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PeopleTools 8.54: PeopleCode Language Reference

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PeopleTools 8.54: PeopleCode Language Reference
CDSKU
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Preface

Understanding the PeopleSoft Online Help and PeopleBooks

The PeopleSoft Online Help is a website that enables you to view all help content for PeopleSoft Applications and PeopleTools. The help provides standard navigation and full-text searching, as well as context-sensitive online help for PeopleSoft users.

PeopleSoft Hosted Documentation

You access the PeopleSoft Online Help on Oracle's PeopleSoft Hosted Documentation website, which enables you to access the full help website and context-sensitive help directly from an Oracle hosted server. The hosted documentation is updated on a regular schedule, ensuring that you have access to the most current documentation. This reduces the need to view separate documentation posts for application maintenance on My Oracle Support, because that documentation is now incorporated into the hosted website content. The Hosted Documentation website is available in English only.

Note: Only the most current release of hosted documentation is updated regularly. After a new release is posted, previous releases remain available but are no longer updated.

Locally Installed Help

If your organization has firewall restrictions that prevent you from using the Hosted Documentation website, you can install the PeopleSoft Online Help locally. If you install the help locally, you have more control over which documents users can access and you can include links to your organization's custom documentation on help pages.

In addition, if you locally install the PeopleSoft Online Help, you can use any search engine for full-text searching. Your installation documentation includes instructions about how to set up Oracle Secure Enterprise Search for full-text searching.

See *PeopleTools Installation* for your database platform, "Installing PeopleSoft Online Help." If you do not use Secure Enterprise Search, see the documentation for your chosen search engine.

Note: Before users can access the search engine on a locally installed help website, you must enable the Search portlet and link. Click the Help link on any page in the PeopleSoft Online Help for instructions.

Downloadable PeopleBook PDF Files

You can access downloadable PDF versions of the help content in the traditional PeopleBook format. The content in the PeopleBook PDFs is the same as the content in the PeopleSoft Online Help, but it has a different structure and it does not include the interactive navigation features that are available in the online help.

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Common Help Documentation

Common help documentation contains information that applies to multiple applications. The two main types of common help are:

- Application Fundamentals
- Using PeopleSoft Applications

Most product families provide a set of application fundamentals help topics that discuss essential information about the setup and design of your system. This information applies to many or all applications in the PeopleSoft product family. Whether you are implementing a single application, some combination of applications within the product family, or the entire product family, you should be familiar with the contents of the appropriate application fundamentals help. They provide the starting points for fundamental implementation tasks.

In addition, the *PeopleTools: Applications User's Guide* introduces you to the various elements of the PeopleSoft Pure Internet Architecture. It also explains how to use the navigational hierarchy, components, and pages to perform basic functions as you navigate through the system. While your application or implementation may differ, the topics in this user's guide provide general information about using PeopleSoft Applications.

Field and Control Definitions

PeopleSoft documentation includes definitions for most fields and controls that appear on application pages. These definitions describe how to use a field or control, where populated values come from, the effects of selecting certain values, and so on. If a field or control is not defined, then it either requires no additional explanation or is documented in a common elements section earlier in the documentation. For example, the Date field rarely requires additional explanation and may not be defined in the documentation for some pages.

Typographical Conventions

The following table describes the typographical conventions that are used in the online help.

Typographical Convention	***Description***
Key+Key	Indicates a key combination action. For example, a plus sign (+) between keys means that you must hold down the first key while you press the second key. For Alt+W, hold down the Alt key while you press the W key.
. . . (ellipses)	Indicate that the preceding item or series can be repeated any number of times in PeopleCode syntax.
{ } (curly braces)	Indicate a choice between two options in PeopleCode syntax. Options are separated by a pipe (|).
[ ] (square brackets)	Indicate optional items in PeopleCode syntax.

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Typographical Convention	*Description*
& (ampersand)	When placed before a parameter in PeopleCode syntax, an ampersand indicates that the parameter is an already instantiated object. Ampersands also precede all PeopleCode variables.
⇒	This continuation character has been inserted at the end of a line of code that has been wrapped at the page margin. The code should be viewed or entered as a single, continuous line of code without the continuation character.

ISO Country and Currency Codes

PeopleSoft Online Help topics use International Organization for Standardization (ISO) country and currency codes to identify country-specific information and monetary amounts.

ISO country codes may appear as country identifiers, and ISO currency codes may appear as currency identifiers in your PeopleSoft documentation. Reference to an ISO country code in your documentation does not imply that your application includes every ISO country code. The following example is a country-specific heading: "(FRA) Hiring an Employee."

The PeopleSoft Currency Code table (CURRENCY_CD_TBL) contains sample currency code data. The Currency Code table is based on ISO Standard 4217, "Codes for the representation of currencies," and also relies on ISO country codes in the Country table (COUNTRY_TBL). The navigation to the pages where you maintain currency code and country information depends on which PeopleSoft applications you are using. To access the pages for maintaining the Currency Code and Country tables, consult the online help for your applications for more information.

Region and Industry Identifiers

Information that applies only to a specific region or industry is preceded by a standard identifier in parentheses. This identifier typically appears at the beginning of a section heading, but it may also appear at the beginning of a note or other text.

Example of a region-specific heading: "(Latin America) Setting Up Depreciation"

Region Identifiers

Regions are identified by the region name. The following region identifiers may appear in the PeopleSoft Online Help:

- Asia Pacific
- Europe
- Latin America
- North America

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Industry Identifiers

Industries are identified by the industry name or by an abbreviation for that industry. The following industry identifiers may appear in the PeopleSoft Online Help:

- USF (U.S. Federal)
- E&G (Education and Government)

Using and Managing the PeopleSoft Online Help

Click the Help link in the universal navigation header of any page in the PeopleSoft Online Help to see information on the following topics:

- What's new in the PeopleSoft Online Help.
- PeopleSoft Online Help acessibility.
- Accessing, navigating, and searching the PeopleSoft Online Help.
- Managing a locally installed PeopleSoft Online Help website.

PeopleTools Related Links

Oracle's PeopleSoft PeopleTools 8.54 Documentation Home Page (Doc ID 1664613.1)

"PeopleTools Product/Feature PeopleBook Index" (PeopleTools 8.54: Getting Started with PeopleTools)

PeopleSoft Information Portal

My Oracle Support

PeopleSoft Training from Oracle University

PeopleSoft Video Feature Overviews on YouTube

Contact Us

Send us your suggestions Please include release numbers for the PeopleTools and applications that you are using.

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Chapter 1

PeopleCode Built-in Functions and Language Constructs

Functions by Category

The following topics subdivide the PeopleCode built-in functions by functional category and provide links from within each category to the reference entries.

Analytic Calculation Engine

CreateAnalyticInstance

GetAnalyticInstance

GetAnalyticGrid

APIs

CreateObject

GetSession

%Session

Application Classes

CollectGarbage

Application Engine

CallAppEngine

CommitWork

GetAESection

Application Logging

WriteToLog

%ApplicationLogFence

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Arrays

CopyFromJavaArray

CopyToJavaArray

CreateArray

CreateArrayAny

CreateArrayRept

Split

Attachment

AddAttachment

CleanAttachments

CopyAttachments

DeleteAttachment

DetachAttachment

GetAttachment

MAddAttachment

PutAttachment

ViewAttachment

Related Links

Files
Images

Bulk

BulkDeleteField

BulkInsertField

BulkModifyPageFieldOrder

BulkUpdateIndexes

Business Interlink

GetBiDoc

GetInterlink

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Character Processing

CharType

ContainsCharType

ContainsOnlyCharType

ConvertChar

DBCSTrim

Charting

CreateObject

GetChart

GetChartURL

GetDialGauge

GetGanttChart

GetLEDGauge

GetOrgChart

GetRatingBoxChart

GetReferenceArea

GetReferenceLine

GetStatusMeterGauge

GetThreshold

ChartField

RenameDBField

RenamePage

RenameRecord

SetDBFieldAuxFlag

SetDBFieldCharDefn

SetDBFieldFormat

SetDBFieldFormatLength

SetDBFieldLabel

SetDBFieldLength

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SetDBFieldNotUsed

SetPageFieldPageFieldName

SetRecFieldEditTable

SetRecFieldKey

Component Buffer

ActiveRowCount

AddKeyListItem

ClearKeyList

CreateRecord

CreateRowset

CompareLikeFields

ComponentChanged

CopyFields

CopyRow

CurrentLevelNumber

CurrentRowNumber

DeleteRecord

DeleteRow

DiscardRow

ExpandBindVar

ExpandEnvVar

ExpandSqlBinds

FetchValue

FieldChanged

FlushBulkInserts

GetField

GetLevel0

GetNextNumber

GetNextNumberWithGaps

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GetNextNumberWithGapsCommit

GetRecord

GetRelField

GetRow

GetRowset

GetSetId

InsertRow

IsDate

PriorValue

RecordChanged

RecordDeleted

RecordNew

RowFlush

SetComponentChanged

SetDefault

SetDefaultAll

SetTempTableInstance

StopFetching

TotalRowCount

TreeDetailInNode

UpdateSysVersion

UpdateValue

ViewContentURL

%BINARYSORT

%Component

%Menu

%Mode

%OperatorClass

%Table

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%TruncateTable

Component Interface

GetMethodNames

GetProgramFunctionInfo

GetSession

StartWork

%CompIntfcName

Conditional Navigation

GenerateComponentContentRelURL

GenerateComponentContentURL

GenerateComponentPortalRelURL

GenerateComponentPortalURL

GenerateComponentRelativeURL

GenerateHomepagePortalURL

GenerateHomepageRelativeURL

GetURL

OverrideCNAVDisplayMode

ShouldSuppressCREF

Transfer

ViewURL

UIDisplayMode

Conversion

Char

Code

ConvertChar

NumberToString

String

Value

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Currency and Financial

Amortize

BlackScholesPut

ConvertCurrency

RoundCurrency

SinglePaymentPV

UniformSeriesPV

%Currency

Current Date and Time

%CurrentDateIn

%CurrentDateOut

%CurrentDateTimeIn

%CurrentDateTimeOut

%CurrentTimeIn

%CurrentTimeOut

Related Links

Date and Time
SQL Date and Time

Custom Display Formats

GetStoredFormat

SetDisplayFormat

Database and Platform

%DbName

%DbServerName

%DbType

Date and Time

AddToDate

AddToDateTime

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AddToTime

ConvertDatetimeToBase

Date

Date3

DatePart

DateTime6

DateTimeToHTTP

DateTimeToISO

DateTimeToLocalizedString

DateTimeToTimeZone

DateTimeToUserFormat

DateTimeValue

DateValue

Day

Days

Days360

Days365

FormatDateTime

GetCalendarDate

Hour

IsDaylightSavings

ISOToDate

ISOToDateTime

Minute

Month

Second

Time

Time3

TimePart

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TimeToTimeZone

TimeValue

TimeZoneOffset

Weekday

IsDate

Year

%AsOfDate

%ClientDate

%ClientTimeZone

%Date

%DateAdd

%DateDiff

%DateTime

%DateTimeDiff

%DateTimeIn

%DateTimeOut

%DTTM

%PerfTime

%PermissionLists

%ServerTimeZone

%Time

%TextIn

Related Links

Current Date and Time
SQL Date and Time

Debugging

CreateException

SetTracePC

SetTraceSQL

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throw

%Test

try

WinMessage

WriteToLog

%ApplicationLogFence

Defaults, Setting

SetDefault

SetDefaultAll

SetDefaultNext

SetDefaultNextRel

SetDefaultPrior

SetDefaultPriorRel

Documents

CreateDocument

CreateDocumentKey

Effective Date and Effective Sequence

CurrEffDt

CurrEffRowNum

CurrEffSeq

NextEffDt

NextRelEffDt

PriorEffDt

PriorRelEffDt

SetDefaultNext

SetDefaultNextRel

SetDefaultPrior

SetDefaultPriorRel

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%EffDtCheck

Email

AddEmailAddress

ChangeEmailAddress

DeleteEmailAddress

MarkPrimaryEmailAddress

Environment

ExpandEnvVar

GetCwd

GetEnv

%PID

Exceptions

CreateException

throw

try

Executable Files, Running

Exec

WinExec

Object

Files

CreateDirectory

FileExists

FindFiles

GetFile

GetTempFile

RemoveDirectory

%FilePath

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Related Links

Attachment
Images

Financial

AccruableDays

AccrualFactor

BlackScholesCall

BlackScholesPut

BootstrapYTMs

ConvertRate

CubicSpline

HermiteCubic

HistVolatility

LinearInterp

Fluid Applications

AddJavaScript

AddMetaTag

AddOnLoadScript

AddStyleSheet

CreateSearchRowset

DoModalComponentPopup

DoModalPopup

ExecuteSearchSavePC

GetAddSearchRecName

GetPageTitle

GetPageType

GetSearchRecName

IsAddMode

IsBackEnabled

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IsFluidMode

IsFluidSearchStart

IsGroupletRequest

IsHomeEnabled

IsLogoutEnabled

IsNavBarEnabled

IsNextInListEnabled

IsNotifyEnabled

IsPinEnabled

IsPrevInListEnabled

IsSaveEnabled

IsSearchEnabled

SetAddMode

SetThemeId

SetTransferAttributes

Grids

GetGrid

Images

CropImage

DeleteImage

GetImageExtents

InsertImage

ResizeImage

Related Links

Attachment
Files

Integration Broker

IBPurgeDomainStatus

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IBPurgeNodesDown

ConnectorRequest

ConnectorRequestURL

CreateWSDLMessage

EncryptNodePswd

FindCodeSetValues

NodeDelete

NodeRename

NodeSaveAs

NodeTranDelete

PingNode

RelNodeTranDelete

SetChannelStatus

SetMessageStatus

Transform

TransformEx

TransformExCache

%IntBroker

%MaxNbrSegments

%TransformData

Related Links

Message Classes (Integration Broker)

Java

CopyFromJavaArray

CopyToJavaArray

CreateJavaArray

CreateJavaObject

GetJavaClass

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Language Constructs

Break

Component

Continue

Declare Function

Evaluate

Exit

For

Function

Global

If

Local

Repeat

Return

throw

try

While

Language Preference and Locale

SetLanguage

%IsMultiLanguageEnabled

%Language

%Language_Base

%Language_Data

%Language_User

%Market

Logical (Tests for Blank Values)

All

AllOrNone

None

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OnlyOne

OnlyOneOrNone

Mail

SendMail

%EmailAddress

Math

Abs

Acos

Asin

Atan

Cos

Cot

Degrees

Exp

Fact

Idiv

Int

Integer

Ln

Log10

Max

Min

Mod

Product

Radians

Rand

Round

Sign

Sin

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Sqrt

Tan

Truncate

%Abs

%DecDiv

%DecMult

%Round

%Truncate

Menu Appearance

CheckMenuItem

DisableMenuItem

EnableMenuItem

HideMenuItem

UnCheckMenuItem

Message Catalog

EndMessage

Error

MessageBox

MsgGet

MsgGetExplainText

MsgGetText

Quote

Warning

WinMessage

Message Classes (Integration Broker)

AddSystemPauseTimes

CreateMessage

CreateWSDLMessage

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DeleteSystemPauseTimes

GetMessage

GetSyncLogData

IsMessageActive

PingNode

ReturnToServer

SetChannelStatus

SetMessageStatus

%MaxMessageSize

%MaxNbrSegments

Related Links

Integration Broker
XML

Modal Transfers

DoModal

DoModalComponent

DoModalX

EndModal

EndModalComponent

DoModalXComponent

IsModal

IsModalComponent

Related Links

Secondary Pages
Transfers

MultiChannel Framework

CreateMCFIMInfo

DeQueue

EnQueue

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Forward

InitChat

MCFBroadcast

NotifyQ

Object

CreateObject

CreateObjectArray

ObjectDoMethod

ObjectDoMethodArray

ObjectGetProperty

ObjectSetProperty

Object-Oriented

CreateArray

CreateArrayRept

CreateException

CreateJavaArray

CreateJavaObject

CreateMessage

CreateObject

CreateObjectArray

CreateProcessRequest

CreateRecord

CreateRowset

CreateSOAPDoc

CreateSQL

CreateXmlDoc

DeleteSQL

FetchSQL

GetAESection

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GetChart

GetChartURL

GetCwd

GetField

GetFile

GetGrid

GetHTMLText

GetInterlink

GetLevel0

GetJavaClass

GetMessage

GetMessageXmlDoc

GetMessageInstance

GetPubContractInstance

GetRecord

GetRow

GetRowset

GetSession

GetSQL

GetSubContractInstance

LogObjectUse

ObjectDoMethod

ObjectDoMethodArray

ObjectGetProperty

ObjectSetProperty

ReturnToServer

Split

StoreSQL

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Page

GetPage

Page Control Appearance

GetImageExtents

Gray

Hide

HideRow

HideScroll

IsHidden

SetCursorPos

SetLabel

Ungray

Unhide

UnhideRow

UnhideScroll

Personalizations

GetUserOption

SetUserOption

Portal

CreateBreadcrumb

CreateSOAPDoc

EncodeURL

EncodeURLForQueryString

EscapeHTML

EscapeJavascriptString

EscapeWML

GenerateActGuideContentUrl

GenerateActGuidePortalUrl

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GenerateActGuideRelativeUrl

GenerateComponentContentRelURL

GenerateComponentContentURL

GenerateComponentPortalRelURL

GenerateComponentPortalURL

GenerateComponentRelativeURL

GenerateExternalPortalURL

GenerateExternalRelativeURL

GenerateHomepagePortalURL

GenerateHomepageRelativeURL

GenerateQueryContentURL

GenerateQueryPortalURL

GenerateQueryRelativeURL

GenerateScriptContentRelURL

GenerateScriptContentURL

GenerateScriptPortalRelURL

GenerateScriptPortalURL

GenerateScriptRelativeURL

GenerateTree

GenerateWorklistPortalURL

GenerateWorklistRelativeURL

GetBreadcrumbs

GetChartURL

GetHTMLText

GetMethodNames

GetURL

Unencode

ViewContentURL

ViewURL

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%ContentID

%ContentType

%EmailAddress

%HPTabName

%LocalNode

%Node

%Portal

%Request

%Response

%RunningInPortal

Related Links

SmartNavigation Charts

Process Scheduler

CreateProcessRequest

GetNextProcessInstance

SetPostReport

SetupScheduleDefnItem

%OutDestFormat

%OutDestType

Remote Call

DoSaveNow

RemoteCall

RowsetCache

CreateRowsetCache

GetRowsetCache

Saving and Canceling

DoCancel

DoSave

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DoSaveNow

WinEscape

Scroll Select

RowFlush

RowScrollSelect

RowScrollSelectNew

ScrollFlush

ScrollSelect

ScrollSelectNew

SortScroll

Search Dialog

ClearSearchDefault

ClearSearchEdit

IsSearchDialog

SetSearchDefault

SetSearchDialogBehavior

SetSearchEdit

%Mode

Secondary Pages

DoModal

DoModalX

EndModal

IsModal

Related Links

Modal Transfers
Transfers

SmartNavigation Charts

GenABNNodeURL

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GenHTMLMenu

GetABNChartRowSet

GetABNInitialNode

GetABNNode

GetABNRelActnRowSet

GetABNReqParameters

GetABNTreeEffdt

GetABNTreeName

GetABNTreeSetid

GetABNTreeUserKey

LoadABN

SQL

CreateSQL

DeleteSQL

ExpandBindVar

ExpandSqlBinds

FetchSQL

FlushBulkInserts

GetSQL

SQLExec

StoreSQL

%FirstRows

%InsertSelect

%InsertValues

%Join

%KeyEqual

%KeyEqualNoEffDt

%Like

%LikeExact

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%NoUppercase

%OldKeyEqual

%SelectDummyTable

%SignonUserId

%SQL

%SQLRows

%Table

%UpdatePairs

Related Links

Component Buffer
Scroll Select

SQL Date and Time

%DateAdd

%DateDiff

%DatePart

%DateNull

%DateIn

%DateTimeNull

%DateOut

%DateTimeDiff

%DateTimeIn

%DateTimeOut

%DTTM

%TimeAdd

%TextIn

%TimeIn

%TimeNull

%TimePart

%TimeOut

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Related Links

Current Date and Time
Date and Time

SQL Shortcuts

%Delete

%Insert

%SelectAll

%SelectDistinct

%SelectByKey

%SelectByKeyEffDt

%Update

String

Clean

ChunkText

%COALESCE

Code

CompareStrings

CompareTextDiff

%Concat

DBCSTrim

DBPatternMatch

DeChunkText

Exact

ExpandBindVar

ExpandEnvVar

Find

GetHTMLText

IsAlpha

IsAlphaNumeric

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IsDigits

Left

Len

Lower

LTrim

NumberToDisplayString

NumberToString

Proper

Quote

Replace

Rept

Right

RTrim

String

Substitute

Substring

Upper

%Abs

%NumToChar

%Substring

%TrimSubstr

%Upper

Subrecords

%SUBREC

Time Zone

ConvertDatetimeToBase

ConvertTimeToBase

DateTimeToHTTP

DateTimeToISO

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DateTimeToLocalizedString

DateTimeToTimeZone

DateTimeToUserFormat

FormatDateTime

IsDaylightSavings

TimeToTimeZone

TimeZoneOffset

%ClientTimeZone

%ServerTimeZone

Trace Control

SetTracePC

SetTraceSQL

Transfers

AddKeyListItem

ClearKeyList

SetNextPage

Transfer

TransferExact

TransferModeless

TransferNode

TransferPage

TransferPortal

Related Links

Modal Transfers
Secondary Pages

Type Checking

IsUserNumber

ValueUser

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IsAlpha

IsAlphaNumeric

IsDate

IsDateTime

IsDigits

IsNumber

IsTime

Max

Min

NumberToString

User Information

%EmailAddress

%EmployeeId

%UserDescription

%UserId

User Security

AllowEmplIdChg

Decrypt

Encrypt

ExecuteRolePeopleCode

ExecuteRoleQuery

ExecuteRoleWorkflowQuery

Hash

HashWithSalt

IsMenuItemAuthorized

IsUserInPermissionList

IsUserInRole

RevalidatePassword

SecureRandomGen

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SetAuthenticationResult

SetPasswordExpired

SwitchUser

VerifyHash

VerifyOprPassword

%AuthenticationToken

%EmployeeId

%ExternalAuthInfo

%NavigatorHomePermissionList

%PasswordExpired

%PermissionLists

%PrimaryPermissionList

%ProcessProfilePermissionList

%PSAuthResult

%ResultDocument

%Roles

%RowSecurityPermissionList

%SignonUserId

%SignOnUserPswd

%UserId

Validation

Error

IsMenuItemAuthorized

RevalidatePassword

SetCursorPos

SetReEdit

Warning

Workflow

GenerateActGuideContentUrl

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GenerateActGuidePortalUrl

GenerateActGuideRelativeUrl

GetWLFieldValue

MarkWLItemWorked

TriggerBusinessEvent

%AllowNotification

%AllowRecipientLookup

%BPName

%SMTPBlackberryReplyTo

%SMTPGuaranteed

%SMTPSender

%WLInstanceID

%WLName

XML

CancelPubHeaderXmlDoc

CancelPubXmlDoc

CancelSubXmlDoc

CreateSOAPDoc

CreateXmlDoc

GetArchPubHeaderXmlDoc

GetArchPubXmlDoc

GetArchSubXmlDoc

GetMessageXmlDoc

GetNRXmlDoc

GetPubHeaderXmlDoc

GetPubXmlDoc

GetSubXmlDoc

GetSyncLogData

InboundPublishXmlDoc

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PublishXmlDoc

ReSubmitPubHeaderXmlDoc

ReSubmitPubXmlDoc

ReSubmitSubXmlDoc

ReValidateNRXmlDoc

SyncRequestXmlDoc

Transform

UpdateXmlDoc

PeopleCode Built-in Functions and Language Constructs: A

The PeopleCode built-In functions and language constructs beginning with the letter A are listed in alphabetical order within this topic.

Related Links

Typographical Conventions

Abs

Syntax

Abs(*x*)

Description

Use the Abs function to return a decimal value equal to the absolute value of a number *x*.

Parameters

x	Specify the number you want the decimal value for.

Example

The example returns the absolute value of the difference between &NUM_1 and &NUM_2:

```
&RESULT = Abs(&NUM_1 - &NUM_2);
```

Related Links

Sign

%Abs

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AccruableDays

Syntax

AccruableDays(*StartDate*, *EndDate*, *Accrual_Conv*)

Description

Use the AccruableDays function to return the number of days during which interest can accrue in a given range of time according to the *Accrual_Conv* parameter.

Parameters

StartDate The beginning of the time period for determining the accrual. This parameter takes a date value.

EndDate The end of the time period for determining the accrual. This parameter takes a date value.

Accrual_Conv The accrual convention. This parameter takes either a number or a constant value. Values for this parameter are:

Numeric Value	*Constant Value*	*Description*
0	%Accrual_30DPM	30/360: all months 30 days long according to NASD rules for date truncation
1	%Accrual_30DPME	30E/360: all months 30 days long according to European rules for date truncation
2	N/A	30N/360: all months but February are 30 days long according to SIA rules
3	%Accrual_Fixed360	Act/360: months have variable number of days, but years have fixed 360 days
4	%Accrual_Fixed365	Act/365: months have variable number of days, buy years have fixed 365 days
5	%Accrual_ActualDPY	Act/Act: months and years have a variable number of days

Returns

An integer representing a number of days.

Related Links

AccrualFactor

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AccrualFactor

Syntax

AccrualFactor(*StartDate*, *EndDate*, *Accrual_Conv*)

Description

Use the AccrualFactor function to compute a factor that's equal to the number of years of interest accrued during a date range, according to *Accrual_Conv* parameter.

Parameters

StartDate The beginning of the time period for determining the accrual. This parameter takes a date value.

EndDate The end of the time period for determining the accrual. This parameter takes a date value.

Accrual_Conv The accrual convention. This parameter takes either a number or constant value. Values for this parameter are:

Numeric Value	*Constant Value*	*Description*
0	%Accrual_30DPM	30/360: all months 30 days long according to NASD rules for date truncation
1	%Accrual_30DPME	30E/360: all months 30 days long according to European rules for date truncation
2	N/A	30N/360: all months but February are 30 days long according to SIA rules
3	%Accrual_Fixed360	Act/360: months have variable number of days, but years have fixed 360 days
4	%Accrual_Fixed365	Act/365: months have variable number of days, buy years have fixed 365 days
5	%Accrual_ActualDPY	Act/Act: months and years have a variable number of days

Returns

A floating point number representing a number of years.

Related Links

AccruableDays

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Acos

Syntax

Acos(*value*)

Description

Use the Acos function to calculate the arccosine of the given value, that is, the size of the angle whose cosine is that value.

Parameters

value	Any real number between **-1.00** and **1.00** inclusive, the range of valid cosine values. If the input value is outside this range, an error message appears at runtime ("Decimal arithmetic error occurred. (2,110)"). Adjust your code to provide a valid input value.

Returns

A value in radians between **0** and **pi**.

Example

The following example returns the size in radians of the angle whose cosine is **0.5**:

```
&MY_ANGLE = Acos(0.5);
```

Related Links

Asin
Atan
Cos
Cot
Degrees
Radians
Sin
Tan

ActiveRowCount

Syntax

ActiveRowCount(*Scrollpath*)

Where *scrollpath* is:

```
[RECORD.level1_recname, level1_row, [RECORD.level2_recname, level2_row, ]]
RECORD.target_recname
```

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To prevent ambiguous references, you can use **SCROLL.** *scrollname*, where *scrollname* is the same as the scroll level's primary record name.

Description

Use the ActiveRowCount function to return the number of active (non-deleted) rows for a specified scroll area in the active page.

Note: This function remains for backward compatibility only. Use the ActiveRowCount Rowset class property instead.

ActiveRowCount is often used to get a limiting value for a For statement. This enables you to loop through the active rows of a scroll area, performing an operation on each active row. Rows that have been marked as deleted are not affected in a For loop delimited by ActiveRowCount. If you want to loop through all the rows of a scroll area, including deleted rows, use TotalRowCount.

Use ActiveRowCount with CurrentRowNumber to determine whether the user is on the last row of a record.

Related Links

"Rowset Class Properties" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide), "Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

scrollpath	A construction that specifies a scroll level in the component buffer.

Returns

Returns a Number value equal to the total active (non-deleted) rows in the specified scroll area in the active page.

Example

In this example **ActiveRowCount** is used to delimit a **For** loop through a level-one scroll:

```
&CURRENT_L1 = CurrentRowNumber(1);
&ACTIVE_L2 = ActiveRowCount(RECORD.ASSIGNMENT, &CURRENT_L1, RECORD.ASGN_HOME_HOST);
&HOME_HOST = FetchValue(RECORD.ASSIGNMENT, &CURRENT_L1,
ASGN_HOME_HOST.HOME_HOST, 1);
If All(&HOME_HOST) Then
   For &I = 1 To &ACTIVE_L2
      DeleteRow(RECORD.ASSIGNMENT, &CURRENT_L1, RECORD.ASGN_HOME_HOST, 1);
   End-For;
End-If;
```

Related Links

CurrentRowNumber

TotalRowCount

For

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AddAttachment

Syntax

```
AddAttachment(URLDestination, DirAndFilePrefix, FileType, UserFileName[, MaxSize [,
PreserveCase[, UploadPageTitle[, AllowLargeChunks]]]])
```

Description

Use the AddAttachment function to upload one file from an end-user machine to a specified storage location. To upload more than one file with a single function call, use the MAddAttachment function.

Important! It is the responsibility of the calling PeopleCode program to store the returned file name for further use.

If a file exists at a particular place on a storage location and then another file with the same name is uploaded to that same place on that same storage location, the original file will be silently overwritten by the new file. If that is not the behavior you desire, it is recommended that you implement PeopleCode to guarantee the ultimate uniqueness of either the name of the file at its place on the storage location or the name of its place (the subdirectory) on the storage location.

You cannot use a relative path to specify the file that is to be uploaded; you must use a full path. If end users experience problems in uploading files, ensure that they browse to the file they wish to upload rather than attempting to manually enter the full path name of the file. This problem can manifest itself differently depending on the browser used. For example, with some browser versions, the PeopleSoft page appears to be in an infinite “Processing” state. Information is available on working with different browsers.

See My Oracle Support, “Troubleshooting Browser Limitations”

Additional information that is important to the use of AddAttachment can be found in the *PeopleTools: PeopleCode Developer's Guide*:

- PeopleTools supports multiple types of storage locations.

  See "Understanding File Attachment Storage Locations" (PeopleTools 8.54: PeopleCode Developer’s Guide).

- Certain characters are illegal in file names; other characters in file names are converted during file transfer.

  See "Application Development Considerations" (PeopleTools 8.54: PeopleCode Developer’s Guide).

- Non-ASCII file names are supported by the PeopleCode file attachment functions.

  See "Attachments with non-ASCII File Names" (PeopleTools 8.54: PeopleCode Developer’s Guide).

- The PeopleCode file attachment functions do not provide text file conversions when files are attached or viewed.

  See "Considerations When Attaching Text Files" (PeopleTools 8.54: PeopleCode Developer’s Guide).

- Because AddAttachment is interactive, it is known as a “think-time” function, and is restricted from use in certain PeopleCode events.

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See "Restrictions on Invoking Functions in Certain PeopleCode Events" (PeopleTools 8.54: PeopleCode Developer's Guide).

- Virus scanning can be performed on all files uploaded with the AddAttachment function.

  See "Setting Up Virus Scanning" (PeopleTools 8.54: PeopleCode Developer's Guide).

Parameters

URLDestination

Specify the destination storage location for the file to be uploaded. This can be either a URL identifier in the form **URL**.*URL_ID*, or a string. This is where the file is transferred to.

Note: When the *URLDestination* parameter is specified as a string value, forward slashes (/) are required. Backward slashes (\) are not supported for a string value.

Note: Oracle recommends that you do not use a URL of the form `file://file_name` with the PeopleCode file processing functions.

See "Understanding URL Strings Versus URL Objects" (PeopleTools 8.54: PeopleCode Developer's Guide).

DirAndFilePrefix

A directory and file name prefix. This is appended to the *URLDestination* to make up the full URL when the file is transferred to an FTP server or, when the file transferred to a database table, to make the file name unique.

Note: If the destination location is an FTP server, then it is *very* important whether the value passed into a call of AddAttachment for the *DirAndFilePrefix* parameter ends with a slash or not. If the value for the *DirAndFilePrefix* parameter ends with a slash, then it will be appended to the value of the *URLDestination* and used to indicate the relative (to the configured root directory of the FTP server) path name of the directory in which the uploaded file will be stored. If the value for the *DirAndFilePrefix* parameter does not end with a slash, then the portion of it prior to its right-most slash will be appended to the value of the *URLDestination* and used to indicate the relative (to the configured root directory of the FTP server) path name of the directory in which the uploaded file will be stored, and the portion after the right-most slash will be prepended to the name of the file that will be created at the destination.

Note: Because the *DirAndFilePrefix* parameter is appended to the URL, it also requires forward slashes ("/"). Backward slashes ("\") are not supported for this parameter.

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FileType

The file extension as a string. Since this parameter is required, a value must be specified; however, the value is currently ignored.

UserFileName

Returns the name of the file on the source system.

Specify *UserFileName* as a string variable or a field reference in the form of [*recordname*.]*fieldname*. You must supply the *recordname* only if the record field and your PeopleCode program are in different record definitions.

AddAttachment returns the user-selected file name in this parameter, so its initial value is ignored and it must not be specified as a string constant.

Note: The file name for the user-selected file cannot be greater than 64 characters.

MaxSize

Specify, in kilobytes, the maximum size of the attachment.

If you specify 0, it indicates "no limit," so any file size can be uploaded. The default value of this parameter is 0.

Note: The system cannot check the size of the file selected by the end user until that file has been uploaded to the web server.

PreserveCase

Specify a Boolean value to indicate whether the case of the extension of the file to be uploaded is preserved or not at the storage location; *True*, preserve the case, *False*, convert the file name extension to all lowercase letters.

The default value is False.

Warning! If you use the *PreserveCase* parameter, it is important that you use it in a consistent manner with all the relevant file-processing functions or you may encounter unexpected file-not-found errors.

Note: AddAttachment provides no indication of a conversion in the file name it returns.

UploadPageTitle

Specify a string value to be displayed in the title bar of the file attachment dialog box (as its title). This string should be simple text and contain no HTML elements. If no value is specified, the default value is "File Attachment."

Note: In accessibility mode, the string value of the UploadPageTitle parameter is displayed in the body of the file attachment dialog box rather than as the title of the window.

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Note: The parameter does *not* automatically handle localization issues. The string passed into the function is the exact string embedded in the page. You and your application are responsible for any translation issues.

AllowLargeChunks

Specify a Boolean value to indicate whether to allow large chunks.

If the value specified in the Maximum Attachment Chunk Size field on the PeopleTools Options page is larger than is allowed for retrieval, then the system breaks the file upload into the largest sized chunks allowed. If *AllowLargeChunks* is set to True, this behavior can be overridden so that it is possible for an end user to upload a file in chunks that are too large for the system to retrieve. If *AllowLargeChunks* is set to False, the system will use the largest size chunk that is allowed for retrieval, or the configured chunk size, whichever is smaller.

Note: If the chunks are too big to be retrieved, then any file retrieval built-in function, such as GetAttachment, will fail.

Note: The *AllowLargeChunks* parameter is only applicable when the storage location is a database record. It has no impact when the storage location is an FTP site or an HTTP repository, since attachments at those locations are never chunked.

See "PeopleTools Options" (PeopleTools 8.54: System and Server Administration)

This is an optional parameter.

The default value is False.

Returns

You can check for either an integer or a constant value:

Numeric Value	***Constant Value***	***Description***
0	%Attachment_Success	File was transferred successfully.

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Numeric Value	*Constant Value*	*Description*
1	%Attachment_Failed	File transfer failed due to unspecified error. The following are some possible situations where %Attachment_Failed could be returned: • Failed to initialize the process due to some internal error. • Failed due to unexpected or bad reply from server. • Failed to allocate memory due to some internal error. • Failed due to timeout. • Failed due to non-availability of space on FTP server. • Failed to close SSL connection. • Failed due to an unspecified error on the HTTP repository. If the HTTP repository resides on a PeopleSoft web server, then you can configure tracing on the web server to report additional error details. See "Debugging File Attachment Problems" (PeopleTools 8.54: PeopleCode Developer's Guide).
2	%Attachment_Cancelled	File transfer didn't complete because the operation was canceled by the end user.

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Numeric Value	*Constant Value*	*Description*
3	%Attachment_FileTransferFailed	File transfer failed due to unspecified error during FTP attempt. The following are some possible situations where %Attachment_ FileTransferFailed could be returned: • Failed due to mismatch in file sizes. • Failed to write to local file. • Failed to store the file on remote server. • Failed to read local file to be uploaded • No response from server. • Failed to overwrite the file on remote server.
6	%Attachment_FileExceedsMaxSize	File exceeds maximum size, if specified.
7	%Attachment_DestSystNotFound	Cannot locate destination system for FTP. The following are some possible situations where %Attachment_ DestSystNotFound could be returned: • Improper URL format. • Failed to connect to the server specified.

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Numeric Value	*Constant Value*	*Description*
8	%Attachment_DestSysFailedLogin	Unable to login to destination system for FTP. The following are some possible situations where %Attachment_ DestSysFailedLogin could be returned: • Unsupported protocol specified. • Access denied to server. • Failed to connect using SSL Failed to verify the certificates. • Failed due to problem in certificates used. • Could not authenticate the peer certificate. • Failed to login with specified SSL level. • Remote server denied logon. • Problem reading SSL certificate.
9	%Attachment_FileNotFound	Cannot locate file. The following are some possible situations where %Attachment_ FileNotFound could be returned: • Remote file not found. • Failed to read remote file.
11	%Attachment_NoFileName	File transfer failed because no file name was specified.
12	%Attachment_FileNameTooLong	File transfer failed because name of selected file name is too long. Maximum is 64 characters.
13	%Attachment_ViolationFound	File violation detected by virus scan engine.
14	%Attachment_VirusScanError	Virus scan engine error.
15	%Attachment_VirusConfigError	Virus scan engine configuration error.
16	%Attachment_VirusConnectError	Virus scan engine connection error.

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Numeric Value	Constant Value	Description
21	%Attachment_Rejected	File transfer failed because the file extension is not allowed.

Example

```
&retcode = AddAttachment(URL.MYFTP, ATTACHSYSFILENAME, "", ATTACHUSERFILE, 0);
```

An example of the AddAttachment function is provided in the demonstration application delivered in the FILE_ATTACH_WRK derived/work record. This demonstration application is shown on the PeopleTools Test Utilities page.

See "Using the PeopleTools Test Utilities Page" (PeopleTools 8.54: PeopleCode Developer's Guide).

Related Links

CleanAttachments
CopyAttachments
DeleteAttachment
DetachAttachment
GetAttachment
MAddAttachment
PutAttachment
ViewAttachment
"Understanding the File Attachment Functions" (PeopleTools 8.54: PeopleCode Developer's Guide)

AddEmailAddress

Syntax

AddEmailAddress(*Type*, *Address* [, *Primary*])

Description

Use the AddEmailAddress function to add an email address for the current user. You can only add *one* email address of a specific type for a user. If you try to add an email address for a type that is already associated with an email address, you receive an error.

Parameters

Type Specify the type of email address being added. This parameter takes a string value. The valid values are:

Value	Description
BB	Blackberry email address
BUS	Business email address

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Value	*Description*
HOME	Home email address
OTH	Other email address
WORK	Work email address

Address Specify the email address that you want to add as a string.

Primary Specify whether this email address is the primary address for the user. This parameter takes a Boolean value: True, this email address is the primary email address, False otherwise. If not specified, the default is False.

Returns

None.

Related Links

ChangeEmailAddress
DeleteEmailAddress
MarkPrimaryEmailAddress

AddJavaScript

Syntax

AddJavaScript(**HTML.***JS_NAME*)

Description

Use the AddJavaScript function to add JavaScript to the HTML document for the page or component.

Important! Use this function within fluid applications only.

Parameters

HTML.*JS_NAME* Specifies the JavaScript code as an HTML object stored in the database.

Returns

None.

Example

```
AddJavaScript(HTML.PT_JQUERY_1_6_2_JS);
AddJavaScript(HTML.PTPG_NUI_GRID_JS);
AddJavaScript(HTML.PT_ACE_USER);
```

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```
AddJavaScript(HTML.PT_ACE_LOAD);
AddJavaScript(HTML.PTS_NUI_SRCH);
```

AddKeyListItem

Syntax

AddKeyListItem(*field*, *value*)

Description

Use the AddKeyListItem to add a new key field and its value to the current list of keys. It enables PeopleCode to help users navigate through related pages without being prompted for key values. A common use of AddKeyListItem is to add a field to a key list and then transfer to a page which uses that field as a key.

Parameters

field	The field to add to the key list.
value	The value of the added key field used in the search.

Returns

Returns a Boolean value indicating whether it completed successfully.

Example

The following example creates a key list using AddKeyListItem and transfers the user to a page named VOUCHER_INQUIRY_FS.

```
AddKeyListItem(VNDR_INQ_VW_FS.BUSINESS_UNIT, ASSET_ACQ_DET.BUSINESS_UNIT_AP);
AddKeyListItem(VNDR_INQ_VW_FS.VOUCHER_ID, ASSET_ACQ_DET.VOUCHER_ID);
TransferPage("VOUCHER_INQUIRY_FS");
```

Related Links

ClearKeyList
TransferPage
Transfer

AddMetaTag

Syntax

AddMetaTag(*tag_name*, *tag_value*)

Description

Use the AddMetaTag function to add a meta tag to the HTML document for the page or component.

Important! Use this function within fluid applications only.

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Parameters

tag_name	Specifies the name of the meta tag as a string value.
tag_value	Specifies the value of the meta tag as a string value.

Returns

None.

Example

```
AddMetaTag("viewport", "user-scalable=no, initial-scale=1.0, minimum-scale=1.0, max⇒
imum-scale=1.0");
```

AddOnLoadScript

Syntax

AddOnLoadScript(*onload_script*)

Description

Use the AddOnLoadScript function to add the JavaScript code to be executed in the onload event of the HTML document.

Important! Use this function within fluid applications only.

Parameters

onload_script	Specifies the JavaScript code to be executed in the onload event of the HTML document as a string value.

Returns

None.

Example

```
AddOnLoadScript("document.querySelector('.ps_header').style.display = 'none';");
```

AddStyleSheet

Syntax

AddStyleSheet(**StyleSheet.***STYLESHEET_NAME*)

Description

Use the AddStyleSheet function to add a free form style sheet to the HTML document for the page or component.

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Important! Use this function within fluid applications only.

Parameters

StyleSheet.*STYLESHEET_NAME* Specifies the style sheet as a style sheet object stored in the database.

Returns

None.

Example

```
AddStyleSheet(StyleSheet.PTNUI_DOCK_CSS_R);
AddStyleSheet(StyleSheet.PTNUI_MODAL_CSS);
```

AddSystemPauseTimes

Syntax

AddSystemPauseTimes(*StartDay*, *StartTime*, *EndDay*, *EndTime*)

Description

Use the AddSystemPauseTimes function to set when pause times occur on your system by adding a row to the system pause-times tables.

This function is used in the PeopleCode for the Message Monitor. Pause times are set up in the Message Monitor.

Parameters

StartDay Specify a number from 0-6. Values are:

Value	*Description*
0	Sunday
1	Monday
2	Tuesday
3	Wednesday
4	Thursday
5	Friday
6	Saturday

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StartTime Specify a time, in seconds, since midnight.

EndDay Specify a number from 0-6. Values are:

Value	*Description*
0	Sunday
1	Monday
2	Tuesday
3	Wednesday
4	Thursday
5	Friday
6	Saturday

EndTime Specify a time, in seconds, since midnight.

Returns

A Boolean value: True if the system pause time specified was added, False otherwise.

Example

```
Declare Function SetTime PeopleCode REFRESH_BTN FieldFormula;

Component Boolean &spt_changed;

Function GetSecond(&time) Returns number ;
   Return Hour(&time) * 3600 + Minute(&time) * 60 + Second(&time);
End-Function;

/* initialize; */

STARTDAY = "0";
AMM_STARTTIME = SetTime(0);
ENDDAY = "0";
AMM_ENDTIME = SetTime(0);

If DoModal(Panel.AMM_ADD_SPTIMES, MsgGetText(117, 13, ""), - 1, - 1) = 1 Then
   If AddSystemPauseTimes(Value(STARTDAY), GetSecond(AMM_STARTTIME), Value(ENDDAY),⇒
 GetSecond(AMM_ENDTIME)) Then
      &spt_changed = True;
      DoSave();
   Else
      MessageBox(16, MsgGetText(117, 13, ""), 117, 14, "");
   End-If;
End-If;
```

Related Links

DeleteSystemPauseTimes

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"Understanding the Integration Broker Service Operations Monitor" (PeopleTools 8.54: Integration Broker Service Operations Monitor)

AddToDate

Syntax

AddToDate(*date*, *num_years*, *num_months*, *num_days*)

Description

Use the AddToDate function to add the specified number of years, months, and days to the *date* provided.

Suppose, for example, that you want to find a date six years from now. You could not just multiply 6 times 365 and add the result to today's date, because of leap years. And, depending on the current year, there may be one or two leap years in the next six years. AddToDate takes care of this for you.

You can subtract from dates by passing the function negative numbers.

Considerations Using AddToDate

When you are adding one month to the date provided, and the date provided is the last day of a month, and the next month is shorter, the returned result is the last day of the next month.

For example, in the following, &NewDate is 29/02/2004:

```
&NewDate = AddToDate("31/01/2004", 0, 1, 0);
```

When you are adding one month to the date provided, and the date provided is the last day of a month, and the next month is longer, the returned result is *not* the last day of the next month.

For example, in the following, &NewDate is 29/03/2004.

```
&NewDate = AddToDate("29/02/2004", 0, 1, 0)
```

Parameters

date	The input date to be adjusted.
num_years	The number of years by which to adjust the specified *date*. *num_years* can be a negative number.
num_months	The number of months by which to adjust the specified *date*. This parameter can be a negative number.
num_days	The number of days by which to adjust the specified *date*. This parameter can be a negative number.

Returns

Returns a Date value equal to the original date plus the number of years, months, and days passed to the function.

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Example

The following example finds the date one year, three months, and 16 days after a field called BEGIN_DT:

```
AddToDate(BEGIN_DT, 1, 3, 16);
```

This example finds the date two months ago prior to BEGIN_DT:

```
AddToDate(BEGIN_DT, 0, -2, 0);
```

Related Links

DateValue
Day
Days
Days360
Days365
Month
Weekday

AddToDateTime

Syntax

AddToDateTime(*datetime*, *years*, *months*, *days*, *hours*, *minutes*, *seconds*)

Description

Use the AddToDateTime function to add the specified number of years, months, days, hours, seconds, and minutes to the *datetime* provided. You can subtract from datetimes by passing the function negative numbers.

Parameters

datetime	The initial Datetime value.
years	An integer representing the number of years to add to *datetime*.
months	An integer representing the number of months to add to *datetime*.
days	An integer representing the number of days to add to *datetime*.
hours	An integer representing the number of hours to add to *datetime*.
minutes	An integer representing the number of minutes to add to *datetime*.
seconds	An integer representing the number of seconds to add to *datetime*.

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Returns

A Datetime value equal to the original date plus the number of years, months, days, hours, minutes, and seconds passed to the function.

Example

The following example postpones an interview scheduled in the INTRTime field by two days and two hours:

```
INTRTIME = AddToDateTime(INTRTIME, 0, 0, 2, 2, 0, 0);
```

Related Links

AddToTime
DateValue
DateTimeValue
TimeValue

AddToTime

Syntax

AddToTime(*time*, *hours*, *minutes*, *seconds*)

Description

Use the AddToTime function to add *hours*, *minutes*, and *seconds* to *time*. This function returns the result as a Time value. To subtract from *time*, use negative numbers for *hours*, *minutes*, and *seconds*. The resulting value is always adjusted such that it represents an hour less than 24 (a valid time of day.)

Parameters

time	A time value that you want to subtract from or add to.
hours	An integer representing the number of hours to add to *time*.
minutes	An integer representing the number of minutes to add to *time*.
seconds	An integer representing the number of seconds to add to *time*.

Returns

A Time value equal to time increased by the number of hours, minutes, and seconds passed to the function.

Example

Assume that a time, &BREAKTime, is 0:15:00. The following moves the time &BREAKTime back by one hour, resulting in 23:15:00:

```
&BREAKTime = AddToTime(&BREAKTime, -1, 0, 0);
```

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Related Links

AddToDateTime
DateValue
DateTimeValue
TimeValue

All

Syntax

All(*fieldlist*)

Where *fieldlist* is an arbitrary-length list of field names in the form:

[*recordname.*]*fieldname1* [, [*recordname.*]*fieldname2*] ...

Description

Use the All function to verify if a field contains a value, or if all the fields in a list of fields contain values. If any of the fields are Null, then All returns False.

A blank character field, or a zero (0) numeric value in a required numeric field is considered a null value.

Related Functions

None	Checks that a field or list of fields have no value.
AllOrNone	Checks if either all the field parameters have values, or none of them have values. Use this in examples where if the user fills in one field, she must fill in all the other related values.
OnlyOne	Checks if exactly one field in the set has a value. Use this when the user must fill in only one of a set of mutually exclusive fields.
OnlyOneOrNone	Checks if no more than one field in the set has a value. Use this in examples when a set of fields is both optional and mutually exclusive; that is, if the user can put a value into one field in a set of fields, or leave them all empty.

Returns

Returns a Boolean value based on the values in *fieldlist*. The All function returns True if all of the specified fields have a value; it returns False if any one of the fields does not contain a value.

Example

The All function is commonly used in SaveEdit PeopleCode to ensure that a group of related fields are all entered. For example:

```
If All(RETURN_DT, BEGIN_DT) and
    8 * (RETURN_DT - BEGIN_DT) (DURATION_DAYS * 8 + DURATION_HOURS)
Then
    Warning MsgGet(1000, 1, "Duration of absence exceeds standard hours for number ⇒
```

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```
of days absent.");
End-if;
```

Related Links

AllOrNone
None
OnlyOne
OnlyOneOrNone
SetDefault
SetDefaultAll

AllOrNone

Syntax

AllOrNone(*fieldlist*)

Where *fieldlist* is an arbitrary-length list of field references in the form:

[*recordname.*]*fieldname1* [, [*recordname.*]*fieldname2*] ...

Description

The AllOrNone function takes a list of fields and returns True if either of these conditions is true:

- All of the fields have values (that is, are not Null).
- None of the fields has a value.

For example, if field1 = 5, field2 = "Mary", and field3 = null, AllOrNone returns False.

This function is useful, for example, where you have a set of page fields, and if any one of the fields contains a value, then all of the other fields are required also.

A blank character field, or a zero (0) numeric value in a required numeric field is considered a null value.

Related Functions

All	Checks to see if a field contains a value, or if all the fields in a list of fields contain values. If any of the fields is Null, then **All** returns False.
None	Checks that a field or list of fields have no value. None is the opposite of All.
OnlyOne	Checks if exactly one field in the set has a value. Use this when the user must fill in only one of a set of mutually exclusive fields.
OnlyOneOrNone	Checks if no more than one field in the set has a value. Use this in cases when a set of fields is both optional and mutually exclusive; that is, if the user can put a value into one field in a set of fields, or leave them all empty.

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Returns

Returns a Boolean value: True if all of the fields in fieldlist or none of the fields in fieldlist has a value, False otherwise.

Example

You could use AllOrNone as follows:

```
If Not AllOrNone(STREET1, CITY, STATE) Then
   WinMessage("Address should consist of at least Street (Line 1), City, State, and⇒
 Country.");
End-if;
```

Related Links

All

None

OnlyOne

OnlyOneOrNone

AllowEmplIdChg

Syntax

AllowEmplIdChg(*is_allowed*)

Description

By default, the Component Processor does not allow an user to make any changes to a record if a record contains an EMPLID key field, EMPLID is a required field, and its value matches the value of the user's EMPLID. In some situations, though, such changes are warranted. For example, you would want employees to be able to change information about themselves when entering time sheet data.

The AllowEmplIdChg function enables the user to change records whose key matches the user's own EMPLID, or prevents the user from changing these records. The function takes a single Boolean parameter that when set to True allows the employee to update their own data. When the parameter is set to False, the employee is prevented from updating this data.

After permission is granted, it stays through the life of the *component*, not the page. After a user switches to another component, the default value (not being able to make changes) is reapplied.

Parameters

is_allowed	A Boolean value indicating whether the user is permitted to change the user's own data.

Returns

Optionally returns a Boolean value: True if the function executed successfully, False otherwise.

Example

```
If Substring (%Page, 1, 9) = Substring(PAGE.TimeSHEET_PNL_A, 1, 9) Then
```

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```
   AllowEmplIdChg(true);
End-if;
```

Amortize

Syntax

Amortize(*intr*, *pb*, *pmt*, *pmtnbr*, *payintr*, *payprin*, *balance*)

Description

Use the Amortize function to compute the amount of a loan payment applied towards interest (*payintr*), the amount of the payment applied towards principal (*payprin*), and the remaining balance *balance*, based on the principal balance (*pb*) at the beginning of the loan term, the amount of one payment *pmt*, the interest rate charged during one payment period (*intr*), and the payment number *pmtnbr*.

Parameters

Note that *payintr*, *payprin,* and *balance* are "outvars": you must pass variables in these parameters, which the Amortize function then fills with values. The remaining parameters are "invars" containing data the function needs to perform its calculation.

intr	Number indicating the percent of interest charged per payment period.
pb	Principal balance at the beginning of the loan term (generally speaking, the amount of the loan).
pmt	The amount of one loan payment.
pmtnbr	The number of the payment.
payintr	The amount of the payment paid toward interest.
payprin	The amount of the payment paid toward principal.
balance	The remaining balance after the payment.

Returns

None.

Example

Suppose you want to calculate the principal, interest, and remaining balance after the 24th payment on a loan of $15,000, at an interest rate of 1% per loan payment period, and a payment amount of $290.

```
&INTRST_RT=1;
&LOAN_AMT=15000;
&PYMNT_AMNT=290;
&PYMNT_NBR=24;
Amortize(&INTRST_RT, &LOAN_AMT, &PYMNT_AMNT, &PYMNT_NBR, &PYMNT_INTRST, &PYMNT_PRIN⇒
, &BAL);
&RESULT = "Int=" | String(&PYMNT_INTRST) | " Prin=" | String(&PYMNT_PRIN) | "    Ba⇒
l=" | String(&BAL);
```

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This example sets &RESULT equal to "Int=114 Prin=176 Bal=11223.72".

Asin

Syntax

Asin(*value*)

Description

Use the Asin function to calculate the arcsine of the given value, that is, the size of the angle whose sine is that value.

Parameters

value	Any real number between -1.00 and 1.00 inclusive, the range of valid sine values. If the input value is outside this range, an error message appears at runtime ("Decimal arithmetic error occurred. (2,110)"). Adjust your code to provide a valid input value.

Returns

A value in radians between -pi/2 and pi/2.

Example

The following example returns the size in radians of the angle whose sine is 0.5:

```
&MY_ANGLE = Asin(0.5);
```

Related Links

Acos
Atan
Cos
Cot
Degrees
Radians
Sin
Tan

Atan

Syntax

Atan(*value*)

Description

Use the Atan function to calculate the arctangent of the given value, that is, the size of the angle whose tangent is that value.

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Parameters

value Any real number.

Returns

A value in radians between -pi/2 and pi/2.

Example

The following example returns the size in radians of the angle whose tangent is 0.5:

```
&MY_ANGLE = Atan(0.5);
```

Related Links

Acos
Asin
Cos
Cot
Degrees
Radians
Sin
Tan

PeopleCode Built-in Functions and Language Constructs: B

The PeopleCode built-In functions and language constructs beginning with the letter B are listed in alphabetical order within this topic.

Related Links

Typographical Conventions

BlackScholesCall

Syntax

BlackScholesCall(*Asset_Price*, *Strike_Price*, *Interest_Rate*, *Years*, *Volatility*)

Description

Use the BlackScholesCall function to return the value of a call against an equity underlying according to the Black-Scholes equations.

Parameters

Asset_Price The asset price. This parameter takes a decimal value.

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Strike_Price	The strike price. This parameter takes a decimal value.
Interest_Rate	The risk-free interest rate. This parameter takes a decimal value.
Years	The number of years to option expiration. This parameter takes a number value (decimal).
Volatility	The volatility of underlying. This parameter takes a decimal value.

Returns

A number representing the value of a call against an equity.

Related Links

BlackScholesPut

BlackScholesPut

Syntax

BlackScholesPut(*Asset_Price*, *Strike_Price*, *Interest_Rate*, *Years*, *Volatility*)

Description

Use the BlackScholesPut function to return the value of a put against an equity underlying according to the Black-Scholes equations.

Parameters

Asset_Price	The asset price. This parameter takes a decimal value.
Strike_Price	The strike price. This parameter takes a decimal value.
Interest_Rate	The risk-free interest rate. This parameter takes a decimal value.
Years	The number of years to option expiration. This parameter takes a number (decimal) value.
Volatility	The volatility of underlying. This parameter takes a decimal value.

Returns

A number representing the value of a call against an equity.

Related Links

BlackScholesCall

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BootstrapYTMs

Syntax

BootstrapYTMs(*Date*, *MktInst*, *Accrual_Conv*)

Description

Use the BootstrapYTMs function to create a zero-arbitrage implied zero-coupon curve from a yield-to-maturity curve using the integrated discount factor method, based on the *Accrual_Conv*.

Parameters

Date The trading date of the set of market issues. This parameter takes a date value.

MktInst The market instrument properties. This parameter takes an array of array of number. The elements in the array specify the following:

Elements	*Description*
1	tenor in days
2	yield in percent
3	price per 100 par
4	coupon rate (zero for spot instruments)
5	frequency of coupon payments
6	unit of measure for coupon frequency, 0 for days, 1 for months, and 2 for years
7	coefficient **a** of a curve interpolating the dataset
8,9,10	coefficients **b**, **c**, and **d** of a curve interpolating the dataset

Returns

An array of array of number. The elements in the array have the same type as the elements in the array for the *MktInst* parameter.

Related Links

"Understanding Arrays" (PeopleTools 8.54: PeopleCode API Reference)

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Break

Syntax

Break

Description

Use the Break statement to terminate execution of a loop or an Evaluate function. The program resumes execution immediately after the end of the statement. If the loop or Evaluate is nested in another statement, only the innermost statement is terminated.

Parameters

None.

Example

In the following example, Break is used to terminate the Evaluate statement, while staying within the outermost If statement:

```
If CURRENCY_CD = PriorEffdt(CURRENCY_CD) Then
      Evaluate ACTION
      When = "PAY"
         If ANNUAL_RT = PriorEffdt(ANNUAL_RT) Then
            Warning MsgGet(1000, 27, "Pay Rate Change action is chosen and Pay Rate⇒
 has not been changed.");
         End-if;
         Break;
      When = "DEM"
         If ANNUAL_RT >= PriorEffdt(ANNUAL_RT) Then
            Warning MsgGet(1000, 29, "Demotion Action is chosen and Pay Rate has no⇒
t been decreased.");
         End-if;
        Break;
      When-other
      End-evaluate;
      WinMessage("This message appears after executing either of the BREAK statemen⇒
ts or after all WHEN statements are false");
End-if;
```

Related Links

Evaluate

Exit

For

While

BulkDeleteField

Syntax

BulkDeleteField(*ProjectName*, **Field.***FieldName* [, *ExclProj*])

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Description

Use the BulkDeleteField function to delete fields from records and pages, as well as the associated PeopleCode programs and modify the SQL either on the record, or, if the record is a subrecord, on the parent records.

Note: You must have the role Peoplesoft Administrator assigned to your UserId in order to use this function.

If you specify a project that contains objects such as fields which have an upgrade action of delete, those objects are ignored.

The field is removed from the page regardless of where the field exists on the page, whether on a grid or not.

If the field is in the SELECT clause of the SQL, the removal is straightforward. However, if the field is also used in a WHERE clause, or if the field is the only item in the SELECT clause, the record isn't modified and is instead inserted into a project called BLK_*FieldName*. The record should be examined and any additional changes made as necessary.

Deleting fields from records and pages does *not* remove the field definition itself and it does not remove the field from other areas, such as Projects, Crystal Reports, or message definitions.

In addition, this function does *not* delete the references to the field in the PeopleCode. You must manually remove the references to the deleted field. Use the Find In. . . tool to search for the field name you deleted.

Note: Because performing this operation changes records, you must subsequently rebuild the project (alter tables).

Using the Log File

Information about this operation is stored in a log field. The directory where the log file is placed depends on where the function is run from:

- If the function is run in two-tier, the log file is located at *PS_CFG_HOME* /BulkOps.txt. This is also the default location if the system cannot find the other paths.
- If the function is run from an application server, the log file is located at:

  PS_CFG_HOME /APPSERV/*Domain_Name*/LOGS/BulkOps.txt
- If the function is run from an Application Engine program, the log file is written to the process' output log directory, that is:

  PS_CFG_HOME /APPSERV/prcs/*Domain_Name*/log_output/*Process_Name_Instance*/BulkOps.txt

Considerations Using this Function

This function is intended for use during configuration time *only*, before active runtime usage is initiated. Using this function during active runtime is not supported. Changes to data definitions are *not* recognized on a currently loaded component. In general, changes aren't recognized until the component is reloaded.

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Bulk operations are time consuming, therefore, referencing the log file to see the progress of an operation is recommended. These operations accommodate errors and continue processing, logging the overall progress of the operation.

Warning! These operations take place in a separate transaction from the page's save status: the initiation of any of these operations immediately changes the definitions, even if the page is subsequently cancelled.

Considerations Using the Exclusion Project

If you specify *ExclProj*, the following items that are both in *ProjectName* and *ExclProj* are *not* changed, that is, the field specified is *not* removed from these items:

- pages
- records
- associated SQL with records of type View
- any PeopleCode associated with those items.

Individual SQL or PeopleCode items are not ignored by themselves, only as associated with records or pages.

Parameters

ProjectName The name of a project that is the source of records and pages to use.

Note: When passing the project name as a parameter, if the project contains definitions with an upgrade action of delete, the system ignores those definitions.

FieldName The name of the field to be deleted. This name must be prefixed with the reserved word **Field**.

ExclProj The name of a project that has pages that should be ignored by this function.

Returns

A constant value. The values are:

Value	*Description*
%MDA_Success	Bulk operation completed successfully.
%MDA_Failure	Bulk operation did not complete successfully.

Example

```
&pjm = "MYPROJ";
&ret =  BulkDeleteField(&pjm, Field.OrgId, "EXCLPROJ");
```

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```
If (&ret = %MDA_Success) Then
   MessageBox(0, "Metadata Fn Status", 0, 0, "BulkDeleteField succeeded");
Else
MessageBox(0, "Metadata Fn Status", 0, 0, "BulkDeleteField failed");
End-If;
```

Related Links

BulkInsertField

BulkModifyPageFieldOrder

"Using the Find In Feature" (PeopleTools 8.54: PeopleCode Developer's Guide)

"Understanding Bulk Operations" (PeopleTools 8.54: Application Designer Developer's Guide)

"Understanding Data Administration and the Build Process" (PeopleTools 8.54: Application Designer Developer's Guide)

BulkInsertField

Syntax

BulkInsertField(*ProjectName*, **Field.***FieldName*, *ModelName*, *ClonePCode* [, *ExclProj*])

Description

Use the BulkInsertField function to insert a source field into records and pages in a project if and only if the model field specified by *ModelName* exists on those records and pages.

If you specify a project that contains objects such as fields which have an upgrade action of delete, those objects are ignored.

Note: You must have the role Peoplesoft Administrator assigned to your UserId in order to use this function.

Using the Log File

Information about this operation is stored in a log field. The directory where the log file is placed depends on where the function is run from:

- If the function is run in two-tier, the log file is located at *PS_HOME*/BulkOps.txt. This is also the default location if the system cannot find the other paths.
- If the function is run from an application server, the log file is located here:

  PS_CFG_HOME /APPSERV/*Domain_Name*/LOGS/BulkOps.txt
- If the function is run from an Application Engine program, the log file is written to the process' output log directory, that is:

  PS_CFG_HOME /APPSERV/prcs/*Domain_Name*/log_output/*Process_Name_Instance*/BulkOps.txt

Considerations Inserting Fields into Records

In records, the source field is assigned the same record field properties as the model field on each record, and is inserted directly after the model field.

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If the model field has a prompt table, a prompt table is created for the source field using the name of the source field with TBL appended to it.

If the record is either a SQL View or Dynamic View type, the associated SQL is modified by having the SELECT clause expanded to include the new field.

If the record is a subrecord, the parent records of type SQL View or Dynamic View that contain this subrecord are updated.

If the SQL contains the model field in the WHERE clause, or the SQL is complex, the associated record is inserted into a project called BLK_*FieldName*. You should examine this record and make any necessary changes.

If the model field has PeopleCode associated with it on the record or in a component, and *ClonePCode* has been set to True, this PeopleCode is cloned to the new field, with all references to the model field changed to refer to the new field.

Note: Because using this function changes records that are used to build application tables, you must rebuild (alter) the specified project before these changes can be used.

Considerations Inserting Fields into Pages

If the model field is in a grid, the system inserts the new field into the grid next to the model field and assigns it the same page field properties.

If the model field is not in a grid, the system inserts the new field onto the page to the right of the model field (in the first open space) and assigns it the same page field properties. If the system detects a questionable field position, it inserts the page into a project called BLK_*FieldName*. The page will work as-is, however, the GUI layout may not be optimal, so you should examine these pages by hand.

The page field name property isn't cloned if it exists on the model field. Instead, the field name of the new field is used, since the page field name should be a unique identifier for page elements.

Note: If the project you specified only contained pages and not records, you do not need to rebuild the project after using this function. The changes take affect when the component containing the page is reloaded.

Considerations Using this Function

This function is intended for use during configuration time *only*, before active runtime usage is initiated. Using this function during active runtime is not supported. Changes to data definitions are *not* recognized on currently loaded component. In general, changes aren't recognized until the component is reloaded.

Bulk operations are time consuming, therefore, referencing the log file to see the progress of an operation is recommended. These operations accommodate errors and continue processing, logging the overall progress of the operation.

Warning! These operations take place in a separate transaction from the page's save status: the initiation of any of these operations immediately changes the definitions, even if the page is subsequently cancelled.

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Considerations Using the Exclusion Project

If you specify *ExclProj*, the following items that are both in *ProjectName* and *ExclProj* are *not* changed, that is, the field specified is *not* inserted to these items:

- pages
- records
- associated SQL with records of type View
- any PeopleCode associated with those items.

Individual SQL or PeopleCode items are not ignored by themselves, only as associated with records or pages.

Parameters

ProjectName The name of a project that is the source of records and pages to use.

Note: When passing the project name as a parameter, if the project contains definitions with an upgrade action of delete, the system ignores those definitions.

FieldName The name of the field to be inserted. This name must be prefixed with the reserved word **Field**.

ModelName The name of a field on which to model the inserted field. Attributes are cloned from it for records and pages, PeopleCode is modified, and SQL inserted.

ClonePCode Specify whether to clone the PeopleCode from the model to this field. This parameter takes a Boolean value: True, clone the PeopleCode programs, False, do not.

ExclProj The name of a project that has pages that should be ignored by this function.

Returns

A constant value. The values are:

Value	*Description*
%MDA_Success	Bulk operation completed successfully.
%MDA_Failure	Bulk operation did not complete successfully.

Example

```
&pjm = "MYPROJ";

&ret =  BulkInsertField(&pjm, Field.OrgId, Field.DeptId, True, "EXCLPROJ");
```

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```
If (&ret = %MDA_Success) Then
   MessageBox(0, "Metadata Fn Status", 0, 0, "BulkInsertField succeeded");
Else
   MessageBox(0, "Metadata Fn Status", 0, 0, "BulkInsertField failed");
End-If;
```

Related Links

BulkModifyPageFieldOrder

BulkDeleteField

"Understanding Bulk Operations" (PeopleTools 8.54: Application Designer Developer's Guide)

"Understanding Data Administration and the Build Process" (PeopleTools 8.54: Application Designer Developer's Guide)

BulkModifyPageFieldOrder

Syntax

BulkModifyPageFieldOrder({*ProjectName* | *PageList*}, *ColNames*, *RequireAll*, [*ColWidths*])

Description

Use the BulkModifyPageFieldOrder function to reorder the grid columns as specified by *ColNames*. If *ColWidths* is specified, the columns are also resized. This can also be used to modify a single columns width.

Note: You must have the role Peoplesoft Administrator assigned to your UserId in order to use this function.

If you specify a project name as a parameter, and if that project contains objects such as fields which have an upgrade action of delete, those objects are ignored.

The reordering algorithm “bunches” these fields together at the first instance of any of these fields in a target page grid, and forces the remaining fields into the order specified.

This function only reorders fields inside a grid.

If the fields occur twice or more in a grid, from two or more records, such as work records, the fields are bunched together in record groupings before being sorted into the order specified. For example, the two records ABS_HIST and PERSONAL_HISTORY both contain the fields DURATION_DAYS and DURATION_HOURS. The following is an example of how the records are fields would be bunched together first:

- ABS_HIST, DURATION_DAYS
- ABS_HIST, DURATION_HOURS
- PERSONAL_HISTORY, DURATION_DAYS
- PERSONAL_HISTORY, DURATION_HOURS

Note: These changes take affect after components are reloaded.

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Using the Log File

Information about this operation is stored in a log field. The directory where the log file is placed depends on where the function is run from:

- If the function is run in two-tier, the log file is located at *PS_CFG_HOME* /BulkOps.txt. This is also the default location if the system cannot find the other paths.
- If the function is run from an application server, the log file is located here:

  PS_CFG_HOME /APPSERV/*Domain_Name*/LOGS/BulkOps.txt
- If the function is run from an Application Engine program, the log file is written to the process' output log directory, that is:

  PS_CFG_HOME /APPSERV/prcs/*Domain_Name*/log_output/*Process_Name_Instance*/BulkOps.txt

Considerations Using this Function

This function is intended for use during configuration time *only*, before active runtime usage is initiated. Using this function during active runtime is not supported. Changes to data definitions are *not* recognized on currently loaded component. In general, changes aren't recognized until the component is reloaded.

Bulk operations are time consuming, therefore, referencing the log file to see the progress of an operation is recommended. These operations accommodate errors and continue processing, logging the overall progress of the operation.

Warning! These operations take place in a separate transaction from the page's save status: the initiation of any of these operations immediately changes the definitions, even if the page is subsequently cancelled.

Parameters

ProjectName | PageList

Specify either the name of a project that is the source of pages to use or an array of page names.

Note: When passing the project name as a parameter, if the project contains definitions with an upgrade action of delete, the system ignores those definitions.

ColNames

Specify an array of string that indicate which fields and the desired order of those fields.

RequireAll

Specify whether all the fields in *ColNames* must be present before changes are made or not. This parameter takes a Boolean value: True, all fields must be present.

ColWidths

Specify an array of number that gives the pixel widths of the grid columns. Use a -1 to indicate that the width of a column shouldn't change.

Returns

A constant value. The values are:

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Value	*Description*
%MDA_Success	Bulk operation completed successfully.
%MDA_Failure	Bulk operation did not complete successfully.

Example

```
Local Array of String &ColOrder;
Local Array of Number &ColWidth;
Local String &pjm, &ret;

&pjm = "MYPROJ";
&ColWidth = CreateArray(50, 100, -1);
&ColOrder = CreateArray("DEPTID", "ORGID", "PROJECT");

&ret =  BulkModifyPageFieldOrder(&pjm, &ColOrder, True, &ColWidth);

If (&ret = %MDA_Success) Then
   MessageBox(0, "Metadata Fn Status", 0, 0, "BulkModifyPageFieldOrder succeeded");⇒

Else
      MessageBox(0, "Metadata Fn Status", 0, 0, "BulkModifyPageFieldOrder failed");⇒

End-If;
```

Related Links

BulkInsertField

BulkDeleteField

"Understanding Bulk Operations" (PeopleTools 8.54: Application Designer Developer's Guide)

"Understanding Data Administration and the Build Process" (PeopleTools 8.54: Application Designer Developer's Guide)

BulkUpdateIndexes

Syntax

BulkUpdateIndexes([*StringFieldArray*])

Description

Use BulkUpdateIndexes to update indexes (PSINDEXDEFN table) for records that contain a field whose NotUsed setting has changed.

A field whose NotUsed flag has been set to True does *not* show up in indexes. The only way to modify a field's NotUsed setting is through an API call such as in the following example:

```
SetDBFieldNotUsed(FIELD.OrgId, True);
```

The indexes of records that contain this field need to be updated to reflect the new settings.

Information about this operation can be logged by turning on PeopleCode tracing of internal functions (value 256.)

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Considerations Using this Function

Do *not* invoke this function from runtime pages, as it modifies all records, including the records used to support the page it is invoked from. This function should be invoked from a Application Engine program.

Note: If you do call this function from a page the operation completes successfully, but the page returns an error message. Switching to a new component clears up this error, however, any changes not saved to the database are lost.

This function is intended for use during configuration time *only*, before active runtime usage is initiated. Using this function during active runtime is not supported. Changes to data definitions are *not* recognized on currently loaded component. In general, changes aren't recognized until the component is reloaded.

Bulk operations are time consuming, therefore, referencing the log file to see the progress of an operation is recommended. These operations accommodate errors and continue processing, logging the overall progress of the operation.

Calling this function without any parameter rebuilds the indexes for *all* records, an operation that may take hours. By indicating a list of fields whose NotUsed flag has changed, only the affected records have their indexes updated, reducing the time required to run this function.

Warning! These operations take place in a separate transaction from the page's save status: the initiation of any of these operations immediately changes the definitions, even if the page is subsequently cancelled.

Parameters

StringFieldArray Specify an array of field names (as strings), such as DEPTID, representing the fields whose NotUsed flag has been modified. Only the records containing these fields are updated.

If you do not specify a value for this parameter, the indexes for *all* records are rebuilt.

Returns

A constant value. The values are:

Value	*Description*
%MDA_Success	Bulk operation completed successfully.
%MDA_Failure	Bulk operation did not complete successfully.

Example

The following example uses the function without the optional array of field names:

```
&ret =  BulkUpdateIndexes();
If (&ret = %MDA_Success) Then
MessageBox(0, "MetaData Fn Status", 0, 0, "BulkUpdateIndexes succeeded");
Else
MessageBox(0, "MetaData Fn Status", 0, 0, "BulkUpdateIndexes failed");
End-If;
```

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The following example uses the function with an array of two field names passed to it:

```
&ret =  BulkUpdateIndexes(CreateArray("DEPTID","PROJECT"));
If (&ret = %MDA_success) Then
MessageBox(0, "MetaData Fn Status", 0, 0, "BulkUpdateIndexes succeeded");
Else
MessageBox(0, "MetaData Fn Status", 0, 0, "BulkUpdateIndexes failed");
End-If;
```

Related Links

BulkDeleteField

BulkInsertField

BulkModifyPageFieldOrder

PeopleCode Built-in Functions and Language Constructs: C

The PeopleCode built-In functions and language constructs beginning with the letter C are listed in alphabetical order within this topic.

Related Links

Typographical Conventions

CallAppEngine

Syntax

CallAppEngine(*applid*[, *statereclist*, *processinstance*, *allowcommit*])

Where *statereclist* is list of record objects in the form:

&staterecord1 [, *&staterecord2*] . . .

There can be only as many record objects in *statereclist* as there are state records for the Application Engine program. Additional record objects are ignored.

Description

Use the CallAppEngine function to start the Application Engine program named *applid*. This is how to start your Application Engine programs synchronously from a page. (Prior to PeopleTools 8, you could do only this using the RemoteCall function.) Normally, you won't run Application Engine programs from PeopleCode in this manner. Rather, the bulk of your Application Engine execution will be run using the Process Scheduler, and the exception would be done using CallAppEngine.

The *staterecord* can be the hard-coded name of a record, but generally you use a record object to pass in values to seed particular state fields. The record name must match the state record name exactly.

The *processinstance* allows you to specify the process instance used by the Application Engine runtime. In your PeopleCode program this parameter must be declared of type integer since that is the only way the runtime can tell whether the last parameter is to be interpreted as a process instance. For more details see the Application Engine documentation.

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After you use CallAppEngine, you may want to refresh your page. The Refresh method, on a rowset object, reloads the rowset (scroll) using the current page keys. This causes the page to be redrawn. `GetLevel0().Refresh()` refreshes the entire page. If you want only a particular scroll to be redrawn, you can refresh just that part.

Note: If you supply a non-zero process instance, all message logging is done under the process instance. You *must* build your own PeopleSoft Pure Internet Architecture page to access or delete the messages, since there is no Process Monitor entry for the process instance you used.

PeopleCode Event Considerations

You must include the CallAppEngine PeopleCode function within events that allow database updates because generally, if you’re calling Application Engine, you’re intending to perform database updates. This includes the following PeopleCode events:

- SavePreChange (Page)
- SavePostChange (Page)
- Workflow
- FieldChange

If CallAppEngine results in a failure, all database updates is rolled back. All information the user entered into the component is lost, as if the user pressed ESC.

Application Engine Considerations

You can also use the CallAppEngine function in a Application Engine program, either directly (in a PeopleCode action) or indirectly (using a Component Interface). This functionality must be used carefully, and you should only do this once you have a clear understanding of the following rules and restrictions.

- Dedicated cursors are *not* supported inside a "nested application engine instance" (meaning an application engine program invoked using CallAppEngine from within another application engine program). If a nested application engine instance has any SQL actions with ReUse set to Yes or Bulk Insert, those settings are ignored.
- As in any other type of PeopleCode event, no commits are performed within the called application engine program. This is an important consideration. If a batch application engine program called another program using CallAppEngine, and that child program updated many rows of data, the unit-of-work might become too large, resulting in contention with other processes. A batch application engine program should invoke such child programs using a Call Section action, not CallAppEngine.
- Temp tables are *not* shared between a batch application engine program and child program invoked using CallAppEngine. Instead, the child program is assigned an "online" temporary table instance, which is used for all temp tables in that program. In addition, if that child program invokes another program using CallAppEngine, that grandchild shares the online temp instance with the caller. In other words, only one online temp instance is allocated to a process at any one time, no matter how many nested CallAppEngine's there might be.
- The lock on an online temp instance persists until the next commit. If the processing time of the called program is significant (greater than a few seconds), this would be unacceptable. As a general rule, application engine programs that make use of temp tables and have a significant processing

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time should be called from other application engine programs using a Call Section action, not CallAppEngine.

See "Using PeopleCode in Application Engine Programs" (PeopleTools 8.54: Application Engine).

Save Events Considerations

To execute the Application Engine program based on an end user Save, use the CallAppEngine function within a Save event. When you use CallAppEngine, you should keep the following items in mind:

- No commits occur during the entire program run.
- During SavePreChange, any modified rows in the page have not been written to the database.
- During SavePostChange, the modified rows have been written to the database. The Page Process issues one commit at the end of the Save cycle.

FieldChange Considerations

If you don't want the CallAppEngine call to depend on a Save event, you can also initiate CallAppEngine from a FieldChange event. When having a FieldChange event initiate CallAppEngine, keep the following items in mind:

- No commits occur within the program called by CallAppEngine. The called program remains a synchronous execution in the same unit of work.
- The Component Processor commits all updates done in a FieldChange at the end of the event, which frees any locks that the Application Engine program might have acquired.
- Do not include a DoSave function in the same FieldChange event. Not only is this not allowed, but it also indicates that you should be including the CallAppEngine within a Save event.
- You can use the DoSaveNow function in the same FieldChange event, but it must be called prior to the first CallAppEngine function, but not afterward.

Parameters

applid

Specify the name of the Application Engine program you want to start.

statereclist

Specify an optional record object that provides initial values for a state record.

processinstance

Specify the process instance used by the Application Engine runtime.

allowcommit

Specify an optional Boolean value indicating whether intermediate commits are allowed. If omitted, *allowcommit* defaults to False.

Intermediate commits of only the transactions that are related to the Application Engine program use a secondary connection to the database. Before invoking CallAppEngine with intermediate commits, the secondary connection to the database for that application server domain must be enabled using the database

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flags (DbFlags) in the application server configuration file. Note that the secondary connections are enabled by default. If the secondary connection to the database is disabled and CallAppEngine is invoked with *allowcommit* set to True, the functionality will fall back to the default where all transactions are committed only at the end of an Application Engine program.

See "PSTOOLS Options" (PeopleTools 8.54: System and Server Administration)

Returns

None.

Example

The following calls the Application Engine program named MYAPPID, and passes initialization values.

```
&REC = CreateRecord(RECORD.INIT_VALUES);
&REC.FIELD1.Value = "XYZ";
   /* set the initial value for INIT_VALUES.FIELD1 */
CallAppEngine("MYAPPID", &REC);
```

Related Links

DoSaveNow

"Understanding the AESection Class" (PeopleTools 8.54: PeopleCode API Reference)

"Refresh" (PeopleTools 8.54: PeopleCode API Reference)

"Running Application Engine Programs" (PeopleTools 8.54: Application Engine)

"Specifying Call Section Actions" (PeopleTools 8.54: Application Engine)

CancelPubHeaderXmlDoc

Syntax

CancelPubHeaderXmlDoc(*PubID, PubNode, ChannelName, VersionName*)

Description

Use the CancelPubHeaderXmlDoc function to programmatically cancel the message header of a publication contract, much the same as you can do in the message monitor.

Note: This function has been deprecated and remains for backward compatibility only. Use the IntBroker class Cancel method instead.

The message header, also known as the message instance, is the published message *before* the system performs any transformations.

The function is only available when the message has one of the following statuses:

- Error

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- New
- Retry
- Timeout
- Edited

Related Links

"IntBroker Class Methods" (PeopleTools 8.54: PeopleCode API Reference)

Parameters

PubID	Specify the PubID of the message.
PubNode	Specify the Pub Node Name of the message.
ChannelName	Specify the channel name of the message.
VersionName	Specify the version name of the message.

Returns

A Boolean value: True if the function completed successfully, False otherwise.

Related Links

ReSubmitPubHeaderXmlDoc

CancelPubXmlDoc

Syntax

```
CancelPubXmlDoc(PubID, PubNode, ChannelName, VersionName, MessageName, SubNode[,
Segment])
```

Description

Use the CancelPubXmlDoc function to programmatically cancel a message publication contract, much the same as you can do in the message monitor.

Note: This function has been deprecated and remains for backward compatibility only. Use the IntBroker class Cancel method instead.

This is the publication contract that exists *after* any transformations have been preformed.

The function is only available when the message has one of the following statuses:

- Error
- New
- Retry

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- Timeout
- Edited

Related Links

"IntBroker Class Methods" (PeopleTools 8.54: PeopleCode API Reference)

Parameters

PubID	Specify the PubID of the message.
PubNode	Specify the Pub Node Name of the message.
ChannelName	Specify the channel name of the message.
VersionName	Specify the version name of the message.
MessageName	Specify the name of the message.
SubNode	Specify the subnode of the message.
Segment	Specify an integer representing which segment you want to access. The default value is one, which means that if you do not specify a segment, the first segment is accessed.

Returns

A Boolean value: True if the function completed successfully, False otherwise.

Related Links

ReSubmitPubXmlDoc

CancelSubXmlDoc

Syntax

```
CancelSubXmlDoc(PubID, PubNode, ChannelName, VersionName, MessageName,
SubscriptionName[, Segment])
```

Description

Use the CancelSubXmlDoc function to programmatically cancel a message subscription contract, much the same as you can do in the message monitor.

Note: This function has been deprecated and remains for backward compatibility only. Use the IntBroker class Cancel method instead.

The function is only available when the message has one of the following statuses:

- Error
- New

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- Retry
- Timeout
- Edited

Related Links

"IntBroker Class Methods" (PeopleTools 8.54: PeopleCode API Reference)

Parameters

PubID	Specify the PubID as a string.
PubNode	Specify the Pub Node name as a string.
ChannelName	Specify the Channel name as a string.
VersionName	Specify the version name as a string.
MessageName	Specify the message name as a string.
SubscriptionName	Specify the subscription name as a string.
Segment	Specify an integer representing which segment you want to access. The default value is one, which means that if you do not specify a segment, the first segment is accessed.

Returns

A Boolean value: True if function completed successfully, False otherwise.

Related Links

ReSubmitSubXmlDoc

ChangeEmailAddress

Syntax

ChangeEmailAddress(*Type*, *Address*)

Description

Use the ChangeEmailAddress function to change the type of an email address that you've already added for the current user. You can only have *one* email address of a specific type for a user. If you try to use a type that already has an email address associated with it, you receive an error.

Parameters

Type	Specify the type that you want to change the email address to. This parameter takes a string value. The valid values are:

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Value	*Description*
BB	Blackberry email address
BUS	Business email address
HOME	Home email address
OTH	Other email address
WORK	Work email address

Address Specify the email address that you want to add as a string.

Returns

None.

Related Links

AddEmailAddress
DeleteEmailAddress
MarkPrimaryEmailAddress

Char

Syntax

Char(*n*)

Description

Use the Char function to convert a decimal numeric value *n* to the corresponding Unicode character.

Parameters

n The numeric value to be expressed as a decimal Unicode value.

Returns

Returns a string representing the Unicode character corresponding to the number *n*.

Example

This example sets three strings:

```
&STRING1 = Char(80) | Char(83);
&STRING2 = Char(26085) | Char(26412);
&STRING3 = Char(55362) | Char(56697);
```

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The following table shows the Unicode hexadecimal code points and the string equivalents for these calls to the Char function:

Variable	*Char (Decimal)*	*Unicode Code Points*	*String*
&STRING1	Char(80) | Char(83)	U+0050, U+0053	PS
&STRING2	Char(26085) | Char(26412)	U+65E5, U+672C	日本
&STRING3*	Char(55362) | Char(56697)	U+D842 U+DD79	*A single Chinese character*

* The single character in &STRING3 signifies a non-BMP, UTF-32 character (U+20979), which is represented by the UTF-16 surrogate pair (U+D842 U+DD79). This single Chinese character has been omitted from this example.

For reference, Unicode character charts are available from The Unicode Consortium.

See Unicode 6.2 Character Code Charts.

Related Links

Code
String
%Substring

CharType

Syntax

CharType(*source_str, char_code*)

Description

Use the CharType function to determine whether the first character in *source_str* is of type *char_code* . The *char_code* parameter is a numeric value representing a character type (see the following Parameters section for details). Most character types supported by this function equate to specific Unicode character blocks or are based on Unicode character properties.

Related Links

"Understanding Character Sets" (PeopleTools 8.54: Global Technology)

Parameters

source_str A String, the first character of which will be tested.

char_code A Number representing the character type to be tested for.

The following table shows valid values for *char_code*. You can specify either a Character Code or a Constant:

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Numeric Value	*Constant*	*Character Set*
0	%CharType_AlphaNumeric	Basic Latin — Alphanumeric (printable range of 7-bit US-ASCII), Unicode characters in the range U+0020 — U +007E
1	%CharType_ExtendedLatin1	Extended Latin-1 characters (ISO 8859-1 accents for Western European languages), Unicode characters in the range U+00BF — U+07E
2	%CharType_HankakuKatakana	Hankaku Katakana (half-width Japanese Katakana)
3	%CharType_ZenkakuKatakana	Zenkaku Katakana (full-width Japanese Katakana)
4	%CharType_Hiragana	Hiragana (Japanese)
5	%CharType_Kanji	Chinese, Japanese and Korean ideographic characters. Includes Japanese Kanji, Chinese Hanzi and Korean Hancha.
6	%CharType_DBAlphaNumeric	Full-width Latin Alphanumeric characters, primarily used for Japanese. Excludes
7	None	Korean Hangul syllables, excluding Hangul Jamo.
8,9	None	Reserved for future use.
10	%CharType_JapanesePunctuation	Full- and half-width punctuation, including space (U+0020) and Fullwidth / Ideographic Space (U+3000).
11	None	Greek
12	None	Cyrillic
13	None	Armenian
14	None	Hebrew
15	None	Arabic
16	None	Devanagari

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Numeric Value	*Constant*	*Character Set*
17	None	Bengali
18	None	Gurmukhi
19	None	Gujarati
20	None	Oriya
21	None	Tamil
22	None	Telugu
23	None	Kannada
24	None	Malayalam
25	None	Thai
26	None	Lao
27	None	Tibetan
28	None	Georgian
29	None	Bopomofo

Returns

CharType returns one of the following Number values. You can check for the constant values instead of the numeric values if you prefer:

Numeric Value	*Constant Value*	*Description*
1	%CharType_Matched	Character is of type *char_code*.
0	%CharType_NotMatched	Character is not of type *char_code.*
-1	%CharType_Unknown	UNKNOWN: unable to determine whether character is of set *char_code.* This occurs if the character being checked is an unallocated Unicode codepoint, or was added in a version of Unicode greater than that supported by PeopleTools.

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Example

This example tests to see if a character is Hiragana:

```
&ISHIRAGANA = CharType(&STRTOTEST, %CharType_Hiragana);
If &ISHIRAGANA = 1 Then
   WinMessage("Character type is Hiragana");
Else
   If &ISHIRAGANA = 0 Then
      WinMessage("Character type is not Hiragana");
   Else
      WinMessage("Character type is UNKNOWN");
   End-If;
End-If;
```

Related Links

ContainsCharType

ContainsOnlyCharType

ConvertChar

"Understanding Character Sets" (PeopleTools 8.54: Global Technology)

ChDir

Syntax

ChDir(*path*)

Description

Use the ChDir function to change the current directory on a drive. This is similar to the DOS ChDir command. The drive and the directory are both specified in a *path* string.

Note: This function has been deprecated.

ChDrive

Syntax

ChDrive(*str_dr*)

Description

Use the ChDrive function to change the current disk drive to the drive specified by *str_dr*, which is a string consisting of a valid drive letter followed by a colon, for example "C:".

Note: This function has been deprecated.

CheckMenuItem

Syntax

CheckMenuItem(**BARNAME.***menubar_name*, **ITEMNAME.***menuitem_name*)

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Description

Use the CheckMenuItem function to change the menu state by placing a check mark beside the menu item.

Note: This function has been deprecated.

ChunkText

Syntax

ChunkText(*string*, *delimiter* [, *chunk_size*])

Description

Use the ChunkText function to break a long text string into chunks that can be more readily managed by a storage system, such as a database text field. You must specify a string delimiter; the chunk size is optional.

Parameters

string	Specify the text to be split into chunks as a string.
delimiter	Specify a single character as a text delimiter.
chunk_size	Specify the chunk size in characters as a number. If you specify no value, 0, or a number greater than 14000, the default value of 14000 is used.

Returns

An array of string.

Example

```
Local array of string &chunkList;

&STRINGTOCHUNK = "NewYorkNewYorkNewYorkNewYorkNewYorkNewYorkNewYorkNewYorkNewYorkNe⇒
wYorkNewYorkNewYorkNewYorkNewYorkNewYorkNewYork";
&DELIM = "r";
&CHUNKSIZE = 8;

&chunkList = ChunkText(&STRINGTOCHUNK, &DELIM, &CHUNKSIZE);
```

The preceding example produces the following 16 chunks:

```
[NewYor][kNewYor][kNewYor][kNewYor][kNewYor][kNewYor][kNewYor][kNewYor][kNewYor][kN⇒
ewYor][kNewYor][kNewYor][kNewYor][kNewYor][kNewYor][kNewYork]
```

Related Links

DeChunkText

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Clean

Syntax

Clean(*string*)

Description

Use the Clean function to remove all non-printable characters, such as control codes, end of line marks, and unpaired Unicode combining marks, from a text *string* and return the result as a String value. It is intended for use on text imported from other applications that contains characters that may not be printable. Frequently, low-level characters appear at the beginning and end of each line of imported data, and they cannot be printed.

Note: All white space characters (for example, a blank space, a tab, a carriage return, and so on) are deemed printable. Therefore, they are not be removed by the Clean function.

Parameters

string	Specifies the text to be cleaned as a string.

Returns

Returns a String value purged of non-printable characters.

Example

Because `Char(7)` (U+0007) is a non-printable character, the following Clean function returns a null string:

```
&CLEANSTR = Clean(Char(7));
```

Related Links

Char
String
%Substring

CleanAttachments

Syntax

CleanAttachments(([*PreserveCaseHint*])

Description

Use the CleanAttachments function to delete all unreferenced (orphaned) files from database tables serving as file storage locations.

Note: CleanAttachments operates only on database tables that have been used as file attachment storage locations, and not on FTP sites or HTTP repositories.

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Warning! There is no way to roll back changes made by the CleanAttachments function. Oracle recommends that you perform a database backup before invoking this function.

It is important that you understand how the system determines that a file is unreferenced, and how it determines which tables contain file attachments.

CleanAttachments compiles two lists:

- List 1: A list of file references that is constructed by finding all the distinct values in the ATTACHSYSFILENAME column in each table with a record definition that contains the FILE_ATTACH_SBR subrecord (at any level). Any file not in this list is considered not referenced (orphaned).
- List 2: A list of actual stored files that is constructed by finding the distinct values in the ATTACHSYSFILENAME column in each table with a record definition that contains the FILE_ATTDET_SBR subrecord at the top level.

The system deletes any file that appears in the second list, but not in the first, after having determined the effect of the optional *PreserveCaseHint* parameter.

Note: A table is only considered to contain file references if its associated record contains the FILE_ATTACH_SBR subrecord (at any level). If an application has stored file references in tables that do not contain the FILE_ATTACH_SBR subrecord, and you invoke the CleanAttachments function, then all the files uploaded to the database through that application will be deleted because the files will not be found in list 1 and the system therefore regards them as unreferenced.

Similarly, the FILE_ATTDET_SBR subrecord must be at the top level of the table that contains the actual attachments or the table will be ignored by CleanAttachments. In this case, CleanAttachments does not find any files to delete and does nothing at all.

To schedule a regular job to clean up orphaned file attachments, you can use the CLEANATT84 Application Engine program, which can be executed from the Delete Orphan Files (Batch) page. See "Delete Orphan Files (Batch)" (PeopleTools 8.54: System and Server Administration) for more information.

Alternatively, you can use the Manage Attachment Repositories page to execute CleanAttachments directly in a synchronous manner. See “Deleting Orphan Attachments” in "Manage Attachment Repositories" (PeopleTools 8.54: System and Server Administration) for more information.

Important! Executing CleanAttachments directly in a synchronous manner may result in a timeout if the number of file attachments to be processed is large. Therefore, Oracle recommends that you use the batch processing interface instead.

Parameters

PreserveCaseHint

An optional integer parameter that provides the CleanAttachments function with a hint about how the *PreserveCase* parameter was used when the files were originally uploaded—that is, whether the *PreserveCase* parameter was True, False, or a mix of the two.

The default value is %CleanAttach_Default (a mix of the two).

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For *PreserveCaseHint*, specify one of the following constant values:

Numeric Value	***Constant Value***	***Description***
0	%CleanAttach_Default	Indicates that the comparison is to be performed as if *PreserveCase* were True when some of the files were uploaded to this database and False for others. Therefore, a file in list 2 (actual stored files) is retained if it would have been retained had *PreserveCaseHint* been specified as either %CleanAttach _PreserveCase or %CleanAttach_ NoPreserveCase. Otherwise, the file is considered an orphan and is deleted.
1	%CleanAttach_PreserveCase	Indicates that the comparison is to be performed as if *PreserveCase* were True when all the files were uploaded to this database. Therefore, the comparison between list 1 and list 2 requires an exact match of the file name including its file extension. Any files in list 2 (actual stored files) that do not have an exact match in list 1 (names of referenced files) are deleted.
2	%CleanAttach_NoPreserveCase	Indicates that the comparison is to be performed as if *PreserveCase* were False when all the files were uploaded to this database. Therefore, the comparison between list 1 and list 2 will be performed only after the file extension of each file in list 1 is lowercased. Any files in list 2 (actual stored files) that do not have an exact match in list 1 (names of referenced files) after lowercasing the file extension in list 1 are deleted.

The following table summarizes the action of CleanAttachments on five different stored files depending on the values found in the file reference table and depending on the value of the optional PreserveCaseHint parameter. CleanAttachments will either retain or delete the file from the file storage tables.

System File Name in File Storage Tables (List 2)	***System File Name in File Reference Tables (List 1)***	***PreserveCaseHint = %CleanAttach_ Default***	***PreserveCaseHint = %CleanAttach_ PreserveCase***	***PreserveCaseHint = %CleanAttach_ NoPreserveCase***
file1.txt	file1.txt	Retain	Retain	Retain
file2.txt	file2.TXT	Retain	Delete	Retain

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System File Name in File Storage Tables (List 2)	***System File Name in File Reference Tables (List 1)***	***PreserveCaseHint = %CleanAttach_ Default***	***PreserveCaseHint = %CleanAttach_ PreserveCase***	***PreserveCaseHint = %CleanAttach_ NoPreserveCase***
file3.TXT	file3.TXT	Retain	Retain	Delete
file4.TxT	file4.TXT *or* file4.txt	Delete	Delete	Delete
file5.txt	*none found*	Delete	Delete	Delete

Returns

An integer value. You can check for either an integer or a constant value:

Note: Because CleanAttachments is designed to work with multiple files, to track errors when using CleanAttachments set your PeopleCode trace to 2112 and your SQL trace to 15 so that errors will be written to the appropriate trace files.

Numeric Value	***Constant Value***	***Description***
0	%Attachment_Success	Files were deleted successfully.

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Numeric Value	*Constant Value*	*Description*
1	%Attachment_Failed	Files were not deleted successfully. The following are some possible situations where %Attachment_Failed could be returned: • Failed to initialize the process due to some internal error. • Failed due to unexpected/bad reply from server. • Failed to allocate memory due to some internal error. • Failed due to timeout. • Failed due to non-availability of space on FTP server. • Failed to close SSL connection. • Failed due to an unspecified error on the HTTP repository. If the HTTP repository resides on a PeopleSoft web server, then you can configure tracing on the web server to report additional error details. See "Debugging File Attachment Problems" (PeopleTools 8.54: PeopleCode Developer's Guide).

Example

```
&retcode = CleanAttachments(%CleanAttach_PreserveCase);
```

Related Links

"Debugging File Attachment Problems" (PeopleTools 8.54: PeopleCode Developer's Guide)
CopyAttachments
DeleteAttachment
DetachAttachment
GetAttachment
MAddAttachment
PutAttachment
ViewAttachment
"Understanding the File Attachment Functions" (PeopleTools 8.54: PeopleCode Developer's Guide)

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ClearKeyList

Syntax

ClearKeyList()

Description

Use the ClearKeyList function to clear the current key list. This function is useful for programmatically setting up keys before transferring to another component.

Returns

Optionally returns a Boolean value indicating whether the function succeeded.

Example

The following example sets up a key list and then transfers the user to a page named PAGE_2.

```
ClearKeyList( );
AddKeyListItem(OPRID, OPRID);
AddKeyListItem(REQUEST_ID, REQUEST_ID);
SetNextPage("PAGE_2");
TransferPage( );
```

Related Links

AddKeyListItem

ClearSearchDefault

Syntax

ClearSearchDefault([*recordname*.]*fieldname*)

Description

Use the ClearSearchDefault function to disable default processing for the specified field, reversing the effects of a previous call to the SetSearchDefault function.

Note: This function remains for backward compatibility only. Use the SearchDefault Field class property instead.

If search default processing is cleared for a record field, the default value specified in the record field properties for that field will not be assigned when the field appears in a search dialog box. This function is effective only when used in SearchInit PeopleCode.

Related Links

"SearchDefault" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide)

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Parameters

[*recordname* .]*fieldname*	The name of the target field, which is a search key or alternate search key that is about to appear in a search dialog box. You must supply the *recordname* only if the record field and your PeopleCode program are in different locations.

Returns

Optionally returns a Boolean value indicating whether the function succeeded.

Related Links

ClearSearchEdit
SetSearchDefault
SetSearchEdit
SetSearchDialogBehavior
"Search Processing in Update Modes" (PeopleTools 8.54: PeopleCode Developer's Guide)

ClearSearchEdit

Syntax

```
ClearSearchEdit([recordname.]fieldname)
```

Description

Use the ClearSearchEdit function to reverse the effects of a previous call to the SetSearchEdit function. If ClearSearchEdit is called for a specific field, the edits specified in the record field properties will not be applied to the field when it occurs in a search dialog.

Note: This function remains for backward compatibility only. Use the SearchEdit Field class property instead.

Related Links

"SearchEdit" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

[*recordname* .]*fieldname*	The name of the target field, which is a search key or alternate search key about to appear in a search dialog box. The *recordname* prefix is not required if the program that calls ClearSearchEdit is on the *recordname* record definition.

Returns

Optionally returns a Boolean value indicating whether the function succeeded.

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Related Links

SetSearchEdit
SetSearchDefault
ClearSearchDefault
SetSearchDialogBehavior
"Search Processing in Update Modes" (PeopleTools 8.54: PeopleCode Developer's Guide)

Code

Syntax

Code(*str*)

Description

Use the Code function to return the numerical Unicode UTF-16 value for the first character in the string *str*. (Normally you would pass this function a single character.) If the string starts with a non-BMP Unicode character, the value returned will be that of the Unicode high surrogate of the character (the first value of the surrogate pair).

Returns

Returns a Number value equal to the character code for the first character in *str*:

Related Links

Char
String
%Substring

Codeb

Syntax

Codeb(*str*)

Description

Note: This function has been deprecated and is no longer supported.

Related Links

Code

CollectGarbage

Syntax

CollectGarbage()

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Description

Use the CollectGarbage function to remove any unreachable application objects created by the Application Classes.

Sometimes there may be unrecoverable application objects that are can no longer be referenced from PeopleCode, but which have not been reclaimed and so are still taking up computer memory. Generally this situation arises only if you have application objects that form into loops of references.

This function is automatically invoked by the application server as part of its end-of-service processing, so generally you do not need to call it for online applications. However, in Application Engine (batch), it is possible that a long-running batch job could grow in memory usage over time as these unreferencable Application Objects accumulate. The solution to such a problem is to call CollectGarbage periodically to reclaim these objects.

Parameters

None.

Returns

None.

Related Links

"Understanding Application Classes" (PeopleTools 8.54: PeopleCode API Reference)

CommitWork

Syntax

`CommitWork``()`

Description

Use the CommitWork function to commit pending changes (inserts, updates, and deletes) to the database.

Considerations for Using CommitWork

The following are the considerations for using CommitWork.

- This function is available in Application Engine PeopleCode, the FieldChange and SavePreChange events. If you use it anywhere else, you'll receive a runtime error.
- When used with an Application Engine program, this function only applies to those Application Engine programs that run in batch (not online). If the program is invoked using the CallAppEngine function, the CommitWork call is ignored. The same is true for commit settings at the section or step level.
- This function can only be used in an Application Engine program that has restart disabled. If you try to use this function in a program that doesn't have restart disabled, you'll receive a runtime error.
- Component interfaces that rely on CommitWork to save data cannot be used in the Excel to Component Interface utility.

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- When CommitWork is called in the context of a component interface (such as, during a SavePreChange PeopleCode program that's associated with the component), if the caller of the component interface already has an open cursor (such as an active SQL object) the Commit does *not* take effect immediately, but only when the last cursor is closed.

See CallAppEngine.

FieldChange and SavePreChange Considerations

The following are the FieldChange and SavePreChange considerations:

- All updates done in FieldChange (including those using CallAppEngine) should be considered a *single database transaction*. This is a fundamental change: previously, a single transaction was represented by a page or a component.
- A consequence of this is that a message requiring a reply, or any other think-time action, causes a *fatal* error if located in FieldChange *after* a database update that has *not* been committed to the database using the CommitWork function. So it is possible for an application to update the database in FieldChange, then do a think-time action, by preceding the think-time action with a call to CommitWork.
- CommitWork commits the updates and closes the database transaction (that is, the unit of work). The consequence of using CommitWork is that because it closes the database transaction, any subsequent rollback calls will *not* rollback the committed updates.
- Just as any database updates in FieldChange required careful application design to ensure that the transaction model is appropriate, so too does the use of CommitWork.
- When using CommitWork in the Component Processor environment (as opposed to using it in an Application Engine program) CommitWork produces an error if there are any open cursors, such as any open PeopleCode SQL objects.

See "FieldChange Event" (PeopleTools 8.54: PeopleCode Developer's Guide).

Application Engine Considerations

The CommitWork function is useful only when you are doing row-at-a-time SQL processing in a single PeopleCode program, and you must commit without exiting the program. In a typical Application Engine program, SQL commands are split between multiple Application Engine actions that fetch, insert, update, or delete application data. Therefore, you would use the section or step level commit settings to manage the commits. This is the recommended approach.

However, with some types of Application Engine programs that are PeopleCode intensive, it can be difficult to exit the PeopleCode in order to perform a commit. This is the only time when the CommitWork function should be used.

See "Restarting Application Engine Programs" (PeopleTools 8.54: Application Engine).

Restart Considerations

Disabling restart on a particular program means that the application *itself* is intrinsically self-restartable: it can be re-run from the start after an abend, and it performs any initialization, cleanup, and filtering of input data to ensure that everything gets processed once and only once, and that upon successful completion, the database is in the same state it would have been if no abend occurred.

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Set-based applications should always use Application Engine's restart. Only row-by-row applications that have restart built into them can benefit from disabling Application Engine's restart.

Consider the following points to managing restarts in a self-restarting program:

- Locking input transactions (optional).

  If the input data can change, and if it's important not to pick up new data during a restart, there should be logic to lock transactions at the start of the initial run (such as updating rows with current Process Instance). The program should first check whether any rows have the current Process Instance (that is, is the process being restarted from the top after an abend?). If no rows found, do the update.

  In some cases it is acceptable for a restarted process to pick up new rows, so that locking is not necessary. It depends on your application.

  Also, if you do not lock transactions, you must provide some other way to manage concurrent processing of the same program. You do not want two simultaneous runs of the same program to use the same data, so you must have some strategy for dividing up the data such that there is no overlap.

- Filtering input transactions (required).

  After an input transaction is processed, the row should be updated accordingly (that is, setting a "processed" flag). The SELECT statement that drives the main processing loop should include a WHERE condition to filter out rows that have already been processed.

Returns

A Boolean value, True if data was successfully committed, False otherwise.

Example

The following example fetches rows and processes them one at a time, committing every 100 iterations. Because restart is disabled, you must have a marker indicating which rows have been processed, and use it in a conditional clause that filters out those rows.

```
Local SQL &SQL;
Local Record &REC;
Local Number &COUNT;

&REC = CreateRecord(RECORD.TRANS_TBL);
&SQL = CreateSQL("%SelectAll(:1) WHERE PROCESSED <> 'Y'");
&COUNT = 0;

&SQL.Execute(&REC);
While &SQL.Fetch(&REC)
   If (&COUNT > 99) Then
      &COUNT = 0;
      CommitWork();   /* commit work once per 100 iterations */
   End-if;
   &COUNT = &COUNT + 1;
   /* do processing */
   ...

   /* update transaction as "processed" */
   &REC.PROCESSED.Value = 'Y';
   &REC.Update();
End-While;
```

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Related Links

"Using PeopleCode in Application Engine Programs" (PeopleTools 8.54: Application Engine)

CompareLikeFields

Syntax

```
CompareLikeFields(from, to)
```

where *from* and *to* are constructions that reference rows of data on specific source and target records in the component buffer; each have the following syntax:

```
level, scrollpath, target_row
```

and where *scrollpath* is:

```
[RECORD.level1_recname, level1_row, [RECORD.level2_recname, level2_row, ]]
RECORD.target_recname
```

To prevent ambiguous references, you can use **SCROLL.** *scrollname*, where *scrollname* is the same as the scroll level's primary record name.

Description

Use the CompareLikeFields function to compare fields in a row on a specified source record to similarly named fields on a specified target record.

Note: This function remains for backward compatibility only. Use the CompareFields record class method instead.

If all of the like-named fields have the same data value, CompareLikeFields returns True; otherwise it returns False.

Related Links

"Record Class Methods" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide), "Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

from	A placeholder for a construction (*level*, *scrollpath*, *target_row*) that references the first row in the comparison.
to	A placeholder for a construction (*level, scrollpath, target_row*) that references the second row in the comparison.
level	Specifies the scroll level for the target level scroll.
scrollpath	A construction that specifies a scroll level in the component buffer.
target_row	Specifies the row number of each target row on its scroll level.

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Returns

Returns a Boolean value indicating whether all of the like-named fields in the two records have the same data value.

Example

The following example compares the like-named fields in two rows on levels 1 (&L1_ROW) and 2 (&L2_ROW) and returns True if all of the like-named fields in the two rows have the same value.

```
&L1_ROW = 1;
&L2_ROW = 1;
if CompareLikeFields(1, RECORD.BUS_EXPENSE_PER, &L1_ROW, 2, RECORD.BUS_EXPENSE_PER,⇒
 1, RECORD.BUS_EXPENSE_DTL, &L2_ROW) then
   WinMessage("The fields match.");
end-if;
```

Related Links

CopyFields

CompareStrings

Syntax

CompareStrings(*new_text*, *old_text* [, *content_type* [, *delimiter*]])

Description

Use the CompareStrings function to compare the content of *new_text* with the content of *old_text* and return an XML-formatted text string detailing the differences between the two strings.

The XML string indicates the type of change for each line or text segment, based on the delimiter, as shown in the following table:

Notation	***Description***
None	Both lines are the same
Insert	A line is present in *new_text* that is not in *old_text*.
Delete	A line is absent in *new_text* that is present in *old_text*.
Change	A change in a line shows as an Insert in *new_text* and a Delete in *old_text*.

Parameters

new_text Specifies the string that you want to compare with the old version of the string.

old_text Specifies the old version of the string for comparison.

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content_type

Specifies the content type as a literal: text or html. This parameter is optional.

If *content_type* is html, HTML tags are stripped and are not included in the comparison.

If content_type is not specified, it is set by default to text.

delimiter

An array of string specifying the delimiters to be used to split the content for comparison. This parameter is optional.

If *content_type* is text and delimiter is not specified, the delimiter is set by default to char(13) (or \n, a carriage return).

If *content_type* is html and delimiter is not specified, the delimiter array is populated by default with the following values:

```
["</p>", "</br>", "</h1>", "</h2>", "</h3>", "</
h4>", "</h5>", "</h6>", "</div>", "</address>",
 "</pre>", "</br>", "</tr>", "</caption>", "</
blockquote>"]
```

Returns

Returns a String in XML format showing the differences between the two input strings.

Example

This example shows a comparison of two text strings.

The variable &NewText contains the following string:

```
Line 2.
Line 2.1.
Line 2.2.
Line 3.
Line 5.
Line 6.
Line 8.
```

The variable &OldText contains the following string:

```
Line 1.
Line 2.
Line 3.
Line 4.
Line 7.
```

The following PeopleCode statement compares the two ASCII-formatted text strings, &NewText and &OldText.

```
&OutputXML = CompareStrings(&NewText, &OldText, "Text");
```

The string variable &OutputXML contains the following text:

```
<?xml version="1.0" encoding="UTF-8" standalone="no" ?>
<CompareReport ContentType="text" Delimitter="&#xA;">
 <FileContent Difference="Deleted">
  <Line Num="1">
   <LineContent>Line 1.</LineContent>
```

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```
  </Line>
 </FileContent>
 <FileContent Difference="None">
  <Line Num="1" OldLineNum="2">
   <LineContent>Line 2.</LineContent>
  </Line>
 </FileContent>
 <FileContent Difference="Inserted">
  <Line Num="2">
   <LineContent>Line 2.1.</LineContent>
  </Line>
  <Line Num="3">
   <LineContent>Line 2.2.</LineContent>
  </Line>
 </FileContent>
 <FileContent Difference="None">
  <Line Num="4" OldLineNum="3">
   <LineContent>Line 3.</LineContent>
  </Line>
 </FileContent>
 <FileContent Difference="Changed">
  <OldLine Num="4">
   <LineContent>Line</LineContent>
   <LineContent Changed="Deleted">4.</LineContent>
  </OldLine>
  <Line Num="4">
   <LineContent>Line</LineContent>
   <LineContent Changed="Inserted">5.</LineContent>
  </Line>
  <OldLine Num="5">
   <LineContent>Line</LineContent>
   <LineContent Changed="Deleted">7.</LineContent>
  </OldLine>
  <Line Num="5">
   <LineContent>Line</LineContent>
   <LineContent Changed="Inserted">6.</LineContent>
  </Line>
 </FileContent>
 <FileContent Difference="Inserted">
  <Line Num="7">
   <LineContent>Line 8.</LineContent>
  </Line>
 </FileContent>
</CompareReport>
```

This example shows a comparison of two HTML strings.

The variable &NewHTML contains the following string:

```
<p><H1>peoplesoft<B>file<B> difference utility
<I>Peopletools<I> Release &lt;6 and &gt;5 </H1></p>
<p> &lt;BOLD&gt;Hello world<ITALIC></p>
```

The variable &OldHTML contains the following string:

```
<p><H1>peoplesoft<B>file<B>difference utility
<I>Peopletools<I> Release &lt;7 and &gt;5 </H1></p>
<p> &lt;BOLD&gt;Hello world<ITALIC></p>
```

The following PeopleCode statement compares the two HTML-formatted text strings, &NewHTML and &OldHTML.

&OutputXML = CompareStrings(&NewHTML, &OldHTML, "HTML");

The string variable &OutputXML contains the following text:

```
<?xml version="1.0" encoding="UTF-8" standalone="no" ?>
<CompareReport Delimitter="</p>,</H1>" ContentType ="html">
```

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```
 <FileContent Difference="Changed">
  <OldLine Num="1">
   <LineContent Changed="Deleted">peoplesoftfile difference</LineContent>
   <LineContent>utility Peopletools Release</LineContent>
   <LineContent Changed="Deleted ">&lt;6</LineContent>
   <LineContent>and &gt;5 </LineContent>
  </OldLine>
  <Line Num="1">
   <LineContent Changed="Inserted">peoplesoftfiledifference</LineContent>
   <LineContent>utility Peopletools Release</LineContent>
   <LineContent Changed="Inserted ">&lt;7</LineContent>
   <LineContent>and &gt;5 </LineContent>
  </Line>
 </FileContent>
 <FileContent Difference="None">
  <Line Num="2" OldLineNum="2">
   <LineContent>&amp;lt;BOLD&amp;gt;Hello world</LineContent>
  </Line>
  <Line Num="3" OldLineNum="3">
   <LineContent></LineContent>
  </Line>
 </FileContent>
</CompareReport>
```

Related Links

CompareTextDiff

CompareTextDiff

Syntax

CompareTextDiff(*new_text*, *old_text* [, *content_type* [, *delimiter*]])

Description

Use the CompareTextDiff function to compare the content of new_text with the content of old_text and return an array of array of any detailing the differences between the two strings. The elements of the returned subarray are as follows:

Element	***Data Type***	***Description***
index	number	The sequential index number in the comparison array.
line	number	The line number for the line of text being compared.
subline	number	The subline is the counter of added lines that exist in the *new_text.* **Note:** For DELETE, CHANGED and COMMON operations, 0 is always reported for the subline.

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Element	*Data Type*	*Description*
type	string	The type of difference: • COMMON – Both lines are the same • ADD – A line is present in *new_text* that is not in *old_text.* • DELETE – A line is absent in *new_text* that is present in *old_text.* • CHANGED – A change in a line shows as an Add in new_text and a Delete in *old_text.*
text	string	The actual text being compared.

Parameters

new_text Specifies the string that you want to compare with the old version of the string.

old_text Specifies the old version of the string for comparison.

content_type Specifies the content type as a literal: text or html. This parameter is optional.

If *content_type* is html, HTML tags are stripped and are not included in the comparison.

If content_type is not specified, it is set by default to text.

delimiter An array of string specifying the delimiters to be used to split the content for comparison. This parameter is optional.

If *content_type* is text and delimiter is not specified, the delimiter is set by default to char(13) (or \n, a carriage return).

If *content_type* is html and delimiter is not specified, the delimiter array is populated by default with the following values:

```
["</p>", "</br>", "</h1>", "</h2>", "</h3>", "</
h4>", "</h5>", "</h6>", "</div>", "</address>",
 "</pre>", "</br>", "</tr>", "</caption>", "</
blockquote>"]
```

Returns

An array of array of any.

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Example

This example shows a comparison of two text strings. The variable &NewText contains the following string:

```
Line 2.
Line 2.1.
Line 2.2.
Line 3.
Line 5.
Line 6.
Line 8.
```

The variable &OldText contains the following string:

```
Line 1.
Line 2.
Line 3.
Line 4.
Line 7.
```

The following PeopleCode statement compares the two ASCII-formatted text strings, &NewText and &OldText:

```
&Output = CompareTextDiff(&NewText, &OldText, "text");
```

The string variable &Output contains the following array:

```
0, 1, 0, DELETED, Line 1.
1, 2, 0, COMMON, Line 2.
2, 2, 1, ADD, Line 2.1.
3, 2, 2, ADD, Line 2.2.
4, 3, 0, COMMON, Line 3.
5, 4, 0, CHANGED, Line 5.
6, 5, 0, CHANGED, Line 6.
7, 5, 1, ADD, Line 8.
```

Related Links

CompareStrings

Component

Syntax

Component *data_type &var_name*

Description

Use the Component statement to declare PeopleCode component variables. A component variable, after being declared in any PeopleCode program, remains in scope throughout the life of the component.

The variable must be declared with the Component statement in every PeopleCode program in which it is used.

Declarations appear at the beginning of the program, intermixed with function declarations.

Note: Because a function can be called from anywhere, you cannot declare any variables within a function. You receive a design time error if you try.

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The system automatically initializes temporary variables. Declared variables always have values appropriate to their declared type. Undeclared variables are initialized as null strings.

Not all PeopleCode data types can be declared as Component.

Parameters

data_type	Specify a PeopleCode data type.
&var_name	A legal variable name.

Example

```
Component string &PG_FIRST;
```

Related Links

Local
Global
"Data Types" (PeopleTools 8.54: PeopleCode Developer's Guide)

ComponentChanged

Syntax

ComponentChanged()

Description

Use the ComponentChanged function to determine whether a component has changed since the last save, whether by the user or by PeopleCode.

Returns

Returns a Boolean value: True if the component has changed.

Example

```
If ComponentChanged() Then
   /* do some stuff */
End-if;
```

ConnectorRequest

Syntax

ConnectorRequest(*&Message*)

Description

Use the ConnectorRequest function to send data to the connector using a message, when the connector properties are assigned in the message.

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Note: This function has been deprecated and remains for backward compatibility only. Use the IntBroker class ConnectorRequest method instead.

In general, you would build a message, add the specific connector properties, then use ConnectorRequest.

You do not need to set up any transaction or relationship when you use this function. It is a direct call to the gateway.

The response to the message is returned as a nonrowset-based message. Use the GetXmlDoc message class method to retrieve the content data. The data is wrapped in the CDATA tag.

Related Links

"ConnectorRequest" (PeopleTools 8.54: PeopleCode API Reference)

Parameters

&Message	Specify an already instantiated message.

Returns

A nonrowset-based message object.

Related Links

ConnectorRequestURL

ConnectorRequestURL

Syntax

`ConnectorRequestURL``(`*`ConnectorStringURL`*`)`

Description

Use the ConnectorRequestURL function to go directly to the gateway for accessing information.

Note: This function has been deprecated and remains for backward compatibility only. Use the IntBroker class ConnectorRequestURL method instead.

Related Links

"ConnectorRequestUrl" (PeopleTools 8.54: PeopleCode API Reference)

Parameters

ConnectorStringURL	Specify the URL of the gateway as a string. This is a fully formed URL.

Returns

A string containing the URL information returned from the message.

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Example

The following is the type of URL that could be returned if you were trying to get a PSFT stock quote:

```
http://finance.yahoo.com/d/quotes.txt/?symbols=PSFT&format=l1c1d1t1
```

Related Links

ConnectorRequest

ContainsCharType

Syntax

ContainsCharType(*source_str, char_code*)

Description

Use the ContainsCharType function to determine if any of the characters in *source_str* are of type *char_code.* The *char_code* is a numerical value representing a character type (see the following Parameters section for details). Most character types supported by this function equate to specific Unicode character blocks or are based on Unicode character properties.

Parameters

source_str String to be examined.

char_code A number value representing the character type to be tested for. The following table shows valid values. You can specify either a character code numeric value or a constant:

Numeric Value	*Constant*	*Character Set*
0	%CharType_AlphaNumeric	Basic Latin — Alphanumeric (printable range of 7-bit US-ASCII), Unicode characters in the range U+0020 — U +007E
1	%CharType_ExtendedLatin1	Extended Latin-1 characters (ISO 8859-1 accents for Western European languages), Unicode characters in the range U+00BF — U+07E
2	%CharType_HankakuKatakana	Hankaku Katakana (half-width Japanese Katakana)
3	%CharType_ZenkakuKatakana	Zenkaku Katakana (full-width Japanese Katakana)
4	%CharType_Hiragana	Hiragana (Japanese)

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Numeric Value	*Constant*	*Character Set*
5	%CharType_Kanji	Chinese, Japanese and Korean ideographic characters. Includes Japanese Kanji, Chinese Hanzi and Korean Hancha.
6	%CharType_DBAlphaNumeric	Full-width Latin Alphanumeric characters, primarily used for Japanese. Excludes
7	None	Korean Hangul syllables, excluding Hangul Jamo.
8,9	None	Reserved for future use.
10	%CharType_JapanesePunctuation	Full- and half-width punctuation, including space (U+0020) and Fullwidth / Ideographic Space (U+3000).
11	None	Greek
12	None	Cyrillic
13	None	Armenian
14	None	Hebrew
15	None	Arabic
16	None	Devanagari
17	None	Bengali
18	None	Gurmukhi
19	None	Gujarati
20	None	Oriya
21	None	Tamil
22	None	Telugu
23	None	Kannada
24	None	Malayalam
25	None	Thai

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Numeric Value	*Constant*	*Character Set*
26	None	Lao
27	None	Tibetan
28	None	Georgian
29	None	Bopomofo

Returns

ContainsCharType returns one of the following Number values. You can check for the constant instead of the numeric value if you prefer:

Numeric Value	*Constant Value*	*Description*
1	%CharType_Matched	String contains at least one character of set *char_code*.
0	%CharType_NotMatched	String contains no characters of set *char_code*.
-1	%CharType_Unknown	UNKNOWN: unable to determine whether character is of set *char_code.* This occurs if the character being checked is an unallocated Unicode codepoint, or was added in a version of Unicode greater than that supported by PeopleTools.

Example

This example tests to see if the string contains any Hiragana:

```
&ANYHIRAGANA = ContainsCharType(&STRTOTEST, 4);
If &ANYHIRAGANA = 1 Then
   WinMessage("There are Hiragana characters");
Else
   If &ANYHIRAGANA = 0 Then
      WinMessage("There are no Hiragana characters");
   Else
      WinMessage("UNKNOWN");
   End-If;
End-If;
```

Related Links

ContainsCharType

ContainsOnlyCharType

ConvertChar

"Selecting Character Sets" (PeopleTools 8.54: Global Technology)

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ContainsOnlyCharType

Syntax

ContainsOnlyCharType(*source_str, char_code_list*)

Where *char_code_list* is a list of character set codes in the form:

char_code_1 [, *char_code_2*]. . .

Description

Use the ContainsOnlyCharType function to determine whether every character in *source_str* belongs to one or more of the character types in *char_code_list*. See the following Parameters section for a list of valid character code values. Most character types supported by this function equate to specific Unicode character blocks or are based on Unicode character properties.

Parameters

Source_str String to be examined.

char_code_list A comma-separated list of character set codes.

char_code_n Either a Number value identifying a character set, or a constant. The following table shows valid values. You can specify either a character code numeric value or a constant:

Numeric Value	*Constant*	*Character Set*
0	%CharType_AlphaNumeric	Alphanumeric (7-bit ASCII codes; A-Z, a-z, 1-9, punctuation)
1	%CharType_ExtendedLatin1	Extended Latin-1 characters (ISO8859-1 accents for Spanish, French, etc.)
2	%CharType_HankakuKatakana	Hankaku Katakana (single-byte Japanese Katakana)
3	%CharType_ZenkakuKatakana	Zenkaku Katakana (double-byte Japanese Katakana)
4	%CharType_Hiragana	Hiragana (Japanese)
5	%CharType_Kanji	Kanji (Japanese)
6	%CharType_DBAlphaNumeric	Double-byte Alphanumeric (Japanese)
7,8,9		Reserved for future use
10	%CharType_JapanesePunctuation	Japanese punctuation

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Returns

ContainsOnlyCharType returns one of the following Number values. You can check for the constant instead of the numeric value, if you prefer:

Numeric Value	*Constant Value*	*Description*
1	%CharType_Matched	String contains only characters belonging to the sets listed in *char_code_list*.
0	%CharType_NotMatched	String contains one or more characters that do not belong to sets listed in *char_code_list*.
-1	%CharType_Unknown	UNKNOWN: unable to determine whether character is of set *char_code.* This occurs if the character being checked is an unallocated Unicode codepoint, or was added in a version of Unicode greater than that supported by PeopleTools.

Note: If any character in the string is determined to be UNKNOWN, the return value is UNKNOWN.

Example

This example tests to see is the string is only Hiragana or Punctuation:

```
&ONLYHIRAGANA = ContainsOnlyCharType(&STRTOTEST, 4, 10);
If &ONLYHIRAGANA = 1 Then
   WinMessage("There are only Hiragana and Punctuation characters");
Else
   If &ONLYHIRAGANA = 0 Then
      WinMessage("Mixed characters");
   Else
      WinMessage("UNKNOWN");
   End-If
End-If
```

Related Links

CharType
ContainsCharType
ConvertChar
"Selecting Character Sets" (PeopleTools 8.54: Global Technology)

Continue

Syntax

`Continue`

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Description

Use the Continue statement to continue execution in a loop. How the statement performs depends on the type of loop:

- In For loops, this statement continues to do the next step of the iteration
- In While loops, this statement continues to the top of the loop and the test of the condition
- In Repeat-Until loops, this statement continues to the Until check at the bottom of the loop.

Parameters

None.

Example

The following are tests of the continue statement in various types of loops:

```
SetTracePC(%TracePC_List);
/* tests of continue statement */
&N = 0;
For &I = 1 To 10;

   If &I > 5 Then
      Continue;
   End-If;
   &J = &I + 1;
   &K = 0;
   /* now a while loop in here */
   While &J <= 10;
      &J = &J + 1;
      If &J = 7 Then
         Continue;
      End-If;
      For &A = 0 To 5;
         &K = &K + 2;
      End-For; /* no continue statement */
      &Barf = 2;
      Repeat
         &Barf = &Barf;
         If &Barf = 1 Then
            Continue;
         End-If;
      Until &Barf = &Barf;
      &K = &K + 1;
   End-While;
   MessageBox(0, "", 0, 0, "K=" | &K);
   If &I < 2 Then
      Continue;
   End-If;
   &N = &N + 1;
End-For;
MessageBox(0, "", 0, 0, "N=" | &N);
```

Related Links

Break

Exit

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ConvertChar

Syntax

```
ConvertChar(source_str, source_str_category, output_str, target_char_code)
```

Description

Use the ConvertChar function to convert every character in *source_str* to type *target_char_code,* if possible, and place the converted string in *output_str*. ConvertChar supports the following conversions:

- Conversion among Japanese Hankaku (half-width) Katakana, Zenkaku (full-width) Katakana, and Hiragana .
- Conversion of Japanese Hankaku (half-width) Katakana, Zenkaku (full-width) Katakana, and Hiragana to Hepburn Romaji (Latin representation).
- Conversion of full-width alphanumeric characters to their half-width equivalents.
- Conversion of full-width punctuation characters to their half-width equivalents.

Other *source_str* and *target_char_code* combinations are either passed through without conversion, or not supported. Character types 0 and 1 (alphanumeric and extended Latin-1) are always passed through to *output_str* without conversion. See the Supported Conventions section later in this reference entry for details.

If ConvertChar is unable to determine whether the characters in *source_str* belong to the specified character set, the function returns a value of UNKNOWN (-1). If *source_str* can be partially converted, ConvertChar will partially convert string, echo the remaining characters to the output string as-is, and return a value of -2 (Completed with Issues).

Parameters

Source_str String to be converted.

Source_str_category Language category of input string. You can specify either a number or a constant.

Numeric Value	*Constant Value*	*Description*
0	%ConvertChar_AlphaNumeric	Half-width AlphaNumeric
1	%ConvertChar_ExtendedLatin1	Extended Latin-1 Characters (ISO8859-1 accents, Spanish, French etc.)
2	%ConvertChar_Japanese	Japanese (any)

Output_str A String variable to receive the converted string.

Target_char_code Either a Number or a constant representing the conversion target character type. You can specify either a character code numeric value or a constant:

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Numeric Value	Constant Value	Description
0	%CharType_AlphaNumeric	Half-width AlphaNumeric — results in a Hepburn Romaji conversion when the input string contains Hiragana or Katakana
2	%CharType_HankakuKatakana	Hankaku Katakana (half—width Japanese Katakana)
3	%CharType_ZenkakuKatakana	Zenkaku Katakana (full-width Japanese Katakana)
4	%CharType_Hiragana	Hiragana (Japanese)
6	%CharType_DBAlphaNumeric	Full-width AlphaNumeric (Japanese)

The following target values are not supported; if the source string is of the same type as any of these values, then the string is passed through without conversion.

Numeric Value	Constant Value	Description
1	%CharType_ExtendedLatin1	Extended Latin-1 characters (ISO8859-1 accents for Spanish, French, etc.)
5	%CharType_Kanji	Chinese, Japanese and Korean ideographic characters.
10	%CharType_JapanesePunctuation	Full- and half-width punctuation, including space (U+0020) and Fullwidth / Ideographic Space (U+3000).

Supported Conversions

The following table shows which conversions are supported, which are passed through without conversion, and which are not supported:

Source	Target	Conversion
0 (Alphanumeric US-ASCII)	0-6 (All supported character types)	Pass through without conversion
1 (Extended Latin-1 characters)	0-6 (All supported character sets)	Pass through without conversion
2 (Hankaku Katakana)	0 (Alphanumeric — Hepburn romaji)	Conversion supported
	1 (Extended Latin)	Not supported
	2 (Hankaku Katakana)	Pass through without conversion

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Source	***Target***	***Conversion***
	3 (Zenkaku Katakana)	Conversion supported
	4 (Hiragana)	Conversion supported
	5 (Kanji)	Not supported
	6 (Full-width alphanumeric)	Not supported
3 (Zenkaku Katakana)	0 (Alphanumeric)	Conversion supported
	1 (Extended Latin)	Not supported
	2 (Hankaku Katakana)	Conversion supported
	3 (Zenkaku Katakana)	Pass through without conversion
	4 (Hiragana)	Conversion supported
	5 (Kanji)	Not supported
	6 (Full-width alphanumeric)	Not supported
4 (Hiragana)	0 (Alphanumeric- Hepburn Romaji)	Conversion supported
	1 (Extended Latin)	Not supported
	2 (Hankaku Katakana)	Conversion supported
	3 (Zenkaku Katakana)	Conversion supported
	4 (Hiragana)	Pass through without conversion
	5 (Kanji)	Not supported
	6 (Full-width alphanumeric)	Not supported
5 (Kanji)	0-4, 6	Not supported
	5 (Kanji)	Pass through without conversion
6 (Full-width alphanumeric)	0 (Alphanumeric)	Conversion supported
	1-5	Not supported
	6 (Full-width alphanumeric)	Pass through without conversion
10 (Japanese punctuation)	0 (Alphanumeric)	Conversion supported

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Source	*Target*	*Conversion*
	1 (Extended Latin)	Not supported
	3-6, 10	Pass through without conversion

Returns

Returns either a Number or a constant with one of the following values, depending on what you're checking for:

Numeric Value	*Constant Value*	*Description*
1	%ConvertChar_Success	String successfully converted.
0	%ConvertChar_NotConverted	String not converted.
-1	%ConvertChar_Unknown	UNKNOWN: unable to determine whether character is of set *char_code.* This occurs if the character being checked is an unallocated Unicode codepoint, or was added in a version of Unicode greater than that supported by PeopleTools.
-2	%ConvertChar_Issues	Completed with issues. Conversion executed but there were one or more characters encountered that were either not recognized, or whose conversion is not supported.

Note: If any character cannot be translated, it is echoed as-is to *output_str*. *output_str* could therefore be a mixture of converted and non-converted characters.

Example

This example attempts to convert a string to Hiragana:

```
&RETVALUE = ConvertChar(&INSTR, 2, &OUTSTR, 4);
If &RETVALUE = 1 Then
   WinMessage("Conversion to Hiragana successful");
Else
   If &RETVALUE = 0 Then
      WinMessage("Conversion to Hiragana failed");
   Else
      If &RETVALUE = - 1 Then
         WinMessage("Input string is UNKNOWN character type.");
      Else
         WinMessage("Some characters could not be converted.");
      End-If
   End-If
End-If
```

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Related Links

CharType
ContainsCharType
ContainsOnlyCharType
"Selecting Character Sets" (PeopleTools 8.54: Global Technology)

ConvertCurrency

Syntax

```
ConvertCurrency(amt, currency_cd, exchng_to_currency, exchng_rt_type, effdt,
converted_amt [, error_process [, round] [, rt_index]])
```

Description

Use the ConvertCurrency function to convert between currencies. The result of the conversion is placed in a variable passed in *converted_amt*.

Related Links

"Understanding Currency-Specific Settings" (PeopleTools 8.54: Global Technology)

Parameters

Amt The currency amount to be converted.

Currency_cd The currency in which the *amt* is currently expressed.

Exchng_to_currency The currency to which the *amt* should be converted.

Exchng_rt_type The currency exchange rate to be used. This is the value of the RT_TYPE field in the RT_RATE table of RT_DFLT_VW.

Effdt The effective date of the conversion to be used.

Converted_amt The resulting converted amount. You must supply a variable for this parameter. If a conversion rate cannot be found, *converted_amt* is set equal to *amt.*

Error_process An optional string that, if specified, contains one of the following values:

- "F" - Produce a fatal error if a matching conversion rate is not found.
- "W" - Produce a warning message box if a matching conversion rate is not found.
- "I" - Or other−return without producing a message box

If *error_process* is not specified, it defaults to Fatal ("F").

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Round Optional Boolean value indicating whether to round *converted _amt* to the smallest currency unit. If omitted, round defaults to False.

rt_index An optional string to indicate which exchange rate index should be used to retrieve the exchange rate. If omitted, the Default Exchange Rate index (as specified on the Market Rate index definition) is used.

Note: If the currency exchange rate is changed in a PeopleSoft table, this change will *not* be reflected in an already open page until the user closes the page, then opens it again.

Returns

ConvertCurrency returns a Boolean value where True means a conversion rate was found and *converted_amt* calculated, and False means a conversion rate was not found and a value of one (1) was used.

Example

```
rem **-----------------------------------------------**;
rem *  Convert the cost & accum_depr fields if books *;
rem * use different currencies.  *;
rem **-----------------------------------------------**;
rem;
   If &FROM_CUR <> &PROFILE_CUR_CD Then
      &CON_COST_FROM = &COST_COST;
      &CON_ACC_DEPR_FROM = &COST_ACCUM;
      ConvertCurrency(&CON_COST_FROM, &FROM_CUR, &PROFILE_CUR_CD, RT_TYPE,TRANS_DT,⇒
 &CON_COST_TO, "F");
      UpdateValue(COST_NON_CAP.COST, &COST_ROW_CUR, &CON_COST_TO);
   Else
      UpdateValue(COST_NON_CAP.COST, &COST_ROW_CUR, &COST_COST);
   End-If;
   UpdateValue(COST_NON_CAP.FROM_CUR, &COST_ROW_CUR, &PROFILE_CUR_CD);
UpdateValue(COST_NON_CAP.OPRID, &COST_ROW_CUR, %UserIdId);
```

ConvertDatetimeToBase

Syntax

ConvertDatetimeToBase(*textdatetime*, {*timezone* | **"Local"** | **"Base"**})

Description

Use the ConvertDatetimeToBase function to convert the text value *textdatetime* to a DateTime value. The ConvertDatetimeToBase function then further converts it from the specified time zone to the base time zone. This function automatically calculates whether daylight saving time is in effect for the given textdatetime and time zone.

The system's base time zone is specified in the PSOPTIONS table.

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Parameters

textdatetime

Specify a date/time represented as text in the PeopleSoft internal format: *yyyy*-*mm*-*dd hh*:*mm*:*ss*[.*S*] (for example, "2011-01-01 18:10:52.000000").

In which:

- *yyyy* is a four-digit year.
- *mm* is a two-digit month (01 through 12).
- *dd* is a two-digit day of the month (01 through 31).
- *hh* is a two digits of hour (00 through 23).
- *mm* is a two digits of minute (00 through 59).
- *ss* is two digits of second (00 through 59).
- *S* is milliseconds in one or up to six digits.

***timezone* | Local | Base**

Specify a value for converting *textdatetime*. Values are:

- *timezone* - a time zone abbreviation or a field reference to be used for converting *textdatetime*
- **Local** - use the local time zone for converting *textdatetime.*
- **Base** - use the base time zone for converting *textdatetime*.

Returns

Returns a DateTime value in the base time zone.

Example

In the following example, assuming the base time (as defined in PSOPTIONS) is PST, &DATETIMEVAL would have a DateTime value of "1999-01-01 07:00:00.000000":

```
&DATETIMEVAL= ConvertDateTimeToBase("1999-01-01 10:00:00.000000", "EST");
```

Related Links

ConvertTimeToBase
FormatDateTime
IsDaylightSavings
DateTimeToTimeZone
TimeToTimeZone
TimeZoneOffset
"PeopleTools Options" (PeopleTools 8.54: System and Server Administration)

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ConvertRate

Syntax

ConvertRate(*Rate, In_Frequency, Out_Frequency*)

Description

Use the ConvertRate function to convert a rate between various compounding frequencies.

Parameters

Rate The rate to be converted. This parameter takes a number value.

In_Frequency The frequency of the rate to be converted from. This parameter takes an array of number, with two elements. The first element is periodicity, (for example, if you chose daily compounding, 1 would represent daily while 7 would represent weekly.) The second element is the unit of measure of frequency. The values for the second element are:

Value	*Description*
0	continuous compounding
1	daily compounding
2	monthly compounding
3	yearly compounding

Out_Frequency The frequency of the rate to be converted to. This parameter takes an array of number, with two elements. The first element is periodicity, (for example, if you chose daily compounding, 1 would represent daily while 7 would represent weekly.) The second element is the unit of measure of frequency. The values for the second element are:

Value	*Description*
0	continuous compounding
1	daily compounding
2	monthly compounding
3	yearly compounding

Returns

A number representing the converted rate.

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Example

The following example converts the specified values from days to years.

```
Local array of number &In, &Out;
Local number &rate, &NewRate;

&rate = 0.01891;
&In = CreateArray(0, 0);
&In[1] = 1; /* daily */
&In[2] = 1; /* compound_days */
&Out = CreateArray(0, 0);
&Out[1] = 1; /* one year */
&Out[2] = 3; /* compound_years */

&NewRate = ConvertRate(&rate, &In, &Out);
```

Related Links

RoundCurrency

ConvertTimeToBase

Syntax

ConvertTimeToBase(*texttime*,{*timezone* | **"Local"** | **"Base"**})

Description

Use the ConvertTimeToBase function to convert the text value *texttime* to a Time value and converts it to the base time. This function automatically calculates whether daylight saving time is in effect for the given *texttime*.

This function is useful for users to convert constant times in specific time zones into database time. For example, there is a deadline for completing Federal Funds transfers by 3:00 PM Eastern Time. ConvertTimeToBase does this conversion, taking into account daylight saving time. The date used to calculate whether daylight saving time is in effect is the current date.

The system's base time zone is specified on the PSOPTIONS table.

Parameters

texttime Specify a time value represented as text (e.g., "3:00 PM")

***timezone* | Local | Base** Specify a value for converting *texttime*. Values are:

- *timezone* - a time zone abbreviation or a field reference to be used for converting *texttime*
- **Local** - use the local time zone for converting *texttime.*
- **Base** - use the base time zone for converting *texttime*.

Returns

Returns a time value in the base time zone.

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Example

In the following example, &TIMEVAL would have a time value of "07:00:00.000000", assuming the Base time (as defined in PSOPTIONS) was PST.

```
&TEXTTIME = ConvertTimeToBase("01/01/99 10:00:00AM", "EST");
```

Related Links

ConvertDatetimeToBase
FormatDateTime
IsDaylightSavings
DateTimeToTimeZone
TimeToTimeZone
TimeZoneOffset
"PeopleTools Options" (PeopleTools 8.54: System and Server Administration)

CopyAttachments

Syntax

```
CopyAttachments(URLSource, URLDestination [, FileRefRecords [, PreserveCase[,
AllowLargeChunks]]])
```

Description

Use the CopyAttachments function to copy all files from one storage location to another. The files to be copied can be limited to those referenced in specific file reference tables.

To schedule a batch job to copy file attachments, you can use the COPYATTS Application Engine program, which can be executed from the Copy File Attachments (Batch) page. See "Copy File Attachments (Batch)" (PeopleTools 8.54: System and Server Administration) for more information.

Alternatively, you can use the Manage Attachment Repositories page to execute CopyAttachments directly in a synchronous manner. See "Manage Attachment Repositories" (PeopleTools 8.54: System and Server Administration) for more information.

Important! Executing CopyAttachments directly in a synchronous manner may result in a timeout if the number of file attachments to be processed is large. Therefore, Oracle recommends that you use the batch processing interface instead.

CopyAttachments looks for the field ATTACHSYSFILENAME in the table that stores the file references. Oracle recommends that you include the FILE_ATTACH_SBR subrecord, which includes the ATTACHSYSFILENAME and ATTACHUSERFILE fields, in your record definition, not just the fields themselves.

CopyAttachments generates a list of all file attachments references, and then performs two operations on each file attachment. First, CopyAttachments calls GetAttachment to retrieve the file from your source location. Then, it calls PutAttachment to copy the attachment to your destination.

Note: If the specified subdirectories do not exist this function tries to create them.

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PeopleTools supports multiple types of storage locations. Additional information on using CopyAttachments with storage locations can be found in the *PeopleTools: PeopleCode Developer's Guide*:

See "Understanding File Attachment Storage Locations" (PeopleTools 8.54: PeopleCode Developer's Guide).

Considerations on Using PreserveCase with CopyAttachments

If the files to be copied were originally uploaded with the value of the *PreserveCase* optional parameter unspecified or explicitly specified as *False*, then CopyAttachments should be similarly invoked (with the value of *PreserveCase* unspecified or explicitly specified as *False*). On the other hand, if the files to be copied were originally uploaded with the value of the *PreserveCase* explicitly specified as *True*, then CopyAttachments should be similarly invoked (with the value of *PreserveCase* explicitly specified as *True*). If the files to be copied fall into both categories, then CopyAttachment will need to be run twice , once with the value of *PreserveCase* unspecified or explicitly specified as *False*, and then again with the value of *PreserveCase* explicitly specified as *True*.

Parameters

URLSource

Specify the source storage location of the files to be copied. This parameter can either be a URL identifier in the form **URL**.*URL_ID*, or a string.

Note: When the *URLSource* parameter is specified as a string value, forward slashes (/) are required. Backward slashes (\) are not supported for a string value.

See "Understanding URL Strings Versus URL Objects" (PeopleTools 8.54: PeopleCode Developer's Guide).

URLDestination

Specify the destination storage location for the files to be copied. This parameter can either be a URL identifier in the form **URL**.*URL_ID*, or a string.

Note: When the *URLDestination* parameter is specified as a string value, forward slashes (/) are required. Backward slashes (\) are not supported for a string value.

See "Understanding URL Strings Versus URL Objects" (PeopleTools 8.54: PeopleCode Developer's Guide).

FileRefRecords

Specify an array of record names each of which is associated with a table containing valid file references. By using this parameter, it is possible to explicitly specify which groups of file references will be considered during a call to CopyAttachments and, in this way, further restrict the scope of that call. If you do not specify this parameter, all the records that contain the FILE_ATTACH_SBR subrecord will be considered to have been implicitly specified (that is, every file at the specified source storage location that has some valid corresponding file reference will be copied).

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PreserveCase

Specify a Boolean value to indicate whether, when searching the source storage locations for the file specified by each file reference and when naming that file at the destination, its file name extension will be preserved or not; *True*, preserve the case of the file name extension, *False*, convert the file name extension to all lower case letters.

The default value is *False*.

Warning! If you use the *PreserveCase* parameter, it is important that you use it in a consistent manner with all the relevant file-processing functions or you may encounter unexpected file-not-found errors.

AllowLargeChunks

Specify a Boolean value to indicate whether to allow large chunks.

If the value specified in the Maximum Attachment Chunk Size field on the PeopleTools Options page is larger than is allowed for retrieval, then the system breaks the file upload into the largest sized chunks allowed. If *AllowLargeChunks* is set to True, this behavior can be overridden so that it is possible for an end user to upload a file in chunks that are too large for the system to retrieve. If *AllowLargeChunks* is set to False, the system will use the largest size chunk that is allowed for retrieval, or the configured chunk size, whichever is smaller.

Note: If the chunks are too big to be retrieved, then any file retrieval built-in function, such as GetAttachment, will fail.

Note: The *AllowLargeChunks* parameter is only applicable when the storage location is a database record. It has no impact when the storage location is an FTP site or an HTTP repository, since attachments at those locations are never chunked.

See "PeopleTools Options" (PeopleTools 8.54: System and Server Administration)

This is an optional parameter.

The default value is False.

Returns

You can check for either an integer or a constant value:

Note: Since file attachment references might not always point to real files in your source location (they might point to files in other locations, for example), file not found errors from the GetAttachment operation are ignored and not included in the CopyAttachments return code.

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Note: Because CopyAttachments is designed to work with multiple files, to track errors when using CopyAttachments set your PeopleCode trace to 2112 and your SQL trace to 15 so that errors will be written to the appropriate trace files.

Numeric Value	*Constant Value*	*Description*
0	%Attachment_Success	Files were copied successfully.
1	%Attachment_Failed	File copy failed due to an unspecified error. The following are some possible situations where %Attachment_Failed could be returned: • Failed to initialize the process due to some internal error. • Failed due to unexpected/bad reply from server. • Failed to allocate memory due to some internal error. • Failed due to timeout. • Failed due to non-availability of space on FTP server. • Failed to close SSL connection. • Failed due to an unspecified error on the HTTP repository. If the HTTP repository resides on a PeopleSoft web server, then you can configure tracing on the web server to report additional error details. See "Debugging File Attachment Problems" (PeopleTools 8.54: PeopleCode Developer's Guide).

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Numeric Value	*Constant Value*	*Description*
3	%Attachment_FileTransferFailed	File copy failed due to an unspecified error during FTP attempt. The following are some possible situations where %Attachment_ FileTransferFailed could be returned: • Failed due to mismatch in file sizes. • Failed to write to local file. • Failed to store the file on remote server. • Failed to read local file to be uploaded • No response from server. • Failed to overwrite the file on remote server.
4	%Attachment_NoDiskSpaceAppServ	No disk space on the application server.
7	%Attachment_DestSystNotFound	Cannot locate destination system for FTP. The following are some possible situations where %Attachment_ DestSystNotFound could be returned: • Improper URL format. • Failed to connect to the server specified.

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Numeric Value	*Constant Value*	*Description*
8	%Attachment_DestSysFailedLogin	Unable to login to destination system for FTP. The following are some possible situations where %Attachment_ DestSysFailedLogin could be returned: • Unsupported protocol specified. • Access denied to server. • Failed to connect using SSL Failed to verify the certificates. • Failed due to problem in certificates used. • Could not authenticate the peer certificate. • Failed to login with specified SSL level. • Remote server denied logon. • Problem reading SSL certificate.
9	%Attachment_FileNotFound	Cannot locate file. The following are some possible situations where %Attachment_ FileNotFound could be returned: • Remote file not found. • Failed to read remote file.

Example

```
&retcode = CopyAttachments(URL.UrlID, ftp://user:passwd@ftpaddress/");
```

Here is another example.

```
&aRecs = CreateArray("HRATTS", "MFGATTS", "CRMATTS");

&ret = CopyAttachments("ftp://user:pass@system/HR/", "record://HRARCHIVE",
&aRecs);

If (&ret = %Attachment_Success) Then
   MessageBox(0, "Copy Archive Status", 0, 0, "Copy attachment archive succeeded");⇒

Else
   MessageBox(0, "Copy Archive Status", 0, 0, "Copy attachment archive failed");
End-If;
```

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Related Links

"Debugging File Attachment Problems" (PeopleTools 8.54: PeopleCode Developer's Guide)
CleanAttachments
DeleteAttachment
DetachAttachment
GetAttachment
MAddAttachment
PutAttachment
ViewAttachment
"Understanding the File Attachment Functions" (PeopleTools 8.54: PeopleCode Developer's Guide)

CopyFields

Syntax

```
CopyFields(from, to)
```

where *from* and *to* are constructions that reference rows of data on specific source and target records in the component buffer; each have the following syntax:

```
level, scrollpath, target_row
```

and where *scrollpath* is:

```
[RECORD.level1_recname, level1_row, [RECORD.level2_recname, level2_row, ]]
RECORD.target_recname
```

To prevent ambiguous references, you can also use **SCROLL.** *scrollname*, where *scrollname* is the same as the scroll level's primary record name.

Description

Use the CopyFields function to copy like-named fields from a row on the specific source record to a row on the specific target record.

Note: This function remains for backward compatibility only. Use the CopyFieldsTo or CopyChangedFieldsTo record class methods instead.

Related Links

"CopyFieldsTo" (PeopleTools 8.54: PeopleCode API Reference), "CopyChangedFieldsTo" (PeopleTools 8.54: PeopleCode API Reference), "CopyTo" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide), "Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

from A placeholder for a construction (*level*, *scrollpath*, *target_row*) that references the first row in the comparison.

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to	A placeholder for a construction (*level*, *scrollpath, target_row*) that references the second row in the comparison.
level	Specifies the scroll level for the target level scroll.
scrollpath	A construction that specifies a scroll level in the component buffer.
target_row	Specifies the row number of each target row on its scroll level.

Returns

Optionally returns a Boolean value indicating whether the function succeeded.

Example

The following example copies fields from PO_RECEIVED_INV (level 1 scroll) from row &ROW to PO_RECV_INV_VW (level 1 scroll), row &LOC_ROW:

```
CopyFields(1, RECORD.PO_RECEIVED_INV, &ROW, 1, RECORD.PO_RECV_INV_VW, &LOC_ROW);
```

Related Links

CompareLikeFields

"Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

CopyFromJavaArray

Syntax

CopyFromJavaArray(*JavaArray*, *&PeopleCodeArray* [, *&RestrictionArray*])

Description

Use the CopyFromJavaArray function to copy the array specified by *JavaArray* into one-dimensional PeopleCode array *&PeopleCodeArray*.

Note: The Java array must be at least the same size as the PeopleCode array.

The optional *&RestrictionArray* parameter is a PeopleCode array that contains the index elements of the elements to copy. For example if *&RestrictionArray* contains the indexes 3, 5 and 7, only elements 3, 5 and 7 in the PeopleCode array are copied to the Java array, and they are copied to the elements 3, 5 and 7. This allows you to minimize the copying when you have arrays that don't require a full element by element copy. If *&RestrictionArray* is not specified, a complete array copy is done.

The array types between the PeopleCode array and the Java array must match the standard type mapping between Java and PeopleCode types. For example, trying to copy a PeopleCode array of Any into a Java array of int will fail because the Any PeopleCode type doesn't map onto the Java int type.

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Related Links

"Understanding Java Class" (PeopleTools 8.54: PeopleCode API Reference), "PeopleCode and Java Data Types Mapping" (PeopleTools 8.54: PeopleCode API Reference)

Parameters

JavaArray	Specify the name of the Java array that you want to copy data from.
&PeopleCodeArray	Specify the name of an already instantiated PeopleCode array that you want to copy the data into.
&RestrictionArray	Specify an already instantiated and populated PeopleCode array that contains the set of elements the copy is restricted to. This array should be of type number.

Returns

None.

Example

```
Local array of any &x = CreateArrayAny();

&x.Push("First bit");
&x.Push(1);
&x.Push(%Datetime);
&x.Push(%Date);
&x.Push("Final bit");
Local array of number &selection = CreateArray(1, 3, 5);
Local JavaObject &Jarray = CreateJavaArray("java.lang.Object[]", &x.Len);
/* Full copy to a Java array */
CopyToJavaArray(&x, &Jarray);
/* Full copy from Java array to PeopleCode array */
Local array of any &y = CreateArrayAny();
&y [5] = Null; /* make sure it's the right length */
CopyFromJavaArray(&Jarray, &y);
```

Related Links

CopyToJavaArray

CreateJavaArray

"Understanding Arrays" (PeopleTools 8.54: PeopleCode API Reference)

"Java Packages and Classes Delivered with PeopleTools" (PeopleTools 8.54: PeopleCode API Reference)

CopyRow

Syntax

CopyRow(*destination_row*, *source_row*)

Description

Use the CopyRow function to copy data from one row to another row.

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Note: This function remains for backward compatibility only. Use the CopyTo row class method instead.

destination_row is the row number to which you want the *source _row* data values copied. The two rows, and the PeopleCode function call, must all be located on the same scroll level.

Related Links

"Row Class Methods" (PeopleTools 8.54: PeopleCode API Reference), "CopyFieldsTo" (PeopleTools 8.54: PeopleCode API Reference), "CopyChangedFieldsTo" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

destination_row	Row number of row to which to copy data.
source_row	Row number of row from which to read data.

Example

This example uses CopyRow to give an inserted row the same values as the previous row:

```
/*  Get the row number of the inserted row and the previous row */
&NEW_ROW_NUM = CurrentRowNumber();
&LAST_ROW_NUM = &NEW_ROW_NUM - 1;
/*  Copy the data from the previous row into the inserted row */
CopyRow(&NEW_ROW_NUM, &LAST_ROW_NUM);
```

CopyToJavaArray

Syntax

CopyToJavaArray(*&PeopleCodeArray*, *JavaArray* [, *&RestrictionArray*])

Description

Use the CopyToJavaArray function to copy the one-dimensional array specified by *&PeopleCodeArray* into the Java array *JavaArray*. The Java array must be at least as large as the PeopleCode array.

The optional *&RestrictionArray* parameter is a PeopleCode array that contains the index elements of the elements to copy. For example if *&RestrictionArray* contains the indexes 3, 5 and 7, only elements 3, 5 and 7 in the PeopleCode array are copied to the Java array, and they are copied to the elements 3, 5 and 7. This allows you to minimize the copying when you have arrays that don't require a full element by element copy. If *&RestrictionArray* is not specified, a complete array copy is done.

The array types between the PeopleCode array and the Java array must match the standard type mapping between Java and PeopleCode types. For example, trying to copy a PeopleCode array of Any into a Java array of int will fail because the Any PeopleCode type doesn't map onto the Java int type.

Related Links

"Understanding Java Class" (PeopleTools 8.54: PeopleCode API Reference), "PeopleCode and Java Data Types Mapping" (PeopleTools 8.54: PeopleCode API Reference)

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Parameters

&PeopleCodeArray	Specify an already instantiated and populated one-dimentional PeopleCode array that contains the information you want to copy to a Java array.
JavaArray	Specify the Java array that you want to copy information into.
&RestrictionArray	Specify an already instantiated and populated PeopleCode array that contains the set of elements the copy is restricted to. This array should be of type number.

Returns

None.

Example

The following example creates an array, then shows both copying the full array, as well as only copying elements of it.

```
Local array of any &x = CreateArrayAny();

&x.Push("First bit");
&x.Push(1);
&x.Push(%Datetime);
&x.Push(%Date);
&x.Push("Final bit");

Local array of number &selection = CreateArray(1, 3, 5);

Local JavaObject &Jarray = CreateJavaArray("java.lang.Object[]", &x.Len);

/* Full copy to a Java array */
CopyToJavaArray(&x, &Jarray);

/* Only copy elements 1, 3 and 5 */
CopyToJavaArray(&x, &Jarray, &selection);
```

Related Links

CopyFromJavaArray

CreateJavaArray

"Understanding Arrays" (PeopleTools 8.54: PeopleCode API Reference)

"Java Packages and Classes Delivered with PeopleTools" (PeopleTools 8.54: PeopleCode API Reference)

Cos

Syntax

Cos(*angle*)

Description

Use the Cos function to calculate the cosine of the given angle (adjacent / hypotenuse).

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Parameters

angle	A value in radians.

Returns

A real number between -1.00 and 1.00.

Example

The following example returns the cosine of an angle measuring 1.2 radians:

```
&MY_RESULT = Cos(1.2);
```

Related Links

Acos
Asin
Atan
Cot
Degrees
Radians
Sin
Tan

Cot

Syntax

Cot(*angle*)

Description

Use the Cot function to calculate the cotangent of the given angle (adjacent / opposite, that is, the reciprocal of the tangent).

Parameters

angle	A value in radians, excluding 0. If the input value is 0, you receive an error message at runtime ("Decimal arithmetic error occurred. (2,110)"). Adjust your code to provide a valid input value.

Note: In theory, all values of *angle* such that `mod(angle, pi)` equals 0 are not valid for this function, because inputs approaching such values produce results that tend toward infinity. In practice, however, no computer system can represent such values exactly. Thus, for example, the statement `Cot(Radians(180))` produces a number close to the largest value PeopleCode can represent, rather than an error.

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Returns

A real number.

Example

The following example returns the cotangent of an angle measuring 1.2 radians:

```
&MY_RESULT = Cot(1.2);
```

Related Links

Acos
Asin
Atan
Cos
Degrees
Radians
Sin
Tan

CreateAnalyticInstance

Syntax

CreateAnalyticInstance(*AnalyticType*, *ID*, *Descr*, *&RecordRef*, *ForceDelete*)

Description

Use the CreateAnalyticInstance function to create an analytic instance as identified by the analytic *ID*. If *ID* is an empty string, the system automatically generates a unique ID.

This function only creates the metadata for the ID. It doesn't load the instance into an analytic server.

If this analytic instance already exists in the system, and you specify *ForceDelete* as false, the analytic instance is not created. If you specify *ForceDelete* as true, the existing analytic instance is deleted and the new one is created.

Every analytic type definition is defined with an application package that contains three methods: Create, Delete, and Copy. The values in *&RecordRef* are passed to the Create method.

Parameters

AnalyticType	Specify the name of the analytic type definition to be used.
ID	Specify the analytic instance identifier as a string. This parameter must be 20 characters or less.
Descr	Specify a description for this analytic instance as a string.
&RecordRef	Specify an already instantiated record object to pass values to the application package Create method that's associated with the

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analytic type definition. If you do not want to specify a record, you can specify NULL.

ForceDelete Specify the behavior if the specified analytic *ID* already exists. This parameter takes a boolean value. If *ForceDelete* is set to false and the specified ID exists, this function terminates without creating a new analytic instance. If *ForceDelete* is set to true and the specified ID exists, the analytic instance is deleted and then recreated.

Returns

An AnalyticInstance object if successful, null otherwise.

Example

```
Local AnalyticInstance &pi;

/* Create a brand new analytic instance */
&pi = CreateAnalyticInstance("BusinessPlanning", "Test", "PopulateTables", &argrec,⇒
 True);
```

Related Links

GetAnalyticInstance

"Understanding the Analytic Calculation Engine Classes" (PeopleTools 8.54: PeopleCode API Reference)

"Understanding Application Classes" (PeopleTools 8.54: PeopleCode API Reference)

"Creating Analytic Type Definitions" (PeopleTools 8.54: Optimization Framework)

CreateArray

Syntax

CreateArray(*paramlist*)

Where *paramlist* is an arbitrary-length list of values in the form:

param1 [, *param2*] ...

Description

Use the CreateArray function to construct an array and returns a reference to it.

The type of the first parameter determines the type of array that is built. That is, if the first parameter is of type NUMBER, an array of number is built. If there is no first parameter an empty array of ANY is built.

The CreateArray function uses flattening and promotion as required to convert subsequent values into suitable elements of the array.

Parameters

paramlist Specify a list of values to be used as the elements of the array.

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Returns

Returns a reference to the array.

Example

```
Local Array of Array of Number &AAN;
Local Array of Number &AN;

&AAN = CreateArray(CreateArray(1, 2), CreateArray(3, 4), 5);
&AN = CreateArray(6, &AAN[1]);
```

&AAN is a two dimensional array with three elements:

- A one-dimensional array with 1 and 2 as elements.
- A one-dimensional array with 3 and 4.
- A one-dimensional array with only the element 5.

The last parameter to Array was promoted to a one-dimensional array. &AN is a one-dimensional array with 3 elements: 6, 1, and 2. The last parameter to Array in the last line was flattened into its two elements.

Related Links

CreateArrayRept
Split
"Understanding Arrays" (PeopleTools 8.54: PeopleCode API Reference)
"Using Flattening and Promotion" (PeopleTools 8.54: PeopleCode API Reference)

CreateArrayAny

Syntax

CreateArrayAny([*paramlist*])

Where *paramlist* is an arbitrary-length list of values in the form:

param1 [, *param2*] ...

Description

Use the CreateArrayAny function to construct an array whose elements are of data type ANY and returns a reference to it.

The CreateArrayAny function uses flattening and promotion as required to convert subsequent values into suitable elements of the array.

If you do not specify any parameters with CreateArrayAny, it's the same as using the CreateArray function without any parameters.

If you do not know how many values are needed in a SQL statement until runtime, you can use an array of any to supply the values.

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Parameters

paramlist Specify a list of values to be used as the elements of the array.

Returns

Returns a reference to an array of ANY.

Example

```
local Array of Any &ArrayAny = CreateArrayAny(1, 2, "hi", "there");

local Array of Array of Any &AAAny = CreateArray(CreateArrayAny(1, 2), CreateArrayA⇒
ny("hi"), "there");
```

&ArrayAny is a two dimensional array with four elements: 1, 2, "hi" and "there". All the elements have the data type Any.

&AAAny is a two-dimensional array with three elements: a one-dimensional array with 1 and 2 as elements, a one-dimensional array with "hi" as its element, and a one-dimensional array with only the element "there". The last parameter to the array was promoted to a one-dimensional array.

Related Links

CreateArrayRept
CreateArray
Split
"Understanding Arrays" (PeopleTools 8.54: PeopleCode API Reference)
"Using Flattening and Promotion" (PeopleTools 8.54: PeopleCode API Reference)
"Understanding SQL Class" (PeopleTools 8.54: PeopleCode API Reference)

CreateArrayRept

Syntax

CreateArrayRept(*val, count*)

Description

Use the CreateArrayRept function to create an array that contains *count* copies of *val*. If *val* is itself an array, the created array has one higher dimension, and each element (sub-array) is the array reference *val*.

The type of the first parameter (*val*) determines the type of array that is built. That is, if the first parameter is of type NUMBER, an array of number is built. If *count* is zero, CreateArrayRept creates an empty array, using the *val* parameter for the type.

If you are making an array that is multi-dimensional, *val* will be the subarray used as the elements.

To make the subarrays distinct, use the Clone method. For example:

```
&A = CreateArrayRept(&AN, 4).Clone();
```

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Parameters

val	A value of any type.
count	The number of copies of *val* contained in the array.

Returns

Returns a reference to the array.

Example

The following code sets &A to a new empty array of string:

```
&A = CreateArrayRept("", 0);
```

The following code sets &A to a new array of ten zeroes:

```
&A = CreateArrayRept(0, 10);
```

The following code sets &AAS to a new array of array of strings, with two subarrays:

```
&AAS = CreateArrayRept(CreateArray("one", "two"), 2);
```

Note that in this case, both elements (rows) of &AAS contain the *same* subarray, and changing the value of an element in one of them changes it in *both* of them. To get distinct subarrays, use the Clone method:

```
&AAS = CreateArrayRept(CreateArray("one", "two"), 2).Clone();
```

The following example shows how to create a two-dimension array using CreateArrayRept and Push. In addition, it shows how to randomly assigns values to the cells in a two-dimension array.

```
Local array of array of string &ValueArray;

&Dim1 = 10;
&Dim2 = 5;
&ValueArray = CreateArrayRept(CreateArrayRept("", 0), 0);
For &I = 1 To &Dim1
   &ValueArray.Push(CreateArrayRept("", &Dim2));
End-For;
&ValueArray[1][1] = "V11";
&ValueArray[2][1] = "V21";

WinMessage("&ValueArray[1][1] = " | &ValueArray[1][1] | " " | "&ValueArray[2][1] = ⇒
" | &ValueArray[2][1], 0);
```

Related Links

CreateArray

Split

"Understanding Arrays" (PeopleTools 8.54: PeopleCode API Reference)

"Array Class Methods" (PeopleTools 8.54: PeopleCode API Reference)

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CreateBreadcrumb

Syntax

```
CreateBreadcrumb(BC_label, BC_ID, portal_ID, node_ID, component, page_ID, page_title,
comp_mode [, comp_keys] [, qry_string])
```

Description

Use the CreateBreadcrumb function to append a breadcrumb element containing application-specific data to the user's list of breadcrumbs. Optionally, the HTML representing the new breadcrumb element can be returned as a String value. The result of the function depends on the context from which it is invoked:

- When navigating to a content reference from the menu, the application-specific breadcrumb generated by CreateBreadcrumb is used instead of the breadcrumb generated by PeopleTools.
- If the breadcrumb is generated as the result of a related action, the breadcrumb generated by CreateBreadcrumb is used instead of the breadcrumb generated by the related action.
- If the generated breadcrumb duplicates an existing breadcrumb in the list of breadcrumb (identical breadcrumb ID), the original breadcrumb is deleted from its position in the list and the generated breadcrumb is appended to the end of the list.
- However, if the breadcrumb is generated by a pagelet on a homepage or dashboard, the breadcrumb list is not updated.

Note: This function cannot be invoked from a fluid component. In addition, this function cannot be invoked after the content is displayed via a direct psc URL.

Parameters

BC_label

Specifies a label for the breadcrumb as a String value. The label is what is displayed to the user in the breadcrumb string.

BC_ID

Specifies a unique ID for the breadcrumb as a String value.

portal_ID

Specifies the portal to be used to construct the content URL as a String value.

This portal ID can be specified as a literal string, by using the **%Portal** system variable, or by using the **Portal.***PORTAL_NAME* reserved word.

node_ID

Specifies the portal to be used to construct the content URL as a String value.

This node ID can be specified as a literal string, by using the **%Node** system variable, or by using the **Node.***NODE_NAME* reserved word.

component

Specifies the component to be used to construct the content URL as a String value. The *component* parameter is constructed from three values (*MENU.COMPONENT.MKT*) as follows:

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- MENU: This menu ID can be specified as a literal string, by using the **%Menu** system variable, or by using the **MenuName.***MENU_NAME* reserved word.
- COMPONENT: This component ID can be specified as a literal string, by using the **%Component** system variable, or by using the **Component.***COMPONENT_NAME* reserved word.
- MKT: This market ID can be specified as a literal string, by using the **%Market** system variable, or by using the **Market.***MARKET_NAME* reserved word.

page_ID

Specifies the current page in the component as a String value.

This page ID can be specified as a literal string, by using the **%Page** system variable, or by using the **Page.***PAGE_NAME* reserved word.

page_title

Specifies a title for the page as a String value.

comp_mode

Specifies the mode for the component as a single-character String value. Valid modes are:

- "A" (add)
- "U" (update)
- "L" (update/display all)
- "C" (correction)
- "E" (data entry)

You can also specify a empty string ("") for this value.

comp_keys

Specifies optional component keys and key values to be used to select a unique row at level zero in the current component as a String value. Specify keys and values in the following recommended format:

```
KEY1_NAME:'KEY1_VALUE';KEY2_NAME:'KEY2_VALUE';...
```

qry_string

Specifies optional query string parameters to be appended to the content URL as a String value in standard query string format:

```
param1=value1&param2=value2&...
```

Returns

(Optional) A String value.

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Example

The following PeopleCode program is executed when the user is on the Roles page of the User Profiles component:

```
&szLabel = "User Profile - Application Level BC";
&szID = "PT_USERMAINT_GBL";
&szPortalID = %Portal;
&szNodeID = %Node;
&szComponentID = %Menu | "." | %Component | "." | %Market;
&szPage = %Page;
&szPageTitle = "Roles - App BC";
&szMode = %Mode;
&szKeys = "OPRID:'PSADMIN'";

Local string &retHTML;

&retHTML = CreateBreadcrumb(&szLabel, &szID, &szPortalID, &szNodeID, &szComponentID⇒
, &szPage, &szPageTitle, &szMode, &szKeys);
```

Then, the following HTML would be returned by this invocation of CreateBreadcrumb:

```
<li id="pthnavbccref_PT_USERMAINT_GBL" class="pthnavbarcref pthbcdispiblock ptdynna⇒
vbc ptappbc">
<a id="pthnavbccrefanc_PT_USERMAINT_GBL" class="ptntop" data-ptf-nextid="id" data-p⇒
tf-previd="id" role="menuitem" href="url" >User Profile - Application Level BC</a>
<div class="pthnavcrefimg"> </div>
<div id="pthnavcrefid_PT_USERMAINT_GBL" style="display:none;">PT_USERMAINT_GBL</div⇒
>
<div id="pthnavportalid_PT_USERMAINT_GBL" style="display:none;">EMPLOYEE</div>
<div id="pthnavnodeid_PT_USERMAINT_GBL" style="display:none;">QE_LOCAL</div>
<div id="pthnavcomponentid_PT_USERMAINT_GBL" style="display:none;">MAINTAIN_SECURIT⇒
Y.USERMAINT.GBL</div>
<div id="pthnavpageid_PT_USERMAINT_GBL" style="display:none;">USER_ROLES</div>
<div id="pthnavpagetitle_PT_USERMAINT_GBL" style="display:none;">Roles - App BC</di⇒
v>
<div id="pthnavcomponentmode_PT_USERMAINT_GBL" style="display:none;">U</div>
<div id="pthnavcomponentkeys_PT_USERMAINT_GBL" style="display:none;"> OPRID:'PSADMI⇒
N'</div>
<div id="pthnavqs_PT_USERMAINT_GBL" style="display:none;">UnknownValue</div>
</li>
```

Related Links

GetBreadcrumbs

CreateDirectory

Syntax

CreateDirectory(*path*, [, *pathtype*])

Description

Use the CreateDirectory function to create the directory specified by *path* and any non-existent directories specified in *path*.

Important! The CreateDirectory function can be used to create a directory on an existing Windows share —for example, \\my_server\my_share\mydir. However, if the root of a Windows share (for example, \ \my_server\my_share) is passed to CreateDirectory, the function will always fail.

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On UNIX systems, the directory has the mode 755, that is, read-write-execute permission for the owner, while group and other have only read and execute permission.

```
drwxr-xr-x
```

Parameters

path Specify the path to be created.

pathtype Use this parameter to specify whether the path is an absolute or relative path. The valid values for this parameter are:

- %FilePath_Relative (default)
- %FilePath_Absolute

If you don't specify *pathtype* the default is %FilePath_Relative.

If you specify a relative path, that path is appended to the path constructed from a system-chosen environment variable. A complete discussion of relative paths and environment variables is provided in documentation on the File class.

See "Working With Relative Paths" (PeopleTools 8.54: PeopleCode API Reference).

If the path is an absolute path, whatever path you specify is used verbatim. You must specify a drive letter and the complete path. You can't use any wildcards when specifying a path.

The Component Processor automatically converts platform-specific separator characters to the appropriate form for where your PeopleCode program is executing. On a Windows system, UNIX "/" separators are converted to "\", and on a UNIX system, Windows "\" separators are converted to "/".

Note: The syntax of the file path does *not* depend on the file system of the platform where the file is actually stored; it depends only on the platform where your PeopleCode is executing.

Returns

None.

Example

```
CreateDirectory("D:\Resumes\New_Hires", %FilePath_Absolute);
```

Related Links

FileExists
FindFiles
GetFile

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GetAttachment
PutAttachment
RemoveDirectory
"Folder Class" (PeopleTools 8.54: PeopleCode API Reference)

CreateDocument

Syntax

CreateDocument(*DocumentKey | Package, DocumentName, Version*)

Description

Use this method to instantiate a new Document object.

Important! When using this CreateDocument to instantiate a Document object, the object must stay in scope for as long as any child objects (Collection, Compound, or Primitive) generated from this Document object are referenced. Referencing a property on a child object of a Document object that has gone out of scope will result in the PeopleCode program failing to execute properly.
For example if you define a variable as a Document variable as local and instantiate it via CreateDocument within an application class method, any objects created off the Document object must be used within the method itself. If you need to pass references of any of the child objects, then the Document object should be a global variable or defined as part of the application class as a property.

Parameters

DocumentKey Specifies a DocumentKey object that defines the document's package, document name, and version.

Package Specifies a document package as a string.

DocumentName Specifies the name of the document as a string.

Note: The document name also becomes the root element name for the document.

Version Specifies the document version as a string.

Returns

A Document object.

Example

The following provides two examples of instantiating a Document object. Both result in the same object.

Example 1:

```
Local Document &Doc;

/* Instatiate the Document object */
&Doc = CreateDocument("Purchasing", "PurchaseOrder", "v1");
```

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Example 2:

```
Local Document &Doc;
Local DocumentKey &DocKey;

/* Instatiate the Document object */
&DocKey = CreateDocumentKey("Purchasing", "PurchaseOrder", "v1");
&Doc = CreateDocument(&DocKey);
```

Related Links

"Document Class" (PeopleTools 8.54: PeopleCode API Reference)

"DocumentKey Class" (PeopleTools 8.54: PeopleCode API Reference)

CreateDocumentKey

Syntax

CreateDocumentKey(*Package*, *DocumentName*, *Version*)

Description

Use this method to instantiate a new DocumentKey object.

Parameters

Package Specifies a document package as a string.

DocumentName Specifies the name of the document as a string.

Note: The document name also becomes the root element name for the document.

Version Specifies the document version as a string.

Returns

A DocumentKey object.

Example

The following provides an example of instantiating a Document object from a document key:

```
Local Document &Doc;
Local DocumentKey &DocKey;

/* Populating Document Object */
&DocKey = CreateDocumentKey("Purchasing", "PurchaseOrder", "v1");
&Doc = CreateDocument(&DocKey);
```

Related Links

"DocumentKey Class" (PeopleTools 8.54: PeopleCode API Reference)

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CreateException

Syntax

CreateException(*message_set*, *message_num*, *default_txt* [, *subslist*])

where *subslist* is an arbitrary-length list of substitutions of undetermined (Any) data type to be substituted in the resulting text string, in the form:

substitution1 [, *substitution2*]. . .

Description

Use the CreateException function to create an exception object with the given properties. You can use this in your exception handling. Use this function either in conjunction with the **throw** statement, or on its own to get more information of a message.

Parameters

message_set Specify the message set number of the message you want associated with this exception.

message_num Specify the message number of the message you want associated with this exception.

default_txt Specify the text you want associated with the exception if the message specified by *message_set* and *message_num* isn't found.

subslist A comma-separated list of substitutions; the number of substitutions in the list is arbitrary. The substitutions are referenced in the message text using the % character followed by an integer corresponding to the position of the substitution in the *subslist*. The number of substitutions specified with this parameter are what get counted with the exception class SubsitutionCount property.

Returns

A reference to an exception object if successful, Null otherwise.

Example

```
Function t2
   throw CreateException(2, 160, "'%1' doesn't support property or method '%2'", "S⇒
omeClass", "SomeMethod");
End-Function;
```

Related Links

"Understanding Exception Class" (PeopleTools 8.54: PeopleCode API Reference)

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CreateJavaArray

Syntax

```
CreateJavaArray(ElementClassName[], NumberOfElements)
```

Description

Use the CreateJavaArray function to create a Java array without knowing the number or value of the elements.

When you create an array in Java, you already know the number of elements in the array. If you do not know the number of elements in the array, but you want to use a Java array, use the CreateJavaArray function in PeopleCode. This creates a Java object that is a Java array, and you can pass in the number of elements that are to be in the array.

The first index in a Java array is 0. PeopleCode arrays start at 1.

Do the following to specify this type of array in Java:

```
new ElementClassName[NumberOfElements];
```

Parameters

ElementClassName[]	Specify the array class name. This parameter takes a string value.
NumberOfElements	Specify the number of elements in the array. This parameter takes a number value.

Returns

A Java object

Related Links

CreateJavaObject
GetJavaClass
"Java Packages and Classes Delivered with PeopleTools" (PeopleTools 8.54: PeopleCode API Reference)

CreateJavaObject

Syntax

```
CreateJavaObject(ClassName [ConstructorParams])
```

Where *ConstructorParams* has the form

```
argument1 [, argument2] . . .
```

Description

Use the CreateJavaObject function to create a Java object that can be manipulated in PeopleCode.

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Note: If you create a class that you want to call using GetJavaClass, it can be located in a directory specified in the PS_CLASSPATH environment variable or in other specified locations. The PeopleCode API Reference provides details on where you can place custom and third-party Java classes.

See "System Setup for Java Classes" (PeopleTools 8.54: PeopleCode API Reference).

Use the CreateJavaObject function to create a Java array when you know how many values it should contain. If *ClassName* is the name of an array class (ending with [ ]), *ConstructorParams* are used to initialize the array.

In Java, do the following to initialize an array:

```
intArray = new int[]{1, 2, 3, 5, 8, 13};
```

Do the following to initialize such a Java array from PeopleCode:

```
&IntArray = CreateJavaObject("int[]", 1, 2, 3, 5, 8, 13);
```

To initialize a Java array without knowing the number of parameters until runtime, use the CreateJavaArray function.

Parameters

ClassName	Specify the name of an already existing class.
ConstructorParams	Specify any construction parameters required for the class. Constructors are matched by construction parameter type and placement.

Returns

A Java object.

Example

The following is an example of using dot notation and CreateJavaObject.

```
&CHARACTER.Value = CreateJavaObject(&java_path).GetField(&java_newchar).Value;

&NUMBER.Value = CreateJavaObject(&java_path).GetField(&java_newnum).Value;

&DATE.Value = CreateJavaObject(&java_path).GetField(&java_newdate).Value;
```

Related Links

CreateJavaArray
GetJavaClass
"System Setup for Java Classes" (PeopleTools 8.54: PeopleCode API Reference)
"Java Packages and Classes Delivered with PeopleTools" (PeopleTools 8.54: PeopleCode API Reference)

CreateMCFIMInfo

Syntax

CreateMCFIMInfo(*UserID*, *Network*)

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Description

Use the CreateMCFIMInfo function to create an instance of the MCFIMInfo class. This is used to initiate the instant messaging session.

Parameters

UserID Specify the PeopleSoft user as a string. This is the source user, or the user issuing the presence requests.

NetworkID Specify which network to use for instant messaging. The values are:

- AOL
- Yahoo

Returns

An MCFIMInfo object if successful, a null value otherwise.

Related Links

"Understanding the MCFIMInfo Class" (PeopleTools 8.54: PeopleCode API Reference)

CreateMessage

Syntax

```
CreateMessage(OPERATION.messagename [, message_type])
```

Description

Use the CreateMessage function to instantiate a message object that refers to a message definition associated with a service operation. The CreateMessage function sets the following properties for the resulting message object, based on the values set for the message definition:

- Name
- QueueName
- Active

Other properties are set when the message is published or subscribed to (TransactionID and so on,) or are dynamically generated at other times (Size, EditError, and so on.)

For rowset-based messages, CreateMessage also sets the LANGUAGE_CD field in the level 0 PSCAMA record for a message based on the USERID default language group. If the message is being published from a component, the language code is set to the USERID language code for the component. If CreateMessage is called from a PeopleSoft Application Engine program, the language code of the user who started the batch process is used.

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Parameters

OPERATION. ***messagename*** Specify the name of the message definition you want to create a message object for.

message_type Specify the type of message that you want to create. Valid values are:

Value	*Description*
%IntBroker_Request	A request message. This is the default.
%IntBroker_Response	A response message.
%IntBroker_Fault	A fault message.

Returns

Returns a reference to a message object.

Example

The following example creates a request message &MSG assocaited with the service operation PURCHASE_ORDER.

```
Local message &MSG;

&MSG = CreateMessage(OPERATION.PURCHASE_ORDER);
```

Related Links

GetMessage
GetPubContractInstance
GetSubContractInstance
"Understanding Message Classes" (PeopleTools 8.54: PeopleCode API Reference)

CreateObject

Syntax

```
CreateObject(str_class_name, create_par,  ...)
```

Where *str_class_name* either:

—identifies a class by class name

—identifies a class of OLE Automation object in the form:

```
app_name.object_name
```

Description

Use the CreateObject function to return an instance of a class. You can use this function to access an Application Class, a PeopleCode built-in object (like a chart), or an OLE Automation object.

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If the class you are creating requires values to be passed, use the *create_par* parameters to supply them, or use the CreateObjectArray function.

Considerations Using Application Classes

You can use the CreateObject function to access an Application Class. You would want to do this when you were programming at a high-level, when you might not know the name of the class you wanted to access until runtime. You must specify a fully-qualified class name. In addition, the class name is case-sensitive.

The returned object has the type of class you specified.

Considerations Using PeopleCode Built-in Objects

For example, to instantiate a Chart object without using a chart control (that is, without using the GetChart function) you could use:

```
&MyChart = CreateObject("Chart");
```

The returned object has the type of class you specified.

Note: The only way to instantiate a Crypt object is using the CreateObject function.

Considerations Using OLE Automation Objects

CreateObject returns an instance of an OLE Automation object as a variable of type Object.

The *str_class_name* argument uses the syntax *app_name.object_type*, which consists of: *app_name* (the name of the application providing the object) and *object_type* (the class or type of the object to create), separated by a period (dot).

Any application that supports OLE Automation exposes at least one type of object. For example, a spreadsheet application may provide an application object, a worksheet object, and a toolbar object.

To create an OLE Automation object, you assign the object returned by CreateObject to a variable of type Object:

```
local object &WORKSHEET;

&WORKSHEET = CreateObject("Excel.Sheet");
```

After an object is created, you can reference it using the object variable. In the previous example, you access properties and methods of the new object using the ObjectGetProperty, ObjectSetProperty, and ObjectDoMethod functions.

Note: If an object has registered itself as a single-instance object, only one instance of the object can be created, even if CreateObject is executed more than once. Note also that an object assigned to a global variable is not valid across processes: that is, the scope and lifetime of the global is the same as the scope and lifetime of the instance of PeopleTools in which the object was created.

Parameters

str_class_name Specify the name of the class that you want to instantiate an object from.

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create_par Specify the parameters required by the class for instantiating the object.

Example

This example instantiates an Excel worksheet object, makes it visible, names it, saves it, and displays its name. Note the use of ObjectGetProperty in the example to return the Excel.Sheet.Application object.

```
&WORKAPP = CreateObject("COM", "Excel.Application");
&WORKBOOKS = ObjectGetProperty(&WORKAPP, "Workbooks");
ObjectDoMethod(&WORKBOOKS, "Add", "C:\TEMP\INVOICE.XLT"); /* This associates the IN⇒
VOICE template w/the workbook */
ObjectDoMethod(&WORKAPP, "Save", "C:\TEMP\TEST1.XLS");
ObjectSetProperty(&WORKAPP, "Visible", True);
```

This following example illustrates the creation of an application class object. This code assumes that MyBaseClass is the superclass of both MySubclass1 and MySubclass2 classes.

```
local MyBaseClass &mbobj;
local String &ClassName = "MySubclass1";
if &test then
&ClassName = "MySubclass2";
end-if;
&mbobj = CreateObject(&ClassName);
```

The following example creates a chart in an iScript, using the CreateObject function to generate a reference to a chart object.

```
Function IScript_GetChartURL()

   Local Chart &oChart;
   Local Rowset &oRowset;
   Local string &sMap;
   Local string &sURL;

   &oChart = CreateObject("Chart");

   &oRowset = CreateRowset(Record.QE_CHART_RECORD);
   &oRowset.Fill("where QE_CHART_REGION= :1", "MIDWEST");
   &oChart.SetData(&oRowset);

   &oChart.Width = 400;
   &oChart.Height = 300;

   &oChart.SetDataYAxis(QE_CHART_RECORD.QE_CHART_SALES);
   &oChart.SetDataXAxis(QE_CHART_RECORD.QE_CHART_PRODUCT);
   &oChart.SetDataSeries(QE_CHART_RECORD.QE_CHART_REGION);

   &oChart.HasLegend = True;
   &oChart.LegendPosition = %ChartLegend_Right;

   &sURL = %Response.GetChartURL(&oChart);
   &sMap = &oChart.ImageMap;

   %Response.Write("<HTML><IMG SRC=");
   %Response.Write(&sURL);
   %Response.Write("  USEMAP=#THEMAP></IMG><MAP NAME=THEMAP>");
   %Response.Write(&sMap);
   %Response.Write("</MAP></HTML>");

End-Function;
```

Related Links

ObjectDoMethod

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ObjectGetProperty
ObjectSetProperty
CreateObjectArray
ObjectDoMethodArray
"Understanding the Charting Classes" (PeopleTools 8.54: PeopleCode API Reference)
"Understanding Internet Script Classes" (PeopleTools 8.54: PeopleCode API Reference)
"Using OLE Functions" (PeopleTools 8.54: PeopleCode Developer's Guide)

CreateObjectArray

Syntax

CreateObjectArray(*Class_Name*, *Array_of_Args*)

Description

Use the CreateObjectArray function to return an instance of a class.

Use this function when you must pass in parameters to create the object and you don't know when you write the code how many parameters are required. If you can create the object without passing in additional values, or if you know how many parameters are required, use the CreateObject function instead.

The array of parameters is an array of Any. It *must* be a one-dimensional array, that is, you cannot pass in an array of array of Any. You cannot pass in field references, that is, you cannot pass in references of the form:

```
RECORD.FIELDNAME
```

If you do not want to supply any parameters, you can use an empty array, or a reference to a Null array.

Parameters

Class_Name	Specify the name of the class you want to create an instance of, as a string.
Array_Of_Args	Specify an Array of Any containing all parameters for creating an instance of the class.

Returns

A reference to newly created object.

Example

The following is an example of the creation of an Application Class object where the number of parameters used to create the object varies, depending on data in the database.

```
local String &ClassName, &RecName;
local Record &Rec;

/* Read class name and parameter record name from the database. */
SQLExec("SELECT CLASSNAME, RECNAME FROM %TABLE(RECORD.CLASSDATA)", &ClassName, &Rec⇒
Name);
```

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```
local Record &Rec = CreateRecord(@ ("RECORD." | &RecName));

/* Read the parameters from the database. */
local Array of Any &Params = CreateArrayAny();

SQLExec("%SelectAll(:1)", &Rec, &Params);

/* Create the object. */
local MyPackage:BaseClass &Obj = CreateObjectArray(&ClassName, &Params);
```

Related Links

CreateObject
ObjectDoMethod
ObjectGetProperty
ObjectSetProperty
ObjectDoMethodArray
"Understanding Arrays" (PeopleTools 8.54: PeopleCode API Reference)
"Using OLE Functions" (PeopleTools 8.54: PeopleCode Developer's Guide)

CreateProcessRequest

Syntax

CreateProcessRequest([*ProcessType*, *ProcessName*])

Description

Use the CreateProcessRequest function to create a ProcessRequest object. After you've created this object, you can assign values to its properties then use the Schedule method to submit the process request for scheduling.

If you specify PSJob for the process type, the ProcessRequest object contains all the items of the job.

Parameters

ProcessType	Specify the process type as a string. Values depend on the process types defined for your system.
ProcessName	Specify the name of the process as a string.

Returns

A reference to a ProcessRequest object.

Example

```
Local ProcessRequest &MYRQST;

&MYRQST = CreateProcessRequest("PSJOB", &MyJobName);
```

Related Links

"Understanding Process Request Classes" (PeopleTools 8.54: PeopleCode API Reference)

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"Schedule" (PeopleTools 8.54: PeopleCode API Reference)

CreateRecord

Syntax

CreateRecord(**RECORD.***recname*)

Description

Use the CreateRecord function to create a *standalone* record definition and its component set of field objects. The specified record must have been defined previously, that is, it must have a record definition. However, if you are calling this function from PeopleCode associated with a page, the record does not have to be included on the current page.

The record and field objects created by this function are accessible only within PeopleCode. They can be used with any of the record and field object methods and properties. The record and field objects are automatically deleted when there are no remaining references to them stored in any variables.

The fields created by this function are initialized to null values. Default processing is not performed. No data associated with the record definition's SQL table is brought in: only the record definition.

You can select into a record object created this way using the SelectByKey record class method. You can also select into it using the SQLExec function.

Parameters

RECORD. ***recname***	Specify a record definition that already exists.

Returns

This function returns a record object that references a new record buffer and set of fields.

Example

```
Local Record &REC2;

&REC2 = CreateRecord(RECORD.OPC_METH);
```

In the following example, a free-standing record is created (&PSBATREPREQRES). Values are assigned to the fields associated with the record. Then a second record is created (&PUBHDR), and the values from the first record are used to populate the second record.

```
&PSBATREPREQRES = CreateRecord(RECORD.PSBATREPREQRES);
   &PSBATREPREQRES.BATREPID.Value = &BATREPID;
   &PSBATREPREQRES.PUBID.Value = &MSG.Pubid;
   &PSBATREPREQRES.CHNLNAME.Value = &MSG.ChannelName;
   &PSBATREPREQRES.PUBNODE.Value = &MSG.PubNodeName;
   &PSBATREPREQRES.MSGNAME.Value = &MSG.Name;

   &PUBHDR = CreateRecord(RECORD.PSAPMSGPUBHDR);
   &PSBATREPREQRES.CopyFieldsTo(&PUBHDR);
```

To create a PeopleCode record object for a record whose name is unknown when the PeopleCode is written, do the following.

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Suppose a record name is in the PeopleCode variable &RECNAME. Use the @ operator to convert the string to a component name. The following code creates a corresponding record object:

```
&RECNAME = "RECORD." | Upper(&RECNAME);
&REC = CreateRecord(@ &RECNAME);
```

The following example uses SQLExec to select into a record object, based on the effective date.

```
Local Record &DST;

&DST = CreateRecord(RECORD.DST_CODE_TBL);
&DST.SETID.Value = GetSetId(FIELD.BUSINESS_UNIT, DRAFT_BU, RECORD.DST_CODE_TYPE, ""⇒
);
&DST.DST_ID.Value = DST_ID_AR;
SQLExec("%SelectByKeyEffDt(:1,:2)", &DST, %Date, &DST);
/* do further processing using record methods and properties */
```

Related Links

GetRecord

GetField

"Understanding Record Class" (PeopleTools 8.54: PeopleCode API Reference)

"Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide)

CreateRowset

Syntax

CreateRowset({**RECORD.***recname* | *&Rowset*} [, {**FIELD.***fieldname*, **RECORD.***recname* | *&Rowset*}] . . .)

Description

Use the CreateRowset function to create an *unpopulated*, standalone rowset.

A standalone rowset is a rowset that has the specified structure, but is not tied to any data (that is, to the component buffer or to a message.) In addition, a standalone rowset isn't tied to the Component Processor. When you fill it with data, no PeopleCode runs (like RowInsert, FieldDefault, and so on.)

The first parameter determines the structure of the rowset to be created.

If you specify a record as the first parameter, it's used as the primary level 0 record. If you don't specify any other parameters, you create a rowset containing one row, with one unpopulated record. To populate this type of rowset with data, you should only use:

- the Fill or FillAppend rowset class methods
- a record method (SelectByKey)
- the SQLExec function

If you specify a rowset object, you are creating a new rowset based on the structure of the specified rowset object, including any child rowsets. It will not contain any data. If you want to populate this type of rowset with data, use the CopyTo method or a SQL statement.

Note: You should *not* use the rowset Select or SelectNew methods for populating rowsets created using CreateRowset. Use Fill or FillAppend instead.

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Restrictions on Using CreateRowset

The following methods and properties don't work with a rowset created using CreateRowset:

- Select
- SelectNew
- Any GUI methods (like HideAllRows)
- Any effective date methods or properties (like EffDt, EffSeq, or GetCurrEffRow)

In addition, rowsets created using CreateRowset are *not* automatically tied to the database. This means if you insert or delete rows, the rows will *not* be inserted or deleted in the database when you save the page.

Parameters

RECORD.*recname* | *&Rowset*	Specify either a record name or an existing rowset object.
FIELD.*fieldname*, RECORD.*recname* | *&Rowset*	Use **FIELD**.*fieldname*, **RECORD**.*recname* to specify a related display *record*. **FIELD**.*fieldname* refers to the controlling field, (not the related display field) while **RECORD**.*recname* refers to the related display record. If you specify *&rowset*, you are adding a child rowset object to the newly created rowset. This must be an existing rowset object.

Returns

An unpopulated, standalone rowset object.

Example

The following creates a simple rowset of just a single record per row:

```
&RS = CreateRowset(RECORD.QA_MYRECORD);
```

The following creates a rowset with the same structure as the specified rowset:

```
&RS2 = CreateRowset(&RS);
```

The following code creates a rowset structure composed of four records in an hierarchical structure, that is,

```
QA_INVEST_HDR
   QA_INVEST_LN
      QA_INVEST_TRANS
         QA_INVEST_DTL
```

Note that you have to start at the *bottom* of the hierarchy, and add the upper levels, not the other way around.

```
Local Rowset &RS, &RS2, &RS_FINAL;

&RS2 = CreateRowset(RECORD.QA_INVEST_DTL);
&RS = CreateRowset(RECORD.QA_INVEST_TRANS, &RS2);
&RS2 = CreateRowset(RECORD.QA_INVEST_LN, &RS);
```

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```
&RS_FINAL = CreateRowset(RECORD.QA_INVEST_HDR, &RS2);
```

The following example reads all of the QA_MYRECORD records into a rowset, and returns the number of rows read:

```
&RS = CreateRowset(RECORD.QA_MYRECORD);
&NUM_READ = &RS.Fill();
```

To make a clone of an existing rowset, that is, to make two distinct copies, you can do the following:

```
&RS2 = CreateRowset(&RS);
&RS.CopyTo(&RS2);
```

The following code example is used for creating multiple children in a standalone rowset:

```
Local Rowset &rsBOCMRole, &rsBOCMRel, &rsBOCMUse;

   &rsBOCMRole = CreateRowset(Record.BO_CM_ROLE);
   &rsBOCMRel = CreateRowset(Record.BO_CM_REL);
   &rsBOCMUse = CreateRowset(Record.BO_CM_USE);
   &rsBOCM = CreateRowset(Record.BO_CM, &rsBOCMUse, &rsBOCMRole, &rsBOCMRel);
```

Related Links

GetRowset

GetLevel0

GetRecord

GetField

"Using Standalone Rowsets" (PeopleTools 8.54: PeopleCode Developer's Guide)

CreateRowsetCache

Syntax

CreateRowsetCache(*&Rowset*, [**Rowset.**]*Name*, *Description*)

Description

Use the CreateRowsetCache function to create a new RowsetCache object with the given name if it doesn't already exist.

Parameters

&Rowset	Specify an already instantiated and populated rowset that you want to use for creating a RowsetCache object. The RowsetCache object will have the same format and data as *&Rowset*.
Record. ***Name***	Specify the name of the created RowsetCache object. If you just specify *name*, you must enclose the name in quotation marks.
Description	Specify a description of the RowsetCache as a string.

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Returns

A reference to the new RowsetCache object if there is not already a RowsetCache object of the given name.

Example

```
Local RowsetCache &Cache;
Local Rowset &RS;

&RS = CreateRowset(Record.PSLANGUAGES);
&NUM_READ = &RS.Fill();

&Cache = CreateRowsetCache(&RS, "AAROWSET1", "ROWSET_AAROWSET1");
```

Related Links

GetRowsetCache

"Using the RowsetCache Class" (PeopleTools 8.54: PeopleCode API Reference)

CreateSearchRowset

Syntax

CreateSearchRowset([*counts*])

Description

Use the CreateSearchRowset function to create the rowset based off of the search record and key list values.

Important! Use this function within fluid applications only.

Parameters

counts	The optional *counts* parameter is currently not supported.

Returns

A Rowset object.

Example

```
&RS_srch = CreateSearchRowset();
```

CreateSOAPDoc

Syntax

CreateSOAPDoc()

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Description

Use the CreateSOAPDoc function to create an empty SOAPDoc object. Then use the SOAPDoc class methods and properties, as well as the XmlDoc class methods and properties to populate the SOAPDoc object.

Parameters

None.

Returns

A reference to a SOAPDoc object.

Example

```
Local SOAPDoc &MyDoc;

&MyDoc = CreateSOAPDoc();
```

Related Links

"Understanding theSOAPDoc Class" (PeopleTools 8.54: PeopleCode API Reference)
"Understanding XmlDoc Classes" (PeopleTools 8.54: PeopleCode API Reference)

CreateSQL

Syntax

CreateSQL([{*sqlstring* | **SQL.***SqlName*}[, *paramlist*]])

Where *paramlist* is an arbitrary-length list of values in the form:

inval1 [, *inval2*] ...

Description

Use the CreateSQL function to instantiate a SQL object from the SQL class and opens it on the given *sqlstring* and input values. *sqlstring* is a PeopleCode string value giving the SQL statement.

Any errors in the SQL processing cause the PeopleCode program to be terminated with an error message.

You can use CreateSQL with no parameters to create an empty SQL object that can be used to assign properties before being populated and executed.

Opening and Processing sqlstring

If *sqlstring* is a SELECT statement, it is immediately bound with the *inval* input values and executed. The SQL object should subsequently be the subject of a series of Fetch method calls to retrieve the selected rows. If you want to fetch only a single row, use the SQLExec function instead. If you want to fetch a single row into a PeopleCode record object, use the record Select method.

If *sqlstring* is not a SELECT statement, and *either* there are some *inval* parameters, *or* there are no bind placeholders in the SQL statement, the statement is immediately bound and executed. This means that there is nothing further to be done with the SQL statement and the IsOpen property of the returned SQL

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object will be False. In this case, using the SQLExec function would generally be better. If you want to delete, insert or update a record object, use the record Delete, Insert, or Update methods.

If *sqlstring* is not a SELECT statement, there are no *inval* parameters, *and* there are bind placeholders in the SQL statement, the statement is neither bound nor executed. The resulting SQL object should subsequently be the subject of a series of Execute method calls to affect the desired rows.

Using Arrays with paramlist

You can use a parameter of type "Array of Any" in place of a list of bind values or in place of a list of fetch result variables. This is particularly useful when fetching an unknown number of results.

```
&Sql1 = CreateSql("Select * from " | &TableName);
&AAny = CreateArrayAny();

While &Sql1.Fetch(&AAny)
   /* Process the row in &AAny. */
   ...
End-While;
```

Because the Array of Any promotes to absorb any remaining select columns, it must be the last parameter for the SQL object Fetch method or (for results) SQLExec. For binding, it must be the only bind parameter, as it is expected to supply all the bind values needed.

Parameters

sqlstring*| SQL.*SqlName	Specify either a SQL string containing the SQL command to be created or a reference to an existing SQL definition. This string can include bind variables, inline bind variables, and meta-SQL.
paramlist	Specify input values for the SQL string.

Returns

None.

Example

This SQL object should be used in a series of Fetch method calls:

```
Local SQL &SQL;

&SQL = CreateSQL("%SelectAll(:1) where EMPLID = :2", RECORD.ABSENCE_HIST, &EMPLID);
```

This SQL object has been opened, bound, and is already closed again:

```
&SQL = CreateSQL("Delete from %Table(:1) where EMPLID = :2", RECORD.ABSENCE_HIST, &⇒
EMPLID);
```

This SQL object should be used in a series of Execute method calls:

```
&SQL = CreateSQL("Delete from %Table(:1) where EMPLID = :2");
```

This SQL object is created as an empty object in order to set properties before being executed:

```
&Sql = CreateSQL();
&Sql.Tracename = "SQL1";
&Sql.ReuseCursor = True;
&Sql.Open(......); /* do the deed */
```

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Related Links

DeleteSQL
FetchSQL
GetSQL
SQLExec
StoreSQL
"Understanding SQL Class" (PeopleTools 8.54: PeopleCode API Reference)
"Open" (PeopleTools 8.54: PeopleCode API Reference)

CreateWSDLMessage

Syntax

```
CreateWSDLMessage(MessageName, ChannelName)
```

Description

Use the CreateWSDLMessage function to create an unstructured message. This function creates both the message as well as the channel.

This function has been deprecated. It is no longer supported.

Related Links

"Understanding Consuming Services" (PeopleTools 8.54: Integration Broker)

CreateXmlDoc

Syntax

```
CreateXmlDoc(XmlString, DTDValidation)
```

Description

Use the CreateXmlDoc function to create an XmlDoc object. If you specify a Null string for *XmlString* ("""), you create an empty XmlDoc object.

Considerations Using CreateXmlDoc

The following coding is either ignored or removed from the XmlDoc object that is created with this function:

- encoding attributes

  PeopleSoft only supports UTF-8 encoding. Any specified encoding statement is removed, as all XmlDoc objects are considered UTF-8.

- version attributes

  Regardless of what version is specified in *XmlString*, the version attribute in the generated XmlDoc object is 1.0.

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Parameters

XmlString

Specify an XML string that you want to convert into an XmlDoc object that you can then manipulate using PeopleCode. You can also specify a Null string ("") to generate an empty XmlDoc object.

DTDValidation

Specify whether a DTD should be validated. This parameter takes a boolean value. If you specify true, the DTD validation occurs if a DTD is provided. If you specify false, and if a DTD is provided, it is ignored and the XML isn't validated against the DTD. False is the default value.

In the case of application messaging, if a DTD is provided, it's always ignored and the XML isn't validated against the DTD. If the XML cannot be validated against a DTD, an error is thrown saying that there was an XML parse error.

Returns

A reference to the newly created XmlDoc object.

Example

The following creates an empty XmlDoc object.

```
Local XmlDoc &MyDoc;

&MyDoc = CreateXmlDoc("");
```

Related Links

"Understanding XmlDoc Classes" (PeopleTools 8.54: PeopleCode API Reference)

CropImage

Syntax

CropImage(*src_recfield*, *dst_recfield*, [*width*, *height*])

Description

Use the CropImage function to crop a source image existing in a database record field and save it to a different destination record field in the database. The source and destination fields must be defined with the same image format: BMP, GIF, or, JPG only.

The image cropping can be constrained to a specific aspect ratio by specifying the optional [*width* and *height* parameters. These parameters define the aspect ratio only, and do not constrain the cropping to a specific size. If the aspect ratio is not specified, then the user will be unconstrained when cropping the image.

An error occurs and CropImage returns False when:

- The source or destination field does not exist in the component buffer.

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- The source or destination field is not of type image
- The image type of the destination field differs from that of the source field.
- The destination image field is the same as the source image field.

Restrictions on Use in PeopleCode Events

CropImage is a “think-time” function, which means it shouldn’t be used in any of the following PeopleCode events:

- SavePreChange
- SavePostChange
- Workflow
- RowSelect
- Any PeopleCode event that fires as a result of a ScrollSelect (or one of its relatives) function calls, or a Select (or one of its relatives) Rowset class method.

See "Understanding Restrictions on Method and Function Use" (PeopleTools 8.54: PeopleCode Developer’s Guide).

Parameters

src_recfield Specifies the record field location of the source image file.

dst_recfield Specifies the record field location of the destination image file.

width Specifies an aspect ratio width as a numeric value.

height Specifies an aspect ratio height as a numeric value.

Important! If the width is specified, but the height is omitted, the PeopleCode program will pass syntax checking. However, at run time, the user will encounter an error and will not be able to crop the image.

Returns

A Boolean value: True when successful, False otherwise.

Example

```
&bRet = CropImage(QE_IMAGE.QE_IMAGE, QE_IMAGE_CROP.QE_CROP_IMAGE, 60, 90);
```

CubicSpline

Syntax

CubicSpline(*DataPoints*, *Control_Option*, *Left_Constraint*, *Right_Constraint*)

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Description

Use the CubicSpline function to compute a cubic spline interpolation through a set of at least four datapoints.

Parameters

DataPoints

This parameter takes an array of array of number. The array's contents are an array of six numbers. The first two of these six numbers are the x and y points to be fit. The last four are the four coefficients to be returned from the function: **a**, **b**, **c** and **d**.**a** is the coefficient of the x^0 term, **b** is the coefficient of the x^1 term, **c** is the coefficient of the x^2 term, and **d** is the coefficient of the x^3 term.

Control_Option

Specifies the control option. This parameter takes either a number or constant value. The values are:

Numeric Value	*Constant Value*	*Description*
0	%SplineOpt_SlEstEst	Generate an internal estimate of the beginning and ending slope of the cubic piecewise equations
1	%SplineOpt_SlSetEst	Use the user-specified value for the slope of the leftmost point, and generate an estimate for the rightmost point
2	%SplineOpt_SlEstSet	Use the user-specified value for the slope of the rightmost point, and generate an estimate for the leftmost point
3	%SplineOpt_SlSetSet	Use the user-specified values for the slopes of the leftmost and rightmost points
4	%SplineOpt_CvEstEst	Generate an internal estimate of the beginning and ending curvature of the cubic piecewise equations
5	%SplineOpt_CvSetEst	Use the user-specified value for the curvature of the leftmost point, and generate an estimate for the rightmost point
6	%SplineOpt_CvEstSet	Use the user-specified value for the curvature of the rightmost point, and generate an estimate for the leftmost point

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Numeric Value	*Constant Value*	*Description*
7	%SplineOpt_CvSetSet	Use the user-specified values for the curvatures of the leftmost and rightmost points
8	%SplineOpt_ClEstEst	Generate an internal estimate of the beginning and ending curl of the cubic piecewise equations
9	%SplineOpt_ClSetEst	Use the user-specified value for the curl of the leftmost point, and generate an estimate for the rightmost point
10	%SplineOpt_ClEstSet	Use the user-specified value for the curl of the rightmost point, and generate an estimate for the leftmost point
11	%SplineOpt_ClSetSet	Use the user-specified values for the curls of the leftmost and rightmost points
12	%SplineOpt_Natural	Generate a “natural” spline
13	%SplineOpt_ContCurl	Generate a spline wherein the equation for the first segment is the exact same equation for the second segment, and where the equation for the penultimate segment is the same as the equation for the last segment.

Left_Constraint A single number for the constraint for the left point. Specify a zero if this parameter isn’t needed.

Right_Constraint A single number for the constraint for the right point. Specify a zero if this parameter isn’t needed.

Returns

A modified array of array of numbers. The elements in the array correspond to the elements in the array used for *DataPoints*.

Related Links

HermiteCubic
LinearInterp

CurrEffDt

Syntax

CurrEffDt([*level_num*])

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Description

Use the CurrEffDt function to return the effective date of the specified scroll level as a Date value.

Note: This function remains for backward compatibility only. Use the EffDt rowset class property instead.

If no level is specified, CurrEffDt returns the effective date of the current scroll level.

Related Links

"EffDt" (PeopleTools 8.54: PeopleCode API Reference), "GetCurrEffRow" (PeopleTools 8.54: PeopleCode API Reference), "EffSeq" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide)

Returns

Returns a Date value equal to the current effective date of the specified scroll level.

Example

```
If INSTALLATION.POSITION_MGMT = "P" Then
   If All(POSITION_NBR) Then
      If (EFFDT = CurrEffDt(1) and
            EFFSEQ >= CurrEffSeq(1)) or
            (EFFDT > CurrEffDt(1) and
               EFFDT = %Date) Then
         Gray_employment( );
       End-if;
   End-if;
End-if;
```

Related Links

CurrEffRowNum

CurrEffSeq

CurrentLevelNumber

CurrEffRowNum

Syntax

CurrEffRowNum([*level_num*])

Description

Use the CurrEffRowNum function to return the effective row number of the selected scroll level.

Note: This function remains for backward compatibility only. Use the RowNumber row class property, in combination with the GetCurrEffRow rowset method, instead.

If no level is specified, it returns the effective row number of the current level.

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Related Links

"RowNumber" (PeopleTools 8.54: PeopleCode API Reference), "GetCurrEffRow" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide)

Example

```
&ROW = CurrEffRowNum(1);
```

Related Links

CurrEffSeq
CurrentLevelNumber
CurrEffRowNum

CurrEffSeq

Syntax

CurrEffSeq([*level_num*])

Description

Use the CurrEffSeq function to determine the effective sequence of a specific scroll area.

Note: This function remains for backward compatibility only. Use the EffSeq rowset class property instead.

If no level is specified, CurrEffSeq returns the effective sequence of the current scroll level.

Related Links

"EffSeq" (PeopleTools 8.54: PeopleCode API Reference), "GetCurrEffRow" (PeopleTools 8.54: PeopleCode API Reference), "DeleteEnabled" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide)

Returns

Returns a Number representing the effective sequence of the specified scroll level.

Example

```
If INSTALLATION.POSITION_MGMT = "P" Then
   If All(POSITION_NBR) Then
      If (EFFDT = CurrEffDt(1) and
            EFFSEQ >= CurrEffSeq(1)) or
            (EFFDT > CurrEffDt(1) and
               EFFDT = %Date) Then
         Gray_employment( );
       End-if;
   End-if;
End-if;
```

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Related Links

CurrEffDt
CurrentLevelNumber
CurrEffRowNum

CurrentLevelNumber

Syntax

```
CurrentLevelNumber()
```

Description

Use the CurrentLevelNumber function to return the scroll level where the function call is located.

Returns

Returns a Number value equal to the scroll level where the function is being called. The function returns 0 if the field where the function is called is not in a scroll area.

Example

```
&LEVEL = CurrentLevelNumber();
```

Related Links

CurrentRowNumber
FetchValue

CurrentRowNumber

Syntax

```
CurrentRowNumber([level])
```

Description

Use the CurrentRowNumber function to determine the row number of the row currently displayed in a specific scroll area.

Note: This function remains for backward compatibility only. Use the RowNumber row class property instead.

This function can determine the current row number on the level where the function call resides, or on a higher scroll level. It won't work on a scroll level below the one where the PeopleCode program resides.

Related Links

GetRow, "RowNumber" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide)

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Parameters

level A Number specifying the scroll level from which the function returns the current row number. If the level parameter is omitted, it defaults to the scroll level where the function call resides.

Returns

Returns a Number value equal to the current row number on the specified scroll level. The current number is the row where the PeopleCode program is being processed, or, if level specifies a higher level scroll, CurrentRowNumber returns the row number of the parent or grandparent row.

Example

CurrentRowNumber is typically used in component buffer functions to return the current row of the parent scroll of the target:

```
&VAL = FetchValue(RECORD.BUS_EXPENSE_PER, CurrentRowNumber(), BUS_EXPENSE_DTL.CHARG⇒
E_DT, &COUNT);
```

The following example checks if the current row number is equal to the active row count (that is, whether the active row is the last record on the scroll):

```
If CurrentRowNumber() = ActiveRowCount(EMPLID) Then
   det_employment_dt();
End-if;
```

Related Links

ActiveRowCount

CurrentLevelNumber

FetchValue

PeopleCode Built-in Functions and Language Constructs: D

The PeopleCode built-In functions and language constructs beginning with the letter D are listed in alphabetical order within this topic.

Related Links

Typographical Conventions

Date

Syntax

Date(*date_num*)

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Description

The **Date** function takes a number in the form YYYYMMDD and returns a corresponding Date value. If the date is invalid, Date displays an error message.

Warning! Make sure that you pass a four-digit year in the year parameter of this function. Two-digit values are interpreted literally: 93, for example, represents the year 93 AD.

Returns

Returns a date equal to the date specified in *date_num*.

Example

Set the temporary variable &HIREDate to a date field containing the date July 1, 1997:

```
&HIREDate = Date(19970701);
```

Related Links

Date3
DateValue
Day
Days360
Days365
Month
Weekday
Year

Date3

Syntax

Date3(*year*, *month*, *day*)

Description

The Date3 function accepts a date expressed as three integers: *year*, *month*, and *day*. It returns a corresponding Date value. If the date is invalid, the Date3 displays an error message.

Warning! Make sure that you pass a four-digit year in the year parameter of this function. Two-digit values will be interpreted literally: 93, for example, represents the year 93 AD.

Parameters

year	An integer for the year in the form YYYY.
month	An integer from 1 to 12 designating the month.
day	An integer from 1 to 31 designating the day of the month.

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Returns

Returns a Date value equal to the date specified in the function parameters.

Example

The following PeopleCode Date3 function returns the first day of the year in which the employee was hired:

```
Date3(HIRE_YEAR, 1, 1);
```

Related Links

Date
DateValue
Day
Days360
Days365

DatePart

Syntax

DatePart(*datetime_value*)

Description

Use the DatePart function to determine a date based on a provided DateTime value.

Returns

Returns a Date value equal to the date part of a specified DateTime value.

Example

The following statement sets &D2 to a Date value for 11/12/1997:

```
&D1 = DateTimeValue("11/12/1997 10:23:15 AM");
&D2 = DatePart(&D1);
```

DateTime6

Syntax

DateTime6(*year*, *month*, *day*, *hour*, *minute*, *second*)

Description

The DateTime6 function returns a DateTime value based on integer values for the *year*, *month*, *day*, *hour*, *minute*, and *second*. If the result of this function is not an actual date, there is a runtime error.

Warning! Make sure that you pass a four-digit year in the year parameter of this function. Two-digit values will be interpreted literally: 93, for example, represents the year 93 AD.

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Parameters

year	A four-digit number representing the year.
month	A number between 1 and 12 representing the month.
day	A number representing the day of the month.
hour	A number from 0 to 23 representing the hour of the day.
minute	A number from 0 to 59 representing the minute of the hour.
second	A number from 0 to 59.999999 representing seconds.

Returns

Returns a DateTime value based on the integers provided.

Example

The following example sets &DTTM to a DateTime value equal to 10:09:20 on March 15, 1997:

```
&DTTM = DateTime6(1997, 3, 15, 10, 9, 20);
```

DateTimeToHTTP

Syntax

DateTimeToHTTP(*datetime*)

Description

Use the DateTimeToHTTP function to convert any DateTime value to a date/time string in the format specified by HTTP 1.0 and 1.1 standards.

Note: Because the HTTP protocol is used to interchange information between diverse computing systems, the value returned from this function is always the ”US English” form of weekdays and months. If you want the value to use the localized form, use the DateTimeToLocalizeString function instead.

The standard HTTP date/time has the following fixed length format:

```
<dow><,><sp><dd><sp><mon><sp><year><sp><hh><:><mm><:><ss><sp><GMT>
```

where:

Value	*Description*
<dow>	a 3-character day of week name, one of Sun, Mon, Tue, Wed, Thu, Fri, Sat.
<,>	a literal comma character
<sp>	a literal space character

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Value	*Description*
<dd>	a 2-digit day of month, such as 02 or 22.
<mon>	is a 3-character month name, one of Jan, Feb, Mar, and so on.
<year>	a 4-digit year number
<hh>	a 24-hour hour number, such as 00 or 13
<mm>	a 2-digit minute number, such as 01 or 56
<ss>	a 2-digit second number, such as 03 or 59
<GMT>	a literal 3-character GMT.

As indicated by the trailing GMT, this date/time format is always expressed in GMT (or UTC, which is declared to be the same for the purposes of HTTP).

Parameters

datetime Specify the DateTime value you want converted to HTTP format. This DateTime is assumed to be in the base time zone of the installation.

Returns

A string containing the converted HTTP date/time.

Example

```
&gmtdate = DateTimeToHTTP(AddToDateTime(%DateTime, 0,0,0,0,600,0));

%Response.setHeader("Last-Modified", &gmtdate);
```

Related Links

AddToDateTime
DateTimeToLocalizedString
FormatDateTime

DateTimeToISO

Syntax

DateTimeToISO(*textdatetime*)

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Description

Use the DatetimeToISO function to convert the text value *textdatetime* (as a base time zone time) to a DateTime value in ISO 8601 format. This function automatically calculates whether daylight saving time is in effect for the given *textdatetime.*

The system's base time zone is specified in the PSOPTIONS table.

Parameters

textdatetime

Specify a date/time represented as text in the ISO 8601 format: *YYYY-MM-DD***T***hh***:***mm***:***ss*[**.***S*] (for example, 1999-01-01T19:20:30.000000)

In which:

- *YYYY* is a four-digit year.
- *MM* is a two-digit month (01 through 12).
- *DD* is a two-digit day of the month (01 through 31).
- *hh* is a two digits of hour (00 through 23).
- *mm* is a two digits of minute (00 through 59).
- *ss* is two digits of second (00 through 59).
- *S* is milliseconds in one or up to six digits.
- *TZD* is a time zone designator (**Z**, +/-*hh***:***mm* or +/-*hhmm*).

Returns

Returns a DateTime value in ISO 8601 format.

Example

In the following example, assuming the base time (as defined in PSOPTIONS) is PST, &DATETIME would have a DateTime value of "1999-01-01T01:00:00.000000-08:00":

```
&DATETIME= DateTimeToISO("1999-01-01 01:00:00.000000");
```

Related Links

ConvertDatetimeToBase
DateTimeValue
ISOToDate
ISOToDateTime

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DateTimeToLocalizedString

Syntax

```
DateTimeToLocalizedString({datetime | date}, [Pattern])
```

Description

Use the DateTimeToLocalizedString function to convert either *datetime* or *date* to a localized string. You can also specify a particular pattern to convert *datetime* or *date* to.

The *Pattern* is optional. Only specify *Pattern* if necessary.

If you need to change the pattern for each language, change the first message in Message Catalog set number 138. This is a format for each language.

Parameters

datetime* | *date
Specify either the DateTime or Date value that you want to convert.

Pattern
Specify the pattern you want to the localized DateTime or Date value to be converted to.

Using the Pattern Parameter

Pattern takes a string value, and indicates how you want the DateTime or Date value converted.

The valid values for *Pattern* are as follows.

Note: The values for pattern are case-sensitive. For example, if you specify a lowercase m, you get minutes, while an uppercase M displays the month.

Symbol	*Definition*	*Type*	*Example*
G	Era designator	Text	AD
y	Year	Number	1996
M	Month in year	Text&Number	July&07
d	Day in month	Number	10
h	Hour in am/pm	Number (1-12)	12
H	Hour in day	Number (0-23)	0
m	Minute in hour	Number	30
s	Second in minute	Number	55

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Symbol	*Definition*	*Type*	*Example*
S	Millisecond	Number	978
E	Day in week	Text	Tuesday
a	am/pm marker	Text	PM
k	Hour in day	Number (1-24)	24
K	Hour in am/pm	Number (0-11)	0
'	Escape for text	Delimiter	
''	Single quote	Literal	'

The number of pattern letters determine the format.

Type	*Pattern Format*
Text	If 4 or more pattern letters are used, the full form is used. If less than 4 pattern letters are used, the short or abbreviated form is used if one exists.
Number	Use the minimum number of digits. Shorter numbers are zero-padded to this amount. The year is handled specially; that is, if the count of 'y' is 2, the year is truncated to 2 digits.
Text&Number	If 3 or more pattern letters are used, text is used, otherwise, a number is used.

Any characters in *Pattern* are not in the ranges of ['a'..'z'] and ['A'..'Z'] are treated as quoted text. For instance, characters like ':', '.', ' ', '#' and '@' appear in the resulting string even they're not within single quotes.

A pattern containing any invalid pattern letter results in a runtime error.

Examples using a United States locale:

Pattern	*Result*
"yyyy.MM.dd G 'at' hh:mm:ss"	1996.07.10 AD at 15:08:56
"EEE, MMM d, "yy"	Wed, July 10, '96
"h:mm a"	12:08 PM
"hh 'o"clock' a"	12 o'clock PM

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Pattern	*Result*
"K:mm a"	0:00 PM
"yyyyy.MMMMM.dd GGG hh:mm aaa"	1996.July.10 AD 12:08 PM

Returns

A string.

Example

```
REM*************************************************************;
Function ConvertDateToDTTM(&Date As date) Returns DateTime ;
REM *************************************************************;
   &String = DateTimeToLocalizedString(&Date, "M/d/y");
   &String = &String | " 00:00:00.000000";
   &DateTime = DateTimeValue(&String);
   Return &DateTime;
End-Function;
```

Related Links

FormatDateTime

DateTimeToHTTP

DateTimeToTimeZone

Syntax

DateTimeToTimeZone(*OldDateTime, SourceTimeZone, DestinationTimeZone*)

Description

Use the DateTimeToTimeZone function to convert DateTime values from the DateTime specified by *SourceTimeZone* to the DateTime specified by *DestinationTimeZone*.

Considerations Using this Function

Typically, this function is used in PeopleCode, *not* for displaying time. If you take a DateTime value, convert it from base time to client time, then try to display this time, depending on the user settings, when the time is displayed the system might try to do a *second* conversion on an already converted DateTime. This function could be used as follows: suppose a user wanted to check to make sure a time was in a range of times on a certain day, in a certain timezone. If the times were between 12 AM and 12 PM in EST, these resolve to 9 PM and 9 AM PST, respectively. The start value is *after* the end value, which makes it difficult to make a comparison. This function could be used to do the conversion for the comparison, in temporary fields, and not displayed at all.

Parameters

OldDateTime Specify the DateTime value to be converted.

SourceTimeZone Specify the time zone that *OldDateTime* is in. Valid values are:

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- *timezone* - a time zone abbreviation or a field reference to be used for converting *OldDateTime*.
- **Local** - use the local time zone for converting *OldDateTime*.
- **Base** - use the base time zone for converting *OldDateTime*.

DestinationTimeZone Specify the time zone that you want to convert *OldDateTime* to. Valid values are:

- *timezone* - a time zone abbreviation or a field reference to be used for converting *OldDateTime*.
- **Local** - use the local time zone for converting *OldDateTime*.
- **Base** - use the base time zone for converting *OldDateTime*.

Returns

A converted DateTime value.

Example

The following example. TESTDTTM, is a DateTime field with a value 01/01/99 10:00:00. This example converts TESTDTTM from Pacific standard time (PST) to eastern standard time (EST).

```
&NEWDATETIME = DateTimeToTimeZone(TESTDTTM, "PST", "EST");
```

&NEWDATETIME will have the value 01/01/99 13:00:00 because EST is three hours ahead of PST on 01/01/99, so three hours are added to the DateTime value.

Related Links

ConvertDatetimeToBase
ConvertTimeToBase
FormatDateTime
IsDaylightSavings
TimeToTimeZone
TimeZoneOffset
"PeopleTools Options" (PeopleTools 8.54: System and Server Administration)

DateTimeToUserFormat

Syntax

DateTimeToUserFormat(*textdatetime*, {*timezone* | **"Local"** | **"Base"**})

Description

Use the DateTimeToUserFormat function to convert the string value *textdatetime* in PeopleSoft internal date/time format to a date/time value in the user's personalized date/time format for a specified time zone.

The format for the return value is determined in the following order of precedence:

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1. User personalizations if they exist.
2. If there are no user personalizations, then any format specified by the browser language setting in PSLOCALEDEFN.
3. If there are no user personalizations and there is no browser session to determine the browser language settings (for example, when running an Application Engine program directly in Application Designer), the system's regional language setting is used to determine the format.

For example, if the user's date and time format personalization settings are DDMMYY and 24-hour clock, the following function invocation returns a DateTime string equal to `27/09/2011 08:00:00`.

```
&DTM = DateTimeToUserFormat("2011-09-27 08:00:00.000000", "Base");
```

Parameters

textdatetime

Specifies a String value representing a date/time value in the PeopleSoft internal format: *YYYY-MM-DD hh*:*mm*:*ss*.*SSSSSS* (for example, 1999-01-01 19:20:30.000000)

In which:

- *YYYY* is a four-digit year.
- *MM* is a two-digit month (01 through 12).
- *DD* is a two-digit day of the month (01 through 31).
- *hh* is two digits of hour (00 through 23).
- *mm* is two digits of minute (00 through 59).
- *ss* is two digits of second (00 through 59).
- *S* is milliseconds in one or up to six digits.

***timezone* | "Local" | "Base"**

Specifies a String value to indicating the time zone to convert to. The values are:

- *timezone* – A time zone abbreviation or a field reference.
- **"Local"** – Use the local time zone.
- **"Base"** – Use the base time zone.

Returns

Returns a DateTime value in user format for the specified time zone.

Example

In the following example, assuming the base time (as defined in PSOPTIONS) is PST, &DT would have a value of "1999-01-13 22:00:00":

```
&DT= DateTimeToUserFormat("1999-01-13 19:00:00.000000","EST");
```

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DateTimeValue

Syntax

DateTimeValue(*textdatetime*)

Description

Use the DateTimeValue function to derive a DateTime value from a string representing a date and time.

Using this Function in Fields Without a Default Century Setting

This function may derive the wrong century setting if passed a two-character year *and* DateTimeValue is executing in a PeopleCode event not associated with a field that has a default century setting.

For example, assume that TEST_DATE is a date field with a default century setting of 10. TEST_FIELD is a field with *no* default century setting. If the following PeopleCode program is executing in TEST_FIELD, the date will be calculated incorrectly:

```
TEST_DATE = DateTimeValue("10/13/11 15:34:25");
```

Although TEST_DATE has a century setting, it isn't used because the PeopleCode fired in TEST_FIELD. Instead, DateTimeValue uses the 50/50 rule and calculates the year to be 2011 (instead of 1911).

Parameters

textdatetime

Specify a date/time value represented as text in one of three formats:

- *MM*/*DD*/*YY*[*YY*] *hh*:*mm*:*ss.ssssss* [{**AM**|**PM**}]
- *MM*.*DD*.*YY*[*YY*] *hh*:*mm*:*ss.ssssss* [{**AM**|**PM**}]
- *YYYY*-*MM*-*DD***T***hh*:*mm*:*ss*[.*S*]*TZD* (that is, ISO 8601 format —for example, 1999-01-01T19:20:30.000000+0800)

In which:

- *YY*[*YY*] is a two- or four-digit year.
- *YYYY* is a four-digit year.
- *MM* is a two-digit month (01 through 12).
- *DD* is a two-digit day of the month (01 through 31).
- *hh* is a two digits of hour (00 through 23).
- *mm* is a two digits of minute (00 through 59).
- *ss* is two digits of second (00 through 59).
- *ssssss* is six digits of milliseconds.
- *S* is milliseconds in one or up to six digits.

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- *TZD* is a time zone designator (**Z**, +/-*hh*:*mm* or +/-*hhmm*).

Returns

Returns a DateTime value.

Example

Both of the following examples set &Date_TIME to a DateTime value equal to October 13, 1997 10:34:25 PM.:

```
&Date_TIME = DateTimeValue("10/13/97 10:34:25 PM");
&Date_TIME = DateTimeValue("10/13/97 22:34:25");
```

Assuming the base time (as defined in PSOPTIONS) is PST, the following three examples set &Date_TIME to a DateTime value equal to 2009-12-31-22.30.40.120000 UTC:

```
&Date_Time = DateTimeValue("2010-01-01 06:30:40.12Z");
&Date_Time = DateTimeValue("2010-01-01 00:30:40.12-0600");
&Date_Time = DateTimeValue("2010-01-01 10:30:40.12+04:00");
```

Related Links

Date
Date3
DateValue
Day
Days360
Days365
Month
Weekday
Year

DateValue

Syntax

DateValue(*date_str*)

Description

Use the DateValue function to convert a date string and returns the result as a Date type. *date_str* must be a string in the active date format user's current personalization date format.

If the user's Date Format personalization setting is set to DDMMYY (or it is defaulted to this from their browser locale or the system-wide personalization defaults) then the following code returns a Date value equal to September 10, 1997.

```
&DTM = DateValue("10/09/97");
```

If the user's Date Format personalization setting is set to MMDDYY (or it is defaulted to this from their browser locale or the system-wide personalization defaults) then the same function call returns a value equal to October 9, 1997.

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Using this Function in Fields Without a Default Century Setting

This function may derive the wrong century setting if passed a 2-character year *and* DateValue is executing in a PeopleCode event not associated with a field that has a default century setting.

For example, assume that TEST_DATE is a date field with a default century setting of 10. TEST_FIELD is a field with *no* default century setting. If the following PeopleCode program is executing in TEST_FIELD, the date will be calculated incorrectly:

```
TEST_DATE = DateValue("10/13/11");
```

Though TEST_DATE has a century setting, it isn't used because the PeopleCode fired in TEST_FIELD. Instead, DateValue uses the 50/50 rule and calculates the year to be 2011 (instead of 1911).

Returns

Returns a Date value.

Related Links

Date
Date3
DateTimeValue
Day
Days360
Days365
Month
Weekday
Year

Day

Syntax

Day(*dt_val*)

Description

Use the Day function to determine an integer representing the day of the month based on a Date or DateTime value.

Returns

Returns a Number value equal to the day of the month for *dt_val*. The return value is an integer from 1 to 31.

Example

If HIRE_DATE is November, 1, 1997, the following Day function returns the integer 1:

```
&FIRST_DAY = Day(HIRE_DATE);
```

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Related Links

Date
Date3
DateValue
Days
Days360
Days365
Month
Weekday
Year

Days

Syntax

Days(*dt_val*)

Description

Use the Days function to returns the Julian date for the *dt_val* specified. This function accepts a Date, DateTime, or Time value parameter.

Returns

Returns a Number value equal to the Julian date for *dt_val*.

Example

To find the number of days between two dates, use the Days function on both dates, and subtract one from the other:

```
&NUM_DAYS = Abs(Days(HIRE_Date) - Days(RELEASE_Date));
```

Related Links

DateValue
Days360
Days365
Month
Weekday
Year

Days360

Syntax

Days360(*date_val1*, *date_val2*)

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Description

Use the Days360 function to return the number of days between the Date values *date_val1* and *date_val2* using a 360-day year (twelve 30-day months). Use this function to help compute payments if your accounting system is based on twelve 30-day months.

If *date_val2* occurs before *date_val1*, Days360 returns a negative number.

Example

The following example sets &NUMDAYS to the number of days between TERM_START_DT and PMT_DT based on a 360-day calendar:

```
&NUMDAYS = Days360(TERM_START_DT, PMT_DT);
```

Related Links

Date
Date3
DateValue
Day
Days
Days365
Month
Weekday
Year

Days365

Syntax

Days365(*date_val1*, *date_val2*)

Description

Use the Days365 function to return the number of days between the Date values *date_val1* and *date_val2* using a 365-day year. Use this function to help compute payments if your accounting system is based on a 365-day year.

If *date_val2* occurs before *date_val1*, Days365 returns a negative number.

Returns

Returns a Number value equal to the number of days between the two dates in a 365-day calendar.

Example

The following example sets &NUMDAYS to the number of days between and TERM_START_DT and PMT_DT, based on a 365-day calendar:

```
&NUMDAYS = Days360(TERM_START_DT, PMT_DT);
```

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Related Links

Date
Date3
DateValue
Day
Days360
Month
Weekday
Year

DBCSTrim

Syntax

```
DBCSTrim(source_str)
```

Description

Note: This function has been deprecated.

Use the DBCSTrim function to remove a trailing DBCS lead byte at the end of the string.

DBPatternMatch

Syntax

```
DBPatternMatch(Value, Pattern, CaseSensitive)
```

Description

Use the DBPatternMatch function to match the string in *Value* to the given pattern.

You can use wildcard characters % and _ when searching. % means find all characters, while _ means find a single character. For example, if you wanted to find if the string in *Value* started with the letter M, you'd use "M%" for *Pattern*. If you wanted to find either DATE or DATA, use "DAT_" for *Pattern*.

These characters can be escaped (that is, ignored) using a \. For example, if you want to search for a value that contains the character %, use \% in *Pattern*.

If *Pattern* is an empty string, this function retrieves the value just based on the specified case-sensitivity (that is, specifying "" for *Pattern* is the same as specifying "%").

Parameters

Value	Specify the string to be searched.
Pattern	Specify the pattern to be used when searching.

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CaseSensitive Specify whether the search is case-sensitive. This parameter takes a Boolean value: True, the search is case-sensitive, False, it is not.

Returns

Returns a Boolean value. True if the string matches the pattern, False otherwise.

Related Links

Find
Findb

DeChunkText

Syntax

```
DeChunkText(table_name, seq_field, data_field, &array_of_keys,
&array_of_key_datatypes, &array_of_key_values)
```

Description

Use the DeChunkText function to read the chunks created by the ChunkText function from a database table and assemble them back into a long text string.

Parameters

table_name Specify the name of the database table as a string. This table stores the chunks created by ChunkText.

seq_field Specify the name of the field that stores the sequence number for each chunk as a string.

data_field Specify the name of the field that stores the data chunks as a string.

&array_of_keys Specify key field names as an array of string.

&array_of_key_datatypes Specify the types for the key fields as an array of string. See below.

&array_of_key_values Specify the key field values as an array of string.

The values for *&array_of_key_datatypes* can be as follows:

Value	***Description***
STR	String value
CHAR	Single character
LONGTEXT	Long text value

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Value	*Description*
DATE	Date value
TIME	Time value
DATETIME	Date/time value
INT	Integer value
SHORT	Short integer value
LONG	Long integer value
DOUBLE	Double-sized integer value

Returns

A string.

Example

```
Local array of string &key_names;
Local array of string &keyfdatatypes;
Local array of string &key_vals;
Local string &text;

&tablename = "PSPCMTXT";
&seq_fld = "SEQNUM";
&data_fld = "PEOPLECODE";

&key_names = CreateArray("OBJECTID1", "OBJECTVALUE1", "OBJECTID2", "OBJECTVALUE2", ⇒
"OBJECTID3", "OBJECTVALUE3");
&keyfdatatypes = CreateArray("INT", "STR", "INT", "STR", "INT", "STR");
&key_vals = CreateArray("1", "PSTRANSFRM_WRK", "2", "IB_TRANSFORM_PB", "12", "Field⇒
Change");

&text = DeChunkText(&tablename, &seq_fld, &data_fld, &key_names, &keyfdatatypes, &k⇒
ey_vals);
```

Related Links

ChunkText

Declare Function

Syntax

PeopleCode Function Syntax

```
Declare Function function_name PeopleCode record_name.field_name event_type
```

External Library Function Syntax

```
Declare Function function_name Library lib_name
[Alias module_name]
[paramlist]
```

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```
[Returns ext_return_type [As pc_type]]
```

In which *paramlist* is:

```
([ext_param1 [, ext_param2] . . .)
```

And in which *ext_param1*, *ext_param2*, and so on is:

```
ext_datatype [{Ref|Value}] [As pc_return_type]
```

Description

PeopleCode can call PeopleCode functions defined in any field on any record definition. You can create special record definitions whose sole purpose is to serve as function libraries. By convention, PeopleCode functions are stored in FieldFormula PeopleCode, in record definitions with names beginning in FUNCLIB_.

PeopleCode can also call external programs that reside in dynamic link libraries. You must declare either of these types of functions at the top of the calling program using the Declare Function statement.

To support processes running on an application server, you can declare and call functions compiled in dynamic link libraries on windows (*.DLL files) and shared libraries on UNIX (lib*.so files.) The PeopleCode declaration and function call syntax is the same regardless of platform, but UNIX libraries must be compiled with an interface function.

See "Calling DLL Functions on the Application Server" (PeopleTools 8.54: PeopleCode Developer's Guide).

PeopleCode Functions

You can call a PeopleCode function defined on any record definition, provided you declare it at the top of the calling program. The declaration identifies the function name, as well as the record, field, and event type where the function definition resides. The function parameters and return type are not declared; they are determined from the function definition.

Note: You can define functions only in record field PeopleCode. You can't define functions in component PeopleCode, component record Field PeopleCode, and so on.

External Library Functions

Function declarations define routines in an external (C-callable) library. The function declaration provides the name of the library, an optional alias *module_name*, a list of parameters to pass to the function, an optional Returns clause specifying the type of any value returned by the external function, and the PeopleCode data type into which to convert the returned value. The library must be a DLL accessible by Windows or a shared library accessible by UNIX.

After you have declared an external library function, you can call it the same way as an external PeopleCode function. Like PeopleCode functions, you must pass the number of parameters the library function expects. Calls to external functions suspend processing: this means that you should exercise caution to avoid "think-time" errors when calling the function in the following PeopleCode events:

- SavePreChange.
- SavePostChange.
- Workflow.

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- RowSelect.
- Any PeopleCode event that fires as a result of a ScrollSelect (or one of its relatives) function calls, or a Select (or one of its relatives) Rowset class method.

See "Understanding Restrictions on Method and Function Use" (PeopleTools 8.54: PeopleCode Developer's Guide).

Parameters

The following are the parameters for the PeopleCode function syntax:

function_name	Name of the function.
PeopleCode	Reserved word that identifies the function as a PeopleCode function.
recordname.fieldname	Specifies the record and field where the function is located.
event_type	Component Processor event with which the function is associated.

Note: *event_type* can be used to specify *record field* events only. You can't specify a component record field event, a component record event, and so on.

The following are the parameters for the external library function syntax:

function_name	Name of the function.
Library	Reserved word that identifies the function as an external library function.
lib_name	A string representing the name of the external library. The external routine must be located in a DLL named *lib_name* accessible by Windows, or an equivalent shared library in a UNIX system.
Alias ***module_name***	Optionally specifies the name of the function's entry point within the shared library. This is needed only if the C function name differs from *function_name* in the PeopleCode external function declaration. The external module is invoked using the _ _stdcall calling convention on Windows.
paramlist	List of parameters expected by the function, each in the form: *ext_datatype* [{**Ref** | **Value**}] [**As** *pc_type*]
ext_datatype	The data type of the parameter expected by the function. To specify the type you can use any of the following: • BOOLEAN • INTEGER • LONG

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- UINTEGER
- ULONG
- STRING
- STRING
- FLOAT
- DOUBLE

Ref | Value

Optionally use one of these two reserved words to specify whether the parameter is passed by reference or by value. If Ref is specified, it is passed by pushing a reference (pointer) on the stack. If Value is specified the value is pushed on the stack (for integers, and so on.) If neither is specified, Ref is assumed.

As *pc_type*

Specifies PeopleCode data type of the value passed to the function. You can choose between PeopleCode data types String, Number, Integer, Float, Date, Boolean, and Any.

Returns *ext_return_type*

Specifies the data type of any value returned by the function. The Returns clause is omitted if the function is void (returns no value.) To specify the return type you can use any of the following:

- BOOLEAN
- INTEGER
- LONG
- UINTEGER
- ULONG
- FLOAT
- DOUBLE

The types String and LString are not allowed for the result type of a function.

As *pc_return_type*

Specifies the PeopleCode data type of the variable or field into which to read the returned value. You can choose between PeopleCode data types String, Number, Integer, Float, Date, Boolean, and Any. If the As clause is omitted, PeopleTools selects an appropriate type based on the type of value returned by the external function (for example, all integer and floating point types are converted to Number).

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Example

Assume you have defined a PeopleCode function called VerifyZip. The function definition is located in the record definition FUNCLIB_MYUTILS, in the record field ZIP_EDITS, attached to the FieldFormula event. You would declare the function using the following statement:

```
Declare Function verifyzip PeopleCode FUNCLIB_MYUTILS.ZIP_EDITS FieldFormula;
```

Now assume you want to declare a function called **PCTest** in PSUSER.DLL. It takes an integer and returns an integer. You would write this declare statement:

```
Declare Function pctest Library "psuser.dll"
      (integer Value As number) Returns integer As number;
```

Related Links

Function

Decrypt

Syntax

Decrypt(*KeyString*, *EncryptedString*)

Description

Use the Decrypt function to decrypt a string previously encrypted with the Encrypt function. This function is generally used with merchant passwords. For this function to decrypt a string successfully, you must use the same *KeyString* value used to encrypt the string.

Parameters

KeyString	Specify the key used for encrypting the string. You can specify a NULL value for this parameter, that is, two quotation marks with no blank space between them ("").
EncryptedString	Specify the string you want decrypted.

Returns

A clear text string.

Example

Encrypt and Decrypt support only strings.

```
&AUTHPARMS.WRKTOKEN.Value = Decrypt("", RTrim(LTrim(&MERCHANTID_REC.CMPAUTHNTCTNTOK⇒
EN.Value)));
```

Related Links

Encrypt

Hash

"PeopleSoft Online Security" (PeopleTools 8.54: Security Administration)

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Degrees

Syntax

```
Degrees(angle)
```

Description

Use the Degrees function to convert the given angle from radian measurement to degree measurement.

Parameters

angle	The size of an angle in radians.

Returns

The size of the given angle in degrees.

Example

The following example returns the equivalent size in degrees of an angle measuring 1.2 radians:

```
&DEGREE_SIZE = Degrees(1.2);
```

Related Links

Acos
Asin
Atan
Cos
Cot
Radians
Sin
Tan

DeleteAttachment

Syntax

```
DeleteAttachment(URLSource, DirAndSysFileName[, PreserveCase])
```

Description

Use the DeleteAttachment function to delete a file from the specified storage location.

DeleteAttachment does *not* generate any type of “Are you sure?” message. If you want the end user to verify the deletion before it is performed, you must write your own checking code in your application.

Additional information that is important to the use of DeleteAttachment can be found in the *PeopleTools: PeopleCode Developer's Guide*:

- PeopleTools supports multiple types of storage locations.

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See "Understanding File Attachment Storage Locations" (PeopleTools 8.54: PeopleCode Developer's Guide).

- Certain characters are illegal in file names; other characters in file names are converted during file transfer.

  See "Application Development Considerations" (PeopleTools 8.54: PeopleCode Developer's Guide).

- Non-ASCII file names are supported by the PeopleCode file attachment functions.

  See "Attachments with non-ASCII File Names" (PeopleTools 8.54: PeopleCode Developer's Guide).

Parameters

URLSource

A reference to a URL. This can be either a URL identifier in the form URL.*URL_ID*, or a string. This, along with the *DirAndSysFileName* parameter, indicates the file's location.

Note: When the *URLSource* parameter is specified as a string value, forward slashes (/) are required. Backward slashes (\) are not supported for a string value.

See "Understanding URL Strings Versus URL Objects" (PeopleTools 8.54: PeopleCode Developer's Guide).

DirAndSysFileName

The relative path and system file name of the file on the file server. This is appended to *URLSource* to make up the full URL where the file is deleted from. This parameter takes a string value.

Note: Because the *DirAndSysFileName* parameter is appended to the URL, it also requires forward slashes ("/"). Backward slashes ("\") are not supported for this parameter.

PreserveCase

Specify a Boolean value to indicate whether when searching for the file specified by the *DirAndSysFileName* parameter, its file name extension is preserved or not; *True*, preserve the case of the file name extension, *False*, convert the file name extension to all lower case letters.

The default value is *False*.

Warning! If you use the *PreserveCase* parameter, it is important that you use it in a consistent manner with all the relevant file-processing functions or you may encounter unexpected file-not-found errors.

Returns

You can check for either an integer or a constant value:

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Numeric Value	*Constant Value*	*Description*
0	%Attachment_Success	File was deleted successfully.
1	%Attachment_Failed	File deletion failed due to an unspecified error. The following are some possible situations where %Attachment_Failed could be returned: • Failed to initialize the process due to some internal error. • Failed due to unexpected/bad reply from server. • Failed to allocate memory due to some internal error. • Failed due to timeout. • Failed due to non-availability of space on FTP server. • Failed to close SSL connection. • Failed due to an unspecified error on the HTTP repository. If the HTTP repository resides on a PeopleSoft web server, then you can configure tracing on the web server to report additional error details. See "Debugging File Attachment Problems" (PeopleTools 8.54: PeopleCode Developer's Guide).
3	%Attachment_FileTransferFailed	File deletion failed due to unspecified error during FTP attempt. The following are some possible situations where %Attachment_FileTransferFailed could be returned: No response from server.

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Numeric Value	*Constant Value*	*Description*
7	%Attachment_DestSystNotFound	Cannot locate destination system for FTP. The following are some possible situations where %Attachment_ DestSystNotFound could be returned: • Improper URL format. • Failed to connect to the server specified.
8	%Attachment_DestSysFailedLogin	Unable to login to destination system for FTP. The following are some possible situations where %Attachment_ DestSysFailedLogin could be returned: • Unsupported protocol specified. • Access denied to server. • Failed to connect using SSL Failed to verify the certificates. • Failed due to problem in certificates used. • Could not authenticate the peer certificate. • Failed to login with specified SSL level. • Remote server denied logon. • Problem reading SSL certificate.
9	%Attachment_FileNotFound	Cannot locate file. This error code applies to the following storage locations: database records only. The following are some possible situations where %Attachment_ FileNotFound could be returned: • Remote file not found. • Failed to read remote file.

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Numeric Value	*Constant Value*	*Description*
10	%Attachment_DeleteFailed	Cannot delete file. This error code applies to the following storage locations: FTP sites and HTTP repositories. The following are some possible situations where %Attachment_DeleteFailed could be returned: • Remote file not found. • Failed to read remote file.

Example

```
&retcode = DeleteAttachment(URL.BKFTP, ATTACHSYSFILENAME);
```

An example of the DeleteAttachment function is provided in the demonstration application delivered in the FILE_ATTACH_WRK derived/work record. This demonstration application is shown on the PeopleTools Test Utilities page.

See "Using the PeopleTools Test Utilities Page" (PeopleTools 8.54: PeopleCode Developer's Guide).

Related Links

AddAttachment
CleanAttachments
CopyAttachments
DetachAttachment
GetAttachment
MAddAttachment
PutAttachment
ViewAttachment
"Understanding the File Attachment Functions" (PeopleTools 8.54: PeopleCode Developer's Guide)

DeleteEmailAddress

Syntax

DeleteEmailAddress(*Type*)

Description

Use the DeleteEmailAddress function to delete the email address associated with the specified type for the current user. You can only have one email address of a specific type for a user.

Note: You can only delete the Primary Email Address if it's the only address. If the email address you want to delete is marked as the primary email address, and it is *not* the only email address, you must mark another email address as primary before you can delete the email address you want to delete. Use the MarkPrimaryEmailAddress function to set the primary email address.

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Parameters

Type Specify the type that you want to change the email address to. This parameter takes a string value. The valid values are:

Value	*Description*
BB	Blackberry email address
BUS	Business email address
HOME	Home email address
OTH	Other email address
WORK	Work email address

Returns

None.

Related Links

AddEmailAddress
ChangeEmailAddress
MarkPrimaryEmailAddress

DeleteImage

Syntax

```
DeleteImage(scrollpath, target_row, [recordname.]fieldname)
```

where *scrollpath* is:

```
[SCROLL.level1_recname, level1_row, [SCROLL.level2_recname, level2_row,]]
SCROLL.target_recname
```

Description

Use the DeleteImage function to remove an image associated with a record field.

Note: To update an image field using this function, be sure that PSIMAGEVER field is also on the same record as the image field being updated.

Parameters

scrollpath A construction that specifies a scroll area in the component buffer.

target_row The row number of the target row.

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[*recordname* .]*fieldname*	The name of the field asThe *recordname* prefix is not required if the program that calls DeleteImage is on the *recordname* record definition.

Returns

Returns a Boolean value: True if image was successfully deleted, False otherwise.

Example

```
&Rslt = DeleteImage(EMPL_PHOTO.EMPLOYEE_PHOTO);
```

Related Links

InsertImage

DeleteRecord

Syntax

DeleteRecord(*level_zero_recfield*)

Description

Use the DeleteRecord function to remove a high-level row of data and all dependent rows in other tables from the database.

Note: This function remains for backward compatibility only. Use the Delete record class method instead.

DeleteRecord deletes the component's level-zero row from the database, deletes any dependent rows in other tables from the database, and exits the component.

This function, like DeleteRow, initially marks the record or row as needing to be deleted. At save time the row is actually deleted from the database and cleared from the buffer.

This function works only if the PeopleCode is on a level-zero field. It cannot be used from SavePostChange or WorkFlow PeopleCode.

Related Links

"Delete" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

level_zero_recfield	A *recordname.fieldname* reference identifying any field on the level-zero area of the page.

Returns

Optionally returns a Boolean value indicating whether the deletion was completed successfully.

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Example

The following example, which is in SavePreChange PeopleCode on a level-zero field, deletes the high-level row and all dependent rows in other tables if the current page is EMPLOYEE_ID_DELETE.

```
if %Page = PAGE.EMPLOYEE_ID_DELETE then
     &success = DeleteRecord(EMPLID);
end-if;
```

Related Links

DeleteRow

DeleteRow

Syntax

DeleteRow(*scrollpath*, *target_row*)

Where *scrollpath* is:

[**RECORD.***level1_recname*, *level1_row*, [**RECORD.***level2_recname*, *level2_row*,]]
RECORD.*target_recname*

To prevent ambiguous references, you can also use **SCROLL.** *scrollname*, where *scrollname* is the same as the scroll level's primary record name.

Description

Use the DeleteRow function to delete rows programmatically.

Note: This function remains for backward compatibility only. Use the DeleteRow rowset class method instead.

See "DeleteRow" (PeopleTools 8.54: PeopleCode API Reference).

A call to this function causes the RowDelete event sequence to fire, as if an user had manually deleted a row.

DeleteRow cannot be executed from the same scroll level where the deletion will take place, or from a lower scroll level. Place the PeopleCode in a higher scroll level record.

When DeleteRow is used in a loop, you have to process rows from high to low to achieve the correct results, that is, you must delete from the *bottom up* rather than from the top down. This is necessary because the rows are renumbered after they are deleted (if you delete row one, row two becomes row one).

Related Links

"DeleteRow" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide), "Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

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Parameters

scrollpath	A construction that specifies a scroll level in the component buffer.
target_row	The row number of the row to delete.

Returns

Boolean (optional). DeleteRow returns a Boolean value indicating whether the deletion was completed successfully.

Example

In the following example DeleteRow is used in a **For** loop. The example checks values in each row, then conditionally deletes the row. Note the syntax of the For loop, including the use of the -1 in the **Step** clause to loop from the highest to lowest values. This ensures that the renumbering of the rows will not affect the loop.

```
For &L1 = &X1 To 1 Step - 1
    &SECTION = FetchValue(AE_STMT_TBL.AE_SECTION, &L1);
    &STEP = FetchValue(AE_STMT_TBL.AE_STEP, &L1);
    If None(&SECTION, &STEP) Then
       DeleteRow(RECORD.AE_STMT_TBL, &L1);
    End-If;
 End-For;
```

Related Links

InsertRow

"Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

DeleteSQL

Syntax

DeleteSQL([**SQL.**]*sqlname*[, *dbtype*[, *effdt*]])

Description

Use the DeleteSQL function to programmatically delete a SQL definition. The SQL definition must have already been created and saved, either using the CreateSQL and StoreSQL functions, or by using Application Designer.

When you create a SQL definition, you must create a base statement before you can create other types of statements, that is, one that has a *dbtype* as GENERIC and *effdt* as the null date (or Date(19000101)). If you specify a base (generic) statement to be deleted, *all* statements as well as the generic statement are deleted.

If you specify a non-generic statement that ends up matching the generic statement, DeleteSQL does *not* delete anything, and returns False.

You must commit all database changes prior to using this function. This is to avoid locking critical Tools tables and hence freezing all other users. You receive a runtime error message if you try to use this

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function when there are pending database updates, and your PeopleCode program terminates. You need to commit any database updates prior to using this function. The CommitWork PeopleCode function has been enhanced to allow this.

Parameters

sqlname

Specify the name of a SQL definition. This is either in the form **SQL**.*sqlname* or a string value giving the *sqlname.*

dbtype

Specify the database type associated with the SQL definition. This parameter takes a string value. If *dbtype* isn't specified or is null ("""), it set by default to the current database type (the value returned from the %DbName system variable.)

Valid values for *dbtype* are as follows. These values are not case sensitive:

- APPSRV
- DB2ODBC
- DB2UNIX
- INFORMIX
- MICROSFT
- ORACLE
- SYBASE

Note: Database platforms are subject to change.

effdt

Specify the effective date associated with the SQL definition. If *effdt* isn't specified, it is set by default to the current as of date, that is, the value returned from the %AsOfDate system variable.

Returns

A Boolean value: True if the delete was successful, False if the specified SQL statement wasn't found, and terminates with an error message if there was another problem (that is, date in incorrect format, and so on.)

Example

The following code deletes the ABCD_XY SQL definition for the current DBType and as of date:

```
&RSLT = DeleteSQL(SQL.ABC_XY);

If NOT(&RSLT) Then
   /* SQL not found - do error processing */
End-if;
```

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The following code deletes the ABCD_XY SQL Definition for the current DBType and November 3, 1998:

```
&RSLT = DeleteSQL(SQL.ABCD_XY, "",Date(19981103));
```

Related Links

CreateSQL
FetchSQL
GetSQL
StoreSQL
CommitWork
"Understanding SQL Class" (PeopleTools 8.54: PeopleCode API Reference)
%DbName
%AsOfDate

DeleteSystemPauseTimes

Syntax

DeleteSystemPauseTimes(*StartDay*, *StartTime*, *EndDay*, *EndTime*)

Description

Use the DeleteSystemPauseTimes function to delete pause times that occur on your system by adding a row to the system pause times table.

This function is used in the PeopleCode for the Message Monitor. Pause times are set up in the Message Monitor.

Parameters

StartDay Specify a number from 0-6. The values are:

Value	*Description*
0	Sunday
1	Monday
2	Tuesday
3	Wednesday
4	Thursday
5	Friday
6	Saturday

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StartTime Specify a time, in seconds, since midnight.

EndDay Specify a number from 0-6. The values are:

Value	*Description*
0	Sunday
1	Monday
2	Tuesday
3	Wednesday
4	Thursday
5	Friday
6	Saturday

EndTime Specify a time, in seconds, since midnight.

Returns

A Boolean value: True if the system pause time specified was deleted, False otherwise.

Example

```
Component Boolean &spt_changed;

/* deleting a system pause time interval; */

If Not DeleteSystemPauseTimes(PSSPTIMES.STARTINGDAY, PSSPTIMES.STARTINGSECOND, PSSP⇒
TIMES.ENDINGDAY, PSSPTIMES.ENDINGSECOND) Then
   Error MsgGetText(117, 15, "");
Else
   &spt_changed = True;

/* to force a save; */

   PSSPTIMES.MSGSPTNAME = " ";

   DoSave();
End-If;
```

Related Links

AddSystemPauseTimes

"Understanding the Integration Broker Service Operations Monitor" (PeopleTools 8.54: Integration Broker Service Operations Monitor)

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DeQueue

Syntax

DeQueue(*physical queue ID*, *task type*, *task number*, *agent ID*)

Description

Once a task that has been placed in a queue by the EnQueue function and has been completed by the agent, use the DeQueue function to notify the queue server. The queue server removes the task from the queue and subtracts the cost of that task from the agent's workload.

Note: The queue server does not allow a task to be dequeued if the agent who owns that task is not logged on to that particular queue server. PeopleSoft recommends that you only use the DeQueue function in application pages that the MultiChannel Framework Console launches when agents accept or activate assigned tasks.

Parameters

physical queue ID

The physical queue is the internal representation of the logical queue that the agent signs onto and to which the task currently belongs. This is a string value, such as “sales3” or “marketing2. ” You retrieve the current physical queue from the query string in the URL of the page launched by the MultiChannel Framework console, using the GetParameter request class method with the value `ps_qid`.

task type

Specifies the type of task that an agent completed. It is a string value. The valid values are:

- email
- generic

Note: This parameter is valid only for persistent tasks (email and generic). It is not valid for chat or voice tasks.
You can retrieve the value from the query string in the URL of the application page launched by the MultiChannel Framework console. Use the GetParameter request class method with the value `ps_tasktype`.

---

task number

Uniquely identifies a particular task. This is the task number returned by the Enqueue function when the system first inserted the task into a queue. This is a string value.

You can retrieve the value from the query string in the URL of the application page launched by the MultiChannel Framework console. Use the GetParameter request class method with the value `ps_tasknum`.

agent ID

Identifies the agent who processed the task. This is a string value.

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You can retrieve the value from the query string in the URL of the application page launched by the MultiChannel Framework console. Use the GetParameter request class method with the value `ps_agentid`.

Returns

Returns 0 for success. Otherwise, it returns a message number. The message set ID for MultiChannel Framework is 162.

For example, 1302 is returned when an invalid task type or no value is provided.

Example

```
PSMCFFUNCLIB.MCF_QUEUE.Value = %Request.GetParameter("ps_qid");
PSMCFFUNCLIB.MCF_TASKTYPE.Value = %Request.GetParameter("ps_tasktype");
PSMCFFUNCLIB.MCF_TASKNUM.Value = %Request.GetParameter("ps_tasknum");
PSMCFFUNCLIB.MCF_AGENTID.Value = %Request.GetParameter("ps_agentid");

&nret = DeQueue(PSMCFFUNCLIB.MCF_QUEUE, PSMCFFUNCLIB.MCF_TASKTYPE, PSMCFFUNCLIB.MCF⇒
_TASKNUM, PSMCFFUNCLIB.MCF_AGENTID);

If &nret = 0 Then
      MessageBox(0, "", 0, 0, "Successfully dequeued.");
      End-If
```

Related Links

EnQueue

DetachAttachment

Syntax

DetachAttachment(*URLSource*, *DirAndSysFileName*, *UserFileName* [,*PreserveCase*])

Description

Use the DetachAttachment function to download a file from its source storage location and save it locally on the end-user machine. The file is sent to the browser with appropriate HTTP headers to cause the browser to display a save dialog box to the user.

The end user can specify any file name to save the file.

Additional information that is important to the use of DetachAttachment can be found in the *PeopleTools: PeopleCode Developer's Guide*:

- PeopleTools supports multiple types of storage locations.

  See "Understanding File Attachment Storage Locations" (PeopleTools 8.54: PeopleCode Developer’s Guide).

- The PeopleCode file attachment functions do not provide text file conversions when files are attached or viewed.

  See "Considerations When Attaching Text Files" (PeopleTools 8.54: PeopleCode Developer’s Guide).

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- Because DetachAttachment is interactive, it is known as a “think-time” function, and is restricted from use in certain PeopleCode events.

  See "Restrictions on Invoking Functions in Certain PeopleCode Events" (PeopleTools 8.54: PeopleCode Developer’s Guide).

- You can restrict the file types that can be uploaded to or downloaded from your PeopleSoft system.

  See "Restricting the File Types That Can Be Uploaded or Downloaded" (PeopleTools 8.54: PeopleCode Developer’s Guide).

Problems Downloading Files

If you need to use the SetLanguage built-in function to change languages, invoke SetLanguage prior to invoking ViewAttachment or DetachAttachment. You *must* place the call to SetLanguage in a different PeopleCode program and event from the PeopleCode program and event that invokes ViewAttachment or DetachAttachment.

Parameters

URLSource

A reference to a URL. This can be either a URL identifier the form **URL**.*URL_ID*, or a string.

Note: When the *URLSource* parameter is specified as a string value, forward slashes (/) are required. Backward slashes (\) are not supported for a string value.

See "Understanding URL Strings Versus URL Objects" (PeopleTools 8.54: PeopleCode Developer’s Guide).

DirAndSysFileName

The relative path and file name of the file on the file server. This is appended to *URLSource* to make up the full URL where the file is transferred from. This parameter takes a string value.

Note: Because the *DirAndSysFileName* parameter is appended to the URL, it also requires forward slashes (“/”). Backward slashes (“\”) are not supported for this parameter.

UserFileName

The default file name provided by the Detach dialog.

PreserveCase

Specify a Boolean value to indicate whether when searching for the file specified by the *DirAndSysFileName* parameter, its file name extension is preserved or not; *True*, preserve the case of the file name extension, *False*, convert the file name extension to all lowercase letters.

The default value is False.

Warning! If you use the *PreserveCase* parameter, it is important that you use it in a consistent manner with all the relevant file-processing functions or you may encounter unexpected file-not-found errors.

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Returns

You can check for either an integer or a constant value:

Numeric Value	*Constant Value*	*Description*
0	%Attachment_Success	File was transferred successfully. **Important!** If file type restrictions are changed so that access to a previously uploaded file is now blocked, a call to DetachAttachment will return %Attachment_Success, even though the file and its contents are not downloaded.
1	%Attachment_Failed	File transfer failed due to unspecified error. The following are some possible situations where %Attachment_Failed could be returned: • Failed to initialize the process due to some internal error. • Failed due to unexpected/bad reply from server. • Failed to allocate memory due to some internal error. • Failed due to timeout. • Failed due to no-availability of space on FTP server. • Failed to close SSL connection. • Failed due to an unspecified error on the HTTP repository. If the HTTP repository resides on a PeopleSoft web server, then you can configure tracing on the web server to report additional error details. See "Debugging File Attachment Problems" (PeopleTools 8.54: PeopleCode Developer's Guide).
2	%Attachment_Cancelled	File transfer didn't complete because the operation was canceled by the end user.

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Numeric Value	*Constant Value*	*Description*
3	%Attachment_FileTransferFailed	File transfer failed due to unspecified error during FTP attempt. The following are some possible situations where %Attachment_ FileTransferFailed could be returned: • Failed due to mismatch in file sizes. • Failed to write to local file. • Failed to store the file on remote server. • Failed to read local file to be uploaded. • No response from server. • Failed to overwrite the file on remote server.
7	%Attachment_DestSystNotFound	Cannot locate destination system for FTP. The following are some possible situations where %Attachment_ DestSystNotFound could be returned: • Improper URL format. • Failed to connect to the server specified.

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Numeric Value	*Constant Value*	*Description*
8	%Attachment_DestSysFailedLogin	Unable to login to destination system for FTP. The following are some possible situations where %Attachment_ DestSysFailedLogin could be returned: • Unsupported protocol specified. • Access denied to server. • Failed to connect using SSL Failed to verify the certificates. • Failed due to problem in certificates used. • Could not authenticate the peer certificate. • Failed to login with specified SSL level. • Remote server denied logon. • Problem reading SSL certificate.
9	%Attachment_FileNotFound	Cannot locate file. The following are some possible situations where %Attachment_ FileNotFound could be returned: • Remote file not found. • Failed to read remote file.

Example

```
&retcode = DetachAttachment(URL.MYFTP, ATTACHSYSFILENAME, ATTACHUSERFILE);
```

An example of the DetachAttachment function is provided in the demonstration application delivered in the FILE_ATTACH_WRK derived/work record. This demonstration application is shown on the PeopleTools Test Utilities page.

See "Using the PeopleTools Test Utilities Page" (PeopleTools 8.54: PeopleCode Developer's Guide).

Related Links

AddAttachment
CleanAttachments
CopyAttachments

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DeleteAttachment
GetAttachment
MAddAttachment
PutAttachment
ViewAttachment
"Understanding the File Attachment Functions" (PeopleTools 8.54: PeopleCode Developer's Guide)

DisableMenuItem

Syntax

```
DisableMenuItem(BARNAME.menubar_name, ITEMNAME.menuitem_name)
```

Description

Use the DisableMenuItem function to disable (make unavailable) the specified menu item. To apply this function to a pop-up menu, use the PrePopup Event of the field with which the pop-up menu is associated.

If you're using this function with a pop-up menu associated with a page (not a field), the earliest event you can use is the PrePopup event for the first "real" field on the page (that is, the first field listed in the Order view of the page in Application Designer.)

Restrictions on Use With a Component Interface

This function is ignored (has no effect) when used by a PeopleCode program that's been called by a Component Interface.

Parameters

menubar_name	Name of the menu bar that owns the menu item, or, in the case of pop-up menus, the name of the pop-up menu that owns the menu item.
menuitem_name	Name of the menu item.

Returns

None.

Example

```
DisableMenuItem(BARNAME.MYPOPUP1, ITEMNAME.DO_JOB_TRANSFER);
```

Related Links

EnableMenuItem
HideMenuItem
"PrePopup Event" (PeopleTools 8.54: PeopleCode Developer's Guide)

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DiscardRow

Syntax

```
DiscardRow()
```

Description

Use the DiscardRow function to prevent a row from being added to a page scroll during Row Select processing. This function is valid only in RowSelect PeopleCode. When DiscardRow is called during RowSelect processing, the current row is skipped (not added to the scroll). Processing then continues on the next row, unless the StopFetching function has also been called, in which case no more rows are added to the page.

If you try to discard a row and it's the only row in the scroll, the row is not discarded. You will still have one blank row in your scroll.

DiscardRow has the same functionality as the Warning function in the RowSelect event. The anomalous behavior of Warning is supported for compatibility with previous releases of PeopleTools.

Note: RowSelect processing is used infrequently, because it is more efficient to filter out rows of data using a search view or an effective-dated record before the rows are selected into the component buffer from the database server.

In row select processing, the following actions occur:

1. The Component Processor checks for more rows to add to the component.
2. The Component Processor initiates the RowSelect event, which triggers any RowSelect PeopleCode associated with the record field or component record.

   This enables PeopleCode to filter rows using the StopFetching and DiscardRow functions. StopFetching causes the system to add the current row to the component, and then to stop adding rows to the component. DiscardRow filters out a current row, and then continues the row select process.
3. If neither the StopFetching nor DiscardRow function is called, the Component Processor adds the rows to the page and checks for the next row.

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The process continues until there are no more rows to add to the component buffers. If both StopFetching and DiscardRow are called, the current row is not added to the page, and no more rows are added to the page.

Image: Row Select Processing Logic

The following flowchart shows this row select processing logic:

Parameters

None.

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Returns

None.

Related Links

StopFetching
Warning
"Row Select Processing" (PeopleTools 8.54: PeopleCode Developer's Guide)

DoCancel

Syntax

```
DoCancel( )
```

Description

Use the DoCancel function to cancel the current page.

- In the page, the DoCancel function terminates the current component and returns the user to the search dialog box.
- In the menu, the DoCancel function terminates the current component and returns the user to the current menu with no component active.

DoCancel terminates any PeopleCode programs executing prior to a save action. It does not stop processing of PeopleCode in SaveEdit, SavePreChange, and SavePostChange events.

Returns

None.

Related Links

DoSave
DoSaveNow
DoModal
EndModal
WinEscape

DoModal

Syntax

```
DoModal(Page.pagename, title, xpos, ypos, [level, scrollpath, target_row])
```

In which *scrollpath* is:

```
[Record.level1_recname, level1_row, [Record.level2_recname, level2_row, ]]
Record.target_recname
```

To prevent ambiguous references, you can also use **Scroll.** *scrollname*, in which *scrollname* is the same as the scroll level's primary record name.

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Description

Use the DoModal function to display a secondary page in a modal, secondary window, which means that the user must dismiss the secondary window before continuing work in the page from which the secondary page was called. Alternatively, you can specify a secondary page in a command push button definition without using PeopleCode. This may be preferable for performance reasons, especially with PeopleSoft Pure Internet Architecture.

DoModal can display a single page modally. To display an entire component modally, use DoModalComponent. Any variable declared as a component variable will still be defined after calling the DoModal function. If you call DoModal without specifying a level number or any record parameters, the function uses the current context as the parent. See "Using Secondary Pages" (PeopleTools 8.54: Application Designer Developer's Guide).

Important Limitations on Launching Modal Components in PeopleSoft Applications

Certain PeopleCode built-in functions have limitations on which component type (fluid or classic) can be launched as a modal component. For example, certain functions support launching only a fluid modal component from a fluid source component (fluid-to-fluid).

When launching modal components, please be aware of the following limitations:

- DoModal and DoModalComponent support fluid-to-fluid, or classic-to-classic only.
- DoModalPopup and DoModalComponentPopup support fluid-to-fluid only.
- As a workaround, Transfer can be used for fluid-to-classic.
- As a workaround, Transfer, ViewURL, or the "RedirectURL" (PeopleTools 8.54: PeopleCode API Reference) method of the Response class can be used for classic-to-fluid.

Note: TransferModeless is currently not supported for transfers from or to fluid components.

Restrictions on Use in PeopleCode Events

Control does not return to the line after DoModal until after the user has dismissed the secondary page. This interruption of processing makes DoModal a “think-time” function, which means that it shouldn’t be used in any of the following PeopleCode events:

- SavePreChange.
- SavePostChange.
- Workflow.
- RowSelect.
- Any PeopleCode event that executes as a result of a ScrollSelect, ScrollSelectNew, RowScrollSelect, or RowScrollSelectNew function call.
- Any PeopleCode event that executes as a result of a Rowset classs Select method or SelectNew method.
- You should not use DoModal or any other think-time function in FieldChange when the field is associated with an edit box, long edit box, or drop-down list box. Use FieldEdit instead.

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However, DoModal can be used in FieldChange when the field is associated with a push button, radio button, checkbox, or hyperlink.

In addition, you can't use DoModal in the SearchInit event.

See "Understanding Restrictions on Method and Function Use" (PeopleTools 8.54: PeopleCode Developer's Guide).

Restrictions on Use With a Component Interface

This function is ignored (has no effect) when used by a PeopleCode program that's been called by a component interface.

Considerations for the DoModal Function and Catching Exceptions

Using the DoModal function inside a try-catch block does *not* catch PeopleCode exceptions thrown in the new component. Starting a new component starts a brand new PeopleCode evaluation context. Exceptions are only caught for exceptions thrown within the *current* component.

In the following code example, the catch statement only catches exceptions thrown in the code *prior to* the DoModal, but not any exceptions that are thrown within the new component:

```
/* Set up transaction */
If %CompIntfcName = "" Then
   try
      &oTrans = &g_ERMS_TransactionCollection.GetTransactionByName(RB_EM_WRK.DESCR)⇒
;
      &sSearchPage = &oTrans.SearchPage;
      &sSearchRecord = &oTrans.SearchRecord;
      &sSearchTitle = &oTrans.GetSearchPageTitle();
      If Not All(&sSearchPage, &sSearchRecord, &sSearchTitle) Then
         Error (MsgGetText(17834, 8081, "Message Not Found"));
      End-If;
      &c_ERMS_SearchTransaction = &oTrans;

      /* Attempt to transfer to hidden search page with configurable filter */
      &nModalReturn = DoModal(@("Page." | &sSearchPage), &sSearchTitle, - 1, - 1);
   catch Exception &e
      Error (MsgGetText(17834, 8082, "Message Not Found"));
   end-try;
```

Parameters

pagename	The name of the secondary page.
title	The text that displays in the caption of the secondary page.
xpos	The pixel coordinates of the top left corner of the secondary page, offset from the top left corner of the parent page (the default of -1, -1 means centered).
ypos	The pixel coordinates of the top right corner of the secondary page, offset from the top right corner of the parent page (the default of -1, -1 means centered).
level	Specifies the level of the scroll level on the parent page that contains the row corresponding to level 0 on the secondary page.

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scrollpath	A construction that specifies a scroll level in the component buffer.
target_row	The row number of the row in the parent page corresponding to the level 0 row in the secondary page.

Returns

Returns a number that indicates how the secondary page was terminated. A secondary page can be terminated by the user clicking a built-in OK or Cancel button, or by a call to the EndModal function in a PeopleCode program. In either case, the return value of DoModal is one of the following:

- 1 if the user clicked OK in the secondary page, or if 1 was passed in the EndModal function call that terminated the secondary page.
- 0 if the user clicked Cancel in the secondary page, or if 0 was passed in the EndModal function call that terminated the secondary page.

Example

```
DoModal(PAGE.EDUCATION_DTL, MsgGetText(1000, 167, "Education Details - %1", EDUCATN⇒
.DEGREE), - 1, - 1, 1, RECORD.EDUCATN, CurrentRowNumber());
```

Related Links

DoModalComponent
DoModalX
EndModal
IsModal
"Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

DoModalComponent

Syntax

```
DoModalComponent(MenuName.MENU_NAME, BarName.BAR_NAME, ItemName.MENU_ITEM_NAME,
Page.COMPONENT_ITEM_NAME, action, Record.SHARED_RECORD_NAME [, keylist])
```

In which *keylist* is a list of field references in the form:

```
[recordname.]field1 [, [recordname.]field2]. . .
```

Or in which *keylist* is a list of field references in the form:

```
&RecordObject1 [, &RecordObject2]. . .
```

Description

Use the DoModalComponent function to display a secondary component in a modal, secondary window, which means that the user must dismiss the secondary window before continuing work in the page from which the secondary window was called. The secondary component launches modally from within an originating component. After the secondary component displays, the user can't proceed with changes to the originating component until either accepting or canceling the secondary component.

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Secondary components can be displayed in any of the following action modes: Add, Update/Display, Update/Display All, Correction. A secondary component can be launched from any component, including another secondary component. You can also use DoModalComponent from a secondary page.

The originating component and the secondary component share data, including search keys, using a Shared Work Record or the values in the *fieldlist* parameter. If valid search keys are provided in the shared work record and populated with valid values before launching the secondary component, the search is conducted using the provided search key values. If the *fieldlist* parameter isn't used and no search keys are provided, or if search key fields contain invalid values, the user accesses the secondary component using a search dialog box.

Note: The user may see a different title for a search page if they enter the search page using this function versus from the regular navigation.

In the *component_item_name* parameter, make sure to pass the component item name for the page, not the page name.

Image: Determining the component item name

The component item name is specified in the component definition, in the Item Name column on the row corresponding to the specific page, as shown here. In this example, the PERSONAL_DATA page name appears twice: once with an item name of PERSONAL_DATA_1, and once with the item name of PERSONAL_DATA_2.

	Page Name	Item Name	Hidden	Item Label	Folder Tab Label	Allow Def
1	PERSONAL_DATA	PERSONAL_DATA_1	☐	&Personal Data 1		
2	PERSONAL_DATA	PERSONAL_DATA_2	☐	&Personal Data 2		
3	SCRTY_TBL_GBL_	SCRTY_TBL_GBL_WR	☑	Scrty Tbl Gbl Wrk		

Important Limitations on Launching Modal Components in PeopleSoft Applications

Certain PeopleCode built-in functions have limitations on which component type (fluid or classic) can be launched as a modal component. For example, certain functions support launching only a fluid modal component from a fluid source component (fluid-to-fluid).

When launching modal components, please be aware of the following limitations:

- DoModal and DoModalComponent support fluid-to-fluid, or classic-to-classic only.
- DoModalPopup and DoModalComponentPopup support fluid-to-fluid only.
- As a workaround, Transfer can be used for fluid-to-classic.
- As a workaround, Transfer, ViewURL, or the "RedirectURL" (PeopleTools 8.54: PeopleCode API Reference) method of the Response class can be used for classic-to-fluid.

Note: TransferModeless is currently not supported for transfers from or to fluid components.

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Shared Work Records

The originating component and the secondary component share fields in a Derived/Work record called a *shared work record*. Shared fields from this record must be placed at level zero of both the originating component and the secondary component.

You can use the shared fields to:

- Pass values that are assigned to the search keys in the secondary component search record. If these fields are missing or not valid, the search dialog box appears, enabling the user to enter search keys.
- Optionally pass other values from the originating component to the secondary component.
- Pass values back from the secondary component to the originating component for processing.

To do this, you have to write PeopleCode that:

- Assigns values to fields in the shared work record in the originating page at some point before the modal transfer takes place.
- Accesses and changes the values, if necessary, in the secondary component.
- Accesses the values from the shared work record from the originating component after the secondary component is dismissed.

Restrictions on Use With a Component Interface

This function is ignored (has no effect) when used by a PeopleCode program that's been called by a component interface.

Restrictions on Use With SearchInit Event

You can't use this function in a SearchInit PeopleCode program.

Considerations for the DoModalComponent Function and Catching Exceptions

Using the DoModalComponent function inside a try-catch block does *not* catch PeopleCode exceptions thrown in the new component. Starting a new component starts a brand new PeopleCode evaluation context. Exceptions are only caught for exceptions thrown within the *current* component.

In the following code example, the catch statement only catches exceptions thrown in the code *prior to* the DoModal, but not any exceptions that are thrown within the new component:

```
/* Set up transaction */
If %CompIntfcName = "" Then
   try
      &oTrans = &g_ERMS_TransactionCollection.GetTransactionByName(RB_EM_WRK.DESCR)⇒
;
      &sSearchPage = &oTrans.SearchPage;
      &sSearchRecord = &oTrans.SearchRecord;
      &sSearchTitle = &oTrans.GetSearchPageTitle();
      If Not All(&sSearchPage, &sSearchRecord, &sSearchTitle) Then
         Error (MsgGetText(17834, 8081, "Message Not Found"));
      End-If;
      &c_ERMS_SearchTransaction = &oTrans;

      /* Attempt to transfer to hidden search page with configurable filter */
      &nModalReturn = DoModal(@("Page." | &sSearchPage), &sSearchTitle, - 1, - 1);
   catch Exception &e
      Error (MsgGetText(17834, 8082, "Message Not Found"));
```

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```
end-try;
```

Parameters

MenuName.*MENU_NAME* Name of the menu through which the secondary component is accessed.

BarName.*BAR_NAME* Name of the menu bar through which the secondary component is accessed.

ItemName.*MENU_ITEM_NAME* Name of the menu item through which the secondary component is accessed.

Page.*COMPONENT_ITEM_NAME* The component item name of the page to be displayed on top of the secondary component when it displays. The component item name is specified in the component definition.

action String representing the action mode in which to start up the component. You can use either a character value (passed in as a string) or a constant. See below.

If only one action mode is allowed for the component, that action mode is used. If more than one action mode is allowed, the user can select which mode to come up in.

Record.*SHARED_RECORD_NAME* The record name of the shared work record. This record must include:

- Fields that are search keys in the secondary component search record; if search key fields are not provided, or if they are invalid, the user accesses the secondary component using the search dialog box.
- Other fields to pass to the secondary component.
- Fields to get back from the secondary component after it has finished processing.

keylist An optional list of field specifications used to select a unique row at level zero in the page you are transferring to, by matching keys in the page you are transferring from. It can also be an already instantiated record object. If a record object is specified, any field of that record object *that is also a field of the search record* for the destination component is added to *keylist*. The keys in *fieldlist* must uniquely identify a row in the "to" page search record. If a unique row is not identified, the search dialog box appears.

If the *keylist* parameter is not supplied then the destination components' search key must be found as part of the source component's level 0 record buffer.

The values for the *action* parameter can be as follows:

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Numeric Value	*Constant Value*	*Description*
A	%Action_Add	Add
U	%Action_UpdateDisplay	Update/Display
L	%Action_UpdateDisplayAll	Update/Display All
C	%Action_Correction	Correction
E	%Action_DataEntry	Data Entry
P	%Action_Prompt	Prompt

Returns

Returns a Boolean that indicates how the secondary page was terminated. A secondary page can be terminated by the user clicking a built-in OK or Cancel button, or by a call to the EndModalComponent function in a PeopleCode program. In either case, the return value of DoModalComponent is one of the following:

- True if the user clicked OK in the secondary page, or if 1 was passed in the EndModal function call that terminated the secondary page.
- False if the user clicked Cancel in the secondary page, or if 0 was passed in the EndModal function call that terminated the secondary page.

Example

The following example shows how to structure a DoModalComponent function call:

```
DoModalComponent(MENUNAME.MAINTAIN_ITEMS_FOR_INVENTORY, BARNAME.USE_A, ITEMNAME.ITE⇒
M_DEFINITION, COMPONENT.ESTABLISH_AN_ITEM, "C", RECORD.NEW7_WRK);
```

Supporting PeopleCode is required if you must assign values to fields in the shared work record or access those values, either from the originating component, or from the secondary component.

Related Links

DoModal
DoModalXComponent
EndModalComponent
IsModalComponent
Transfer
TransferPage
"Implementing Modal Transfers" (PeopleTools 8.54: PeopleCode Developer’s Guide)

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DoModalComponentPopup

Syntax

```
DoModalComponentPopup(modal_options, Cancel_button_ID, title, MenuName.menuname,
BarName.BARNAME, ItemName.MENUITEM_NAME, Page.COMPONENT_ITEM_NAME, action,
Record.SHARED_RECORD_NAME [, keylist])
```

In which *keylist* is a list of field references in the form:

```
[RECORD_NAME.]field1 [, [recordname.]field2]. . .
```

Or in which *keylist* is a list of field references in the form:

```
&RecordObject1 [, &RecordObject2]. . .
```

Description

Use the DoModalComponentPopup function in fluid applications only. Use DoModalComponentPopup to display a secondary component in a modal, secondary window, which means that the user must dismiss the secondary window before continuing work in the page from which the secondary window was called. The secondary component launches modally from within an originating component. After the secondary component is displayed, the user can’t proceed with changes to the originating component until either accepting or canceling the secondary component.

Secondary components can be displayed in any of the following action modes: Add, Update/Display, Update/Display All, Correction. A secondary component can be launched from any component, including another secondary component. You can also use DoModalComponentPopup from a secondary page.

The originating component and the secondary component share data, including search keys, using a shared work record or the values in the *fieldlist* parameter. If valid search keys are provided in the shared work record and populated with valid values before launching the secondary component, the search is conducted using the provided search key values. If the *fieldlist* parameter isn't used and no search keys are provided, or if search key fields contain invalid values, the user accesses the secondary component using a search dialog box.

Note: The user may see a different title for a search page if they enter the search page using this function versus from the regular navigation.

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In the *component_item_name* parameter, make sure to pass the component item name for the page, not the page name.

Image: Determining the component item name

The component item name is specified in the component definition, in the Item Name column on the row corresponding to the specific page, as shown here. In this example, the PERSONAL_DATA page name appears twice: once with an item name of PERSONAL_DATA_1, and once with the item name of PERSONAL_DATA_2.

	Page Name	Item Name	Hidden	Item Label	Folder Tab Label	Allow Def
1	PERSONAL_DATA	PERSONAL_DATA_1	☐	&Personal Data 1		
2	PERSONAL_DATA	PERSONAL_DATA_2	☐	&Personal Data 2		
3	SCRTY_TBL_GBL_	SCRTY_TBL_GBL_WR	☑	Scrty Tbl Gbl Wrk		

Important Limitations on Launching Modal Components in PeopleSoft Applications

Certain PeopleCode built-in functions have limitations on which component type (fluid or classic) can be launched as a modal component. For example, certain functions support launching only a fluid modal component from a fluid source component (fluid-to-fluid).

When launching modal components, please be aware of the following limitations:

- DoModal and DoModalComponent support fluid-to-fluid, or classic-to-classic only.
- DoModalPopup and DoModalComponentPopup support fluid-to-fluid only.
- As a workaround, Transfer can be used for fluid-to-classic.
- As a workaround, Transfer, ViewURL, or the "RedirectURL" (PeopleTools 8.54: PeopleCode API Reference) method of the Response class can be used for classic-to-fluid.

Note: TransferModeless is currently not supported for transfers from or to fluid components.

Shared Work Records

The originating component and the secondary component share fields in a derived/work record called a *shared work record*. Shared fields from this record must be placed at level zero of both the originating component and the secondary component.

You can use the shared fields to:

- Pass values that are assigned to the search keys in the secondary component search record. If these fields are missing or not valid, the search dialog box appears, enabling the user to enter search keys.
- Optionally pass other values from the originating component to the secondary component.
- Pass values back from the secondary component to the originating component for processing.

To do this, you have to write PeopleCode that:

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- Assigns values to fields in the shared work record in the originating page at some point before the modal transfer takes place.
- Accesses and changes the values, if necessary, in the secondary component.
- Accesses the values from the shared work record from the originating component after the secondary component is dismissed.

Restrictions on Use With a Component Interface

This function is ignored (has no effect) when used by a PeopleCode program that's been called by a component interface.

Restrictions on Use With SearchInit Event

You can't use this function in a SearchInit PeopleCode program.

Considerations for the DoModalComponentPopup Function and Catching Exceptions

Using the DoModalComponentPopup function inside a try-catch block does *not* catch PeopleCode exceptions thrown in the new component. Starting a new component starts a brand new PeopleCode evaluation context. Exceptions are only caught for exceptions thrown within the *current* component.

In the following code example, the catch statement only catches exceptions thrown in the code *prior to* the DoModal, but not any exceptions that are thrown within the new component:

```
/* Set up transaction */
If %CompIntfcName = "" Then
   try
      &oTrans = &g_ERMS_TransactionCollection.GetTransactionByName(RB_EM_WRK.DESCR)⇒
;
      &sSearchPage = &oTrans.SearchPage;
      &sSearchRecord = &oTrans.SearchRecord;
      &sSearchTitle = &oTrans.GetSearchPageTitle();
      If Not All(&sSearchPage, &sSearchRecord, &sSearchTitle) Then
         Error (MsgGetText(17834, 8081, "Message Not Found"));
      End-If;
      &c_ERMS_SearchTransaction = &oTrans;

      /* Attempt to transfer to hidden search page with configurable filter */
      &nModalReturn = DoModal(@("Page." | &sSearchPage), &sSearchTitle, - 1, - 1);
   catch Exception &e
      Error (MsgGetText(17834, 8082, "Message Not Found"));
   end-try;
```

Important! Use this function within fluid applications only.

Parameters

modal_options	Specifies custom modal options as a string value.
Cancel_button_ID	Specifies the field ID of the cancel button as a string value.
title	Specifies a string value to be displayed in the caption of the secondary page.
MenuName.*MENUNAME*	Name of the menu through which the secondary component is accessed.

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BarName.*BARNAME* Name of the menu bar through which the secondary component is accessed.

ItemName.*MENUITEM_NAME* Name of the menu item through which the secondary component is accessed.

Page.*COMPONENT_ITEM_NAME* The component item name of the page to be displayed on top of the secondary component when it displays.The component item name is specified in the component definition.

action String representing the action mode in which to start up the component. You can use either a character value (passed in as a string) or a constant. See below.

If only one action mode is allowed for the component, that action mode is used. If more than one action mode is allowed, the user can select which mode to come up in.

Record.*SHARED_RECORD_NAME* The record name of the shared work record (preceded by the reserved word **Record**). This record must include:

- Fields that are search keys in the secondary component search record; if search key fields are not provided, or if they are invalid, the user accesses the secondary component using the search dialog box.
- Other fields to pass to the secondary component.
- Fields to get back from the secondary component after it has finished processing.

keylist An optional list of field specifications used to select a unique row at level zero in the page you are transferring to, by matching keys in the page you are transferring from. It can also be an already instantiated record object. If a record object is specified, any field of that record object *that is also a field of the search record* for the destination component is added to *keylist*. The keys in *fieldlist* must uniquely identify a row in the "to" page search record. If a unique row is not identified, the search dialog box appears.

If the *keylist* parameter is not supplied then the destination components' search key must be found as part of the source component's level 0 record buffer.

The values for the *action* parameter can be as follows:

Numeric Value	*Constant Value*	*Description*
A	%Action_Add	Add
U	%Action_UpdateDisplay	Update/Display
L	%Action_UpdateDisplayAll	Update/Display All

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Numeric Value	*Constant Value*	*Description*
C	%Action_Correction	Correction
E	%Action_DataEntry	Data Entry
P	%Action_Prompt	Prompt

Returns

Returns a Boolean that indicates how the secondary page was terminated. A secondary page can be terminated by the user clicking a built-in OK or Cancel button, or by a call to the EndModalComponent function in a PeopleCode program. In either case, the return value of DoModalComponentPopup is one of the following:

- True if the user clicked OK in the secondary page, or if 1 was passed in the EndModal function call that terminated the secondary page.
- False if the user clicked Cancel in the secondary page, or if 0 was passed in the EndModal function call that terminated the secondary page.

Example

The following example shows how to structure a DoModalComponentPopup function call:

```
Local string &sPopupOptions = "bFullScreen@1";
Local string &sCancelButtonId = "";
Local string &sTemp = &srchPivotGrid.Prompt.PageName;
&srchPivotGrid.Prompt.PageName = Page.PTPG_GRIDVIEWERNUI;

Local boolean &ret = DoModalComponentPopup(&sPopupOptions, &sCancelButtonId, &srchP⇒
ivotGrid.m_model.getModelTitle(), MenuName.PTPG_WIZ_MENU, BarName.PTPG_MENU, ItemNa⇒
me.PTPG_NUI_VWGRID, Page.PTPG_GRIDVIEWERNUI, "U", Record.PTPG_NUI_WRK);
&srchPivotGrid.Prompt.PageName = &sTemp;
```

Supporting PeopleCode is required if you must assign values to fields in the shared work record or access those values, either from the originating component, or from the secondary component.

Related Links

DoModalPopup

"Implementing Modal Transfers" (PeopleTools 8.54: PeopleCode Developer's Guide)

DoModalX

Syntax

```
DoModalX(showInModal, cancelButtonName, PAGE.pagename, title, xpos, ypos, [level,
scrollpath, target_row])
```

In which *scrollpath* is:

```
[RECORD.level1_recname, level1_row, [RECORD.level2_recname, level2_row, ]]
RECORD.target_recname
```

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To prevent ambiguous references, you can also use **SCROLL.** *scrollname*, in which *scrollname* is the same as the scroll level's primary record name.

Description

Use the DoModalX function to display a secondary page modally when you do not want it to display in a modal, secondary window. Instead, the page to be displayed completely replaces the primary window when the *showInModal* parameter is set to False. Similar to DoModal, the user must complete work on the secondary page before continuing work in the page from which the secondary page was called.

Important! When the *showInModal* parameter is set to False, using DoModalX will completely replace the primary window, even if DoModalX is called from a modal window. In addition, this will also close any open modal windows. Therefore, Oracle recommends that DoModalX with the *showInModal* parameter set to False not be used after calling DoModal or DoModalComponent, or after calling DoModalX or DoModalXComponent when the *showInModal* parameter is set to True.

DoModalX can display a single page modally. To display an entire component modally, use DoModalXComponent.

Any variable declared as a component variable will still be defined after calling the DoModalX function.

If you call DoModalX without specifying a level number or any record parameters, the function uses the current context as the parent.

See "Using Secondary Pages" (PeopleTools 8.54: Application Designer Developer's Guide).

Restrictions on Use in PeopleCode Events

Control does not return to the line after DoModalX until after the user has dismissed the secondary page. This interruption of processing makes DoModalX a "think-time" function, which means that it shouldn't be used in any of the following PeopleCode events:

- SavePreChange.
- SavePostChange.
- Workflow.
- RowSelect.
- Any PeopleCode event that executes as a result of a ScrollSelect, ScrollSelectNew, RowScrollSelect, or RowScrollSelectNew function call.
- Any PeopleCode event that executes as a result of a Rowset classs Select method or SelectNew method.
- You should not use DoModalX or any other think-time function in FieldChange when the field is associated with an edit box, long edit box, or drop-down list box. Use FieldEdit instead.

  However, DoModalX can be used in FieldChange when the field is associated with a push button, radio button, checkbox, or hyperlink.

In addition, you can't use DoModalX in the SearchInit event.

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See "Understanding Restrictions on Method and Function Use" (PeopleTools 8.54: PeopleCode Developer's Guide).

Restrictions on Use With a Component Interface

This function is ignored (has no effect) when used by a PeopleCode program that's been called by a component interface.

Considerations for the DoModalX Function and Catching Exceptions

Using the DoModalX function inside a try-catch block does *not* catch PeopleCode exceptions thrown in the new component. Starting a new component starts a brand new PeopleCode evaluation context. Exceptions are only caught for exceptions thrown within the *current* component.

In the following code example, the catch statement only catches exceptions thrown in the code *prior to* the DoModal, but not any exceptions that are thrown within the new component:

```
/* Set up transaction */
If %CompIntfcName = "" Then
   try
      &oTrans = &g_ERMS_TransactionCollection.GetTransactionByName(RB_EM_WRK.DESCR)⇒
;
      &sSearchPage = &oTrans.SearchPage;
      &sSearchRecord = &oTrans.SearchRecord;
      &sSearchTitle = &oTrans.GetSearchPageTitle();
      If Not All(&sSearchPage, &sSearchRecord, &sSearchTitle) Then
         Error (MsgGetText(17834, 8081, "Message Not Found"));
      End-If;
      &c_ERMS_SearchTransaction = &oTrans;

      /* Attempt to transfer to hidden search page with configurable filter */
      &nModalReturn = DoModal(@("Page." | &sSearchPage), &sSearchTitle, - 1, - 1);
   catch Exception &e
      Error (MsgGetText(17834, 8082, "Message Not Found"));
   end-try;
```

Parameters

showInModal

Specify a Boolean value to indicate whether to display the secondary page in a modal, secondary window:

- *True* display the page in a secondary, modal window similar to the function of DoModal
- *False* do not display the page in a secondary window; instead, completely replace the primary window.

cancelButtonName

Currently, this parameter is not used and should be specified as an empty string: "".

pagename

The name of the secondary page.

title

The text that displays in the caption of the secondary page.

xpos

The pixel coordinates of the top left corner of the secondary page, offset from the top left corner of the parent page (the default of -1, -1 means centered).

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ypos	The pixel coordinates of the top right corner of the secondary page, offset from the top right corner of the parent page (the default of -1, -1 means centered).
level	Specifies the level of the scroll level on the parent page that contains the row corresponding to level 0 on the secondary page.
scrollpath	A construction that specifies a scroll level in the component buffer.
target_row	The row number of the row in the parent page corresponding to the level 0 row in the secondary page.

Returns

Returns a number that indicates how the secondary page was terminated. A secondary page can be terminated by the user clicking a built-in OK or Cancel button, or by a call to the EndModal function in a PeopleCode program. In either case, the return value of DoModalX is one of the following:

- 1 if the user clicked OK in the secondary page, or if 1 was passed in the EndModal function call that terminated the secondary page.
- 0 if the user clicked Cancel in the secondary page, or if 0 was passed in the EndModal function call that terminated the secondary page.

Example

```
DoModalX( False, "", PAGE.EDUCATION_DTL, MsgGetText(1000, 167, "Education Details -⇒
 %1", EDUCATN.DEGREE), - 1, - 1, 1, RECORD.EDUCATN, CurrentRowNumber());
```

Related Links

DoModal

DoModalXComponent

EndModal

IsModal

"Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

DoModalXComponent

Syntax

DoModalXComponent(*showInModal*, *cancelButtonName*, **MENUNAME.***menuname*, **BARNAME.***barname*, **ITEMNAME.***menuitem_name*, **PAGE.***component_item_name*, *action*, **RECORD.***shared_record_name* [, *keylist*])

In which *keylist* is a list of field references in the form:

```
[recordname.]field1 [, [recordname.]field2].
. .
```

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Or in which *keylist* is a list of field references in the form:

```
&RecordObject1 [, &RecordObject2]. . .
```

Description

Use the DoModalXComponent function to display a secondary component modally when you do not want it to display in a modal, secondary window. Instead, the component to be displayed completely replaces the primary window when the *showInModal* parameter is set to False. Similar to DoModalComponent, the user must complete work on the secondary component before continuing work in the page from which the secondary component was called.

Important! When the *showInModal* parameter is set to False, using DoModalXComponent will completely replace the primary window, even if DoModalXComponent is called from a modal window. In addition, this will also close any open modal windows. Therefore, Oracle recommends that DoModalXComponent with the *showInModal* parameter set to False not be used after calling DoModal or DoModalComponent, or after calling DoModalX or DoModalXComponent when the *showInModal* parameter is set to True.

Secondary components can be displayed in any of the following action modes: Add, Update/Display, Update/Display All, Correction. A secondary component can be launched from any component, including another secondary component. You can also use DoModalXComponent from a secondary page.

The originating component and the secondary component share data, including search keys, using a Shared Work Record or the values in the *fieldlist* parameter. If valid search keys are provided in the shared work record and populated with valid values before launching the secondary component, the search is conducted using the provided search key values. If the *fieldlist* parameter isn't used and no search keys are provided, or if search key fields contain invalid values, the user accesses the secondary component using a search dialog box.

Note: The user may see a different title for a search page if they enter the search page using this function versus from the regular navigation.

In the *component_item_name* parameter, make sure to pass the component item name for the page, not the page name.

Image: Determining the component item name

The component item name is specified in the component definition, in the Item Name column on the row corresponding to the specific page, as shown here. In this example, the PERSONAL_DATA page name appears twice: once with an item name of PERSONAL_DATA_1, and once with the item name of PERSONAL_DATA_2.

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Shared Work Records

The originating component and the secondary component share fields in a Derived/Work record called a *shared work record*. Shared fields from this record must be placed at level zero of both the originating component and the secondary component.

You can use the shared fields to:

- Pass values that are assigned to the search keys in the secondary component search record. If these fields are missing or not valid, the search dialog box appears, enabling the user to enter search keys.
- Optionally pass other values from the originating component to the secondary component.
- Pass values back from the secondary component to the originating component for processing.

To do this, you have to write PeopleCode that:

- Assigns values to fields in the shared work record in the originating page at some point before the modal transfer takes place.
- Accesses and changes the values, if necessary, in the secondary component.
- Accesses the values from the shared work record from the originating component after the secondary component is dismissed.

Restrictions on Use With a Component Interface

This function is ignored (has no effect) when used by a PeopleCode program that's been called by a component interface.

Restrictions on Use With SearchInit Event

You can't use this function in a SearchInit PeopleCode program.

Considerations for the DoModalXComponent Function and Catching Exceptions

Using the DoModalXComponent function inside a try-catch block does *not* catch PeopleCode exceptions thrown in the new component. Starting a new component starts a brand new PeopleCode evaluation context. Exceptions are only caught for exceptions thrown within the *current* component.

In the following code example, the catch statement only catches exceptions thrown in the code *prior to* the DoModal, but not any exceptions that are thrown within the new component:

```
/* Set up transaction */
If %CompIntfcName = "" Then
   try
      &oTrans = &g_ERMS_TransactionCollection.GetTransactionByName(RB_EM_WRK.DESCR)⇒
;
      &sSearchPage = &oTrans.SearchPage;
      &sSearchRecord = &oTrans.SearchRecord;
      &sSearchTitle = &oTrans.GetSearchPageTitle();
      If Not All(&sSearchPage, &sSearchRecord, &sSearchTitle) Then
         Error (MsgGetText(17834, 8081, "Message Not Found"));
      End-If;
      &c_ERMS_SearchTransaction = &oTrans;

      /* Attempt to transfer to hidden search page with configurable filter */
      &nModalReturn = DoModal(@("Page." | &sSearchPage), &sSearchTitle, - 1, - 1);
   catch Exception &e
      Error (MsgGetText(17834, 8082, "Message Not Found"));
```

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```
end-try;
```

Parameters

showInModal

Specify a Boolean value to indicate whether to display the secondary component in a modal, secondary window:

- *True* display the page in a secondary, modal window similar to the function of DoModal
- *False* do not display the page in a secondary window; instead, completely replace the primary window.

cancelButtonName

Currently, this parameter is not used and should be specified as an empty string: “”.

menuname

Name of the menu through which the secondary component is accessed.

barname

Name of the menu bar through which the secondary component is accessed.

menuitem_name

Name of the menu item through which the secondary component is accessed.

component_item_name

The component item name of the page to be displayed on top of the secondary component when it displays. The component item name is specified in the component definition.

action

String representing the action mode in which to start up the component. You can use either a character value (passed in as a string) or a constant. See below.

If only one action mode is allowed for the component, that action mode is used. If more than one action mode is allowed, the user can select which mode to come up in.

shared_record_name

The record name of the shared work record (preceded by the reserved word **Record**). This record must include:

- Fields that are search keys in the secondary component search record; if search key fields are not provided, or if they are invalid, the user accesses the secondary component using the search dialog box.
- Other fields to pass to the secondary component.
- Fields to get back from the secondary component after it has finished processing.

keylist

An optional list of field specifications used to select a unique row at level zero in the page you are transferring to, by matching keys in the page you are transferring from. It can also be an already instantiated record object. If a record object is specified, any field of that record object *that is also a field of the search record* for the destination component is added to *keylist*.

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The keys in *fieldlist* must uniquely identify a row in the "to" page search record. If a unique row is not identified, the search dialog box appears.

If the *keylist* parameter is not supplied then the destination components' search key must be found as part of the source component's level 0 record buffer.

The values for *action* can be as follows:

Numeric Value	***Constant Value***	***Description***
A	%Action_Add	Add
U	%Action_UpdateDisplay	Update/Display
L	%Action_UpdateDisplayAll	Update/Display All
C	%Action_Correction	Correction
E	%Action_DataEntry	Data Entry
P	%Action_Prompt	Prompt

Returns

Returns a Boolean that indicates how the secondary page was terminated. A secondary page can be terminated by the user clicking a built-in OK or Cancel button, or by a call to the EndModalComponent function in a PeopleCode program. In either case, the return value of DoModalXComponent is one of the following:

- True if the user clicked OK in the secondary page, or if 1 was passed in the EndModal function call that terminated the secondary page.
- False if the user clicked Cancel in the secondary page, or if 0 was passed in the EndModal function call that terminated the secondary page.

Example

The following example shows how to structure a DoModalXComponent function call:

```
DoModalXComponent( False, "", MENUNAME.MAINTAIN_ITEMS_FOR_INVENTORY, BARNAME.USE_A,⇒
 ITEMNAME.ITEM_DEFINITION, COMPONENT.ESTABLISH_AN_ITEM, "C", RECORD.NEW7_WRK);
```

Supporting PeopleCode is required if you must assign values to fields in the shared work record or access those values, either from the originating component, or from the secondary component.

Related Links

DoModalComponent
DoModalX
EndModalComponent
IsModalComponent

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Transfer
TransferPage
"Implementing Modal Transfers" (PeopleTools 8.54: PeopleCode Developer's Guide)

DoModalPanelGroup

Syntax

```
DoModalPanelGroup(MENUNAME.menuname, BARNAME.barname, ITEMNAME.menuitem_name,
PANEL.panel_group_item_name, action, RECORD.shared_record_name)
```

Description

Use the DoModalPanelGroup function to launch a secondary component.

Note: The DoModalPanelGroup function is supported for compatibility with previous releases of PeopleTools. Future applications should use DoModalComponent instead.

Related Links

DoModalComponent

DoModalPopup

Syntax

```
DoModalPopup(modal_options, Cancel_button_ID, display_only, cached, Page.PAGE_NAME,
title, xpos, ypos[, level, scrollpath, target_row])
```

In which *scrollpath* is:

```
[Record.level1_recname, level1_row, [Record.level2_recname, level2_row, ]]
Record.target_recname
```

To prevent ambiguous references, you can also use **Scroll.** *scrollname*, in which *scrollname* is the same as the scroll level's primary record name.

Description

Use the DoModalPopup function in fluid applications only. Use DoModalPopup to display a secondary page as popup modal next to a parent control. This means that the user must dismiss the secondary window before continuing work in the page from which the secondary page was called. In addition, DoModalPopup can display the secondary page in a display-only mode.

Note: Alternatively, you can specify a secondary page in a command push button definition without using PeopleCode. This may be preferable for performance reasons, especially with PeopleSoft Pure Internet Architecture.

DoModalPopup can display a single page modally. To display an entire component modally, use DoModalComponentPopup. Any variable declared as a component variable will still be defined after calling the DoModalPopup function. If you call DoModalPopup without specifying a level number or any record parameters, the function uses the current context as the parent. See "Using Secondary Pages" (PeopleTools 8.54: Application Designer Developer's Guide).

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Important Limitations on Launching Modal Components in PeopleSoft Applications

Certain PeopleCode built-in functions have limitations on which component type (fluid or classic) can be launched as a modal component. For example, certain functions support launching only a fluid modal component from a fluid source component (fluid-to-fluid).

When launching modal components, please be aware of the following limitations:

- DoModal and DoModalComponent support fluid-to-fluid, or classic-to-classic only.
- DoModalPopup and DoModalComponentPopup support fluid-to-fluid only.
- As a workaround, Transfer can be used for fluid-to-classic.
- As a workaround, Transfer, ViewURL, or the "RedirectURL" (PeopleTools 8.54: PeopleCode API Reference) method of the Response class can be used for classic-to-fluid.

Note: TransferModeless is currently not supported for transfers from or to fluid components.

Restrictions on Use in PeopleCode Events

Control does not return to the line after DoModalPopup until after the user has dismissed the secondary page. This interruption of processing makes DoModalPopup a “think-time” function, which means that it shouldn’t be used in any of the following PeopleCode events:

- SavePreChange.
- SavePostChange.
- Workflow.
- RowSelect.
- Any PeopleCode event that executes as a result of a ScrollSelect, ScrollSelectNew, RowScrollSelect, or RowScrollSelectNew function call.
- Any PeopleCode event that executes as a result of a Rowset classs Select method or SelectNew method.
- You should not use DoModalPopup or any other think-time function in FieldChange when the field is associated with an edit box, long edit box, or drop-down list box. Use FieldEdit instead.

  However, DoModalPopup can be used in FieldChange when the field is associated with a push button, radio button, checkbox, or hyperlink.

In addition, you can't use DoModalPopup in the SearchInit event.

See "Understanding Restrictions on Method and Function Use" (PeopleTools 8.54: PeopleCode Developer’s Guide).

Restrictions on Use With a Component Interface

This function is ignored (has no effect) when used by a PeopleCode program that’s been called by a component interface.

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Considerations for the DoModalPopup Function and Catching Exceptions

Using the DoModalPopup function inside a try-catch block does *not* catch PeopleCode exceptions thrown in the new component. Starting a new component starts a brand new PeopleCode evaluation context. Exceptions are only caught for exceptions thrown within the *current* component.

In the following code example, the catch statement only catches exceptions thrown in the code *prior to* the DoModal, but not any exceptions that are thrown within the new component:

```
/* Set up transaction */
If %CompIntfcName = "" Then
   try
      &oTrans = &g_ERMS_TransactionCollection.GetTransactionByName(RB_EM_WRK.DESCR)⇒
;
      &sSearchPage = &oTrans.SearchPage;
      &sSearchRecord = &oTrans.SearchRecord;
      &sSearchTitle = &oTrans.GetSearchPageTitle();
      If Not All(&sSearchPage, &sSearchRecord, &sSearchTitle) Then
         Error (MsgGetText(17834, 8081, "Message Not Found"));
      End-If;
      &c_ERMS_SearchTransaction = &oTrans;

      /* Attempt to transfer to hidden search page with configurable filter */
      &nModalReturn = DoModal(@("Page." | &sSearchPage), &sSearchTitle, - 1, - 1);
   catch Exception &e
      Error (MsgGetText(17834, 8082, "Message Not Found"));
   end-try;
```

Important! Use this function within fluid applications only.

Parameters

modal_options Specifies custom modal options as a string value.

Cancel_button_ID Specifies the ID of the cancel button as a string value.

display_only Specifies a Boolean value indicating whether the modal secondary page is display-only.

cached Specifies a Boolean value indicating whether to cache the group container for the modal secondary page within the parent page.

Note: The value of *display_only* must be True for this parameter to take effect.

Page.*PAGE_NAME* The name of the secondary page.

title The text that displays in the caption of the secondary page.

xpos The pixel coordinates of the top left corner of the secondary page, offset from the top left corner of the parent page (the default of -1, -1 means centered).

ypos The pixel coordinates of the top right corner of the secondary page, offset from the top right corner of the parent page (the default of -1, -1 means centered).

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level	Specifies the level of the scroll level on the parent page that contains the row corresponding to level 0 on the secondary page.
scrollpath	A construction that specifies a scroll level in the component buffer.
target_row	The row number of the row in the parent page corresponding to the level 0 row in the secondary page.

Returns

Returns a number that indicates how the secondary page was terminated. A secondary page can be terminated by the user clicking a built-in OK or Cancel button, or by a call to the EndModal function in a PeopleCode program. In either case, the return value of DoModal is one of the following:

- 1 if the user clicked OK in the secondary page, or if 1 was passed in the EndModal function call that terminated the secondary page.
- 0 if the user clicked Cancel in the secondary page, or if 0 was passed in the EndModal function call that terminated the secondary page.

Example

```
Local string &sPopupOptions = "bAutoClose@1";
&sPopupOptions = &sPopupOptions | ";sStyle@NUIAddLP";
&sPopupOptions = &sPopupOptions | ";bTail@0";
&sPopupOptions = &sPopupOptions | ";bCenter@1";
&sPopupOptions = &sPopupOptions | ";bHeader@1";
&sPopupOptions = &sPopupOptions | ";bClose@1";
&sPopupOptions = &sPopupOptions | ";width@350";
&sPopupOptions = &sPopupOptions | ";height@400;";

&newHPName = "";
If DoModalPopup(&sPopupOptions, "", False, False, Page.PTNUI_ADDLP_SEC, MsgGetExpla⇒
inText(95, 10017, "MNF-Add Homepage"), - 1, - 1) = 1 Then
End-If;
```

Related Links

DoModalComponentPopup

"Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

DoSave

Syntax

DoSave()

Description

Use the DoSave function to save the current page. DoSave defers processing to the end of the current PeopleCode program event, as distinct from DoSaveNow, which causes save processing (including SaveEdit, SavePreChange, SavePostChange, and Workflow PeopleCode) to be executed immediately.

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DoSave can be used in the following PeopleCode events only: FieldEdit, FieldChange, or ItemSelected (for menu items in popup menus only).

Parameters

None.

Returns

None.

Example

The following example sets up a key list with AddKeyListItem, saves the current page, and then transfers the user to a page named PAGE_2.

```
ClearKeyListItem( );
AddKeyListItem(OPRID, OPRID);
AddKeyListItem(REQUEST_ID, REQUEST_ID);
SetNextPage("PAGE_2");
DoSave( );
TransferPage( );
```

Related Links

DoCancel

DoSaveNow

TransferPage

AddKeyListItem

DoSaveNow

Syntax

DoSaveNow()

Description

The DoSaveNow function is designed primarily for use with remote calls. It enables a PeopleCode program to save page data to the database before running a remote process (most frequently a COBOL process) that will access the database directly. It is generally necessary to call DoSaveNow before calling the RemoteCall function.

DoSaveNow causes the current page to be saved immediately. Save processing (including SaveEdit, SavePreChange, SavePostChange, and Workflow PeopleCode) is executed before continuing execution of the program where DoSaveNow is called. DoSaveNow differs from the DoSave function in that DoSave defers saving the component until after any running PeopleCode is completed.

DoSaveNow can only be called from a FieldEdit or FieldChange event.

If you call DoSaveNow and there are no changes to save, save processing is skipped entirely. You can call SetComponentChanged right before you call DoSaveNow. The SetComponentChanged function makes the Component Processor think there are changes and so will force full save processing.

See RemoteCall, DoSave.

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Errors in DoSaveNow Save Processing

DoSaveNow initiates save processing. It handles errors that occur during save processing as follows:

- If save processing encounters a SaveEdit error, it displays the appropriate message box. DoSaveNow immediately exits from the originating FieldChange or FieldEdit program. The user can correct the error and continue.
- If save processing encounters a fatal error, it displays the appropriate fatal error. DoSaveNow handles the error by immediately exiting from the originating FieldChange or FieldEdit program. The user must then cancel the page.
- If save processing completes with no errors, PeopleCode execution continues on the line after the DoSaveNow call in FieldChange or FieldEdit.

Restrictions on Use of DoSaveNow

The following restrictions apply:

- DoSaveNow can be executed only from a FieldEdit or FieldChange event.
- DoSaveNow is only allowed prior to the first CallAppEngine function in a FieldChange event, but not afterward.
- Deferred operations should not be called before the DoSaveNow. Deferred operations include the DoSave, TransferPage, SetCursorPos, and EndModal functions.
- Components that use DoSaveNow must not use the DoCancel, Transfer, TransferPage, or WinEscape functions in PeopleCode attached to save action events (SaveEdit, SavePreChange, and SavePostChange), because these functions terminate the component, which would cause the program from which DoSaveNow was called to terminate prematurely.

Note: You should be aware that DoSaveNow may result in unpredictable behavior if PeopleCode in save events deletes rows or inserts rows into scrolls. PeopleCode that runs after DoSaveNow must be designed around the possibility that rows were deleted or inserted (which causes row number assignments to change). Modifying data on a deleted row may cause it to become “undeleted.”

Parameters

None.

Returns

None.

Example

The following example calls DoSaveNow to save the component prior to running a remote process in the remote_depletion declared function:

```
Declare Function remote_depletion PeopleCode FUNCLIB_ININTFC.RUN_DEPLETION FieldFor⇒
mula;

/*
Express Issue Page - run Depletion job through RemoteCall()
*/
```

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```
If %Component = COMPONENT.EXPRESS_ISSUE_INV Then
   DoSaveNow();
   &BUSINESS_UNIT = FetchValue(SHIP_HDR_INV.BUSINESS_UNIT, 1);
   &SHIP_OPTION = "S";
   &SHIP_ID = FetchValue(SHIP_HDR_INV.SHIP_ID, 1);
   remote_depletion(&BUSINESS_UNIT, &SHIP_OPTION, &SHIP_ID, &PROGRAM_STATUS);
End-If
```

PeopleCode Built-in Functions and Language Constructs: E

The PeopleCode built-In functions and language constructs beginning with the letter E are listed in alphabetical order within this topic.

Related Links

Typographical Conventions

EnableMenuItem

Syntax

EnableMenuItem(**BARNAME.***menubar_name*, **ITEMNAME.***menuitem_name*)

Description

Use the EnableMenuItem function to enable (make available for selection) the specified menu item. To apply this function to a pop-up menu, use the PrePopup Event of the field with which the pop-up menu is associated.

If you're using this function with a pop-up menu associated with a page (not a field), the earliest event you can use is the PrePopup event for the first "real" field on the page (that is, the first field listed in the Order view of the page in Application Designer.)

Restrictions on Use With a Component Interface

This function is ignored (has no effect) when used by a PeopleCode program that's been called by a Component Interface.

Parameters

menubar_name	Name of the menu bar that owns the menu item, or, in the case of pop-up menus, the name of the pop-up menu that owns the menu item.
menuitem_name	Name of the menu item.

Returns

None.

Example

```
EnableMenuItem(BARNAME.MYPOPUP1, ITEMNAME.DO_JOB_TRANSFER);
```

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Related Links

DisableMenuItem

HideMenuItem

"PrePopup Event" (PeopleTools 8.54: PeopleCode Developer's Guide)

EncodeSearchCode

Syntax

EncodeSearchCode(*search_string*)

Description

Use this function in special circumstances to encode a search string so that it is not "tokenized" by the search provider.

Note: Tokenization is the process that the search provider uses to split both indexed words as well as search terms containing special characters into multiple alphanumeric *tokens.* The index is generated using these tokens; therefore, at search time, the search provider also splits a similar search term into tokens to search the index. For special circumstances, PeopleSoft search definitions also allow that specific attributes can be encoded so that they are not tokenized during index generation. Similarly, to perform a search on attributes that have been marked for encoding on the Advanced Properties page, use this function to return an encoded search string to match the encoding done when the attribute was indexed..

This function converts all non-alphanumeric characters and the letters z and Z to hexadecimal values. A string that has been converted is terminated with Z. A string that does not include any special characters that require conversion remains unchanged as the return value. The following examples show the string input to and output from the EncodeSearchCode function.

- Input: `abcz123456`

  Output: `abc7A123456Z` — The z was converted to hexadecimal 7A and the string was terminated with Z.

- Input: `abc123456`

  Output: `abc123456` — The search string was not encoded and therefore the string was not terminated with Z.

Parameters

search_string Specifies the search string that is to be encoded.

Returns

A String value.

Example

```
import PT_SEARCH:*;

Local PT_SEARCH:SearchFilter &flt;
```

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```
Local PT_SEARCH:SearchField &fld;

&flt.Field = &fld;
&srchString = &fld.Value;
&flt.Value = EncodeSearchCode(&srchString);
```

Related Links

"Working With Advanced Settings" (PeopleTools 8.54: Search Technology)

EncodeURL

Syntax

EncodeURL(*URLString*)

Description

Use the EncodeURL function to apply URL encoding rules, including escape characters, to the string specified by *URLString*. The method used to encode the *URLString* is the standard defined by W3C. This function returns a string that contains the encoded URL. All characters outside the Unicode Basic Latin block (U+0020 — U+007F) are encoded, with the exception of the characters in the table below which are not encoded as they may represent valid components of URL or protocol syntax. If you need to encode such characters, use the EncodeURLForQueryString function.

The following table lists the punctuation characters in the Unicode Basic Latin block that are not encoded by the URLEncode function.

Punctuation Character	***Description***
Glyph	Unicode Character Name
!	Exclamation mark
#	Number sign
$	Dollar sign
&	Ampersand
(	Left parenthesis
)	Right parenthesis
*	Asterisk
+	Plus sign
,	Coma
-	Hyphen, minus
.	Full stop, period

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Punctuation Character	*Description*
/	Solidus, slash
:	Colon
;	Semi-colon
=	Equals sign
?	Question mark
_	Underscore

Parameters

URLString Specify the string you want encoded. This parameter takes a string value.

Returns

An encoded string.

Example

The example below returns the following encoded URL:

```
http://corp.office.com/human%20resources/benefits/401kchange_home.htm?FirstName=Gun⇒
ter&LastName=D%c3%9crst
```

```
&MYSTRING = EncodeURL("http://corp.office.com/hr/benefits/401k/401k_home.htm");
```

Related Links

EncodeURLForQueryString

Unencode

"Understanding Internet Script Classes" (PeopleTools 8.54: PeopleCode API Reference)

EncodeURLForQueryString

Syntax

EncodeURLForQueryString(*URLString*)

Description

Use the EncodeURLForQueryString function to encode *URLString* for use in a query string parameter in an URL. All characters outside the Unicode Basic Latin block (U+0020 — U+007F) are encoded, with the exception of the characters in the table below which are not encoded as they are typically valid in a query string.

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If the link is constructed in a page, and the value is a link field, you should not call EncodeURL to encode the entire URL, as the PeopleSoft Pure Internet Architecture does this for you. You still need to unencode the parameter value when you retrieve it, however.

Always encode each field value being added directly to query strings using EncodeURLForQueryString.

The following table lists punctuation characters in the Unicode Basic Latin block that are not encoded by the URLEncodeForQueryString function.

Punctuation Character	***Description***
(	Left parenthesis
)	Right parenthesis
*	Asterisk
-	Hyphen, minus
.	Full stop, period
_	Underscore, low line

Parameters

URLString Specify the string you want encoded. This parameter takes a string value.

Returns

An encoded URL string.

Example

In an Internet Script, to construct an anchor with a URL in a query string parameter, do the following:

```
&url = "http://host/psp/ps/EMPLOYEE/HRMS/s/EMPL_INFO.FieldFormula.IScript_EMPL_INFO⇒
?emplid=1111&mkt=usa"

&href = %Request.RequestURI | "?" | %Request.QueryString | "&myurl=" | EncodeURLFor⇒
QueryString(&url);

%Response.WriteLine("<a href= " | EncodeURL(&href) | ">My Link</a>");
```

The following uses a generic method to find, then encode, the URL, for the external link:

```
&StartPos = Find("?", &URL, 1);
&CPColl = &Portal.ContentProviders;
&strHREF = EncodeURLForQueryString(Substring(&URL, &StartPos + 1, Len(&URL)  -&Star⇒
tPos));
&LINK = &Portal.GetQualifiedURL("PortalServlet", "PortalOriginalURL=" | &CPColl.Ite⇒
mbyName(&CP_NAME).URI | "?" | &strHREF);
```

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Related Links

EncodeURL
Unencode
EscapeHTML
EscapeJavascriptString
EscapeWML
"Understanding Internet Script Classes" (PeopleTools 8.54: PeopleCode API Reference)

Encrypt

Syntax

Encrypt(*KeyString*, *ClearTextString*)

Description

Use the Encrypt function to encrypt a string. This function is generally used with merchant passwords.

The value you use for *KeyString* must be the same for Decrypt and Encrypt.

Size Considerations for Encrypt

The Encrypt function uses 56-bit DES (Data Encryption Standard). The size of the output string is increased to the nearest multiple of 8 bytes. The string is encrypted (which doesn't modify the size), then encoded, which increases the resulting size to the next multiple of 3. Then, the system multiplies the result by 4/3 to get the final encrypted size.

For example, a 16-character, Unicode field is 32 bytes long, which is already an even multiple of 8. After it is encrypted, it is encoded, which increases the size of the string to 33 bytes (the next multiple of 3). Then, the system multiplies this by 4/3 to get the final encrypted string size of 44 bytes.

Parameters

KeyString	Specify the key used for encrypting the string. You can specify a Null value for this parameter, that is, two quotation marks with no blank space between them ("").
ClearTextString	Specify the string you want encrypted.

Returns

An encrypted string.

Example

The following encrypts a field if it contains a value. It also removes any blanks either preceding or trailing the value.

```
If All(PSCNFMRCHTOKEN.WRKTOKEN) Then
   CMPAUTHTOKEN = Encrypt("", RTrim(LTrim(PSCNFMRCHTOKEN.WRKTOKEN)));
End-If;
```

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Related Links

Decrypt
Hash
"PeopleSoft Online Security" (PeopleTools 8.54: Security Administration)

EncryptNodePswd

Syntax

EncryptNodePswd(*Password*)

Description

Use the EncryptNodePswd function to encrypt an Integration Broker node password.

Note: This function is generally used with Integration Broker node password encryption. This function should not be used casually, as once you encrypt your node password, there is no decrypt PeopleCode method.

Parameters

Password	Specify the Integration Broker node password that you want encrypted, as a string.

Returns

An encrypted password as a string.

Example

In the following example, the password is stored in the database in an encrypted form instead of as plain text:

```
PSMSGNODEDEFN.IBPASSWORD = EncryptNodePswd(RTrim(LTrim(PSNODE_WRK.WRKPASSWORD)));
```

Related Links

"Adding Node Definitions" (PeopleTools 8.54: Integration Broker Administration)

EndMessage

Syntax

EndMessage(*message*, *messagebox_title*)

Description

Note: The EndMessage function is obsolete and is supported only for backward compatibility. The MessageBox function, which can now be used to display informational messages in any PeopleCode event, should be used instead.

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Use the EndMessage function to display a message at the end of a transaction, at the time of the database COMMIT. This function can be used only in SavePostChange PeopleCode.

When an EndMessage function executes, PeopleTools:

- Verifies that the function is in SavePostChange; if it is not, an error occurs and the function terminates.
- Displays the message.
- Terminates the SavePostChange PeopleCode program.

Because it terminates the SavePostChange program, EndMessage is always be the last statement executed in the program on the specific field and row where the EndMessage is called. For this reason, you must write the SavePostChange program so that all necessary processing takes place before the EndMessage statement. PeopleCode programs on other fields and rows execute as usual.

Parameters

message	A string that must be enclosed in quotes containing the message text you want displayed.
messagebox_title	A string that must be enclosed in quotes containing the title of the message. It appears in the message box title bar.

Returns

None.

Example

The following example is from SavePostChange event PeopleCode. It checks to see whether a condition is true, and if so, it displays a message and terminates the SavePostChange program. If the condition is false, then processing continues in the Else clause:

```
If BUSINESS_UNIT = BUS_UNIT_WRK.DEFAULT_SETID Then
         EndMessage(MsgGet(20000, 12, "Message not found in Message Catalog")," ");
      Else
/* any other SavePostChange processing in Else clause */
```

Related Links

MessageBox

WinMessage

EndModal

Syntax

EndModal(*returnvalue*)

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Description

Use the EndModal function to close a currently open secondary page. It is required only for secondary pages that do not have OK and Cancel buttons. If the secondary page has OK and Cancel buttons, then the function for exiting the page is built in and no PeopleCode is required.

Important! Do not use multiple EndModal or EndModalComponent invocations to close multiple, open modal secondary windows simultaneously. Each modal window must be closed individually with a single EndModal call followed by an event that triggers a trip to the application server. Otherwise, multiple, simultaneous EndModal or EndModalComponent invocations will close all open modal secondary windows.

Restrictions on Use With a Component Interface

This function is ignored (has no effect) when used by a PeopleCode program that's been called by a Component Interface.

Parameters

returnvalue A Number value that determines whether the secondary page data is copied back to the parent page. A positive value runs SaveEdit PeopleCode and copies the data (this is the same as clicking the OK button). A value of zero skips SaveEdit and discards buffer changes made in the secondary page (this is the same as clicking the Cancel button). This value becomes the return value of the DoModal function that started the secondary page, and it can be tested after the secondary page is closed.

Returns

None.

Example

The following statement acts as an OK button:

```
EndModal(1);
```

The following statement acts as a Cancel button:

```
EndModal(0);
```

Related Links

DoModal
DoModalX
IsModal

EndModalComponent

Syntax

EndModalComponent(*ReturnValue*)

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Description

Use the EndModalComponent function to close a currently open secondary component. You could use this for creating your own links to exit a secondary component.

Important! Do not use multiple EndModalComponent or EndModal invocations to close multiple, open modal secondary windows simultaneously. Each modal window must be closed individually with a single EndModalComponent call followed by an event that triggers a trip to the application server. Otherwise, multiple, simultaneous EndModalComponent or EndModal invocations will close all open modal secondary windows.

Restrictions on Use With a Component Interface

This function can't be used by a PeopleCode program that's been called by a Component Interface, and is ignored.

Parameters

ReturnValue A Number value that determines whether the secondary component data is saved and copied back to the parent page. A positive value saves the data in the component to the database, including all save processing and PeopleCode (this is the same as pressing the OK button). It also copies the data in the shared work record, if any, back to the primary component. A value of zero skips save processing discards buffer changes made in the secondary component (this is the same as pressing the Cancel button).

Returns

A Boolean value: True if a non-zero value was used, False if zero was used.

Example

```
EndModalComponent(0);  /* cancels the component without saving */

EndModalComponent(1); /* saves and closes the component */
```

Related Links

DoModalComponent
DoModalXComponent
EndModal
IsModal

EnQueue

Syntax

```
EnQueue(logical_queue, task_type, Relative_URL, Language_Code [, subject][, agent_ID]
[, overflow_timeout][, escalation_timeout][, cost][, priority][, skill_level])
```

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Description

Use the EnQueue function to assign a task to one of the active, physical queues belonging to the specified logical queue. The physical queue to which the system assigns the task is chosen randomly to balance load across the queues.

Note: PeopleSoft recommends that you always follow the EnQueue function with the NotifyQ function.

See NotifyQ.

Parameters

logical_queue

Specifies the logical queue in which the task should be queued. It is a string value.

The logical queue ID is a case-sensitive value. The case used in the EnQueue function must exactly match the case used when creating the logical queue ID with the MultiChannel Framework administration pages.

task_type

Specifies the type of task to be inserted. It is a string value. The valid values are:

- email
- generic

Note: This parameter does not apply to voice or chat. Chat tasks are enqueued using the InitChat function. Voice queueing is managed by PeopleSoft CTI.

Relative_URL

The system uses this relative URL to generate the URL of the appropriate application page for the MultiChannel Framework console to launch when an agent accepts this task. The application page should contain the logic to enable the agent to resolve the task and either forward the task using the Forward function or dequeue the task using the DeQueue function.

Language_Code

This is the language code associated with the task to be enqueued. It is a string value that must exist in the PeopleSoft language table.

The queue server only assigns this task to an agent whose list of languages contains this value. For example if an email to be enqueued is written in English, the language code would be “ENG”, and this email would only be assigned to agents whose language list contains English.

subject

This is an optional parameter. It is a string value describing the purpose of the request. This value appears on the agent's console when the system assigns the task.

agent_ID

Specifies the assigned agent. This is an optional, string parameter.

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If specified, the system holds the task until the specified agent is available to take this task. If this parameter is left blank, the queue server assigns it to the first available agent.

Note: For better performance, PeopleSoft recommends not specifying the target agent as this has a processing overhead for the queue servers and does not allow the system to balance workload across all available agents.

---

overflow_timeout

This is an optional parameter. It is an integer value expressing the overflow timeout in minutes.

The overflow timeout is the time period within which a queue server has to find an agent who accepts the task (clicks on the flashing icon on the MultiChannel console). If the task is not accepted within this time, the task is removed from the queue and placed in the MultiChannel overflow table.

If you do not specify a value, the system uses the default value specified for that task type in the Task Configuration page.

escalation_timeout

This is an optional parameter. It is an integer value expressing the escalation timeout in minutes.

The escalation timeout is the time period within which a task must be completed by the agent and closed with DeQueue. If the task is not closed within this time, the task is removed from the queue and from the agent's accepted task list, which means the task becomes unassigned. Then the task is placed in the MultiChannel Framework escalation table.

If no value is specified, the system uses the default specified for that task type in the Task Configuration pages.

cost

This is an optional parameter. It is an integer value measuring the workload each task places on an agent. The cost of a task is an estimate of the tasks's expected complexity and of the time required to resolve the task. The minimum value is 0, and there is no maximum value.

The cost of a task is added to an agent's workload after accepting a task on the MultiChannel Framework console. A task can't be assigned to an agent if the difference between the current workload and the maximum workload defined for that agent on the Agent configuration page is less than the cost of this task.

If you do not specify a value, the system uses the default value specified for that task in the Task Configuration pages.

Note: If the required skill level or cost submitted exceeds the highest skill level or maximum workload of any of the agents on that queue, the task cannot be assigned.

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priority

This is an optional parameter. It is an integer value expressing the priority level of the request. The minimum value is 0 and there is no maximum value.

A higher value means a higher priority. Tasks are ordered on a physical queue based on their assigned priority. That is, the system assigns a task of a higher priority before it assigns a task of a lower priority.

If no value is specified, the system uses the default value specified for that task type in the Task Configuration page.

When tasks have the same priority, the system orders the tasks according to the time they were created. For example, suppose the following tasks exist: Priority 2 created at 11:15 AM and Priority 2 created at 11:16 AM. In this case, the system assigns the task created at 11:15 AM before the task created at 11:16 AM.

skill_level

This is an optional parameter. It is an integer value expressing the minimum skill level required of the agent to whom the system routes the request. You set an agent's skill level in the Agent configuration page.

The queue server assigns this task type to an available agent on that queue whose lowest skill level is greater than or equal to the skill level required by the task.

If no value is specified, the system uses the default value specified for that task type in the Task Configuration page.

Note: If the required skill level or cost submitted exceeds the highest skill level or maximum workload of any of the agents on that queue, the task cannot be assigned.

Returns

If the insert was successful, the function returns a task number in the form of a string.

If unsuccessful, it returns a message number. The message set ID for MultiChannel Framework is 162.

For example, 1302 is returned when an invalid task type or no value is provided.

Example

```
&PortalValue = Portal.EMPLOYEE;
   &NodeValue = Node.QE_LOCAL; /*If running in Application Engine, this code
assumes CONTENT URI has been set in node defn admin page*/

   &MyCompURL = GenerateComponentContentRelURL(&PortalValue, &NodeValue,
MenuName.PT_MCF, "GBL", Component.MCFEM_DEMOERMS_CMP, Page.MCFEM_ERMSMN, "");
   &MyCompURL = &MyCompURL | "&ps_emailid=" | &emailid; /*Query string
dependent on component. Our demo comonent just needs email id*/

rem The URL to be passed will look something like;
rem "/psc/ps/EMPLOYEE/QE_LOCAL/c/PT_MCF.MCF_DEMOERMS_CMP.GBL?Page=MCFEM_ERMSMN";
```

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```
&strtasknum = EnQueue(&queueID, "email", &MyCompURL, &langcode,
&subject, "QEDMO", 15, 60, &cost, &priority, &minskill);
```

Related Links

DeQueue

Error

Syntax

Error *str*

Description

Use the Error function in FieldEdit or SaveEdit PeopleCode to stop processing and display an error message. It is distinct from Warning, which displays a warning message, but does not stop processing. Error is also used in RowDelete and RowSelect PeopleCode events.

Warning! The behavior of the Error function in the RowSelect event is very different from its normal behavior.
See the Error in RowSelect section for more details.

The text of the error message (the *str* parameter), should always be stored in the Message Catalog and retrieved using the MsgGet or MsgGetText functions. This makes it much easier for the text to be translated, and it also enables you to include more detailed Explain text about the error.

Note: If you pass a string to the Error function instead of using a Message Catalog function, the explanation text from the last call to the Message Catalog may be appended to the message. This can cause unexpected results.

See WinMessage.

When Error executes in a PeopleCode program, the program terminates immediately and no statements after the Error are executed. In other respects behavior of Error differs, depending on which PeopleCode event the function occurs in.

Errors in FieldEdit and SaveEdit

The primary use of Error is in FieldEdit and SaveEdit PeopleCode:

- In FieldEdit, Error stops processing, displays a message, and highlights the relevant field.
- In SaveEdit, Error stops all save processing and displays a message, but does not highlight any field. You can move the cursor to a specific field using the SetCursorPos function, but be sure to call SetCursorPos *before* calling Error, otherwise Error stops processing before SetCursorPos is called. Note that an Error on any field in SaveEdit stops all save processing, and no page data is saved to the database.

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Errors in RowDelete

When the user attempts to delete a row of data, the system first prompts for confirmation. If the user confirms, the RowDelete event fires. An Error in the RowDelete event displays a message and prevents the row from being deleted.

Error in RowSelect

The behavior of Error in RowSelect is totally anomalous, and is supported only for backward compatibility. It is used to filter rows that are being added to a page scroll after the rows have been selected and brought into the component buffer. *No message is displayed.* Error causes the Component Processor to add the current row (the one where the PeopleCode is executing) to the page scroll, then stops adding any additional rows to the page scroll.

The behavior of Error in the RowSelect event enables you to filter out rows that are above or below some limiting value. In practice this technique is rarely used, because it is more efficient to filter out rows of data before they are brought into the component buffer. This can be accomplished with search views or effective date processing.

Errors in Other Events

Do not use the Error function in any of the remaining events, which include:

- FieldDefault
- FieldFormula
- RowInit
- FieldChange
- Prepopup
- RowInsert
- SavePreChange
- SavePostChange

Parameters

Str A string containing the text of the error message. This string should always be stored in the Message Catalog and retrieved using the MsgGet or MsgGetText function. This makes translation much easier and also enables you to provide detailed Explain text about the error.

Returns

None.

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Example

The following example, from SaveEdit PeopleCode, displays an error message, stops all save processing, and places the cursor in the QTY_ADJUSTED field. Note that SetCursorPos must be called before Error.

```
If PAGES2_INV_WRK.PHYS_CYC_INV_FLG = "Y" Then
      SetCursorPos(%Page, PHYSICAL_INV.INV_LOT_ID, CurrentRowNumber(1), QTY_ADJUSTE⇒
D, CurrentRowNumber());
      Error MsgGet(11100, 180, "Message not found.");
   End-If;
```

Related Links

MsgGet
MsgGetText
SetCursorPos
Warning
WinMessage

EscapeHTML

Syntax

EscapeHTML(*TextString*)

Description

Use the EscapeHTML function to replace all characters in *TextString* that would otherwise be interpreted as markup sequences.

The characters that are replaced are ones that would cause the browser to interpret them as HTML tags or other markup if they aren't encoded, and therefore pre-formatted HTML should not be passed to this function unless the output desired is a rendering of the HTML code itself as opposed to it's interpretation. This function is intended to make the text "browser safe".

This function is for use with strings that display in an HTML area.

Either HTML character entities (eg. &lt) or Numeric Character Representations (e.g. &#039) are output by the EscapeHTML function, depending on the character passed. The table below shows the escaping that is performed by EscapeHTML.

In addition to escaping characters that could be misinterpreted as HTML tags or other elements, EscapeHTML escapes the percentage sign (%) as this could interfere with meta HTML processing. As all PeopleTools HTML is generated in Unicode, it is not necessary to escape other Unicode characters — their value may be passed directly to the browser instead of a character entity or in Numeric Character Representation.

The following table lists the Unicode characters that are escaped by the EscapeHTML function.

For example, the less-than symbol (<) is replaced with `&lt.`, a single quotation mark (') is replaced with `&#039.`, and so on.

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Unicode Character Name	*Glyph*	*Escape Sequence*
Quotation mark	”	"
Ampersand	&	&
Less than sign	<	<
Apostrophe, single quote	'	'
Percentage sign	%	%
New line	Not applicable	

Parameters

TextString Specify a string of HTML that contains characters that must be replaced with HTML escape sequences.

Returns

A string containing the original text plus HTML escape sequences.

Related Links

EscapeJavascriptString
EscapeWML

EscapeJavascriptString

Syntax

`EscapeJavascriptString``(`*`String`*`)`

Description

Use the EscapeJavascriptString function to replace the characters in *String* that have special meaning in a JavaScript string as escape sequences.

For example, a single quotation mark` (') is replaced by \', a new line character is replaced by \n, and so on.

This function is for use with text that becomes part of a JavaScript program.

The characters that are replaced are ones that cause the browser to misinterpret the JavaScript if they aren't encoded. This function is intended to make the text “browser safe.” The table below shows the strings that are replaced by this function, and their replacement character sequence.

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Character Name	*Glyph*	*Description*
Apostrophe, single quote	'	\'
Quotation mark	"	\"
New line	Not applicable	\n
Carriage return	Not applicable	Deleted
Double backslash	\\	\\\\

Parameters

String Specify a string that contains character that need to be replaced with JavaScript escape sequences.

Returns

A string containing the original text plus JavaScript escape sequences.

Related Links

EscapeHTML
EscapeWML

EscapeWML

Syntax

`EscapeWML``(`*`String`*`)`

Description

Use the EscapeWML function to escape special characters that are significant to WML. This includes <, >, $ (escaped as $$), &, ' and ".

This function is for use with strings that display on an WML browser.

Parameters

String Specify a string that contains characters that need to be replaced with WML escape sequences.

Returns

A string containing the original plus text plus WML escape sequences.

Related Links

EscapeHTML

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EscapeJavascriptString

Evaluate

Syntax

```
Evaluate left_term
When [relop_1] right_term_1
[statement_list]
.
.
.
[When [relop_n] right_term_n
[statement_list]]
[When-other
[statement_list]]
End-evaluate
```

Description

Use the Evaluate statement to check multiple conditions. It takes an expression, *left_term*, and compares it to compatible expressions (*right_term*) using the relational operators (*relop*) in a sequence of When clauses. If *relop* is omitted, then = is assumed. If the result of the comparison is True, it executes the statements in the When clause, then moves on to evaluate the comparison in the following When clause. It executes the statements in all of the When clauses for which the comparison evaluates to True. If and only if none of the When comparisons evaluates to True, it executes the statement in the When-other clause (if one is provided).

To end the Evaluate after the execution of a When clause, you can add a Break statement at the end of the clause.

Considerations Using When Clause

Generally, you use the When clause without a semicolon at the end of the statement. However, in certain circumstances, this can cause an error. For example, the following PeopleCode produces an error because the PeopleCode compiler cannot separate the end of the Where clause with the beginning of the next statement:

```
When = COMPONENT.GARBAGE

      (create BO_SEARCH:Runtime:BusinessContact_Contact(&fBusObjDescr, Null, &fDeri⇒
vedBOID, &fDerivedBORole, &fBusObjDescr1, Null, &fContactBOID, &fContactRoleID, &fC⇒
ustBOID, &fCustRoleID, "")).SearchItemSelected();

End-Evaluate;
```

If you place a semicolon after the When clause, the two expressions are read separately by the compiler. For example:

```
 When = COMPONENT.GARBAGE;
```

Example

The following is an example of a When statement taken evaluates ACTION and performs various statements based on its value:

```
&PRIOR_STATUS = PriorEffdt(EMPL_STATUS);
Evaluate ACTION
When  "HIR"
```

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```
   If %Mode = "A" Then
      Warning MsgGet(1000, 13, "You are hiring an employee and Action
      is not set
 to Hire.");
   End-if;
   Break;
When = "REH"
   If All(&PRIOR_STATUS) and
         not (&PRIOR_STATUS = "T"  or
            &PRIOR_STATUS = "R" ) Then
      Error MsgGet(1000, 14, "Hire or Rehire action is valid
        only if employee status is Terminated or Retired.");
   End-if;
   Break;
When-Other
/* default code */
End-evaluate;
```

Exact

Syntax

Exact(*string1*, *string2*)

Description

Use the Exact function to compare two text strings and returns True if they are the same, False otherwise. Exact is case-sensitive because it uses the internal character codes.

Returns

Returns a Boolean value: True if the two strings match in a case-sensitive comparison.

Example

The examples set &MATCH to True, then False:

```
&MATCH = Exact("PeopleSoft", "PeopleSoft");
&MATCH = Exact("PeopleSoft", "Peoplesoft");
```

Related Links

Len
String
%Substring

Exec

Syntax

Exec(*command_str* [, *parameter*])

where *parameter* has one of the following formats:

Boolean constant

Exec_Constant + Path_Constant

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Description

Exec is a cross-platform function that executes an external program on either UNIX or Windows.

This function has two parameter conventions in order to maintain upward compatibility with existing programs.

Note: All PeopleCode is executed on the application server. So if you're calling an interactive application, you receive an error. There shouldn't be any application interaction on the application server console.

The function can make either a synchronous or asynchronous call. Synchronous execution acts as a "modal" function, suspending the PeopleSoft application until the called executable completes. This is appropriate if you want to force the user (or the PeopleCode program) to wait for the function to complete its work before continuing processing. Asynchronous processing, which is the default, launches the executable and immediately returns control to the calling PeopleSoft application.

If Exec is unable to execute the external program, the PeopleCode program terminates with a fatal error. You may want to try to catch these exceptions by enclosing such statements in a try-catch statement (from the Exception Class).

Command Formatting

The function automatically converts the first token on *command_str* platform-specific separator characters to the appropriate form for where your PeopleCode program is executing, regardless of the *path_constant*. On a Windows system, a UNIX "/" separator is converted to "\", and on a UNIX system, a Windows "\" separator is converted to "/".

This is only done for the first token on *command_str* assuming it to be some sort of file specification. This allows you to put file or program names in canonical form (such as, UNIX style) as the first token on the exec command.

Using an Absolute Path

If you do not specify anything for the second parameter, or if you specify a Boolean value, the path to PS_HOME is prefixed to the *command_str*.

If you specify constant values for the second parameter, PS_HOME may or may not be prefixed, depending on the values you select.

You can use the GetEnv function to determine the value of PS_HOME.

Creating a File in UNIX

If you try to create a file on a UNIX machine using the Exec function the file might not be created due to permission issues. If you encounter this problem, create a script file that includes the file creation commands and run the script using the Exec function. The script file must have correct privileges.

If you pass an absolute path in the Exec argument you must use the %FilePath_Absolute flag

Restrictions on Use in PeopleCode Events

When Exec is used to execute a program synchronously (that is, if its *synch_exec* parameter is set to True) it behaves as a think-time function, which means that it can’t be used in any of the following PeopleCode events:

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- SavePreChange.
- SavePostChange.
- Workflow.
- RowSelect.
- Any PeopleCode event that fires as a result of a ScrollSelect (or one of its relatives) function calls, or a Select (or one of its relatives) Rowset class method.

Related Links

"Understanding Restrictions on Method and Function Use" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

command_str

The *command_str* parameter consists of a series of tokens that together make up the name of the executable to run and the parameters to be passed to it. Tokens are separated by unquoted space characters. Single or double quote characters can be used for quoting. Both types of quotes are treated equivalently, but the starting and ending quotes for a quoted portion of a token must match. A quoted string may not contain quotes of the same type but a single quoted string can contain double quote characters and vice versa. A single token may consist of multiple adjacent quoted characters (There must be no spaces between the quoted fragments). Unterminated quoted fragments will result in an error.

Note: PeopleCode strings will require two double quote characters within a string to embed a double quote character.

Boolean | Constants

If you specify a Boolean value, it indicates whether to execute the external program synchronously or asynchronously. Values are:

- True - Synchronous
- False - Asynchronous (default)

If you do not specify a value, the program executes asynchronously.

If you use this style, PS_HOME is always prefixed to *command_str*.

If you specify constant values, you're specifying a numeric value composed of an *exec_constant* and a *path_constant*. The *exec_constant* specifies whether to execute the external program synchronously or not. The *path_constant* specifies how the path name is to be treated. The value specified is made up of the addition of these predefined constants.

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Values are:

Exec Constant	*Description*
%Exec_Asynchronous	Program executes asynchronously (the default)
%Exec_Synchronous	Program executes synchronously.

Path Constant	*Description*
%FilePath_Relative	PS_HOME is prefixed to *command_str*.
%FilePath_Absolute	Nothing is prefixed to *command_str*.

Returns

What is returned depends on what you specified for the second parameter.

If you specified a Boolean, a Number value equal to the process ID of the called process is returned.

If you specify constant values, the returned value contains the value of the exit code of the program executed using this function, unless you have executed the program asynchronously.

Example

```
&ExitCode = Exec("sh -c " | &scriptFile, %Exec_Synchronous + %FilePath_Absolute);
```

The following example demonstrates executing a program where the path to the executable contains spaces and a single parameter containing space characters is passed. Suppose the location of the executable is `C:\Program Files\App\program.exe` and the value of the first parameter is *1 2 3*.

```
Exec("'c:\Program Files\App\program.exe' '1 2 3'", %FilePath_Absolute)
```

or

```
Exec("""c:\Program Files\App\program.exe"" ""1 2 3""", %FilePath_Absolute)
```

This is an example of executing a program with a parameter that contains space and single quote characters. The second parameter is enclosed in double quotes so that the single quote and space characters are passed correctly. Suppose your executable is *program.exe*. The first parameter is *-p* and the second parameter is *customer's update*.

```
Exec("program.exe -p ""customer’s update""")
```

This is an example of executing a program with a parameter that contains space, single quote, and double quote characters. The second parameter consists of several adjacent quoted fragments. The first fragment is enclosed in double quotes so that the single quote and space characters are passed correctly and the second fragment is enclosed in single quotes so that the double quote and space characters are passed correctly. Note that there are no spaces between the quoted fragments. Suppose your executable is *program.exe*. The first parameter is *-p* and the second parameter is *John’s comment: “Hello There”*.

```
Exec("program.exe -p ""John's comment: ""'""Hello There""'")
```

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Related Links

Declare Function
RemoteCall
WinExec
ScrollSelect
ScrollSelectNew
RowScrollSelect
RowScrollSelectNew
GetEnv
"Select" (PeopleTools 8.54: PeopleCode API Reference)
"Understanding Exception Class" (PeopleTools 8.54: PeopleCode API Reference)
"Understanding Restrictions on Method and Function Use" (PeopleTools 8.54: PeopleCode Developer's Guide)

ExecuteRolePeopleCode

Syntax

ExecuteRolePeopleCode(*RoleName*)

Description

Use the ExecuteRolePeopleCode function to execute the PeopleCode Rule for the Role *RoleName*. This function returns an array of string containing dynamic members (UserIds).

Typically, this function is used by an Application Engine process that runs periodically and executes the role rules for different roles. It could then write the results of the rules (a list of users) into the security tables, effectively placing users in certain roles based on the rule.

Parameters

RoleName	Specify the name of an existing role.

Returns

An array of string containing the appropriate UserIds.

Example

The following saves valid users to a temporary table:

```
Local array of string &pcode_array_users;

SQLExec("delete from ps_dynrole_tmp where ROLENAME=:1", &ROLENAME);
   If &pcode_rule_status = "Y" Then
      SQLExec("select RECNAME, FIELDNAME, PC_EVENT_TYPE, PC_FUNCTION_NAME from
      PSROLEDEFN where ROLENAME= :1", &ROLENAME, &rec, &fld, &pce, &pcf);
      If (&rec <> "" And
            &fld <> "" And
            &pce <> "" And
            &pcf <> "") Then
         &pcode_array_users = ExecuteRolePeopleCode(&ROLENAME);
         &pcode_results = True;
```

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```
      Else
         &pcode_results = False;
      End-If;
      &comb_array_users = &pcode_array_users;
   End-If;
```

Related Links

ExecuteRoleQuery
ExecuteRoleWorkflowQuery
IsUserInPermissionList
IsUserInRole
%Roles
"PeopleSoft Online Security" (PeopleTools 8.54: Security Administration)

ExecuteRoleQuery

Syntax

ExecuteRoleQuery(*RoleName*, *BindVars*)

where *BindVars* is an arbitrary-length list of bind variables that are stings in the form:

bindvar1 [, *bindvar2*]. . .

Description

Use the ExecuteRoleQuery function to execute the Query rule for the role *rolename*, passing in *BindVars* as the bind variables. This function returns an array object containing the appropriate user members (UserIds).

Parameters

RoleName	Specify the name of an existing role.
BindVars	A list of bind variables to be substituted in the query. These bind variables must be strings. You can't use numbers, dates, and so on.

Returns

An array object containing the appropriate UserIds.

Related Links

ExecuteRolePeopleCode
ExecuteRoleWorkflowQuery
IsUserInPermissionList
IsUserInRole
%Roles
"PeopleSoft Online Security" (PeopleTools 8.54: Security Administration)

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ExecuteRoleWorkflowQuery

Syntax

```
ExecuteRoleWorkflowQuery(RoleName, BindVars)
```

where *BindVars* is an arbitrary-length list of bind variables in the form:

```
bindvar1 [, bindvar2]. . .
```

Description

Use the ExecuteRoleWorkflowQuery function to execute the Workflow Query rule for the role *rolename*, passing in *BindVars* as the bind variables. This function returns an array object containing the appropriate user members (UserIds).

Parameters

RoleName	Specify the name of an existing role.
BindVars	A list of bind variables to be substituted in the query.

Returns

An array object containing the appropriate UserIds.

Related Links

ExecuteRolePeopleCode
ExecuteRoleQuery
IsUserInPermissionList
IsUserInRole
%Roles
"PeopleSoft Online Security" (PeopleTools 8.54: Security Administration)

ExecuteSearchSavePC

Syntax

```
ExecuteSearchSavePC()
```

Description

Use the ExecuteSearchSavePC function to execute any SearchSave PeopleCode on the search page.

Important! Use this function within fluid applications only.

Parameters

None.

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Returns

None.

Related Links

"SearchSave Event" (PeopleTools 8.54: PeopleCode Developer's Guide)

Exit

Syntax

```
Exit([1])
```

Description

Use the Exit statement to immediately terminate a PeopleCode program. If the Exit statement is executed within a PeopleCode function, the main program terminates.

Note: `Exit(1)` does *not* rollback iScript transactions. To rollback in an iScript, you can use the SqlExec built-in function with the parameter of ROLLBACK (`SQLEXEC("ROLLBACK")`) or the MessageBox built-in function with a message error severity of error. You can also use the built-in function Error, but only if you are not sending HTML or XML in the error text itself.

Parameters

1 Use this parameter to rollback database changes.

Generally, this parameter is used in PeopleCode programs that affect messages. When used with a message, all database changes are rolled back, errors for the subscription contract are written to the subscription contract error table, and the status of the message is marked to Error. All errors that have occurred for this message are viewable in the message monitor: even those errors detected by the ExecuteEdits method.

Note: This function takes only numeric values. It fails if you use a Boolean value, True or False.

Returns

None.

Example

The following example terminates the main program from a For loop:

```
For &I = 1 To ActiveRowCount(RECORD.SP_BUIN_NONVW)
  &ITEM_SELECTED = FetchValue(ITEM_SELECTED, &I);
  If &ITEM_SELECTED = "Y" Then
      &FOUND = "Y";
      Exit;
  End-If;
End-For;
```

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Related Links

Break
Return

Exp

Syntax

Exp(*n*)

Description

Exp returns the constant *e* raised to the power of *n* where *n* is a number. The constant *e* equals 2.71828182845904, the base of natural logarithms. The number *n* is the exponent applied to the base *e*.

Exp is the inverse of the Ln function, which is the natural logarithm of x.

Returns

Returns a Number value equal to the constant *e* raised to the power of *n*.

Example

The examples set &NUM to 2.71828182845904, then 7.389056099(e2):

```
&NUM = Exp(1);
&NUM = Exp(2);
```

Related Links

Ln
Log10

ExpandBindVar

Syntax

ExpandBindVar(*str*)

Description

Inline bind variables can be included in any PeopleCode string. An inline bind variable is a field reference (in the form *recordname.fieldname*), preceded by a colon. The inline bind variable references the value in the field.

Use the ExpandBindVar function to expand any inline bind variables that it finds in *str* into strings (converting the data type of non-character fields) and returns the resulting string. This works with inline bind variables representing fields containing any data type except Object. It also expands bind variables specified using additional parameters.

See SQLExec.

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Parameters

str	A string containing one or more inline bind variables.

Returns

Returns a String value equal to the input string with all bind variables expanded.

Example

A bind variable is included in the string &TESTSTR, which is then expanded into a new string containing the current value of BUS_EXPENSE_PER.EMPLID in place of the bind variable. If this program runs on the row for EMPLID 8001, the message displayed reads "This is a test using EmplID 8001".

```
&TESTSTR = "This is a test using EmplID :bus_expense_per.emplid";
&RESULT = ExpandBindVar(&TESTSTR);
WinMessage(&RESULT);
```

Related Links

MessageBox

SQLExec

ExpandEnvVar

Syntax

ExpandEnvVar(*string*)

Description

Use the ExpandEnvVar function to convert any environment variables that it finds within *string* into String values and returns the entire resulting string.

Parameters

string	A string containing an environment variable.

Returns

Returns a string equal to *string* with any enclosed environment variables expanded to their values.

Example

Assume that the environment variable %NETDRIVE% is equal to "N:". The following PeopleCode sets *&newstring* equal to "The network drive is equal to N:":

```
&newstring = ExpandEnvVar("The network drive is equal to %netdrive%.");
```

Related Links

ExpandBindVar

GetEnv

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GetCwd

ExpandSqlBinds

Syntax

ExpandSqlBinds(*string*)

Description

Prior to PeopleTools 8.0, the PeopleCode replaced runtime parameter markers in SQL strings with the associated literal values. For databases that offer SQL statement caching, a match was never found in the cache so the SQL had to be re-parsed and re-assigned a query path.

To process skipped parameter markers, each parameter marker is assigned a unique number. This doesn't change the values associated with the parameter markers.

However, *some SQL statements can't contain parameter markers because of database compatibility*.

To process these exceptions, use the ExpandSqlBinds function. This function does the bind variable reference expansion, and can be used within a SQLExec statement or on its own.

You should use ExpandSQLBinds *only* for those parts of the string that you want to put literal values into. The following code shows how to use ExpandSQLBinds with %Table:

```
SQLExec(ExpandSqlBinds("Insert....  Select A.Field, :1, :2 from ", "01", "02") |
 "%table(:1)", Record.MASTER_ITEM_TBL);
```

Parameters

string Specify the string you want to do the bind variable reference expansion on.

Returns

A string.

Example

The following example shows both the original string and what it expands to.

```
&NUM = 1;
&STRING = "My String";
&STR2 = ExpandSqlBinds("This :2 is an expanded string(:1)", &STRING, &NUM);
```

The previous code produces the following value for &STR2:

```
This 1 is an expanded string(My String)
```

If you're having problems with an old SQL statement binds, you can use ExpandSqlBinds with it. For example, if your SQLExec is this:

```
SQLExec("String with concatenated bindrefs 'M':2, 'M':1", &VAR1, &VAR2),
 &FETCHRESULT1, &FETCHRESULT2);
```

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you can make it work by expanding it as follows:

```
SQLExec(ExpandSqlBinds("String with concatenated bindrefs 'M':2, 'M':1", &VAR1,
 &VAR2), &FETCHRESULT1, &FETCHRESULT2);
```

Related Links

SQLExec

"Understanding SQL Class" (PeopleTools 8.54: PeopleCode API Reference)

PeopleCode Built-in Functions and Language Constructs: F

The PeopleCode built-In functions and language constructs beginning with the letter F are listed in alphabetical order within this topic.

Related Links

Typographical Conventions

Fact

Syntax

Fact(*x*)

Description

Use the Fact function to return the factorial of a positive integer *x*. The factorial of a number *x* is equal to 1*2*3*...**x*. If *x* is not an integer, it is truncated to an integer.

Returns

Returns a Number equal to the factorial of x.

Example

The example sets &X to 1, 1, 2, then 24. Fact(2) is equal to 1*2; Fact(4) is equal to 1*2*3*4:

```
&X = Fact(0);
&X = Fact(1);
&X = Fact(2);
&X = Fact(4);
```

Related Links

Product

FetchSQL

Syntax

FetchSQL([**SQL.**]*sqlname*[, *dbtype*[, *effdt*]])

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Description

Use the FetchSQL function to return the SQL definition with the given *sqlname* as SQL.*sqlname or* a string value, matching the *dbtype* and *effdt*. If *sqlname* is a literal name, it must be in quotes.

Parameters

sqlname

Specify the name of a SQL definition. This is either in the form **SQL**.*sqlname* or a string value giving the *sqlname.*

dbtype

Specify the database type associated with the SQL definition. This parameter takes a string value. If *dbtype* isn't specified or is null ("""), it is set by default to the current database type (the value returned from the %DbType system variable.)

Values for *dbtype* are as follows. These values are not case-sensitive:

- APPSRV
- DB2ODBC
- DB2UNIX
- INFORMIX
- MICROSFT
- ORACLE
- SYBASE

Note: Database platforms are subject to change.

effdt

Specify the effective date associated with the SQL definition. If *effdt* isn't specified, it is set by default to the current as of date, that is, the value returned from the %AsOfDate system variable.

Returns

The SQL statement associated with *sqlname* as a string.

Example

The following code gets the text associated with the ABCD_XY SQL Definition for the current DBType and as of date:

```
&SQLSTR = FetchSQL(SQL.ABC_XY);
```

The following code gets the text associated with the ABCD_XY SQL Definition for the current DBType and November 3, 1998:

```
&SQLSTR = FetchSQL(SQL.ABCD_XY, "", Date(19981103));
```

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Related Links

CreateSQL
DeleteSQL
SQLExec
GetSQL
StoreSQL
"Understanding SQL Class" (PeopleTools 8.54: PeopleCode API Reference)
%AsOfDate
%DbName

FetchValue

Syntax

```
FetchValue(scrollpath, target_row, [recordname.]fieldname)
```

where *scrollpath* is:

```
[RECORD.level1_recname, level1_row, [RECORD.level2_recname, level2_row, ]]
RECORD.target_recname
```

To prevent ambiguous references, you can also use **SCROLL**.*scrollname*, where *scrollname* is the same as the scroll level's primary record name.

Description

Use the FetchValue function to return the value of a buffer field in a specific row of a scroll level.

Note: This function remains for backward compatibility only. Use the Value field class property instead.

This function is generally used to retrieve the values of buffer fields outside the current context; if a buffer field is in the current context, you can reference it directly using a [*recordname*.]*fieldname* expression.

Related Links

"Value" (PeopleTools 8.54: PeopleCode API Reference), "LongTranslateValue" (PeopleTools 8.54: PeopleCode API Reference), "ShortTranslateValue" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide), "Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

scrollpath	A construction that specifies a scroll level in the component buffer.
target_row	An integer specifying the row on the target scroll level where the referenced buffer field is located.
[*recordname*.]*fieldname*	The name of the field where the value to fetch is located. The field can be on scroll level one, two, or three of the active page.

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The *recordname* prefix is required if the call to FetchValue is not on the record definition *recordname*.

Returns

Returns the field value as an Any data type.

Example

The following example retrieves the value from field DEPEND_ID in record DEPEND on row &ROW_CNT from scroll level one:

```
&VAL = FetchValue(SCROLL.DEPEND, &ROW_CNT, DEPEND.DEPEND_ID);
```

Related Links

ActiveRowCount
CopyRow
CurrentRowNumber
PriorValue
UpdateValue
"Accessing Secondary Component Buffer Data" (PeopleTools 8.54: PeopleCode Developer's Guide)

FieldChanged

Syntax

The syntax of the FieldChanged function varies depending on whether you want to use a scroll path reference or a contextual reference to specify the field.

If you want to use a scroll path reference, the syntax is:

```
FieldChanged(scrollpath, target_row, [recordname.]fieldname)
```

where *scrollpath* is:

```
[RECORD.level1_recname, level1_row, [RECORD.level2_recname, level2_row, ]]
RECORD.target_recname
```

To prevent ambiguous references, you can also use **SCROLL**.*scrollname*, where *scrollname* is the same as the scroll level's primary record name.

If you want to use a contextual reference, the syntax is:

```
FieldChanged([recordname.]fieldname)
```

In this construction the scroll level and row number are determined based on the current context.

Description

The FieldChanged function returns True if the referenced buffer field has been modified since being retrieved from the database either by a user or by a PeopleCode program.

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Note: This function remains for backward compatibility only. Use the IsChanged field class property instead.

This is useful during SavePreChange or SavePostChange processing for checking whether to make related updates based on a change to a field.

Related Links

"IsChanged" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide), "Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

scrollpath	A construction that specifies a scroll level in the component buffer.
[*recordname*.]*fieldname*	The name of the field where the value to check is located. The field can be on scroll level one, two, or three of the active page. The *recordname* prefix is required if the call to FieldChanged is not on the record definition *recordname*.
target_row	The row number of the target row. If this parameter is omitted, the function assumes the row on which the PeopleCode program is executing.

Related Functions

Save PeopleCode programs (SaveEdit, SavePreChange, SavePostChange) normally process each row of data in the component. The following four functions enable you to control more precisely when the Component Processor should perform save PeopleCode:

- FieldChanged
- RecordChanged
- RecordDeleted
- RecordNew

These functions enable you to restrict save program processing to specific rows.

Example

The following example checks three fields and sets a flag if any of them has changed:

```
/* Set the net change flag to 'Yes' if the scheduled date, scheduled */
/*  time or quantity requested is changed */
If FieldChanged(QTY_REQUESTED) Or
      FieldChanged(SCHED_DATE) Or
      FieldChanged(SCHED_TIME) Then
   NET_CHANGE_FLG = "Y";
End-If;
```

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Related Links

RecordChanged
RecordDeleted
RecordNew

FileExists

Syntax

```
FileExists(filename [, pathtype])
```

Description

Use the FileExists function to determine whether a particular file or directory is present on your PeopleSoft system, so, in the case of a file, you can decide which mode to use when you open the file for writing or whether the file is available to be read, and, in the case of a directory, you can decide whether the directory already exists or needs to be created.

Note: If you want to open a file for reading, you should use the "E" mode with the GetFile function or the File class Open method, which prevents another process from deleting or renaming the file between the time you tested for the file and when you open it.

Important! The FileExists function can be used to confirm the existence of a directory on a Windows share—for example, \\my_server\temp\mydir. However, if the root of a Windows share (for example, \\my_server\temp) is passed to FileExists, the return value will always be False.

Parameters

filespec

Specify the name, and optionally, the path, of the file or directory you want to test.

pathtype

If you have prepended a path to the file name, use this parameter to specify whether the path is an absolute or relative path. The valid values for this parameter are:

- %FilePath_Relative (default)
- %FilePath_Absolute

If you don't specify *pathtype* the default is %FilePath_Relative.

If you specify a relative path, that path is appended to the path constructed from a system-chosen environment variable. A complete discussion of relative paths and environment variables is provided in documentation on the File class.

See "Working With Relative Paths" (PeopleTools 8.54: PeopleCode API Reference).

If the path is an absolute path, whatever path you specify is used verbatim. You must specify a drive letter and the complete path. You can't use any wildcards when specifying a path.

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The Component Processor automatically converts platform-specific separator characters to the appropriate form for where your PeopleCode program is executing. On a Windows system, UNIX "/" separators are converted to "\", and on a UNIX system, Windows "\" separators are converted to "/".

Note: The syntax of the file path does *not* depend on the file system of the platform where the file is actually stored; it depends only on the platform where your PeopleCode is executing.

Returns

A Boolean value: True if the file or directory exists, False if it doesn't.

Example

The following example opens a file for appending if it exists in the system:

```
If FileExists("c:\work\item.txt", %FilePath_Absolute) Then
   &MYFILE = GetFile("c:\work\item.txt", "A");
   /* Process the file */
   &MYFILE.Close();
End-If;
```

Related Links

FindFiles

GetFile

"Folder Class" (PeopleTools 8.54: PeopleCode API Reference)

"Open" (PeopleTools 8.54: PeopleCode API Reference)

Find

Syntax

Find(*string*, *within_string* [, *number*])

Description

Use the Find function to locate one string of text within another string of text and returns the character position of the string as an integer. Find is case-sensitive and does not allow wildcards.

If you need to do either case-sensitive search or pattern matching, just to find if a string matches a pattern, use the DBPatternMatch function.

If you need to find a quotation mark, you need to double it in a string.

```
&find = Find("""", PSOPRDEFN_SRCH.OPRID);
```

Parameters

string The text you are searching for.

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A tilde character (~) used in the *string* parameter stands for an arbitrary number of white spaces.

within_string The text string you are searching within.

number The position of *within_string* at which you want to start your search. If you omit *number*, Find starts at the first character of *within_string*.

Returns

Returns a Number value indicating the starting position of *string* in *within_string*.

Find returns with 0 if *string* does not appear in *within_string*, if *number* is less than or equal to zero, or if *number* is greater than the length of *within_string*.

Example

In the following example, the first statement returns 1; the second statement returns 6.

```
&POS = Find("P", "PeopleSoft")
&POS = Find("e", "PeopleSoft", 4)
```

Related Links

Exact

Len

DBPatternMatch

Findb

Syntax

Findb(*string*, *within_string* [, *number*])

Description

Note: This function has been deprecated and is no longer supported.

FindCodeSetValues

Syntax

FindCodeSetValues(*CodesetName*, *&NameValuePairs*, *SourceNodeName*, *TargetNodeName*)

Description

Use the FindCodeSetValues function to find a list of code set name-value pairs. Code sets are primarily used with data value translations as part of a transformation.

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Parameters

CodeSetName	Specify the name of the code set you want to find, as a string.
&NameValuePairs	Specify a 2 dimensional array containing the name value pairs in the specified code set that you want to use.
SourceNodeName	Specify the name of the source (initial) node used in the data transformation.
TargetNodeName	Specify the name of the target (result) node used in the data transformation.

Returns

A two-dimensional array of any.

Example

This example checks the specified CodeSet values, with the name value pairs of "locale/en_us" and "uom/box". It takes the returned array and adds XML nodes to the document. The XML nodes names are the unique names of the CodeSet value, and the XML node value is the corresponding return value.

```
/* Get the data from the AE Runtime */
Local TransformData &incomingData = %TransformData;

/* Set a temp object to contain the incoming document */
Local XmlDoc &tempDoc = &incomingData.XmlDoc;

/* Declare the node */
Local XmlNode &tempNode;

/* Create an array to hold the name value pairs */
   Local array of array of string &inNameValuePairsAry;

/* Clear out the doc and put in a root node */
If (&tempDoc.ParseXmlString("<?xml version=""1.0""?><xml/>")) Then

   /* Load the array with some values */
   &inNameValuePairsAry = CreateArray(CreateArray("locale", "en_us"),
   CreateArray("uom", "box"));

   /* Find the codeset values */
   &outAry = FindCodeSetValues("PS_SAP_PO_01", &inNameValuePairsAry,
   "SAP_SRC", "PSFT_TGT");

/*    Local XmlNode &tempNode; */

   /* Make sure something was returned */
   If &outAry.Len > 0 Then

      /* Loop through the quantities and make sure they are all above 5 */
      For &i = 1 To &outAry.Len

         /* Add the current system date to the working storage*/
         &tempNode = &tempDoc.DocumentElement.AddElement(&outAry [&i][1]);
         &tempNode.NodeValue = &outAry [&i][2];

      End-For;
   End-If;
End-If;
```

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Related Links

"Understanding Arrays" (PeopleTools 8.54: PeopleCode API Reference)

"Understanding Filtering, Transformation, and Translation" (PeopleTools 8.54: Integration Broker)

FindFiles

Syntax

FindFiles(*filespec_pattern* [, *pathtype*])

Description

Use the FindFiles function to return a list of the external file names that match the file name pattern you provide, in the location you specify.

Parameters

filespec_pattern

Specify the path and file name pattern for the files you want to find. The path can be any string expression that represents a single relative or absolute directory location. The file name pattern, but not the path, can include two wildcards:

***** (Asterisk): matches zero or more characters at its position.

? (Question mark): matches exactly one character at its position.

pathtype

If you have prepended a path to the file name, use this parameter to specify whether the path is an absolute or relative path. The valid values for this parameter are:

- %FilePath_Relative (default)
- %FilePath_Absolute

If you don't specify *pathtype* the default is %FilePath_Relative.

If you specify a relative path, that path is appended to the path constructed from a system-chosen environment variable. A complete discussion of relative paths and environment variables is provided in documentation on the File class.

See "Working With Relative Paths" (PeopleTools 8.54: PeopleCode API Reference).

If the path is an absolute path, whatever path you specify is used verbatim. You must specify a drive letter and the complete path. You can't use any wildcards when specifying a path.

The Component Processor automatically converts platform-specific separator characters to the appropriate form for where your PeopleCode program is executing. On a Windows system, UNIX "/" separators are converted to "\", and on a UNIX system, Windows "\" separators are converted to "/".

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Note: The syntax of the file path does *not* depend on the file system of the platform where the file is actually stored; it depends only on the platform where your PeopleCode is executing.

Returns

A string array whose elements are file names qualified with the same relative or absolute path you specified in the input parameter to the function.

Example

The following example finds all files in the system's TEMP location whose names end with ".txt", then opens and processes each one in turn:

```
Local array of string &FNAMES;
Local file &MYFILE;

&FNAMES = FindFiles("\*.txt");
while &FNAMES.Len > 0
   &MYFILE = GetFile(&FNAMES.Shift(), "R");  /* Open each file */
      /* Process the file contents */
   &MYFILE.Close();
end-while;
```

Related Links

FileExists

GetFile

"Folder Class" (PeopleTools 8.54: PeopleCode API Reference)

"Understanding Arrays" (PeopleTools 8.54: PeopleCode API Reference)

FlushBulkInserts

Syntax

FlushBulkInserts()

Description

Use the FlushBulkInserts function to move the bulk inserted rows from the bulk insert buffers of the PeopleSoft process to the physical tables on the database. This flushes all open SQL objects that have pending bulk inserts, but performs no COMMITs. If the flush fails, the PeopleCode program terminates.

When executing a SQL insert using a SQL object with the BulkMode property set to True, the rows being inserted cannot be selected by this database connection until the bulk insert is flushed. For another connection to the database to be able to select those rows, both a flush and a COMMIT are required. To have your process see the bulk inserted rows without committing and without closing the SQL object or its cursor (that is, maintaining reuse for the SQL object), use FlushBulkInserts.

An example of using this function would be in preparation for a database commit where you do not want to close the SQL insert statement, but need to ensure that all the rows you have inserted up to this point are in fact in the database and not in the buffer.

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Another example would be when another SQL statement in the same PeopleSoft process needs to select rows that have been inserted using bulk insert and you do not want to close the SQL insert statement. The SELECT cannot read rows in the bulk insert buffer, so you need to flush them to the table from which the SELECT is reading.

Parameters

None.

Returns

None. If the flush fails, the PeopleCode program terminates.

Example

```
&CM_DEPLETION_REC = CreateRecord(Record.CM_DEPFIFO_VW);
&CM_DEPLETE_REC = CreateRecord(Record.CM_DEPLETE);
&DEPLETE_FIFO_SEL = GetSQL(SQL.CM_DEPLETE_FIFO_SEL);
&ONHAND_FIFO_SEL = GetSQL(SQL.CM_ONHAND_FIFO_SEL);
DEPLETE_INS = GetSQL(SQL.CM_DEPLETE_INS);
&DEPLETE_INS.BulkMode = True;

&DEPLETE_FIFO_SEL.Execute(&CM_DEPLETION_REC, CM_COSTING_AET.BUSINESS_UNIT,
CM_COSTING_AET.CM_BOOK);
While &DEPLETE_FIFO_SEL.Fetch(&CM_DEPLETION_REC);
   /* Call functions that populate &CM_DEPLETE_REC.values */
   . . .
   &DEPLETE_INS.Execute(&CM_DEPLETE_REC);
   .  .  .
   If &CM_DEPLETION_REC.CM_COST_PROC_GROUP.Value = "BINTOBIN" Then
      /* Bin to Bin transfers are both a deplete and receipt, call functions to
         create the receipt */
      .  .  .
          /* Flush Bulk Insert to be able to see the current on hand quantities in
             CM_ONHAND_VW */
          FlushBulkInserts();
   End-if;
End-While;
.  .  .
```

Related Links

"Understanding Filtering, Transformation, and Translation" (PeopleTools 8.54: Integration Broker)

For

Syntax

```
For count = expression1 To expression2
[Step i]
statement_list
End-for
```

Description

Use the For loop to cause the statements of the *statement_list* to be repeated until *count* is equal to *expression2*. Step specifies the value by which *count* will be incremented each iteration of the loop. If you do not include Step, *count* is incremented by 1 (or -1 if the start value is greater than the end value.) Any statement types are allowed in the loop, including other loops.

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A Break statement inside the loop causes execution to continue with whatever follows the loop. If the Break occurs in a nested loop, the Break does not apply to the outside loop.

Example

The following example loops through all of the rows for the FIELDNAME scroll area:

```
&FIELD_CNT = ActiveRowCount(DBFIELD_VW.FIELDNAME);
For &I = 1 to &FIELD_CNT;
   WinMessage(MsgGetText(21000, 1, "Present Row Number is: %1", &I));
End-for;
```

FormatDateTime

Syntax

FormatDateTime(*datetime*, {*timezone* | **"Local"** | **"Base"**}, *displayTZ*)

Description

Use the FormatDateTime function to take a *datetime* value and convert it to text. If a specific time zone abbreviation, or a field reference, is passed in *timezone*, FormatDateTime adjusts the DateTime to the user's local time zone instead of the specified time zone. The system's base time zone is specified on the PSOPTIONS table. The value *datetime* is assumed to be in base time.

See "PeopleTools Options" (PeopleTools 8.54: System and Server Administration).

If **Local** is specified for time zone, FormatDateTime adjusts the DateTime to the user's local time zone instead of a specific time zone.

If True is specified for *displayTZ*, FormatDateTime appends the time zone abbreviation to the returned string.

Parameters

datetime Specify the DateTime value to be formatted.

***timezone* | Local | Base** Specify a value for converting *datetime*. The values are:

- *timezone* - a time zone abbreviation or a field reference to be used for converting *datetime*.
- **Local** - use the local time zone for converting *datetime.*
- **Base** - use the base time zone for converting *datetime*.

displayTZ Specify whether the time zone abbreviation should be appended to the returned string. This parameter takes a Boolean: True if the abbreviation should be appended, False, otherwise.

Returns

A formatted string value.

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Example

The following example populates the &DISPDATE variable with a string containing the DateTime value in the ORDER_DATE field adjusted to the user's local time zone, and with the time zone abbreviation.

```
&DISPDATE=FormatDateTime(ORDER_DATE, "Local", True);
```

The following example populates the &DISPDATE variable with a string containing the DateTime value in the SHIP_DATE field adjusted to the time zone stored in the SHIP_TZ field, and does not include the time zone abbreviation in the output.

```
&DISPDATE=FormatDateTime(SHIP_DATE, SHIP_TZ, False);
```

Related Links

ConvertDatetimeToBase
ConvertTimeToBase
DateTimeToLocalizedString
IsDaylightSavings
DateTimeToTimeZone
TimeToTimeZone
TimeZoneOffset
DateTimeToHTTP

Forward

Syntax

```
Forward(from physical queue ID, from agent ID, task
number, task type, to logical queue ID[, to agent ID])
```

Description

Use the Forward function to transfer a task from one agent to another agent or from one agent's logical queue to another logical queue. This enables agents to reroute tasks that are not appropriate for their skill level or functional expertise.

Keep the following in mind when using Forward:

- The queue server subtracts the task's cost from the transferring agent's workload.
- The system cannot forward tasks to logical queues that do not have active physical queues on the same MultiChannel Framework cluster as the physical queue to which the task currently belongs. That is, you can't forward tasks *across* MultiChannel Framework clusters.
- A queue server does not allow a task to be transferred if the agent who owns that task is not logged on to that queue server. PeopleSoft recommends that you only use Forward for application pages that the MultiChannel Framework console launches when agents accept or activate assigned tasks.
- Forward only applies to email and generic task types.

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Parameters

from physical queue ID

The physical queue is the internal representation of the logical queue that the agent signs onto and to which the task currently belongs. This is a string value, such as “sales3” or “marketing2. ”

You retrieve the current physical queue from the query string in the URL of the page launched by the MultiChannel Framework console. Use the GetParameter request class method with the value `ps_qid`

from agent ID

Specifies the current agent, as in the agent that “accepted” the task. This is a string value.

You retrieve the current physical queue from the query string in the URL of the page launched by the MultiChannel Framework console. Use the GetParameter request class method with the value `ps_agentid`.

task number

Identifies the task to be forwarded. The EnQueue function returns this value. This is a string value.

You retrieve the current physical queue from the query string in the URL of the page launched by the MultiChannel Framework console. Use the GetParameter request class method with the value `ps_tasknum`.

task type

Identifies the task type. This value is provided by the queue. This is a string value. Valid values are:

- email
- generic

You retrieve the current physical queue from the query string in the URL of the page launched by the MultiChannel Framework console. Use the GetParameter request class method with the value `ps_tasktype`.

to logical queue ID

Specifies the logical queue to which the system forwards the task. This is a string value.

The queue ID is case sensitive and must match the case used when you created the queue using the Queues page.

to agent ID

This is an optional parameter. It is a string value specifying a particular agent ID to receive the forwarded task.

If this value is specified, the system holds the task until the specified agent is available on the new queue to take this task. This means that the specified agent must be able to log in to one of the physical queues belonging to the destination logical queue. The system determines which physical queue the specified agent has access to and assigns the task to that queue

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for that agent. If the agent ID is not specified, the physical queue is chosen at random from the active physical queues.

Note: For better performance, PeopleSoft recommends not specifying the target agent as this has a processing overhead for the queue servers and does not allow the system to balance workload across all available agents.

Returns

Returns 0 on success.

If unsuccessful, it returns a message number. The message set ID for MultiChannel Framework is 162.

For example, 1302 is returned when an invalid task type or no value is provided.

Example

```
Forward("SALES5", "TSAWYER", "email_2145", "email", "MARKETING", "GSALMON");
```

The following example shows how to retrieve parameters from the application page using the GetParameter request class method.

```
PSMCFFUNCLIB.MCF_QUEUE.Value = %Request.GetParameter("ps_qid");
PSMCFFUNCLIB.MCF_TASKTYPE.Value = %Request.GetParameter("ps_tasktype");
PSMCFFUNCLIB.MCF_TASKNUM.Value = %Request.GetParameter("ps_tasknum");
PSMCFFUNCLIB.MCF_AGENTID.Value = %Request.GetParameter("ps_agentid");

&nret = Forward(PSMCFFUNCLIB.MCF_QUEUE, PSMCFFUNCLIB.MCF_AGENTID,
PSMCFFUNCLIB.MCF_TASKNUM, PSMCFFUNCLIB.MCF_TASKTYPE, &ToQueue);

If &nret = 0 Then
      MessageBox(0, "", 0, 0, "Successfully forwarded.");
      End-If
```

Function

Syntax

```
Function name[(paramlist)] [Returns data_type]
[statements]
End-function
```

Where *paramlist* is:

```
&param1 [As data_type] [, &param2 [As data_type]]...
```

Where *data_type* is any valid data type, including Number, String, Date, Rowset, SQL, Record, and so on.

Where *statements* is a list of PeopleCode statements.

Description

PeopleCode functions can be defined in any PeopleCode program. Function definitions must be placed at the top of the program, along with any variable and external function declarations.

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Functions can be called from the program in which they are defined, in which case they don't need to be declared, and they can be called from another program, in which case they need to be declared at the top of the program where they are called.

Any variables declared within a function are valid for the scope of the function.

By convention, external PeopleCode functions are stored in records whose names begin in FUNCLIB_, and they are always placed in the FieldFormula event (which is convenient because this event should no longer be used for anything else).

Note: Functions can be stored in the FieldFormula event only for record fields, *not* for component record fields.

A function definition consists of:

- The keyword **Function** followed by the name of the function and an optional list of parameters. The name of the function can be up to 100 characters in length.
- An optional **Returns** clause specifying the data type of the value returned by the function.
- The statements to be executed when the function is called.
- The **End-function** keyword.

The parameter list, which must be enclosed in parentheses, is a comma-separated list of variable names, each prefixed with the & character. Each parameter is optionally followed by the keyword As and the name for one of the conventional PeopleCode data types (Number, String, Date, and so on) or any of the object data types (such as Rowset, SQL, and so on.) If you specify data types for parameters, then function calls are checked to ensure that values passed to the function are of the appropriate type. If data types are not specified, then the parameters, like other temporary variables in PeopleCode, take on the type of the value that is passed to them.

Note: If a parameter is listed in the function definition, then it is required when the function is called.

PeopleCode parameters are always passed by reference. This means that if you pass the function a variable from the calling routine and change the value of the variable within the function, the value of the variable is changed when the flow of execution returns to the calling routine.

If the function is to return a result to the caller, the optional **Returns** part must be included to specify the data type of the returned value. You have seven choices of value types: Number, String, Date, Time, DateTime, Boolean, or Any.

PeopleCode internal subroutines are part of the enclosing program and can access the same set of variables as the other statement-lists of the program, in addition to local variables created by the parameters and local variable declarations within the function.

Returning a Value

You can optionally return a value from a PeopleCode function. To do so, you must include a **Returns** statement in the function definition, as described in the preceding section. For example, the following function returns a Number value:

```
Function calc_something(&parm1 as number, &parm2 as number) Returns number
```

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In the code section of your function, use the **Return** statement to return the value to the calling routine. When the **Return** statement executes, the function ends and the flow of execution goes back to the calling routine.

Example

This example returns a Boolean value based on the return value of a SQLExec:

```
Function run_status_upd(&PROCESS_INSTANCE, &RUN_STATUS) Returns boolean;
   &UPDATEOK = SQLExec("update PS_PRCS_RQST set run_status = :1    where process_in⇒
stance = :2", &RUN_STATUS, &PROCESS_INSTANCE);
   If &UPDATEOK Then
      Return True;
   Else
      Return False;
   End-If;
End-Function;
```

Related Links

Declare Function

Return

PeopleCode Built-in Functions and Language Constructs: G

The PeopleCode built-In functions and language constructs beginning with the letter G are listed in alphabetical order within this topic.

Related Links

Typographical Conventions

GenABNNodeURL

Syntax

GenABNNodeURL(*node*,*initial_node*,*display_parent*)

Description

Use the GenABNNodeURL function to generate a URL for a specific node within a SmartNavigation chart.

Important! This function must be called during a user action that displays the SmartNavigation chart —for example, when the user clicks on a folder icon from the menu or when the user clicks on the first description link of a SmartNavigation chart node. Otherwise, the function returns an empty string.

Parameters

node Specify the ID of the node to be displayed as a string.

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initial_node Specify the ID of the initial node of the SmartNavigation chart as a string.

display_parent A Boolean value indicating whether the node to be displayed requires that its parent node also be displayed in the chart.

Returns

A string representing the URL to navigate to the specified node.

Example

```
&Mode = %Request.GetParameter("mode");
If None(&Mode) Then
   rem only valid during a click event since this code sets a panel buffer field;
   &NodeID = "10400";

   &Node = &MyTree.FindNode(&NodeID, "");

   &rootNode = &MyTree.FindRoot();
   If &rootNode.Name = &Node.Name Then
      &bDisplParent = False;
   Else
      &bDisplParent = True;
   End-If;

   &Field = GetLevel0()(1).GetRowset(Scroll.PT_ABNCHARTNODE)(1).PT_ABN_CHART_ND.PT_⇒
ABN_CHART_DFLD6;
   &Field.Value = GenABNNodeURL(&NodeID, GetABNInitialNode(&reqParams), &bDisplPare⇒
nt);
End-If;
```

Related Links

GetABNInitialNode

"Node Class" (PeopleTools 8.54: PeopleCode API Reference)

GenDynABNElement

Syntax

GenDynABNElement(*&str_param1*[,*&str_param2*], ...)

Description

Use the GenDynABNElement function to generate <li> elements for the specified data source to be used as a dynamically generated SmartNavigation subfolder. This built-in function is required when the root SmartNavigation folder is designated as a “dynamic hierarchy” folder on the Folder Administration page.

See "Defining SmartNavigation Folders" (PeopleTools 8.54: Portal Technology).

The <li> elements generated by this function can be provided as the input to the GenHTMLMenu function. Alternatively, the output of one invocation of GenDynABNElement can be concatenated to subsequent invocations prior to calling the GenHTMLMenu function.

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Parameters

&str_param1, &str_param2, ... Specifies the first and additional input parameters to the function as string variables.

Note: Each string parameter can be specified as a string literal or a string variable.

While this function can accept an unlimited number of string parameters, in practical terms, the function expects a specific number of string parameters in a specific order depending on whether the data source for the dynamically generated SmartNavigation subfolder is a tree or a rowset.

When the data source for the SmartNavigation subfolder is a tree, 11 string parameters are required in the following order with the following specifications:

- *Data source type* – For a tree, this parameter must be "t".
- *Display as CREF* – Indicates that the SmartNavigation folder is to be displayed as a CREF, which immediately displays the SmartNavigation chart, instead of as a folder with submenus. Specify as false = "f"; true = "t".
- *Folder ID* – Specifies a programmatically generated folder ID. For example: "PRS_DATA_001".
- *Folder label* – Specifies the label to display for this subfolder in the SmartNavigation menu drop-downs, fly-outs, and breadcrumbs. For example: "Personnel Data".
- *Chart component* – Specifies the page used to render the SmartNavigation chart in the following format: COMPONENT.PAGE.MKT.
- *PeopleCode ID* – Specifies the PeopleCode program to run to generate the SmartNavigation elements for the specified data source. The PeopleCode ID must be in the following format: APP_PKG.Class.Method.
- *Tree name* – Specifies the name for the tree. For example: "PERS_DATA".
- *Tree setID* – Specifies the setID for the tree. For example: "SHARE".
- *Tree user key* – Specifies the user key value for the tree (also known as the set control value). An actual value is optional but must be specified as the null string: "".
- *Tree effective date* – Specifies the effective date for the tree. An actual value is optional but must be specified as the null string: "".
- *Tree branch* – Specifies the tree branch. An actual value is optional but must be specified as the null string: "".

SmartNavigation passes the values of several tree-specific fields to the application via URL.
Certain characters are inappropriate for use in a URL and must be avoided. When using a tree as a SmartNavigation data source, do not use any of the following characters in the tree name, setID, user key value, and tree branch values:

pound (#)	percent (%)	dollar ($)
ampersand (&)	plus (+)	comma (,)

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forward slash/virgule (/)	colon (:)	semi-colon (;)
equals (=)	question mark (?)	at symbol (@)
space ( )	quotation marks(")	less than symbol (<)
greater than symbol (>)	left curly brace ({)	right curly brace (})
vertical bar/pipe (|)	backslash (\)	caret (^)
tilde (~)	left square bracket ([)	right square bracket (])
grave accent (`)		

For example:

```
rem Create SmartNavigation dynamic folder from a tree;
&fldr = GenDynABNElement(&ds_t, &cref_t, &fldr_id, &label_t, &chart_t, &pcode_t, &t⇒
ree_name, &tree_setid, &tree_userkey, &tree_effdt, &tree_branch);
```

When the data source for the SmartNavigation subfolder is a rowset, 6 string parameters are required in the following order with the following specifications:

- *Data source type* – For a rowset, this parameter must be "r".
- *Display as CREF* – Indicates that the SmartNavigation folder is to be displayed as a CREF, which immediately displays the SmartNavigation chart, instead of as a folder with submenus. Specify as false = "f"; true = "t".
- *Folder ID* – Specifies a programmatically generated folder ID. For example: "PRS_DATA_001".
- *Folder label* – Specifies the label to display for this subfolder in the SmartNavigation menu drop-downs, fly-outs, and breadcrumbs. For example: "Personnel Data".
- *Chart component* – Specifies the page used to render the SmartNavigation chart in the following format: COMPONENT.PAGE.MKT.
- *PeopleCode ID* – Specifies the PeopleCode program to run to generate the SmartNavigation elements for the specified data source. The PeopleCode ID must be in the following format: APP_PKG.Class.Method.

For example:

```
rem Create SmartNavigation dynamic folder from a rowset;
&fldr = GenDynABNElement(&ds_r, &cref_r, &fldr_id, &label_r, &chart_r, &pcode_r);
```

Returns

A string representing the <li> elements for the data source.

Example

The following example demonstrates how the GenDynABNElement function could be implemented in a method. This method would be specified in the application package parameters on the Folder

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Administration page for a folder that is configured as a “dynamic hierarchy” folder. In this example, the output of the second invocation of GenDynABNElement is concatenated to the output of the first invocation resulting in two dynamically generated SmartNavigation subfolders being displayed beneath the root “dynamic hierarchy” folder.

```
method QE_ABN_DYN_HIERARCHY_MIXED

   Local string &fldrList;

   rem variables for abn tree;
   Local string &ds_t, &cref_t, &fldr_id, &id_t, &label_t, &portal, &node, &chart_t⇒
, &pcode_t, &tree_name, &tree_setid, &tree_userkey, &tree_effdt, &tree_branch;

   rem variables for abn rowset;
   Local string &ds_r, &cref_r, &id_r, &label_r, &chart_r, &pcode_r;

   rem abn tree sample;
   &ds_t = "t";
   &cref_t = "f";
   &fldr_id = "QE_ABN_DH_44";
   rem &id_t="";
   &label_t = "Dynamic ABN Tree";
   rem &portal="";
   rem &node = "";
   &chart_t = "PT_ABN_ORGCHART.PT_ABN_ORGCHART.GBL";
   &pcode_t = "QE_ABNTREE.qe_abntree.QE_ABN_TREE_AP";
   &tree_name = "QE_PERS_DATA";
   &tree_setid = "QEDM1";
   &tree_userkey = "";
   &tree_effdt = "1997/05/05";
   &tree_branch = "";

   rem create abn tree folder here;
   &fldrList = GenDynABNElement(&ds_t, &cref_t, &fldr_id, &label_t, &chart_t, &pcod⇒
e_t, &tree_name, &tree_setid, &tree_userkey, &tree_effdt, &tree_branch);

   rem abn rowset sample;
   &ds_r = "r";
   &cref_r = "f";
   rem &id_r="";
   &label_r = "Dynamic ABN Rowset";
   &chart_r = "QE_PIA_TEST_PAGES.QE_ABN_ORGCHART.GBL";
   &pcode_r = "QE_ABN_RS_APKG.QE_ABN_RS_1:QE_ABNRS_C1.QE_ABNRS_M";

   rem append abn rowset folder after the abn tree;
   &fldrList = &fldrList | GenDynABNElement(&ds_r, &cref_r, &fldr_id, &label_r, &ch⇒
art_r, &pcode_r);

   rem generate menu item in nav;
   GenHTMLMenu(&fldrList);

end-method;
```

Related Links

GenHTMLMenu

GenerateActGuideContentUrl

Syntax

GenerateActGuideContentlUrl(**PORTAL.***portalname*, **NODE.***nodename*, **MENUNAME.***menuname*, *Marketname*, **COMPONENT.***componentname*, *ActivityGuide*)

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Description

Use the GenerateActGuideContentUrl function to create a URL string that represents an absolute reference to the specified activity guide (life event) for the content servlet. The ContentURI of the node that hosts the specified portal is used in the generated URL. The URL contains a reference to the content service (*psc*) servlet.

If you want to generate a URL for the portal service (*psp*) servlet, use the GenerateActGuidePortalURL function.

Parameters

portalname	Specify the name of the portal used for this request, prefixed with the reserved word **PORTAL**. You can also use a string, such as %Portal, for this value.
nodename	Specify the name of the node that contains the activity guide, prefixed with the reserved word **NODE**. You can also use a string, such as %Node, for this value.
menuname	Specify the name of the menu containing the activity guide, prefixed with the reserved word **MENUNAME**. You can also use a string, such as %Menu, for this value.
Marketname	Specify the name of the market of the component. You can also use a string, such as %Market, for this value.
ComponentName	Specify the name of the component, prefixed with the reserved word **COMPONENT**. You can also use a string, such as %Component, for this value.
ActivityGuide	Specify the name of the Activity Guide, as a string.

Returns

A string with the following format:

```
http://Content URI of node/portal/node/l/ActivityGuide.component.market
```

This function returns a Null string if you specify an invalid portal or node.

Example

The following code:

```
&AGURL = GenerateActGuideContentUrl(%Portal, %Node, MENUNAME.MAINTAIN_SECURITY, "GB⇒
L", COMPONENT.CHANGE_PASSWORD, "QE_ACTIVITY_GUIDE_DEMO");
```

might produce the following URL string:

```
http://boynten8700/psc/ps/EMPLOYEE/QE_LOCAL/l/QE_ACTIVITY_GUIDE_DEMO.MAINTAIN_
SECURITY.CHANGE_PASSWORD.GBL
```

Related Links

GenerateActGuidePortalUrl

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GenerateActGuideRelativeUrl
"Creating Workflow Activity Guide Pages" (PeopleTools 8.54: Workflow Technology)

GenerateActGuidePortalUrl

Syntax

```
GenerateActGuidePortalUrl(PORTAL.portalname, NODE.nodename, MENUNAME.menuname,
Marketname, COMPONENT.componentname, ActivityGuide)
```

Description

Use the GenerateActGuidePortalUrl function to create a URL string that represents an absolute reference to the specified activity guide (life event) for the portal servlet. The PortalURI of the node that hosts the specified portal is used in the generated URL. The URL contains a reference to the portal service (*psp*) servlet.

If you want to generate a URL for the portal content (*psc*) servlet, use the GenerateActGuideContentURL function.

Parameters

portalname	Specify the name of the portal used for this request, prefixed with the reserved word **PORTAL**. You can also use a string, such as %Portal, for this value.
nodename	Specify the name of the node that contains the activity guide, prefixed with the reserved word **NODE**. You can also use a string, such as %Node, for this value.
menuname	Specify the name of the menu containing the activity guide, prefixed with the reserved word **MENUNAME**. You can also use a string, such as %Menu, for this value.
Marketname	Specify the name of the market of the component. You can also use a string, such as %Market, for this value.
ComponentName	Specify the name of the component, prefixed with the reserved word **COMPONENT**. You can also use a string, such as %Component, for this value.
ActivityGuide	Specify the name of the Activity Guide, as a string.

Returns

A string with the following format:

```
http://Portal URI of node/portal/node/l/ActivityGuide.component.market
```

This function returns a Null string if you specify an invalid portal or node.

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Example

The following code:

```
&AGURL = GenerateActGuidePortalUrl(%Portal, %Node, MENUNAME.MAINTAIN_SECURITY,
 "GBL", COMPONENT.CHANGE_PASSWORD, "QE_ACTIVITY_GUIDE_DEMO");
```

might create the following URL string:

```
http://boynte700/psp/ps/EMPLOYEE/QE_LOCAL/l/QE_ACTIVITY_GUIDE_DEMO.MAINTAIN_
SECURITY.CHANGE_PASSWORD.GBL
```

Related Links

GenerateActGuideContentUrl

GenerateActGuideRelativeUrl

"Creating Workflow Activity Guide Pages" (PeopleTools 8.54: Workflow Technology)

GenerateActGuideRelativeUrl

Syntax

GenerateActGuideRelativeUrl(**PORTAL.***portalname*, **NODE.***nodename*, **MENUNAME.***menuname*, *Marketname*, **COMPONENT.***componentname*, *ActivityGuide*)

Description

Use the GenerateActGuideContentUrl function to create a URL string that represents an relative reference to the specified activity guide (life event). The relative reference is suitable for use on any page that itself has the simple URL format.

Parameters

portalname	Specify the name of the portal used for this request, prefixed with the reserved word **PORTAL**. You can also use a string, such as %Portal, for this value.
nodename	Specify the name of the node that contains the activity guide, prefixed with the reserved word **NODE**. You can also use a string, such as %Node, for this value.
menuname	Specify the name of the menu containing the activity guide, prefixed with the reserved word **MENUNAME**. You can also use a string, such as %Menu, for this value.
Marketname	Specify the name of the market of the component. You can also use a string, such as %Market, for this value.
ComponentName	Specify the name of the component, prefixed with the reserved word **COMPONENT**. You can also use a string, such as %Component, for this value.
ActivityGuide	Specify the name of the Activity Guide, as a string.

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Returns

A string with the following format:

```
../../../Portal/node/l/ActivityGuide.menu.component.market
```

This function returns a Null string if you specify an invalid portal or node.

Example

The following code:

```
&AGURL = GenerateActGuideRelativeUrl(%Portal, %Node, MENUNAME.MAINTAIN_SECURITY,
 "GBL", COMPONENT.CHANGE_PASSWORD, "QE_ACTIVITY_GUIDE_DEMO");
```

might produce the following URL string:

```
../../../EMPLOYEE/QE_LOCAL/l/QE_ACTIVITY_GUIDE_DEMO.MAINTAIN_SECURITY.CHANGE_
PASSWORD.GBL
```

Related Links

GenerateActGuideContentUrl

GenerateActGuidePortalUrl

"Creating Workflow Activity Guide Pages" (PeopleTools 8.54: Workflow Technology)

GenerateComponentContentRelURL

Syntax

```
GenerateComponentContentRelURL(PORTAL.portalname,  NODE.nodename,MENUNAME.menuname,
MARKET.marketname,  COMPONENT.componentname, PAGE.pagename, action, [, keylist])
```

where *keylist* is a list of field references in the form:

```
[recordname.]field1 [, [recordname.]field2].
. .
```

OR

```
&RecordObject1 [, &RecordObject2].  .  .
```

Description

Use the GenerateComponentContentRelURL function to create a URL string that represents a relative reference to the specified component for the content servlet. The relative reference is suitable for use on any page that itself has the simple URL format.

If you want to generate an absolute URL for a component, use the GenerateComponentContentURL function.

Note: PeopleSoft recommends using the Transfer function for opening new windows, not this function, as there may be problems maintaining state and window count.

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Parameters

PortalName

Specify the name of the portal used for this request, prefixed with the reserved word **PORTAL**. You can also use a string, such as %Portal, for this value. This parameter is ignored by the content service, but is a required part of the `psc` URL format.

NodeName

Specify the name of the node that contains the content, prefixed with the reserved word **NODE**. You can also use a string, such as %Node, for this value.

MenuName

Specify the name of the menu containing the content, prefixed with the reserved word **MENUNAME**. You can also use a string, such as %Menu, for this value.

Marketname

Specify the name of the market of the component, prefixed with the reserved word **MARKET**. You can also use a string, such as %Market, for this value.

ComponentName

Specify the name of the component, prefixed with the reserved word **COMPONENT**. You can also use a string, such as %Component, for this value.

Pagename

Specify the name of the page that contains the content. If you specify a page name, it must be prefixed with the keyword **PAGE**. You can also specify an empty string ("") for this value.

Action

Specify a single-character code. Valid actions are:

- "A" (add)
- "U" (update)
- "L" (update/display all)
- "C" (correction)
- "E" (data entry)

You can also specify an empty string ("") for this value.

Keylist

An optional list of field specifications used to select a unique row at level zero in the page you are transferring to, by matching keys in the page you are transferring from. It can also be an already instantiated record object.

If a record object is specified, any field of that record object *that is also a field of the search record for the destination component is added to keylist*. The keys in the *fieldlist* must uniquely identify a row in the "to" page search record. If a unique row is not identified, of if Force Search Processing has been selected, the search dialog appears.

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If the *keylist* parameter is not supplied the destination component's search key must be found as part of the source components level 0 record buffer.

Returns

If the node has a Node Type of PIA, a string of the following format is returned:

```
../../../Portal/node/c/menu.component.market?parameters
```

If the node has a Node Type of ICType, a string of the following format is returned:

```
../../../portal/node/?ICType=Panel&Menu=menu&Market=market&PanelGroupName=component?p⇒
arameters
```

The question mark and the text following the question mark may or may not be included, depending on whether or not you specified a page and action or not.

This function returns a Null string if you specify an invalid portal or node.

Example

The following code:

```
&MyCompURL = GenerateComponentContentRelURL("EMPLOYEEPORTAL", "CRM", MenuName.SFA,
 "GBL", Component.CUSTOMERINFO, Page.CUST_DATA1, "U", EMPLID);
```

Might create the following URL:

```
../../../psc/PS84/EMPLOYEEPORTAL/CRM/c/SFA.CUSTOMERINFO.GBL?page=
CUST_DATA1&&Action=U&emplid=00001
```

Because this function terminates if the portal or node name is invalid, it's enclosed in a try-catch section so if an exception gets raised, it can be handled.

```
try
   &MyURL = GenerateComponentContentRelURL(%Portal, "HRMS", Menuname.ADMIN_
WORKFORCE, "GBL", Component.ABSENCE_HISTORY, Page. ABSENCE_HISTORY, "U", EMPLID)

   catch ExceptionPortal &Ex1
      /* error handling portal name not valid */
   catch ExceptionNode &Ex2
      /* error handling Node name not valid */

end-try;
```

Related Links

GenerateComponentContentURL

GenerateComponentPortalRelURL

GenerateComponentPortalURL

GenerateComponentRelativeURL

"Understanding Internet Script Classes" (PeopleTools 8.54: PeopleCode API Reference)

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GenerateComponentContentURL

Syntax

```
GenerateComponentContentURL(PORTAL.portalname, NODE.nodename, MENUNAME.menuname,
MARKET.marketname, COMPONENT.componentname, PAGE.pagename, action, [, keylist])
```

where *keylist* is a list of field references in the form:

```
[recordname.]field1 [, [recordname.]field2].
. .
```

OR

```
&RecordObject1 [, &RecordObject2].  .  .
```

Description

Use the GenerateComponentContentURL function to create a URL string that represents an absolute reference to the specified component for the content servlet.

The ContentURI of the specified node is used in the generated URL. The URL contains a reference to the portal content (*psc*) servlet. If you want to generate a URL for the portal service (*psp*), use the GenerateComponentPortalURL function.

Parameters

PortalName

Specify the name of the portal used for this request, prefixed with the reserved word **PORTAL**. You can also use a string, such as %Portal, for this value. This parameter is ignored by the content service, but is a required part of the `psc` URL format.

NodeName

Specify the name of the node that contains the content, prefixed with the reserved word **NODE**. You can also use a string, such as %Node, for this value.

MenuName

Specify the name of the menu containing the content, prefixed with the reserved word **MENUNAME**. You can also use a string, such as %Menu, for this value.

Marketname

Specify the name of the market of the component, prefixed with the reserved word **MARKET**. You can also use a string, such as %Market, for this value.

ComponentName

Specify the name of the component, prefixed with the reserved word **COMPONENT**. You can also use a string, such as %Component, for this value.

Pagename

Specify the name of the page that contains the content. If you specify a page name, it must be prefixed with the keyword **PAGE**. You can also specify an empty string ("") for this value.

Action

Specify a single-character code. Valid actions are:

- "A" (add)
- "U" (update)

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- "L" (update/display all)
- "C" (correction)
- "E" (data entry)

You can also specify an empty string ("") for this value.

Keylist

An optional list of field specifications used to select a unique row at level zero in the page you are transferring to, by matching keys in the page you are transferring from. It can also be an already instantiated record object.

If a record object is specified, any field of that record object that is also a *field of the search record for the destination component* is added to keylist. The keys in the *fieldlist* must uniquely identify a row in the "to" page search record. If a unique row is not identified, of if Force Search Processing has been selected, the search dialog appears.

If the *keylist* parameter is not supplied the destination component's search key must be found as part of the source components level 0 record buffer.

Returns

If the node has a Node Type of PIA, a string of the following format is returned:

```
http://Content URI of host node/Portal/node/c/menu.component.market?parameters
```

If the node has a Node Type of ICType, a string of the following format is returned:

```
http://Content URI of host node/portal/node/?ICType=Panel&Menu=menu&Market=market
&PanelGroupName=component?parameters
```

The question mark and the text following the question mark may or may not be included, depending on whether or not you specified a page and action or not.

This function returns a Null string if you specify an invalid portal or node.

Example

The following code:

```
&MyCompURL = GenerateComponentContentURL("EMPLOYEEPORTAL", "CRM", MenuName.SFA,
 "GBL", Component.CUSTOMERINFO, Page.CUST_DATA1, "U", EMPLID);
```

Might create the following URL:

```
http://serverx/servlets/psc/PS84/EMPLOYEEPORTAL/CRM/c/SFA.CUSTOMERINFO.GBL?page=
CUST_DATA1&&Action=U&emplid=00001
```

Because this function terminates if the portal or node name is invalid, it's enclosed in a try-catch section so if an exception gets raised, it can be handled.

```
try
   &MyURL = GenerateComponentContentURL(%Portal, "HRMS", Menuname.ADMIN_WORKFORCE,
 "GBL", Component.ABSENCE_HISTORY, Page. ABSENCE_HISTORY, "U", EMPLID)
```

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```
   catch ExceptionPortal &Ex1
      /* error handling portal name not valid */
   catch ExceptionNode &Ex2
      /* error handling Node name not valid */

end-try;
```

Related Links

GenerateComponentContentRelURL

GenerateComponentPortalRelURL

GenerateComponentPortalURL

GenerateComponentRelativeURL

"Understanding Internet Script Classes" (PeopleTools 8.54: PeopleCode API Reference)

GenerateComponentPortalRelURL

Syntax

```
GenerateComponentPortalRelURL(PORTAL.portalname, NODE.nodename, MENUNAME.menuname,
MARKET.marketname, COMPONENT.componentname, PAGE.pagename, action, [, keylist])
```

where *keylist* is a list of field references in the form:

```
[recordname.]field1 [, [recordname.]field2].
. .
```

OR

```
&RecordObject1 [, &RecordObject2].  .  .
```

Description

Use the GenerateComponentPortalRelURL function to create a URL string URL string that represents a relative reference the specified content (component). The relative reference is suitable for use on any page that itself has the simple URL format.

If you want to generate an absolute URL for a component, use the GenerateComponentPortalURL function.

Parameters

portalname Specify the name of the portal used for this request, prefixed with the reserved word **PORTAL**. You can also use a string, such as %Portal, for this value.

nodename Specify the name of the node that contains the content, prefixed with the reserved word **NODE**. You can also use a string, such as %Node, for this value.

menuname Specify the name of the menu containing the content, prefixed with the reserved word **MENUNAME**. You can also use a string, such as %Menu, for this value.

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Marketname Specify the name of the market of the component, prefixed with the reserved word **MARKET**. You can also use a string, such as %Market, for this value.

ComponentName Specify the name of the component, prefixed with the reserved word **COMPONENT**. You can also use a string, such as %Component, for this value.

pagename Specify the name of the page that contains the content. If you specify a page name, it must be prefixed with the keyword **PAGE**. You can also specify a Null string ("") for this value.

action Specify a single-character code. Valid actions are:

- "A" (add)
- "U" (update)
- "L" (update/display all)
- "C" (correction)
- "E" (data entry)

You can also specify a Null string ("") for this value.

keylist An optional list of field specifications used to select a unique row at level zero in the page you are transferring to, by matching keys in the page you are transferring from. It can also be an already instantiated record object.

If a record object is specified, any field of that record object *that is also a field of the search record for the destination component* is added to keylist. The keys in the *fieldlist* must uniquely identify a row in the "to" page search record. If a unique row is not identified, of if Force Search Processing has been selected, the search dialog appears.

If the *keylist* parameter is not supplied the destination component's search key must be found as part of the source components level 0 record buffer.

Returns

If the node has a Node Type of PIA, a string of the following format is returned:

```
../../../portal/node/c/menu.component.market?parameters
```

If the node has a Node Type of ICType, a string of the following format is returned:

```
../../../portal/node/?ICType=Panel&Menu=menu&Market=market&PanelGroupName=component?p⇒
arameters
```

The question mark and the text following the question mark may or may not be included, depending on whether or not you specified a page and action or not.

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This function returns a Null string if you specify an invalid portal or node.

Example

The following code:

```
&MyCompURL = GenerateComponentPortalRelURL("EMPLOYEEPORTAL", "CRM", MenuName.SFA,
 "GBL", Component.CUSTOMERINFO, , "", "");
```

Might create the following URL:

```
../../../EMPLOYEEPORTAL/CRM/c/sfa.customerinfo.gbl
```

Related Links

GenerateComponentContentRelURL
GenerateComponentContentURL
GenerateComponentPortalURL
GenerateComponentRelativeURL
"Understanding Internet Script Classes" (PeopleTools 8.54: PeopleCode API Reference)

GenerateComponentPortalURL

Syntax

```
GenerateComponentPortalURL(PORTAL.portalname, NODE.nodename, MENUNAME.menuname,
MARKET.marketname, COMPONENT.componentname, PAGE.pagename, action, [, keylist])
```

where *keylist* is a list of field references in the form:

```
[recordname.]field1 [, [recordname.]field2].
. .
```

OR

```
&RecordObject1 [, &RecordObject2].  .  .
```

Description

Use the GenerateComponentPortalURL function to create a URL string that represents an absolute reference to the specified component for the portal servlet. The PortalURI of the node that hosts the specified portal is used in the generated URL. The URL contains a reference to the portal service (*psp*) servlet.

If you want to generate a URL for the portal content (*psc*) servlet, use the GenerateComponentContentURL function.

Parameters

portalname Specify the name of the portal used for this request, prefixed with the reserved word **PORTAL**. You can also use a string, such as %Portal, for this value.

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nodename

Specify the name of the node that contains the content, prefixed with the reserved word **NODE**. You can also use a string, such as %Node, for this value.

menuname

Specify the name of the menu containing the content, prefixed with the reserved word **MENUNAME**. You can also use a string, such as %Menu, for this value.

Marketname

Specify the name of the market of the component, prefixed with the reserved word **MARKET**. You can also use a string, such as %Market, for this value.

ComponentName

Specify the name of the component, prefixed with the reserved word **COMPONENT**. You can also use a string, such as %Component, for this value.

pagename

Specify the name of the page that contains the content. If you specify a page name, it must be prefixed with the keyword **PAGE**. You can also specify a Null string ("") for this value.

action

Specify a single-character code. Valid actions are:

- "A" (add)
- "U" (update)
- "L" (update/display all)
- "C" (correction)
- "E" (data entry)

You can also specify a Null string ("") for this value.

keylist

An optional list of field specifications used to select a unique row at level zero in the page you are transferring to, by matching keys in the page you are transferring from. It can also be an already instantiated record object.

If a record object is specified, any field of that record object *that is also a field of the search record for the destination component* is added to keylist. The keys in the *fieldlist* must uniquely identify a row in the "to" page search record. If a unique row is not identified, of if Force Search Processing has been selected, the search dialog appears.

If the *keylist* parameter is not supplied the destination component's search key must be found as part of the source components level 0 record buffer.

Returns

If the node has a Node Type of PIA, a string of the following format is returned:

http://*Portal URI of host node*/*portal*/*node*/**c**/*menu.component.market*?*parameters*

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If the node has a Node Type of ICType, a string of the following format is returned:

```
http://Portal URI of host node/portal/node/?ICType=Panel&Menu=menu&Market=market&Pa⇒
nelGroupName=component?parameters
```

Note: If the host node is local, then *Portal URI of host node* will always be the one you're currently logged in as.

The question mark and the text following the question mark may or may not be included, depending on whether or not you specified a page and action or not.

This function returns a Null string if you specify an invalid portal or node.

Example

The following code:

```
&MyCompURL = GenerateComponentPortalURL("EMPLOYEEPORTAL", "CRM", MenuName.SFA,
 "GBL", Component.CUSTOMERINFO, , "", "");
```

Might create the following URL:

```
http://mike.com/servlets/psp/testsite/EMPLOYEEPORTAL/CRM/c/sfa.customerinfo.gbl
```

The following example uses a de-referenced name for the component.

```
&sComponent = "Component." | &sComponent;
&sPage = "Page.EM_VCHR_PYMNT_CLN";

&rwCurrent = GetRow();
/*- The Search Record keys -*/
&sQueryString = &sQueryString | "&BUSINESS_UNIT=" | &rwCurrent.EM_VCHR_INQ_VW.EM_
BUSINESS_UNIT.Value;
&sQueryString = &sQueryString | "&VOUCHER_ID=" |
&rwCurrent.EM_VCHR_INQ_VW.VOUCHER_ID.Value;

&sQueryString = GenerateComponentPortalURL(%Portal, %Node,
MenuName.EM_BILL_PRESENTMENT, %Market, @&sComponent, @&sPage, "U") |
&sQueryString;

%Response.RedirectURL(&sURL);
```

Related Links

GenerateComponentContentRelURL

GenerateComponentContentURL

GenerateComponentPortalRelURL

GenerateComponentRelativeURL

"Understanding Internet Script Classes" (PeopleTools 8.54: PeopleCode API Reference)

GenerateComponentRelativeURL

Syntax

```
GenerateComponentRelativeURL(PORTAL.portalname, NODE.nodename, MENUNAME.menuname,
MARKET.marketname, COMPONENT.componentname, PAGE.pagename, action, [, keylist])
```

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where *keylist* is a list of field references in the form:

```
[recordname.]field1 [, [recordname.]field2].
. .
```

OR

```
&RecordObject1 [, &RecordObject2].  .  .
```

Description

Use the GenerateComponentRelativeURL function to create a URL string that represents a relative reference the specified content (component). The relative reference is suitable for use on any page that itself has the simple URL format.

If you want to generate an absolute URL for a component, use either the GenerateComponentContentURL or GenerateComponentPortalURL function.

Parameters

portalname Specify the name of the portal used for this request, prefixed with the reserved word **PORTAL**. You can also use a string, such as %Portal, for this value.

nodename Specify the name of the node that contains the content, prefixed with the reserved word **NODE**. You can also use a string, such as %Node, for this value.

menuname Specify the name of the menu containing the content, prefixed with the reserved word **MENUNAME**. You can also use a string, such as %Menu, for this value.

Marketname Specify the name of the market of the component, prefixed with the reserved word **MARKET**. You can also use a string, such as %Market, for this value.

ComponentName Specify the name of the component, prefixed with the reserved word **COMPONENT**. You can also use a string, such as %Component, for this value.

Pagename Specify the name of the page that contains the content. If you specify a page name, it must be prefixed with the keyword **PAGE**. You can also specify a Null string ("") for this value.

Action Specify a single-character code. Valid actions are:

- "A" (add)
- "U" (update)
- "L" (update/display all)
- "C" (correction)
- "E" (data entry)

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You can also specify a Null string ("") for this value.

Keylist

An optional list of field specifications used to select a unique row at level zero in the page you are transferring to, by matching keys in the page you are transferring from. It can also be an already instantiated record object.

If a record object is specified, any field of that record object *that is also a field of the search record for the destination component* is added to keylist. The keys in the *fieldlist* must uniquely identify a row in the "to" page search record. If a unique row is not identified, of if Force Search Processing has been selected, the search dialog appears.

If the *keylist* parameter is not supplied the destination component's search key must be found as part of the source components level 0 record buffer.

Returns

If the node has a Node Type of PIA, a string of the following format is returned:

```
../../../portal/node/c/menu.component.market?parameters
```

If the node has a Node Type of ICType, a string of the following format is returned:

```
../../../portal/node/?ICType=Panel&Menu=menu&Market=market&PanelGroupName=component?p⇒
arameters
```

The question mark and the text following the question mark may or may not be included, depending on whether or not you specified a page and action or not.

This function returns a Null string if you specify an invalid portal or node.

Example

The following code example:

```
&MyCompURL = GenerateComponentRelativeURL("EMPLOYEEPORTAL", "CRM", MenuName.SFA,
 "GBL", Component.CUSTOMERINFO, "", "");
```

Might yield the following:

```
../../../EMPLOYEEPORTAL/CRM/c/sfa.customerinfo.gbl
```

Related Links

GenerateComponentContentRelURL
GenerateComponentContentURL
GenerateComponentPortalRelURL
GenerateComponentPortalURL
"Understanding Internet Script Classes" (PeopleTools 8.54: PeopleCode API Reference)

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GenerateExternalPortalURL

Syntax

```
GenerateExternalPortalURL(PORTAL.portalname, NODE.nodename, URL)
```

Description

Use the GenerateExternalPortalURL function to create a URL string that represents an absolute reference the specified external content (URL) on the portal servlet.

The PortalURI of the node that hosts the specified portal is used in the generated URL. The generated URL contains a reference to the portal service (*psp*) servlet.

If you want to generate a relative URL, use the GenerateExternalRelativeURL function.

Parameters

portalname	Specify the name of the portal used for this request, prefixed with the reserved word **PORTAL**. You can also use a string, such as %Portal, for this value.
NodeName	Specify the name of the node that contains the content, prefixed with the reserved word **NODE**. You can also use a string, such as %Node, for this value.
URL	Specify the URL to be used for this content.

Returns

A string of the following format is returned:

```
http://Portal URI of host node/Portal/node/e/encodedURL
```

When the portal servlet evaluates an external URL, the Node is ignored, so %Node can always be passed in for the Node parameter.

This function returns a Null string if you specify an invalid portal or node.

Example

The following code:

```
&url = GenerateExternalPortalURL("EMPLOYEEPORTAL", "CRM", "http://www.excite.com");
```

Might create the following URL:

```
http://myserver/psp/ps/EMPLOYEEPORTAL/CRM/e/http%3a%2f%2fwww.excite.com
```

Related Links

GenerateExternalRelativeURL

"Understanding Internet Script Classes" (PeopleTools 8.54: PeopleCode API Reference)

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GenerateExternalRelativeURL

Syntax

GenerateExternalRelativeURL(**PORTAL.***portalname*, **NODE.***nodename*, *EncodedURL*)

Description

Use the GenerateExternalRelativeURL function to create a URL string that represents a relative reference the specified external content (URL). The relative reference is suitable for use on any page that itself has the simple URL format and which is served by the portal servlet (psp).

If you want to generate an absolute URL, use the GenerateExternalPortalURL function.

Parameters

PortalName	Specify the name of the portal used for this request, prefixed with the reserved word **PORTAL**. You can also use a string, such as %Portal, for this value.
NodeName	Specify the name of the node that contains the content, prefixed with the reserved word **NODE**. You can also use a string, such as %Node, for this value.
EncodedURL	Specify the URL to be used for this content.

Returns

A string of the following format is returned:

../../../*Portal*/*node*/**e**/*encodedURL*

This function returns a Null string if you specify an invalid portal or node.

Example

The following code:

```
&url = GenerateExternalRelativeURL("EMPLOYEEPORTAL", "CRM", "http:
//www.excite.com");
```

Might create the following URL:

```
../../../EMPLOYEEPORTAL/CRM/e/http%3a%2f%2fwww.excite.com
```

Related Links

GenerateExternalRelativeURL

"Understanding Internet Script Classes" (PeopleTools 8.54: PeopleCode API Reference)

GenerateHomepagePortalURL

Syntax

GenerateHomepagePortalURL(**PORTAL.***portalname*, **NODE.***nodename*, *Tabname*)

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Description

Use the GenerateHomepagePortalURL function to create a URL string that represents an absolute reference the specified homepage tab on the portal servlet.

The PortalURI of the node that hosts the specified portal is used in the generated URL. The generated URL contains a reference to the portal service (*psp*) servlet.

If you want to generate a relative URL, use the GenerateHomepageRelativeURL function.

Parameters

portalname

Specify the name of the portal used for this request, prefixed with the reserved word **PORTAL**. You can also use a string, such as %Portal, for this value.

Note: The value specified for this parameter is ignored. The node name that is used is automatically calculated. However, you must still specify a value for this parameter.

---

nodename

Specify the name of the node that contains the content, prefixed with the reserved word **NODE**. You can also use a string, such as %Node, for this value. This should be the node that hosts the specified portal.

Tabname

Specify the name of the tab on the homepage that you want to generate a URL for. If you specify a null string ("""), the default tab is used.

Returns

If the node has a Node Type of PIA, a string of the following format is returned:

http://*Portal URI of host node*/*Portal*/*node*/**h**/**?tab=***tabname*

This function returns a Null string if you specify an invalid portal or node.

Example

Specifying the following code:

```
&HomePage = GenerateHomepagePortalURL(%Portal, NODE.North_Asia, "");
```

Might generate the following string:

```
http://bejing/psp/psoft/crm/North_Asia/h/?tab=DEFAULT
```

Related Links

GenerateHomepageRelativeURL

"Understanding the Portal Registry" (PeopleTools 8.54: PeopleCode API Reference)

"Understanding Internet Script Classes" (PeopleTools 8.54: PeopleCode API Reference)

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GenerateHomepageRelativeURL

Syntax

GenerateHomepageRelativeURL(**PORTAL.***portalname*, **NODE.***nodename*, *Tabname*)

Description

Use the GenerateHomepageRelativeURL function to create a URL string that represents a relative reference the specified homepage on the portal servlet. The relative reference is suitable for use on any page that itself has the simple URL format.

If you want to generate an absolute URL, use the GenerateHomepagePortalURL function.

Parameters

portalname Specify the name of the portal used for this request, prefixed with the reserved word **PORTAL**. You can also use a string, such as %Portal, for this value.

nodename Specify the name of the node that contains the content, prefixed with the reserved word **NODE**. You can also use a string, such as %Node, for this value. . This should be the node that hosts the specified portal.

Tabname Specify the name of the tab on the homepage that you want to generate a URL for. If you specify a null string ("""), the default tab is used.

Returns

If the node has a Node Type of PIA, a string of the following format is returned:

```
../../../Portal/node/h/?tab=tabname
```

If the node has a Node Type of ICType, a string of the following format is returned:

```
./?cmd=start
```

This function returns a Null string if you specify an invalid portal or node.

Example

The following code:

```
&HomePage = GenerateHomepageRelativeURL(%Portal, NODE.North_Asia, "");
```

Might generate the following string:

```
../../../crm/North_Asia/h/?tab=DEFAULT
```

Related Links

GenerateHomepagePortalURL

"Understanding the Portal Registry" (PeopleTools 8.54: PeopleCode API Reference)

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"Understanding Internet Script Classes" (PeopleTools 8.54: PeopleCode API Reference)

GenerateQueryContentURL

Syntax

```
GenerateQueryContentURL(PORTAL.portalname, NODE.nodename, QueryName, IsPublic [,
IsNewWindow])
```

Description

Use the GenerateQueryContentURL function to create a URL string that represents an absolute reference the specified query (URL) on the content servlet.

The PortalURI of the node that hosts the specified portal is used in the generated URL. The generated URL contains a reference to the portal content (*psc*) servlet.

If you want to generate a relative URL, use the GenerateQueryRelativeURL function.

If you want to generate a URL for the portal service (*psp*) servlet, use the GenerateQueryPortalURL function.

Parameters

portalname Specify the name of the portal used for this request, prefixed with the reserved word **PORTAL**. You can also use a string, such as %Portal, for this value.

nodename Specify the name of the node that contains the query, prefixed with the reserved word **NODE**. You can also use a string, such as %Node, for this value.

Queryname Specify the name of the query you want to generate a URL for. This parameter takes a string value.

IsPublic Specify whether the query is public or private. This parameter takes a Boolean value: True, the query is public, False otherwise.

IsNewWindow Specify whether the URL is for a new browser instance. This parameter takes a Boolean value: True, the URL is for a new browser instance, False otherwise. The default is False.

If the value is True this function generates a new state block for use in a separate browser instance. This does *not* automatically open a new browser instance. It just supports it.

Note: When Query is being run on a PeopleTools version prior to 8.16, the query URL does *not* include the ability to specify if a query is public or private. On PeopleTools versions 8.16 and higher, the generated URL contains either the keyword PUBLIC or PRIVATE prepended to the query name. If you are building a URL for a portal node that is on a PeopleTools release prior to 8.16, you *must* remove the public or private keyword before trying to use the URL.

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Returns

If *IsPublic* is specified as True, and the node has a Node Type of PIA, a string of the following format is returned:

```
http://PortalURI/Portal/node/q/?ICAction=ICQryNameURL=PUBLIC.QueryName
```

If *IsPublic* is specified as False, and the node has a Node Type of PIA, a string of the following format is returned:

```
http://PortalURI/Portal/node/q/?ICAction=ICQryNameURL=PRIVATE.QueryName
```

This function returns a Null string if you specify an invalid portal or node.

Example

The following code example:

```
&url = GenerateQueryContentURL(%Portal, "RMTNODE", "QUERYNAME", True);
```

might produce a string as follows:

```
http://bsto091200/psc/ps/EMPLOYEE/RMTNODE/q/?ICAction=ICQryNameURL=PUBLIC.QUERYNAME
```

The following code example uses the optional parameter to produce a URL that supports a new browser instance:

```
&url = GenerateQueryContentURL(%Portal, "RMTNODE", "QUERYNAME", True, True);
```

might produce a string as follows:

```
http://bsto091200/psc/ps_newwin/EMPLOYEE/RMTNODE/q/?ICAction=ICQryNameURL=
PUBLIC.QUERYNAME
```

Related Links

GenerateQueryPortalURL

GenerateQueryRelativeURL

"Understanding Internet Script Classes" (PeopleTools 8.54: PeopleCode API Reference)

"Understanding Query Classes" (PeopleTools 8.54: PeopleCode API Reference)

"Understanding PeopleSoft Query" (PeopleTools 8.54: Query)

GenerateQueryPortalURL

Syntax

GenerateQueryPortalURL(**PORTAL.***portalname*, **NODE.***nodename*, *QueryName*, *IsPublic* [, *IsNewWindow*])

Description

Use the GenerateQueryPortalURL function to create a URL string that represents an absolute reference the specified query (URL) on the portal servlet.

The PortalURI of the node that hosts the specified portal is used in the generated URL. The generated URL contains a reference to the portal service (*psp*) servlet.

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If you want to generate a relative URL, use the GenerateQueryRelativeURL function.

If you want to generate a URL for the portal content (*psc*) servlet, use the GenerateQueryContentURL function.

Parameters

portalname Specify the name of the portal used for this request, prefixed with the reserved word **PORTAL**. You can also use a string, such as %Portal, for this value.

nodename Specify the name of the node that contains the query, prefixed with the reserved word **NODE**. You can also use a string, such as %Node, for this value.

Queryname Specify the name of the query you want to generate a URL for. This parameter takes a string value.

IsPublic Specify whether the query is public or private. This parameter takes a Boolean value: True, the query is public, False otherwise.

IsNewWindow Specify whether the URL is for a new browser instance. This parameter takes a Boolean value: True, the URL is for a new browser instance, False otherwise. The default is False.

If the value is True this function generates a new state block for use in a separate browser instance. This does *not* automatically open a new browser instance. It just supports it.

Note: When Query is being run on a PeopleTools version prior to 8.16, the query URL does *not* include the ability to specify if a query is public or private. On PeopleTools versions 8.16 and higher, the generated URL contains either the keyword PUBLIC or PRIVATE prepended to the query name. If you are building a URL for a portal node that is on a PeopleTools release prior to 8.16, you *must* remove the public or private keyword before trying to use the URL.

Returns

If *IsPublic* is specified as True, and the node has a Node Type of PIA, a string of the following format is returned:

`http://PortalURI/Portal/node/`**`q/?ICAction=ICQryNameURL=PUBLIC.`**`QueryName`

If *IsPublic* is specified as False, and the node has a Node Type of PIA, a string of the following format is returned:

`http://PortalURI/Portal/node/`**`q/?ICAction=ICQryNameURL=PRIVATE.`**`QueryName`

This function returns a Null string if you specify an invalid portal or node.

Example

The following code example:

```
&url = GenerateQueryPortalURL(%Portal, "RMTNODE", "QUERYNAME", True);
```

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might produce a string as follows:

```
http://bsto091200/psp/ps/EMPLOYEE/RMTNODE/q/?ICAction=ICQryNameURL=PUBLIC.QUERYNAME
```

The following code example uses the optional parameter to produce a URL that supports a new browser instance:

```
&url = GenerateQueryPortalURL(%Portal, "RMTNODE", "QUERYNAME", True, True);
```

might produce a string as follows:

```
http://bsto091200/psp/ps_newwin/EMPLOYEE/RMTNODE/q/?ICAction=ICQryNameURL=
PUBLIC.QUERYNAME
```

Related Links

GenerateQueryContentURL

GenerateQueryRelativeURL

"Understanding Internet Script Classes" (PeopleTools 8.54: PeopleCode API Reference)

"Understanding Query Classes" (PeopleTools 8.54: PeopleCode API Reference)

"Understanding PeopleSoft Query" (PeopleTools 8.54: Query)

GenerateQueryRelativeURL

Syntax

GenerateQueryRelativeURL(**PORTAL.***portalname*, **NODE.***nodename*, *QueryName*, *IsPublic* [, *IsNewWindow*])

Description

Use the GenerateQueryRelativeURL function to creates a URL string that represents a relative reference to the specified query on the portal servlet. The relative reference is suitable for use on any page that itself has the simple URL format.

If you want to generate an absolute URL, use either the GenerateQueryPortalURL or GenerateQueryContentURL function.

Parameters

portalname	Specify the name of the portal used for this request, prefixed with the reserved word **PORTAL**. You can also use a string, such as %Portal, for this value.
nodename	Specify the name of the node that contains the query, prefixed with the reserved word **NODE**. You can also use a string, such as %Node, for this value.
Queryname	Specify the name of the query you want to generate a URL for. This parameter takes a string value.
IsPublic	Specify whether the query is public or private. This parameter takes a Boolean value: True, the query is public, False otherwise.

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IsNewWindow Specify whether the URL is for a new browser instance. This parameter takes a Boolean value: True, the URL is for a new browser instance, False otherwise. The default is False.

If the value is True this function generates a new state block for use in a separate browser instance. This does *not* automatically open a new browser instance. It just supports it.

Note: When Query is being run on a PeopleTools version prior to 8.16, the query URL does *not* include the ability to specify if a query is public or private. On PeopleTools versions 8.16 and higher, the generated URL contains either the keyword PUBLIC or PRIVATE prepended to the query name. If you are building a URL for a portal node that is on a PeopleTools release prior to 8.16, you *must* remove the public or private keyword before trying to use the URL.

Returns

If *IsPublic* is specified as True, and the node has a Node Type of PIA, a string of the following format is returned:

```
../../../portal/node/q/?ICAction=ICQryNameURL=PUBLIC.QueryName
```

If *IsPublic* is specified as False, and the node has a Node Type of PIA, a string of the following format is returned:

```
../../../portal/node/q/q/?ICAction=ICQryNameURL=PRIVATE.QueryName
```

This function returns a Null string if you specify an invalid portal or node.

Example

The following code example:

```
&url = GenerateQueryRelativeURL(%Portal, "RMTNODE", "QUERYNAME", True);
```

might produce a string as follows:

```
../../../EMPLOYEE/RMTNODE/q/?ICAction=ICQryNameURL=PUBLIC.QUERYNAME
```

Related Links

GenerateQueryContentURL
GenerateQueryPortalURL
"Understanding Internet Script Classes" (PeopleTools 8.54: PeopleCode API Reference)
"Understanding Query Classes" (PeopleTools 8.54: PeopleCode API Reference)
"Understanding PeopleSoft Query" (PeopleTools 8.54: Query)

GenerateScriptContentRelURL

Syntax

```
GenerateScriptContentRelURL(PORTAL.portalname, NODE.nodename, RECORD.recordname,
FIELD.fieldname, event_name, function_name, [, keylist])
```

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where *keylist* is a list of field references in the form:

```
[recordname.]field1 [, [recordname.]field2].
. .
```

OR

```
&RecordObject1 [, &RecordObject2].  .  .
```

Description

Use the GenerateScriptContentRelURL function to create a URL string that represents a relative reference to the specified iScript. The generated URL contains a reference to the portal content (*psc*) servlet.

If you want to generate an absolute URL for an iScript for the portal content servlet, use the GenerateScriptContentURL function.

Parameters

portalname	Specify the name of the portal used for this request, prefixed with the reserved word **PORTAL**. You can also use a string, such as %Portal, for this value.
nodename	Specify the name of the node that contains the iScript, prefixed with the reserved word **NODE**. You can also use a string, such as %Node, for this value.
recordname	Specify the name of the record containing the iScript, prefixed with the reserved word **RECORD**.
fieldname	Specify the name of the field containing the iScript, prefixed with the reserved word **FIELD**.
event_name	Specify the name of the event containing the iScript. This is generally the FieldFormula event.
function_name	Specify the name of the iScript function.
keylist	An optional list of parameters used with the function. It can also be an already instantiated record object.

Returns

If the node has a Node Type of PIA, a string of the following format is returned:

```
/psc/s/recname.fieldname.event_name.function_name?parameters
```

If the node has a Node Type of ICType, a string of the following format is returned:

```
/portal/node/?ICType=Script&ICScriptProgramName=recname.fieldname.event_name.functi⇒
on_name?parameters
```

The question mark and the text following the question mark may or may not be included, depending on whether or not you specified a page and action or not.

This function returns a Null string if you specify an invalid portal or node.

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Example

The following code:

```
&MyScriptURL = GenerateScriptContentRelURL("EMPLOYEEPORTAL", "CRM", Record.WEBLIB_
CRM, Field.SFASCRIPTS, "FieldFormula", "Iscript_SFAHOME ");
```

Might yield the following URL:

```
/psc/s/WEBLIB_CRM.SFASCRIPTS.FieldFormula.IScript_SFAHOME
```

Related Links

GenerateScriptContentURL
GenerateScriptPortalRelURL
GenerateScriptPortalURL
GenerateScriptRelativeURL
"Understanding Internet Script Classes" (PeopleTools 8.54: PeopleCode API Reference)

GenerateScriptContentURL

Syntax

```
GenerateScriptContentURL(PORTAL.portalname, NODE.nodename, RECORD.recordname,
FIELD.fieldname, event_name, function_name, [, keylist])
```

where *keylist* is a list of field references in the form:

```
[recordname.]field1 [, [recordname.]field2].
. .
```

OR

```
&RecordObject1 [, &RecordObject2].  .  .
```

Description

Use the GenerateScriptContentURL function to create a URL string that represents an absolute reference to the specified iScript for the content servlet.

The ContentURI of the specified node is used in the generated URL. The URL contains a reference to the portal content (*psc*) servlet.

If you want to generate a URL for an iScript for the portal servlet, use the GenerateScriptPortalURL function.

Parameters

portalname Specify the name of the portal used for this request, prefixed with the reserved word **PORTAL**. You can also use a string, such as %Portal, for this value.

nodename Specify the name of the node that contains the iScript, prefixed with the reserved word **NODE**. You can also use a string, such as %Node, for this value.

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recordname	Specify the name of the record containing the iScript, prefixed with the reserved word **RECORD**.
fieldname	Specify the name of the field containing the iScript, prefixed with the reserved word **FIELD**.
event_name	Specify the name of the event containing the iScript. This is generally the FieldFormula event.
function_name	Specify the name of the iScript function.
keylist	An optional list of parameters used with the function. It can also be an already instantiated record object.

Returns

If the node has a Node Type of PIA, a string of the following format is returned:

```
http://Content URI of host node/portal/node/s/recname.fieldname.event_
name.function_name?parameters
```

If the node has a Node Type of ICType, a string of the following format is returned:

```
http://Content URI of host node/portal/node/?ICType=Script&ICScriptProgramName=recn⇒
ame.fieldname.event_name.function_name?parameters
```

The question mark and the text following the question mark may or may not be included, depending on whether or not you specified a page and action or not.

This function returns a Null string if you specify an invalid portal or node.

Example

The following code:

```
&MyScriptURL = GenerateScriptContentURL("EMPLOYEEPORTAL", "CRM", Record.WEBLIB_
CRM, Field.SFASCRIPTS, "FieldFormula", "Iscript_SFAHOME ");
```

Might yield the following URL:

```
http://mike.com/servlets/psc/testsite/EMPLOYEEPORTAL/CRM/s/WEBLIB_
CRM.SFASCRIPTS.FieldFormula.IScript_SFAHOME
```

Related Links

GenerateScriptContentRelURL

GenerateScriptPortalRelURL

GenerateScriptPortalURL

GenerateScriptRelativeURL

"Understanding Internet Script Classes" (PeopleTools 8.54: PeopleCode API Reference)

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GenerateScriptPortalRelURL

Syntax

```
GenerateScriptPortalRelURL(PORTAL.portalname, NODE.nodename, RECORD.recordname,
FIELD.fieldname, event_name, function_name, [, keylist])
```

where *keylist* is a list of field references in the form:

```
[recordname.]field1 [, [recordname.]field2].
. .
```

OR

```
&RecordObject1 [, &RecordObject2].  .  .
```

Description

Use the GenerateScriptPortalRelURL function to create a URL string that represents a relative reference to the specified iScript. The generated URL contains a reference to the portal service (*psp*) servlet.

If you want to generate an absolute URL for an iScript for the portal service servlet, use the GenerateScriptPortalURL function.

Parameters

portalname	Specify the name of the portal used for this request, prefixed with the reserved word **PORTAL**. You can also use a string, such as %Portal, for this value.
nodename	Specify the name of the node that contains the iScript, prefixed with the reserved word **NODE**. You can also use a string, such as %Node, for this value.
recordname	Specify the name of the record containing the iScript, prefixed with the reserved word **RECORD**.
fieldname	Specify the name of the field containing the iScript, prefixed with the reserved word **FIELD**.
event_name	Specify the name of the event containing the iScript. This is generally the FieldFormula event.
function_name	Specify the name of the iScript function.
keylist	An optional list of parameters used with the function. It can also be an already instantiated record object.

Returns

If the node has a Node Type of PIA, a string of the following format is returned:

```
/psp/s/recname.fieldname.event_name.function_name?parameters
```

If the node has a Node Type of ICType, a string of the following format is returned:

```
/portal/node/?ICType=Script&ICScriptProgramName=recname.fieldname.event_name.functi⇒
```

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```
on_name?parameters
```

The question mark and the text following the question mark may or may not be included, depending on whether or not you specified a page and action or not.

This function returns a Null string if you specify an invalid portal or node.

Example

The following code:

```
&MyScriptURL = GenerateScriptPortalRelURL("EMPLOYEEPORTAL", "CRM", Record.WEBLIB_
CRM, Field.SFASCRIPTS, "FieldFormula", "IScript_SFAHOME");
```

Might yield the following:

```
/psp/s/WEBLIB_CRM.SFASCRIPTS.FieldFormula.IScript_SFAHOME
```

Related Links

GenerateScriptContentRelURL
GenerateScriptContentURL
GenerateScriptPortalURL
GenerateScriptRelativeURL
"Understanding Internet Script Classes" (PeopleTools 8.54: PeopleCode API Reference)

GenerateScriptPortalURL

Syntax

```
GenerateScriptPortalURL(PORTAL.portalname, NODE.nodename, RECORD.recordname,
FIELD.fieldname, event_name, function_name, [, keylist])
```

where *keylist* is a list of field references in the form:

```
[recordname.]field1 [, [recordname.]field2].
. .
```

OR

```
&RecordObject1 [, &RecordObject2].  .  .
```

Description

Use the GenerateScriptPortalURL function to create a URL string that represents an absolute reference to the specified iScript for the portal servlet. The PortalURI of the node that hosts the specified portal is used in the generated URL. The URL contains a reference to the portal service (*psp*) servlet.

If you want to generate a URL for an iScript for the portal content (*psc*) servlet, use the GenerateScriptContentURL function.

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Parameters

portalname	Specify the name of the portal used for this request, prefixed with the reserved word **PORTAL**. You can also use a string, such as %Portal, for this value.
nodename	Specify the name of the node that contains the iScript, prefixed with the reserved word **NODE**. You can also use a string, such as %Node, for this value.
recordname	Specify the name of the record containing the iScript, prefixed with the reserved word **RECORD**.
fieldname	Specify the name of the field containing the iScript, prefixed with the reserved word **FIELD**.
event_name	Specify the name of the event containing the iScript. This is generally the FieldFormula event.
function_name	Specify the name of the iScript function.
keylist	An optional list of parameters used with the function. It can also be an already instantiated record object.

Returns

If a node has a Node Type of PIA, a string of the following format is returned:

```
http://Portal URI of host portal/portal/node/s/recname.fieldname.event_
name.function_name?parameters
```

If the node has a Node Type of ICType, a string of the following format is returned:

```
http://Portal URI of host node/portal/node/?ICType=Script&ICScriptProgramName=
recname.fieldname.event_name.function_name?parameters
```

The question mark and the text following the question mark may or may not be included, depending on whether or not you specified a page and action or not.

This function returns a Null string if you specify an invalid portal or node.

Example

The following code:

```
&MyScriptURL = GenerateScriptPortalURL("EMPLOYEEPORTAL", "CRM", Record.WEBLIB_CRM,
 Field.SFASCRIPTS, "FieldFormula", "IScript_SFAHOME");
```

Might yield the following:

```
http://mike.com/servlets/psp/testsite/EMPLOYEEPORTAL/CRM/s/WEBLIB_
CRM.SFASCRIPTS.FieldFormula.IScript_SFAHOME
```

Related Links

GenerateScriptContentRelURL

GenerateScriptContentURL

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GenerateScriptPortalRelURL
GenerateScriptRelativeURL
"Understanding Internet Script Classes" (PeopleTools 8.54: PeopleCode API Reference)

GenerateScriptRelativeURL

Syntax

```
GenerateScriptRelativeURL(PORTAL.portalname, NODE.nodename, RECORD.recordname,
FIELD.fieldname, event_name, function_name, [, keylist])
```

where *keylist* is a list of field references in the form:

```
[recordname.]field1 [, [recordname.]field2] ...
```

OR

```
&RecordObject1 [, &RecordObject2] ...
```

Description

Use the GenerateScriptRelativeURL function to create a relative URL string that represents a relative reference to the specified iScript. The relative reference is suitable for use on any page that has the simple URL format.

If you want to generate an absolute URL for an iScript, use either the GenerateScriptContentURL or GenerateScriptPortalURL function.

Parameters

portalname	Specify the name of the portal used for this request, prefixed with the reserved word **PORTAL**. You can also use a string, such as %Portal, for this value.
nodename	Specify the name of the node that contains the iScript, prefixed with the reserved word **NODE**. You can also use a string, such as %Node, for this value.
recordname	Specify the name of the record containing the iScript, prefixed with the reserved word **RECORD**.
fieldname	Specify the name of the field containing the iScript, prefixed with the reserved word **FIELD**.
event_name	Specify the name of the event containing the iScript. This is generally the FieldFormula event.
function_name	Specify the name of the iScript function.
keylist	An optional list of parameters used with the function. It can also be an already instantiated record object.

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Returns

If the node has a Node Type of PIA, a string of the following format is returned:

```
../../../portal/node/s/recname.fieldname.event_name.function_name?parameters
```

If the node has a Node Type of ICType, a string of the following format is returned:

```
../../../portal/node/?ICType=Script&ICScriptProgramName=recname.fieldname.event_nam⇒
e.function_name?parameters
```

The question mark and the text following the question mark may or may not be included, depending on whether or not you specified a page and action or not.

This function returns a Null string if you specify an invalid portal or node.

Example

The following code:

```
&MyScriptURL = GenerateScriptRelativeURL("EMPLOYEE", "CRM", Record.WEBLIB_CRM, Fiel⇒
d.SFASCRIPTS, "FieldFormula", "IScript_SFAHOME");
```

Might yield the following:

```
../../../EMPLOYEE/CRM/s/WEBLIB_CRM.SFASCRIPTS.FieldFormula.IScript_SFAHOME
```

Related Links

GenerateScriptContentRelURL
GenerateScriptContentURL
GenerateScriptPortalRelURL
GenerateScriptPortalURL
"Understanding Internet Script Classes" (PeopleTools 8.54: PeopleCode API Reference)

GenerateTree

Syntax

```
GenerateTree(&rowset [, TreeEventField])
```

Description

Use the GenerateTree function to display data in a tree format, with nodes and leaves. The result of the GenerateTree function is an HTML string, which can be displayed in an HTML area control. The tree generated by GenerateTree is called an *HTML tree*.

The GenerateTree function can be used in conjunction with the Tree Classes to display data from trees created using Tree Manager.

The GenerateTree function works with both an HTML area control and a hidden field. The *TreeEventField* parameter contains the contents of the invisible character field used to process the HTML tree events.

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When an end user selects a node, expands a node, collapses a node, or uses one of the navigation links, that event (end-user action) is passed to the invisible field, and the invisible field's FieldChange PeopleCode is executed.

Related Links

"Using HTML Tree Actions (Events)" (PeopleTools 8.54: PeopleCode Developer's Guide), "Building HTML Tree Pages" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

&rowset	Specify the name of the rowset you've populated with tree data.
TreeEventField	Specify the contents of the invisible character field used to process the HTML tree events. The first time the GenerateTree function is used, that is, to generate the initial tree, you do not need to include this parameter. Subsequent calls require this parameter.

Returns

A string that contains HTML code that can be used with the HTML control to display a tree.

Example

In the following example, TREECTLEVENT is the name of the invisible control field that contains the event string that was passed from the browser.

```
HTMLAREA = GenerateTree(&TREECTL, TREECTLEVENT);
```

Related Links

"Using the GenerateTree Function" (PeopleTools 8.54: PeopleCode Developer's Guide)

GenerateWorklistPortalURL

Syntax

```
GenerateWorklistPortalURL(PORTAL.portalname, NODE.nodename, BusProc, Activity, Event,
Worklist, Instance)
```

Description

Use the GenerateWorklistPortalURL function to create a URL string that represents an absolute reference the specified Worklist (URL) on the portal servlet.

The PortalURI of the node that hosts the specified portal is used in the generated URL. The generated URL contains a reference to the portal service (*psp*) servlet.

If you want to generate a relative URL, use the GenerateWorklistRelativeURL function.

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Parameters

portalname	Specify the name of the portal used for this request, prefixed with the reserved word **PORTAL**. You can also use a string, such as %Portal, for this value.
nodename	Specify the name of the node that contains the content, prefixed with the reserved word **NODE**. You can also use a string, such as %Node, for this value.
BusProc	Specify the business process of the Worklist.
Activity	Specify the activity of the Worklist.
Event	Specify the event of the Worklist.
Instance	Specify the instance of the Worklist.

Returns

A string of the following format:

`http://PortalURI/Portal/node/w/BusProc.Activity.Event.Worklist.Instance`

This function returns a Null string if you specify an invalid portal or node.

Related Links

GenerateWorklistRelativeURL
"Understanding Internet Script Classes" (PeopleTools 8.54: PeopleCode API Reference)
"Understanding PeopleSoft Workflow" (PeopleTools 8.54: Workflow Technology)

GenerateWorklistRelativeURL

Syntax

```
GenerateWorklistRelativeURL(PORTAL.portalname, NODE.nodename, BusProc, Activity,
Event, Worklist, Instance)
```

Description

Use the GenerateWorklistRelativeURL function to create a URL string that represents a relative reference to the specified Worklist on the portal servlet. The relative reference is suitable for use on any page that itself has the simple URL format.

If you want to generate an absolute URL, use the GenerateWorklistPortalURL function.

Parameters

portalname	Specify the name of the portal used for this request, prefixed with the reserved word **PORTAL**. You can also use a string, such as %Portal, for this value.

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nodename	Specify the name of the node that contains the content, prefixed with the reserved word **NODE**. You can also use a string, such as %Node, for this value.
BusProc	Specify the business process of the Worklist.
Activity	Specify the activity of the Worklist.
Event	Specify the event of the Worklist.
Instance	Specify the instance of the Worklist.

Returns

A string of the following format:

```
../../../Portal/Node/w/BusProc.Activity.Event.Worklist.Instance
```

This function returns a Null string if you specify an invalid portal or node.

Example

The following is an example PeopleCode statement used to generate a URL for a worklist activity:

```
GenerateWorklistRelativeURL(%Portal, %Node, "Administer Workflow", "Find Timeout Wo⇒
rklists", "Worklist Current Operator", "Timeout Notification", 1);
```

Related Links

GenerateWorklistPortalURL

"Understanding Internet Script Classes" (PeopleTools 8.54: PeopleCode API Reference)

"Understanding PeopleSoft Workflow" (PeopleTools 8.54: Workflow Technology)

GenHTMLMenu

Syntax

GenHTMLMenu(*list*[, *fldr_img_class_ID*] [, *element_label*])

Description

Use this function to generate an HTML code fragment that will be rendered in the browser as menu drop-downs, fly-outs, and breadcrumbs. Typically, this function is used when the SmartNavigation data source is a tree. The <li> elements in the input string are created by the GenRelatedActions function, the GenABNMenuElement method of the Node class, and the GenABNMenuElement method of the Leaf class.

Parameters

list	Specifies the list of elements as a string.
fldr_img_class_ID	Specifies the class ID for a custom folder icon as a string. This class must be defined in a style sheet, and the style sheet must be assigned to the SmartNavigation folder.

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See "Understanding SmartNavigation Icons" (PeopleTools 8.54: Portal Technology).

This is an optional parameter. To use the default folder icon, you can omit this parameter or specify the null string "". However, to ensure forward compatibility or to use the default folder icon while specifying the *element_label* parameter, you must specify the null string.

element_label

Specifies a label for a drop-down menu item as an array with two numeric elements, which represents a message catalog entry. The first element is the message set number and the second element is the message number.

This label is applied to a drop-down menu item that is generated for the SmartNavigation breadcrumb on which the user has clicked, allowing the user to view the chart associated with that breadcrumb. The complete label is the word “View” with the *element_label* message appended.

This is an optional parameter.

If the *element_label* is not provided or if the message set or number is undefined, then a default message catalog entry (95, 9109) is used, which includes the default message, “User Profile Page,” in the label for the drop-down menu item.

Returns

None.

Example

To use the default folder icon, use a call similar to one of the following:

```
GenHTMLMenu(&szLI, "");

GenHTMLMenu(&szLI);
```

Note: To ensure forward compatibility or to use the default folder icon while specifying the element_label parameter, you must follow the first example and specify the null string.

The following example shows how the list of <li> elements is created for a node. In this example, <li> elements are generated for related actions, the first child node, and child leaves. This list is then passed to the GenHTMLMenu function.

```
Local string &szLI;
Local array of number &NavElementLabel;

rem generate the requested node's related actions;
&szLI = &szLI | &MyNode.GenRelatedActions();

/* Begin, Filter the requested tree node's child nodes and leaves that are */
/* displayed based on whatever criteria */

&nNodeOrder = &MyNode.allChildCount;
If &MyNode.HasChildNodes Then
```

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```
   /* get the first child node */
   &ChildNode = &MyNode.FirstChildNode;

   /* generate the LI tag that is consumed by the portal for this node */
   &szLI = &szLI | &ChildNode.GenABNMenuElement(GetABNInitialNode(&reqParams));

   &ChildNode.LoadABNChart(&rs, &rars, False, GetABNInitialNode(&reqParams));

End-If;

If &MyNode.HasChildLeaves Then
   If &MyNode.ChildLeafCount >= 3 Then
      &MaxCount = 3;
   Else
      &MaxCount = &MyNode.ChildLeafCount;
   End-If;

   For &i = 1 To &MaxCount
      If &i = 1 Then /* get the first child leaf */
         &ChildLeaf = &MyNode.FirstChildLeaf;
      Else /* get the next child leaf */
         &ChildLeaf = &ChildLeaf.NextSib;
      End-If;

      /* generate the LI tag that is consumed by the portal for this leaf */
      &szLI = &szLI | &ChildLeaf.GenABNMenuElement();

      &ChildLeaf.LoadABNChart(&rs, &rars);
   End-For;

End-If;

/* End, Filter the requested tree node's child nodes and leaves that are  */
/* displayed based on whatever criteria */

/* GenHTMLMenu(&szLI): Generate the HTML snippet required by the portal   */
/* html snippet written to the response object when mouse over event      */
/* inject html snippet during page generation when on click event         */

&NavElementLabel = CreateArray(6045, 4);
GenHTMLMenu(&szLI, "myfldricon", &NavElementLabel);
```

Related Links

GenDynABNElement

"GenABNMenuElement" (PeopleTools 8.54: PeopleCode API Reference)

"GenABNMenuElementWithImage" (PeopleTools 8.54: PeopleCode API Reference)

"GenABNMenuElement" (PeopleTools 8.54: PeopleCode API Reference)

"GenABNMenuElementWithImage" (PeopleTools 8.54: PeopleCode API Reference)

"GenRelatedActions" (PeopleTools 8.54: PeopleCode API Reference)

GenToken

Syntax

GenToken()

Description

Use the GenToken function to create an authentication token for the user currently logged in, as a string.

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Generally this function is used in an application engine program when an authentication token is not automatically generated. However, it can be used anytime. The token that is generated is usually passed to another process that has no token.

Parameters

None.

Returns

A string containing the authentication token.

Related Links

%AuthenticationToken

GetABNChartRowSet

Syntax

GetABNChartRowSet()

Description

Use this function to return a reference to a rowset representing the SmartNavigation chart for the rowset or tree data currently in the component buffer. This function flushes the rowset prior to returning. The SmartNavigation chart rowset comprises two record definitions: and PT_ABNCHARTNODE and PT_ABN_CHART_ND.

Parameters

None.

Returns

A SmartNavigation chart rowset. If the user clicks on a menu folder description instead, then this function returns Null.

Example

```
&chart_RS = GetABNChartRowSet();
```

GetABNInitialNode

Syntax

GetABNInitialNode(*&reqParams*)

Description

Use this function to return the identifier of the initial SmartNavigation chart node as a string.

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Parameters

&reqParams Specifies the array of request parameters (name-value pairs) generated by the GetABNReqParameters function. This is an array of array of string.

Returns

The identifier of the initial chart node as a string.

Example

The following example loads the SmartNavigation chart with the initial chart node set to tree node 10100:

```
&reqParams = GetABNReqParameters("10100");
&MyTree = &Session.GetTree();
&MyNode = &MyTree.FindNode(GetABNNode(&reqParams), "");
&MyNode.LoadABNChart(&rs, True, GetABNInitialNode(&reqParams));
```

The following example loads the SmartNavigation chart with the initial chart node set to the root of the tree:

```
&reqParams = GetABNReqParameters();
&MyTree = &Session.GetTree();
&MyNode = &MyTree.FindNode(GetABNNode(&reqParams), "");
&MyNode.LoadABNChart(&rs, True, GetABNInitialNode(&reqParams));
```

The following example loads the SmartNavigation chart with the initial chart node set to a specific row in the rowset data source:

```
&reqParams = GetABNReqParameters("MYROW01");
&rs_ChartRowset = GetABNChartRowSet();
&rs_RelatedActions = GetABNRelActnRowSet();
LoadABN(&rs_DataSource, &rs_ChartRowset, &rs_RelatedActions, GetABNNode(&reqParams)⇒
, GetABNInitialNode(&reqParams));
```

Related Links

GetABNReqParameters

GetABNNode

Syntax

GetABNNode(*&reqParams*)

Description

Use this function to return the identifier of the current SmartNavigation chart node as a string. The user requests this chart node through a mouse-click event

Parameters

&reqParams Specifies the array of request parameters (name-value pairs) generated by the GetABNReqParameters function. This is an array of array of string.

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Returns

The identifier of the current SmartNavigation chart node as a string.

Related Links

GetABNReqParameters

GetABNRelActnRowSet

Syntax

GetABNRelActnRowSet()

Description

Use this function to return a reference to the related actions rowset for the SmartNavigation chart. This function flushes the rowset prior to returning.

Parameters

None.

Returns

A related actions rowset. If the user clicks on the menu folder description instead, then this function returns Null.

Example

```
&relAction_RS = GetABNRelActnRowSet();
```

GetABNReqParameters

Syntax

GetABNReqParameters([*start*])

Description

Use this function to generate HTTP request parameters as an array of name-value pairs. The start parameter specifies the initial node of the data source. When using a tree data source, the start parameter is optional. If the initial node is not provided, the tree's root node is the initial node.

When using a rowset data source, the start parameter is required. The returned request parameter array contains the following values:

Array Element	*HTTP Request Parameter Name/Value*
[1][1]	TREE_NAME
[1][2]	The tree's name.*

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Array Element	*HTTP Request Parameter Name/Value*
[2][1] [2][2]	TREE_SETID The tree's setID key.*
[3][1] [3][2]	TREE_USERKEY The tree's user key.*
[4][1] [4][2]	TREE_EFFDT The tree's effective date key.*
[5][1] [5][2]	TREE_NODE The name of the currently requested tree node.*
[6][1] [6][2]	INITIAL_TREE_NODE The name of the initial node.

* Set to an empty string when the data source is a rowset.

Parameters

start Specifies a string representing the initial node of the tree or rowset data source.

Returns

An array of array of string representing the HTTP request parameters (name-value pairs).

Example

```
Local array of array of string &reqParams;

&reqParams = GetABNReqParameters("00001");
```

GetABNTreeEffdt

Syntax

GetABNTreeEffdt(*&reqParams*)

Description

Use this function to extract the effective date key for the tree from the request parameter array. The output of this function is used to open the specified tree.

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Parameters

&reqParams Specifies the array of request parameters (name-value pairs) generated by the GetABNReqParameters function. This is an array of array of string.

Returns

A string representing the effective date key for the tree.

Note: If the SmartNavigation chart data source is a rowset, this function returns an empty string.

Example

```
Local array of array of string &reqParams;

&reqParams = GetABNReqParameters();

&TreeReturn = &MyTree.Open(GetABNTreeSetid(&reqParams), GetABNTreeUserKey(&reqParam⇒
s), GetABNTreeName(&reqParams), GetABNTreeEffdt(&reqParams), "", True);
```

Related Links

GetABNReqParameters

"Open" (PeopleTools 8.54: PeopleCode API Reference)

GetABNTreeName

Syntax

GetABNTreeName(*&reqParams*)

Description

Use this function to extract the tree name from the request parameter array. The output of this function is used to open the specified tree.

Parameters

&reqParams Specifies the array of request parameters (name-value pairs) generated by the GetABNReqParameters function. This is an array of array of string.

Returns

A string representing the tree name.

Note: If the SmartNavigation chart data source is a rowset, this function returns an empty string.

Example

```
Local array of array of string &reqParams;
```

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```
&reqParams = GetABNReqParameters();

&TreeReturn = &MyTree.Open(GetABNTreeSetid(&reqParams), GetABNTreeUserKey(&reqParam⇒
s), GetABNTreeName(&reqParams), GetABNTreeEffdt(&reqParams), "", True);
```

Related Links

GetABNReqParameters

"Open" (PeopleTools 8.54: PeopleCode API Reference)

GetABNTreeSetid

Syntax

GetABNTreeSetid(*&reqParams*)

Description

Use this function to extract the setID key for the tree from the request parameter array. The output of this function is used to open the specified tree.

Parameters

&reqParams	Specifies the array of request parameters (name-value pairs) generated by the GetABNReqParameters function. This is an array of array of string.

Returns

A string representing the setID key for the tree.

Note: If the SmartNavigation chart data source is a rowset, this function returns an empty string.

Example

```
Local array of array of string &reqParams;

&reqParams = GetABNReqParameters();

&TreeReturn = &MyTree.Open(GetABNTreeSetid(&reqParams), GetABNTreeUserKey(&reqParam⇒
s), GetABNTreeName(&reqParams), GetABNTreeEffdt(&reqParams), "", True);
```

Related Links

GetABNReqParameters

"Open" (PeopleTools 8.54: PeopleCode API Reference)

GetABNTreeUserKey

Syntax

GetABNTreeUserKey(*&reqParams*)

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Description

Use this function to extract the user key for the tree from the request parameter array. The output of this function is used to open the specified tree.

Parameters

&reqParams Specifies the array of request parameters (name-value pairs) generated by the GetABNReqParameters function. This is an array of array of string.

Returns

A string representing the user key for the tree.

Note: If the SmartNavigation chart data source is a rowset, this function returns an empty string.

Example

```
Local array of array of string &reqParams;

&reqParams = GetABNReqParameters();

&TreeReturn = &MyTree.Open(GetABNTreeSetid(&reqParams), GetABNTreeUserKey(&reqParam⇒
s), GetABNTreeName(&reqParams), GetABNTreeEffdt(&reqParams), "", True);
```

Related Links

GetABNReqParameters

"Open" (PeopleTools 8.54: PeopleCode API Reference)

GetAddSearchRecName

Syntax

GetAddSearchRecName()

Description

Use the GetAddSearchRecName function to return the *add* search record name for the component.

Important! Use this function within fluid applications only.

Parameters

None.

Returns

A string value.

Example

```
&strRecName = GetAddSearchRecordName();
```

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Related Links

GetSearchRecName

"Setting Use Properties" (PeopleTools 8.54: Application Designer Developer's Guide)

GetAESection

Syntax

```
GetAESection(ae_applid, ae_section [, effdt])
```

Description

Use the GetAESection function to open and associate an AESection PeopleCode object with the base section, as specified. If no base section by the specified name is found, one is created. This enables you to create base sections as needed.

Warning! When you open or get an AESection object, (that is, the base section) any existing steps in the section are deleted.

After you've instantiated the AESection object, set the template section using the SetTemplate AESection class method. You can copy steps from the template section to the base section before you start the Application Engine program. This is useful for applications that let users input their "rules" into a user-friendly page, then convert these rules, at save time, into Application Engine constructs.

When an AESection is opened (or accessed), the system first looks to see if it exists with the given input parameters. If such a section doesn't exist, the system looks for a similar section based on market, database platform, and effective date.

The AESection Object is designed for use within an online program. Typically, dynamic sections should be constructed in response to an end-user action.

Note: Do not call an AESection object from an Application Engine PeopleCode Action. If you need to access another section, use the CallSection action instead.

Parameters

ae_applid	Specifies the application ID of the section you want to modify.
ae_section	Specifies the section name of the base section you want to modify. If no base section by the specified name is found, one is created.
effdt	Specifies the effective date of the section you want to modify (optional).

Returns

An AESection object is returned.

Related Links

"Understanding the AESection Class" (PeopleTools 8.54: PeopleCode API Reference)

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"Open" (PeopleTools 8.54: PeopleCode API Reference)
"AESection Example" (PeopleTools 8.54: PeopleCode API Reference)

GetAnalyticGrid

Syntax

```
GetAnalyticGrid(Page.page_name, grid_name)
```

Description

Use the GetAnalyticGrid function to instantiate an analytic grid object from the AnalyticGrid class, and populates it with the grid specified by *grid_name*, which is the Page Field Name on the General tab of that analytic grid's page field properties.

Note: PeopleSoft builds a page grid one row at a time. Because the AnalyticGrid class applies to a complete grid, you can't attach PeopleCode that uses the AnalyticGrid class to events that occur before the grid is built; the earliest event you can use is the page Activate event.

See "PeopleCode Events" (PeopleTools 8.54: PeopleCode Developer's Guide).

Specifying the Grid Name

When you place an analytic grid on a page, the grid is automatically named the same as the name of the primary record of the scroll for the grid (from the Page Field Name field). This is the name you use with the GetAnalyticGrid function.

Note: If the name of the record changes, the Page Field Name is *not* automatically updated. You must change this name if you want the name of the grid to reflect the name of the record.

To change a grid name:

1. Open the page definition in PeopleSoft Application Designer.
2. Select the analytic grid and access the Analytic Grid control properties.
3. On the General tab, type the new grid name in the Page Field Name field.

Note: Every grid on a page must have a unique name.

Parameters

Page.*page_name*	Specify the name of the page definition containing the grid you want to access. Specify a grid name consisting of any combination of uppercase letters, digits and "#", "$", "@", and "_".
grid_name	Specify the Page Field Name on the General tab of the grid's page field properties.

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Returns

A reference to an AnalyticGrid object.

Related Links

"AnalyticGrid Class Reference" (PeopleTools 8.54: PeopleCode API Reference)

GetAnalyticInstance

Syntax

GetAnalyticInstance(*ID*)

Description

Use the GetAnalyticInstance function to return a reference to the AnalyticInstance object as specified by the *ID*.

The analytic instance specified by *ID* must already be created before using this function.

Parameters

ID	Specify the analytic instance identifier that you want to access.

Returns

An AnalyticInstance object if successful, null otherwise.

Related Links

CreateAnalyticInstance

"CheckStatus" (PeopleTools 8.54: PeopleCode API Reference)

GetArchPubHeaderXmlDoc

Syntax

GetArchPubHeaderXmlDoc(*PubID*, *PubNode*, *ChannelName*, *VersionName*[, *Segment*])

Description

Use the GetArchPubHeaderXMLDoc function to retrieve an archived message header from the message queue.

This function has been deprecated. You will receive an error if you use this function.

Related Links

"Understanding Consuming Services" (PeopleTools 8.54: Integration Broker)

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GetArchPubXmlDoc

Syntax

```
GetArchPubXmlDoc(PubID, PubNode, ChannelName, VersionName, MessageName, SubNode[,
Segment])
```

Description

Use the GetArchPubXmlDoc function to retrieve an archived message from the message queue.

This function has been deprecated. You will receive an error if you use this function.

Related Links

"Understanding Error Handling, Logging, Tracing and Debugging" (PeopleTools 8.54: Integration Broker)

GetArchSubXmlDoc

Syntax

```
GetArchSubXmlDoc(PubID, PubNode, ChannelName, VersionName, MessageName[, Segment])
```

Description

Use the GetArchSubXmlDoc function to retrieve an archived message from the message queue.

This function has been deprecated. You will receive an error if you use this function.

Related Links

"Understanding PeopleSoft Integration Broker" (PeopleTools 8.54: Integration Broker)

GetAttachment

Syntax

```
GetAttachment(URLSource, DirAndSysFileName, DirAndLocalFileName[, LocalDirEnvVar[,
PreserveCase]])
```

Description

Use the GetAttachment function to download a file from its source storage location to the file system of the application server. The *file system of the application server* includes any directories accessible from the application server including those on local disks as well as on network shares.

Note: All directories that are part of the destination full path name must exist before GetAttachment is called. The GetAttachment function will not create any directories on the application server's file system.

Additional information that is important to the use of GetAttachment can be found in the *PeopleTools: PeopleCode Developer's Guide*:

- PeopleTools supports multiple types of storage locations.

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See "Understanding File Attachment Storage Locations" (PeopleTools 8.54: PeopleCode Developer's Guide).

- Certain characters are illegal in file names; other characters in file names are converted during file transfer.

  See "Application Development Considerations" (PeopleTools 8.54: PeopleCode Developer's Guide).

- Non-ASCII file names are supported by the PeopleCode file attachment functions.

  See "Attachments with non-ASCII File Names" (PeopleTools 8.54: PeopleCode Developer's Guide).

- The PeopleCode file attachment functions do not provide text file conversions when files are attached or viewed.

  See "Considerations When Attaching Text Files" (PeopleTools 8.54: PeopleCode Developer's Guide).

File System Considerations

If you are uncertain which type of file system the file is going to be transferred to, either a UNIX or Windows system, you should simply specify a file name for the *DirAndLocalFileName* parameter and either explicitly set the *LocalDirEnvVar* parameter or accept its default value, which is "TMP" (indicating that the value of the TMP environment variable will be used).

The following code example works for Windows systems, but *not* UNIX systems:

```
&retcode = GetAttachment(&FTPINFO, &SOURCEFILENAME, "c:\temp\resume.doc");
```

The following code example works for Unix systems, but *not* Windows systems:

```
&retcode = GetAttachment(&FTPINFO, &SOURCEFILENAME, "/tmp/resume.doc");
```

The following two examples work for *both* Windows and Unix systems:

```
&retcode = GetAttachment(&FTPINFO, &SOURCEFILENAME, "resume.doc");
```

```
&retcode = GetAttachment(&FTPINFO, &SOURCEFILENAME, "resume.doc", "PS_CFG_HOME");
```

Warning! If the effectively specified target directory that is to ultimately contain the downloaded file on the application server is a UNC (Universal Naming Convention) share, an error will occur and GetAttachment will fail to download the file.

You cannot use a share as the target directory—that is, as the ultimate destination—to download a file onto an application server using GetAttachment. However, you can use a subdirectory of a UNC share as the target directory.

For example, if a directory similar to the following were the target directory, GetAttachment would fail:

```
\\server_name\share_name
```

However, the following subdirectory of the same UNC share could be used with GetAttachment:

```
\\server_name\share_name\temp
```

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Parameters

URLSource

A reference to a URL. This can be either a URL identifier the form URL.*URL_ID*, or a string. This (along with the *DirAndSysFileName* parameter) indicates the file's source location.

Note: When the *URLSource* parameter is specified as a string value, forward slashes (/) are required. Backward slashes (\) are not supported for a string value.

See "Understanding URL Strings Versus URL Objects" (PeopleTools 8.54: PeopleCode Developer's Guide).

DirAndSysFileName

The relative path and file name of the file at the storage location. This is appended to *URLSource* to form the full URL where the file will be transferred from. This parameter takes a string value.

Note: Because the *DirAndSysFileName* parameter is appended to the URL, it also requires forward slashes ("/"). Backward slashes ("\") are not supported for this parameter.

DirAndLocalFileName

The name, relative path name, or full path name of the destination file on the application server. This parameter takes a string value. If you specify only a name or a relative path name for the destination file, the file will be placed in or relative to:

- The directory indicated by the value of the environment variable specified by the *LocalDirEnvVar* parameter.
- The directory indicated by the value of the TMP environment variable if the *LocalDirEnvVar* parameter has not been specified.

If you do not want to use the *LocalDirEnvVar* parameter or the value of the TMP environment variable in this way, you must specify a full path name as appropriate to the application server's operating system.

LocalDirEnvVar

This optional parameter takes a string value.

If *LocalDirEnvVar* is specified, then its value will be prefixed to the value of the *DirAndLocalFileName* parameter to form the full path name of the destination file on the application server's file system. With this parameter, you can avoid the need to hard-code the full path name.

If *LocalDirEnvVar* is not specified and the value of the *DirAndLocalFileName* parameter is already a full path file name, then that value will itself be used as the full path name that the downloaded file will have at its destination on the application server machine. If *LocalDirEnvVar* is not specified and the value of the *DirAndLocalFileName* parameter is not a full path file name, then the value of the

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TMP environment variable will be prefixed to the value of the *DirAndLocalFileName* parameter to form the full path name that the downloaded file will have at its destination on the application server machine.

Note: In order to use the optional parameter *PreserveCase,* you must pass some value for *LocalDirEnvVar.* If you want to use the default behavior of *LocalDirEnvVar* and also use *PreserveCase,* you can specify *""* (the empty string) for *LocalDirEnvVar*. Then the function behaves as if no value is specified. In this situation, if you wish to use the TMP environment variable, it must be explicitly specified.

Note: Do not specify *LocalDirEnvVar* if you use an absolute path for the *DirAndLocalFileName* parameter.

PreserveCase

When searching for the file specified by the *DirAndSysFileName* parameter, *PreserveCase* specifies a Boolean value to indicate whether the case of its file name extension is preserved: True, preserve the case, False, convert the file name extension in *DirAndSysFileName* to all lowercase letters.

The default value is False.

For a particular file, use the same value for this parameter that was used when the file was originally uploaded.

Warning! If you use the *PreserveCase* parameter, it is important that you use it in a consistent manner with all the relevant file-processing functions or you may encounter unexpected file-not-found errors.

This is an optional parameter.

Returns

You can check for either an integer or a constant value:

Numeric Value	*Constant Value*	*Description*
0	%Attachment_Success	File was transferred successfully.

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Numeric Value	*Constant Value*	*Description*
1	%Attachment_Failed	File transfer failed due to unspecified error. The following are some possible situations where %Attachment_Failed could be returned: • Failed to initialize the process due to some internal error. • Failed due to unexpected/bad reply from server. • Failed to allocate memory due to some internal error. • Failed due to timeout. • Failed due to non-availability of space on FTP server. • Failed to close SSL connection. • Failed due to an unspecified error on the HTTP repository. If the HTTP repository resides on a PeopleSoft web server, then you can configure tracing on the web server to report additional error details. See "Debugging File Attachment Problems" (PeopleTools 8.54: PeopleCode Developer's Guide).

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Numeric Value	*Constant Value*	*Description*
3	%Attachment_FileTransferFailed	File transfer failed due to unspecified error during FTP attempt. The following are some possible situations where %Attachment_ FileTransferFailed could be returned: • Failed due to mismatch in file sizes. • Failed to write to local file. • Failed to store the file on remote server. • Failed to read local file to be uploaded • No response from server. • Failed to overwrite the file on remote server.
4	%Attachment_NoDiskSpaceAppServ	No disk space on the application server.
7	%Attachment_DestSystNotFound	Cannot locate destination system for FTP. • Improper URL format. • Failed to connect to the server specified.

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Numeric Value	*Constant Value*	*Description*
8	%Attachment_DestSysFailedLogin	Unable to login to destination system for FTP. The following are some possible situations where %Attachment_DestSysFailedLogin could be returned: • Unsupported protocol specified. • Access denied to server. • Failed to connect using SSL Failed to verify the certificates. • Failed due to problem in certificates used. • Could not authenticate the peer certificate. • Failed to login with specified SSL level. • Remote server denied logon. • Problem reading SSL certificate.
9	%Attachment_FileNotFound	Cannot locate file. The following are some possible situations where %Attachment_FileNotFound could be returned: • Remote file not found. • Failed to read remote file.

Example

The following downloads the file, `HRarchive/NewHire/11042000resume.txt`, from the FTP server to `c:\NewHires\resume.txt` on the application server machine.

```
&retcode = GetAttachment("ftp://anonymous:hobbit1@ftp.ps.com/HRarchive/", "NewHire/⇒
11042000resume.txt", "c:\NewHires\resume.txt");
```

Related Links

"Debugging File Attachment Problems" (PeopleTools 8.54: PeopleCode Developer's Guide)

CleanAttachments

CopyAttachments

DeleteAttachment

DetachAttachment

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MAddAttachment
PutAttachment
ViewAttachment
"Debugging File Attachment Problems" (PeopleTools 8.54: PeopleCode Developer's Guide)

GetAttachmentURL

Syntax

```
GetAttachmentURL(URLSource, DirAndSysFileName, UserFileName , AttachmentURL [,
AuthToken][, ContentURI][, PreserveCase])
```

Description

Use the GetAttachmentURL function within a Mobile Application Platform (MAP) application to temporarily download a file from its source storage location and return the associated attachment URL. This attachment URL can subsequently be used by the MAP application to *temporarily* gain secure access to the downloaded file.

Additional information that is important to the use of GetAttachmentURL can be found in the *PeopleTools: PeopleCode Developer's Guide*:

- PeopleTools supports multiple types of storage locations.

  See "Understanding File Attachment Storage Locations" (PeopleTools 8.54: PeopleCode Developer's Guide).

- Certain characters are illegal in file names; other characters in file names are converted during file transfer.

  See "Application Development Considerations" (PeopleTools 8.54: PeopleCode Developer's Guide).

- Non-ASCII file names are supported by the PeopleCode file attachment functions.

  See "Attachments with non-ASCII File Names" (PeopleTools 8.54: PeopleCode Developer's Guide).

- The PeopleCode file attachment functions do not provide text file conversions when files are attached or viewed.

  See "Considerations When Attaching Text Files" (PeopleTools 8.54: PeopleCode Developer's Guide).

Parameters

URLSource

Specifies a reference to a URL. This can be either a URL identifier in the form **URL**.*URL_ID*, or a string. This, along with the *DirAndSysFileName* parameter, indicates the file's source location.

Note: The *URLSource* parameter requires forward slashes (/). Backward slashes (\) are not supported for this parameter.

See "Understanding URL Strings Versus URL Objects" (PeopleTools 8.54: PeopleCode Developer's Guide).

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DirAndSysFileName

Specifies the relative path and file name of the file on the file server. This is appended to *URLSource* to make up the full URL where the file is transferred from. This parameter takes a string value

---

Note: The *URLSource* requires "/" slashes. Because *DirAndSysFileName* is appended to the URL, it also requires only "/" slashes. "\" are NOT supported in anyway for either the *URLSource* or the *DirAndSysFileName* parameter.

UserFileName

Specifies the name of the as it was known to the end-user at the time it was originally uploaded as a string value (may be different than the name of the file at the storage location).

AttachmentURL

Returns the attachment URL as a string value.

Specify *AttachmenURL* as a string variable or a field reference in the form of [*RECORD*.]*FIELD*. You must supply the *RECORD* only if the record field and your PeopleCode program are in different record definitions.

AuthToken

Specifies the PeopleSoft authentication token to be used to retrieve the file from the file storage location.

The default value for this optional parameter is the empty string.

Important! A MAP application must treat *AuthToken* as a required parameter.

ContentURI

Specifies the content URI to be used by this function to construct the returned attachment URL. This string value can be specified as:

- A quoted reference to a PeopleSoft node object (in the form, **Node.***NODE_NAME*) that has a content URI property with a value that will be used as the content URI. For example:

  ```
  "Node.PSFT_HR"
  ```

- A quoted reference to a PeopleSoft URL object (in the form, **URL.***URL_ID*) that has a URL property with a value that will be used as the content URI. For example:

  ```
  "URL.MY_URI_URL"
  ```

- A literal string. For example:

  ```
  "http://example.com:8080/psc/ps/"
  ```

The default value of this optional parameter is the empty string.

Important! If no value is specified for this parameter or its value is explicitly specified as an empty string, then the value of the content URI property of the default local node is used.

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PreserveCase

Specify a Boolean value to indicate whether when searching for the file specified by the *DirAndSysFileName* parameter, its file name extension is preserved or not; *True*, preserve the case of the file name extension, *False*, convert the file name extension to all lowercase letters.

The default value is *False*.

Warning! If you use the *PreserveCase* parameter, it is important that you use it in a consistent manner with all the relevant file-processing functions or you may encounter unexpected file-not-found errors.

Returns

You can check for either an integer or a constant value:

Numeric Value	***Constant Value***	***Description***
0	%Attachment_Success	File was transferred successfully. **Important!** If file type restrictions are changed so that access to a previously uploaded file is now blocked, a call to ViewAttachment will return %Attachment_Success, even though the file and its contents are not displayed.

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Numeric Value	*Constant Value*	*Description*
1	%Attachment_Failed	File transfer failed due to unspecified error. The following are some possible situations where %Attachment_Failed could be returned: • Failed to initialize the process due to some internal error. • Failed due to unexpected/bad reply from server. • Failed to allocate memory due to some internal error. • Failed due to timeout. • Failed due to non-availability of space on FTP server. • Failed to close SSL connection. • Failed due to an unspecified error on the HTTP repository. If the HTTP repository resides on a PeopleSoft web server, then you can configure tracing on the web server to report additional error details. See "Debugging File Attachment Problems" (PeopleTools 8.54: PeopleCode Developer's Guide).

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Numeric Value	*Constant Value*	*Description*
3	%Attachment_FileTransferFailed	File transfer failed due to unspecified error during FTP attempt. The following are some possible situations where %Attachment_ FileTransferFailed could be returned: • Failed due to mismatch in file sizes. • Failed to write to local file. • Failed to store the file on remote server. • Failed to read local file to be uploaded • No response from server. • Failed to overwrite the file on remote server.
7	%Attachment_DestSystNotFound	Cannot locate destination system for FTP. The following are some possible situations where %Attachment_ DestSystNotFound could be returned: • Improper URL format. • Failed to connect to the server specified.

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Numeric Value	*Constant Value*	*Description*
8	%Attachment_DestSysFailedLogin	Unable to login to destination system for FTP. The following are some possible situations where %Attachment_ DestSysFailedLogin could be returned: • Unsupported protocol specified. • Access denied to server. • Failed to connect using SSL Failed to verify the certificates. • Failed due to problem in certificates used. • Could not authenticate the peer certificate. • Failed to login with specified SSL level. • Remote server denied logon. • Problem reading SSL certificate.
9	%Attachment_FileNotFound	Cannot locate file. The following are some possible situations where %Attachment_ FileNotFound could be returned: • Remote file not found. • Failed to read remote file.

Example

For example, a file called, "my_resume.doc", has previously been uploaded with a system file name of "21EC2020-3AEA-4069-A2DD-08002B30309D_my_resume.doc" to the database table associated with the PSFILE_ATTDET record, and the content URI property of the default local node has been explicitly set to the appropriate content URI value. The GetAttachmentURL invocation returns a URL giving temporary access to that file. The MAP application assigns the URL as the value of a primitive—for example, a URL element.

```
Local integer &RETCODE;
Local string &URL_ID;
Local string &ATTACHSYSFILENAME;
Local string &ATTACHUSERFILE;
Local string &ATTACHMENTURL;
Local string &AUTHTOKEN;
Local Document &Doc;
Local Compound &Com;
```

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```
&URL_ID = "record://PSFILE_ATTDET";
&ATTACHSYSFILENAME = "21EC2020-3AEA-4069-A2DD-08002B30309D_my_resume.doc";
&ATTACHUSERFILE = "my_resume.doc";
&AUTHTOKEN = &Map.GetAuthToken();
&RETCODE = GetAttachmentURL(&URL_ID, &ATTACHSYSFILENAME, &ATTACHUSERFILE, &ATTACHME⇒
NTURL, &AUTHTOKEN);

&Doc = &Map.getDocument();
&Com = &Doc.DocumentElement;
&Com.GetPropertyByName("AttachURL").Value = &ATTACHMENTURL;
```

Related Links

"GetAuthToken" (PeopleTools 8.54: PeopleCode API Reference)

AddAttachment

MAddAttachment

"Understanding the File Attachment Functions" (PeopleTools 8.54: PeopleCode Developer's Guide)

GetBiDoc

Syntax

GetBiDoc(*XMLstring*)

Description

Use the GetBiDoc function to create a BiDocs structure. You can populate the structure with data from *XMLstring*. This is part of the incoming Business Interlink functionality, which enables PeopleCode to receive an XML request and return an XML response.

Note: Business Interlinks is a deprecated product. Use PeopleSoft Integration Broker instead. See *PeopleTools: Integration Broker*.

Parameters

XMLstring	A string containing XML. You can specify a NULL string for this parameter, that is, two quotation marks ("") without a space between them.

Return Value

A BiDocs object.

Example

The following example gets an XML request, puts it into a text string, and puts that into a BiDoc. After this is done, the GetDoc method and the GetValue method can get the value of the skills XML element, which is contained within the postreq XML element in the XML request.

```
Local BIDocs &rootInDoc, &postreqDoc;
Local string &blob;
Local number &ret;

&blob = %Request.GetContentBody();
```

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```
/* process the incoming xml(request)- Create a BiDoc and fill with the request*/
&rootInDoc = GetBiDoc(&blob);
&postreqDoc = &rootInDoc.GetDoc("postreq");
&ret = &postreqDoc.GetValue("skills", &skills);
```

You can also create an empty BiDoc with GetBiDoc, as in the following example.

```
Local BIDocs &rootInDoc, &postreqDoc;
Local string &blob;
Local number &ret;

&blob = %Request.GetContentBody();
/* process the incoming xml(request)- Create a BiDoc and fill with the request*/
&rootInDoc = GetBiDoc("");
&ret = &rootInDoc.ParseXMLString(&blob);
&postreqDoc = &rootInDoc.GetDoc("postreq");
&ret = &postreqDoc.GetValue("skills", &skills);
```

GetBreadcrumbs

Syntax

GetBreadcrumbs()

Description

Use the GetBreadcrumbs function to return the user's current list of breadcrumbs as an array of array of string in reverse order of access—that is, the first breadcrumb in the list represents the current content reference. The array of string includes 11 elements as specified in the following table. Specific values are included in the table when they do not vary based on the breadcrumb type; otherwise, blank cells indicate values that are dependent on the specific breadcrumb. For example, breadcrumbs created by PeopleTools do not include certain values such as a page ID or component keys. These and any other unknown values are returned as the literal string "UnknownValue".

Data Element	***Breadcrumb Generated by CreateBreadcrumb***	***Content Breadcrumb Generated by PeopleTools***	***Folder Breadcrumb Generated by PeopleTools***
Element type	C	C	F
Breadcrumb element ID			
Portal ID			
Node ID			
Component ID			UnknownValue
Page ID		UnknownValue	UnknownValue
Breadcrumb label			
Component mode		UnknownValue	UnknownValue
Component keys		UnknownValue	UnknownValue

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Data Element	*Breadcrumb Generated by CreateBreadcrumb*	*Content Breadcrumb Generated by PeopleTools*	*Folder Breadcrumb Generated by PeopleTools*
Content URL			
Query string parameters		UnknownValue	UnknownValue

The GetBreadcrumbs function returns a Null value in the following situations:

- When the breadcrumb list is empty—for example, when the function is invoked by an action on a homepage pagelet.
- When the source content is not displayed in the PeopleSoft portal template—for example, if you display the content in your own portal or if the content is displayed via a direct psc URL.
- When executing JavaScript fails to retrieve any breadcrumb data.

Note: This function cannot be invoked from a fluid component. In addition, this function cannot be invoked after the content is displayed via a direct psc URL.

Parameters

None

Returns

A array of array of string.

Example

In the following example, the invocation of GetBreadcrumbs returns five breadcrumbs. The first and second breadcrumbs application-specific breadcrumbs generated by calls to CreateBreadcrumb. The final three breadcrumbs represent folder navigation generated automatically by PeopleTools:

```
[C,PT_ROLEMAINT_GBL_2,EMPLOYEE,QE_LOCAL,MAINTAIN_SECURITY.ROLEMAINT.GBL,ROLEDEFN,Ro⇒
le Maintenance,U,ROLENAME:'ADMINISTRATOR',http://.../MAINTAIN_SECURITY.ROLEMAINT.GB⇒
L,UnknownValue]
[C,PT_USERMAINT_GBL,EMPLOYEE,QE_LOCAL,MAINTAIN_SECURITY.USERMAINT.GBL,USER_ROLES,Ro⇒
le Maintenance,U,UnknownValue,http://.../MAINTAIN_SECURITY.USERMAINT.GBL,UnknownVal⇒
ue]
[F,PT_USER_PROFILES,EMPLOYEE,QE_LOCAL,UnknownValue,UnknownValue,User Profiles,Unkno⇒
wnValue,UnknownValue,http://.../WEBLIB_PT_NAV.ISCRIPT1.FieldFormula.IScript_PT_NAV_⇒
INFRAME,UnknownValue ]
[F,PT_SECURITY,EMPLOYEE,QE_LOCAL,UnknownValue,UnknownValue,Security,UnknownValue,Un⇒
knownValue,http://.../WEBLIB_PT_NAV.ISCRIPT1.FieldFormula.IScript_PT_NAV_INFRAME,Un⇒
knownValue]
[F,PT_PEOPLETOOLS,EMPLOYEE,QE_LOCAL,UnknownValue,UnknownValue,PeopleTools,UnknownVa⇒
lue,UnknownValue,http://.../WEBLIB_PT_NAV.ISCRIPT1.FieldFormula.IScript_PT_NAV_INFR⇒
AME,UnknownValue]
```

Related Links

CreateBreadcrumb

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GetCalendarDate

Syntax

GetCalendarDate(*comparedate*, *periods*, *periodadjustment*,*outfieldname*, *company*, *paygroup*)

Description

Use the GetCalendarDate function to return the value of a Date field from the PS_PAY_CALENDAR table. If a table entry is not found, GetCalendarDate returns 1899-01-01.

Processing Rules

The following are the processing rules for GetCalendarDate:

1. The function SELECTs all the values for *outfieldname*, PAY_BEGIN_DT and PAY_END_DT from PS_PAY_CALENDAR. The result set is sorted in increasing PAY_END_DT order.
2. A SQL SELECT statement is generated in the following form:
3. SELECT outfieldname, PAY_BEGIN_DT, PAY_END_DT FROM PS_PAY_CALENDAR WHERE COMPAny=:1 AND PAYGROUP=:2 ORDER BY PAY_END_DT;
4. Rows are fetched from the result set until the value of *comparedate* falls between PAY_BEGIN_DT and PAY_END_DT. The value of *outfieldname* is stored in a storage stack.
5. A work variable equal to the value in *periods* is set.
6. If the value of *outfieldname* in the located result row is equal to *comparedate,* then the value in *periodadjustment* is added to the work variable. Because *periodadjustment* may be negative, the result may be negative.
7. If the work variable is negative then the saved value of *outfieldname* is returned from the storage stack at the level specified by the work variable. If the work variable is positive then fetch forward the number of times specified by the work variable. The value of *outfieldname* is returned from the most recently fetched (current) row.

Parameters

comparedate A date field set by the caller as the date of interest, for example, "1997-02-17."

periods A numeric variable set by the caller specifying the number of periods forward or backward to be returned.

periodadjustment A numeric variable that adjusts the *periods* if the *comparedate* equals the period end date. This is typically used to adjust for period end dates. Usually the *periodadjustment* is either -1, 0, or 1.

outfieldname The name of a date field in the PS_PAY_CALENDAR table. For example PAY_BEGIN_DT. The value of this field is not referenced or modified by the routine, but the name of the field

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is used to build a SQL SELECT statement and to indicate which value from the table to return in the return date.

company A field set by the caller to be equal to the company code of interest, for example, "CCB".

paygroup A variable set by the caller to be equal to the PayGroup code of interest, for example, "M01".

Returns

Returns a Date value from the PS_PAY_CALENDAR table.

Example

The following examples use the sample PS_PAY_CALENDAR entries in the following table. In the example, *comparedate* and the result date are Date type fields defined in some record.

COMPANY	***PAYGROUP***	***PAY_END_DT***	***PAY_BEGIN_DT***	***CHECK_DT***
CCB	MO1	1997-01-31	1997-01-01	1997-01-31
CCB	MO1	1997-02-28	1997-02-01	1997-02-28
CCB	MO1	1997-03-31	1997-03-01	1997-03-29
CCB	MO1	1997-04-30	1997-04-01	1997-04-30
CCB	MO1	1997-05-31	1997-05-01	1997-05-31
CCB	MO1	1997-06-30	1997-06-01	1997-06-28
CCB	MO1	1997-07-31	1997-07-01	1997-07-31
CCB	MO1	1997-08-31	1997-08-01	1997-08-30
CCB	MO1	1997-09-30	1997-09-01	1997-09-30
CCB	MO1	1997-10-31	1997-10-01	1997-10-31
CCB	MO1	1997-11-30	1997-11-01	1997-11-27
CCB	MO1	1997-12-31	1997-12-01	1997-12-31
CCB	SM1	1997-01-15	1997-01-01	1997-01-15

Find the begin date of the pay period containing the date 1997-05-11 (the value of &COMPAREDate). The result date returned would be 1997-05-01.

```
&RESULT_Date = GetCalendarDate(&COMPAREDate, 0, 0,
   PAY_BEGIN_DT, COMPAny, PAYGROUP);
```

Or:

```
&RESULT_Date = GetCalendarDate(&COMPAREDate, 1, -1,
```

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```
PAY_BEGIN_DT, COMPAny, PAYGROUP);
```

GetChart

Syntax

GetChart(*RecordName.FieldName*)

Description

Use the GetChart function to get a reference to a Chart object.

A chart must be associated with a record and field merely so that the chart object can be instantiated in PeopleCode. Which record and field you use doesn't matter. Commonly, the same derived/work record is used for all the charts in an application.

Parameters

RecordName.FieldName Specify the record and field name associated with the chart.

Returns

A reference to a Chart object.

Example

```
&MyChart = GetChart(CHARTREC_WRK.CHART_FLD);
```

Related Links

"Using the Chart Class" (PeopleTools 8.54: PeopleCode API Reference)

GetChartURL

Syntax

GetChartURL(*&Chart*)

Description

Use the GetChartURL function to generate the URL of a chart object. This URL can then be used in your application for displaying a chart.

GetChartURL can be used only with the Chart class and Gantt class.

Parameters

&Chart Specify an already instantiated Chart object or Gantt object.

Returns

A URL as a string.

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Example

```
Function IScript_GetChartURL()
local object &MyChart;
local string &MyURL;

   &MyChart = CreateObject("Chart");
   &MyChart .SetData = xx;

/* xx will be a data row set */

   &MyURL = %Response.GetChartURL(&MyChart);
   &sMap = &oChart.ImageMap;

   %Response.Write("<HTML><IMG SRC=");
   %Response.Write(&MyURL);
   %Response.Write("  USEMAP=#THEMAP></IMG><MAP NAME=THEMAP>");
   %Response.Write(&sMap);
   %Response.Write("</MAP></HTML>");

End-Function;
```

Related Links

"Using the Chart Class" (PeopleTools 8.54: PeopleCode API Reference)

GetCwd

Syntax

GetCwd()

Description

Use the GetCwd function to determine the current working directory of the process that executes it. This means that in PeopleSoft Pure Internet Architecture it returns the current working directory on the server, in an Application Engine program it returns the current working directory of the Application Engine process, and so on.

Returns

Returns a string containing the path of the current working directory.

Example

The example stores a string specifying the current working directory in &CWD.

```
&CWD = GetCwd();
```

Related Links

GetEnv

ExpandEnvVar

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GetDialGauge

Syntax

GetDialGauge(*RecordName.FieldName*)

Description

Use the GetDialGauge function to get a reference to a DialGauge object.

A gauge must be associated with a record and field merely so that the gauge object can be instantiated in PeopleCode. Which record and field you use doesn't matter. Commonly, the same derived/work record is used for all the charts in an application.

Parameters

RecordName.FieldName	Specify the record and field name associated with the dial gauge.

Returns

A reference to a DialGauge object.

Example

```
&MyGauge = GetDialGauge(GAUGEREC_WRK.GAUGE_FLD);
```

Related Links

"Using the Gauge Classes" (PeopleTools 8.54: PeopleCode API Reference)

GetEnv

Syntax

GetEnv(*env_var*)

Description

Use the GetEnv function to return the value of an environment variable specified by *env_var* as a string. If the environment variable does not exist, GetEnv it returns a null string.

For example, you can use the GetEnv function to determine the actual path of *PS_HOME*. You could use this with the Exec function, which automatically prepends the command string with the path of *PS_HOME*.

Parameters

env_var	A string specifying the environment variable.

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Important! Because the input string is converted to all uppercase, the *env_var* parameter is case-insensitive. While environment variable names are case-sensitive on UNIX systems—that is, "netdrive" is a different variable from "NetDrive"—in both cases, GetEnv returns the value of the NETDRIVE environment variable if it exists.

Returns

A string representing the value of the specified environment variable; Null if the variable does not exist.

Example

Assume that the environment variable NETDRIVE is equal to "N:" and the environment variable netdrive is equal to "P:”. The following statement returns "N:" in &drive:

```
&drive = GetEnv("netdrive");
```

Furthermore, if the environment variables netdrive and NetDrive are defined on a UNIX system, but not NETDRIVE, each of the following calls to GetEnv return Null:

```
&string = GetEnv("netdrive");
&string = GetEnv("NetDrive");
&string = GetEnv("NETDRIVE");
```

Related Links

GetCwd

ExpandEnvVar

GetField

Syntax

GetField([*recname.fieldname*])

Description

Use the GetField function to create a reference to a field object for the current context; that is, from the row containing the currently executing program.

If you do not specify *recname.fieldname*, the current field executing the PeopleCode is returned.

Note: For PeopleCode programs located in events that are not associated with a specific row, record, and field at the point of execution this function is invalid. That is, you cannot use this function in PeopleCode programs on events associated with high-level objects like pages or components. For events associated with record level programs (like component record), this function is valid, but it must be specified with a field name, as there is an assumed record, but no assumed field name.

When GetField is used with an associated record and field name on component buffer data, the following is assumed:

```
&FIELD = GetRow().recname.fieldname;
```

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Parameters

recname.fieldname	If you do not want to refer to the field executing the PeopleCode, specify a record name and field name.

Returns

This function returns a field object that references the field from the specified record.

Example

```
Local Field &CHARACTER;

&CHARID = GetField(FIELD.CHAR_ID);
```

Related Links

"Understanding the Field Class" (PeopleTools 8.54: PeopleCode API Reference)
GetPageField
"Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide)

GetFile

Syntax

GetFile(*filename*, *mode* [, *charset*] [, *pathtype*])

Description

Use the GetFile function to instantiate a new file object from the File class, associate it with an external file, and open the file so you can use File class methods to read from or write to it.

Any file opened for writing (using a call to the GetFile function or the File class Open method) by a PeopleCode program that runs in the Process Scheduler is automatically managed by the Report Repository.

You can use the GetFile or GetTempFile functions to access an external file, but each execution of GetFile or GetTempFile instantiates a new file object. If you plan to access only one file at a time, you need only one file object. Use GetFile or GetTempFile to instantiate a file object for the first external file you access. Then, use Open to associate the same file object with as many different external files as you want. However, if you expect to have multiple files open at the same time, you need to instantiate multiple file objects with GetFile or GetTempFile.

GetFile and Open both perform implicit commits. Therefore, the GetTempFile function has been introduced specifically to avoid these implicit database commits. GetTempFile differs from GetFile in two respects:

- GetTempFile does not perform an implicit commit.
- GetTempFile does not make the associated file available through the Report Repository even when the calling PeopleCode program is run through the Process Scheduler.

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Therefore, GetTempFile can be a good choice when you wish to avoid implicit database commits and when you do not need to have the file managed through the Report Repository. Otherwise, GetTempFile operates exactly the same as GetFile.

See GetTempFile.

Parameters

filespec Specify the name, and optionally, the path, of the file you want to open.

mode A string indicating how you want to access the file. The mode can be one of the following:

- "R" (Read mode): opens the file for reading, starting at the beginning.
- "W" (Write mode): opens the file for writing.

  Warning! When you specify Write mode, any existing content in the file is discarded.

- "A" (Append mode): opens the file for writing, starting at the end. Any existing content is retained.
- "U" (Update mode): opens the file for reading or writing, starting at the beginning of the file. Any existing content is retained. Use this mode and the GetPosition and SetPosition methods to maintain checkpoints of the current read/write position in the file.

  In Update mode, any write operation clears the file of all data that follows the position you set.

  Note: Currently, the effect of the Update mode and the GetPosition and SetPosition methods is not well defined for Unicode files. Use the Update mode only on files stored with a non-Unicode character set.

- "E" (Conditional "exist" read mode): opens the file for reading only if it exists, starting at the beginning. If it doesn't exist, the Open method has no effect. Before attempting to read from the file, use the IsOpen property to confirm that it's open.
- "N" (Conditional "new" write mode): opens the file for writing, only if it doesn't already exist. If a file by the same name already exists, the Open method has no effect. Before attempting to write to the file, use the IsOpen property to confirm that it's open. You can insert an asterisk (*) in the file name to ensure that a new file is created. The system replaces the asterisk with numbers starting at 1 and incrementing by 1, and checks for the existence of a file by each resulting name in turn. It uses the first name for which

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a file *doesn't* exist. In this way you can generate a set of automatically numbered files. If you insert more than one asterisk, all but the first one are discarded.

charset

A string indicating the character set you expect when you read the file, or the character set you want to use when you write to the file. You can abbreviate Unicode UCS-2 to "U" and the host operating system's default non-Unicode (sometimes referred to as the ANSI character set) to “A”. All other character sets must be spelled out in full, for example, ASCII, Big5, Shift-JIS, UTF8, or UTF8BOM.

If “A” is specified as the character set, or you do not specify a character set, the character set used is dependent on the application server configuration. On a Windows application server, the default non-Unicode character set is dependent on the Windows ANSI Codepage (ACP) which can be checked using the DOS command chcp. On a Unix application server, the default non-Unicode character set is specified in the application server configuration file, psappsrv.cfg, and can be modified using PSADMIN. You can also use a record field value to specify the character set (for example, RECORD.CHARSET.)

A list of supported character set names valid for this argument can be found in *PeopleTools: Global Technology*.

See "Character Sets Across the Tiers of the PeopleSoft Architecture" (PeopleTools 8.54: Global Technology).

Note: If you attempt to read data from a file using a different character set than was used to write that data to the file, the methods used generate a runtime error or the data returned is unusable.

When a file is opened for reading using the “U” *charset* argument, GetFile expects the file to begin with a Unicode byte order mark (BOM). This mark indicates whether the file is written in big endian order or little endian order. A BOM consisting of the hex value 0xFEFF indicates a big endian file, a BOM consisting of the hex value 0xFFEF indicates a little endian file. If the Unicode UCS-2 file being opened does not start with a BOM, an error is returned. The BOM is automatically stripped from the file when it is read into the buffers by GetFile.

When a file is opened for writing using the “U” *charset* argument, the appropriate Unicode BOM is automatically written to the start of the file depending on whether the application server hardware platform operates in little endian or big endian mode.

BOMs are only expected or supported for files in Unicode character sets such as UTF8, UTF8BOM, and UCS2. For

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consuming applications that do expect the BOM for UTF-8 files, use the UTF8BOM character set to create UTF-8 files with the BOM.

Note: For example, the UTF-8 BOM is represented by the sequence 0xEF BB BF. This sequence can be misinterpreted by a non-Unicode character set such as ISO-8859-1 and appears as ISO characters ï»¿.

When working with XML documents, specify UTF8 or UTF8BOM for *charset*. If you are writing an XML file using a different character set, you must remember to include a character set declaration in the XML file.

In some cases, a Unicode file (UCS-2 or UTF-8) cannot be opened. An error message is displayed, when one of the following error conditions is encountered:

- If the character set is U (that is, UCS2) and the mode is:
  - A: The file is empty or the BOM is missing or incorrect.
  - R: The BOM is missing or incorrect.
  - W: The file does not exist, or adding the BOM failed.
- If the character set is UTF8 or UTF8BOM and the mode is:
  - R: For UTF8BOM, the BOM is missing or the file is empty; for UTF8, the file is empty.
  - A or W: For UTF8BOM only, the file does not exist or adding the BOM failed.

pathtype

If you have prepended a path to the file name, use this parameter to specify whether the path is an absolute or relative path. The valid values for this parameter are:

- %FilePath_Relative (default)
- %FilePath_Absolute

If you don’t specify *pathtype* the default is %FilePath_Relative.

If you specify a relative path, that path is appended to the path constructed from a system-chosen environment variable. A complete discussion of relative paths and environment variables is provided in documentation on the File class.

See "Working With Relative Paths" (PeopleTools 8.54: PeopleCode API Reference).

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If the path is an absolute path, whatever path you specify is used verbatim. You must specify a drive letter and the complete path. You can't use any wildcards when specifying a path.

The Component Processor automatically converts platform-specific separator characters to the appropriate form for where your PeopleCode program is executing. On a Windows system, UNIX "/" separators are converted to "\", and on a UNIX system, Windows "\" separators are converted to "/".

Note: The syntax of the file path does *not* depend on the file system of the platform where the file is actually stored; it depends only on the platform where your PeopleCode is executing.

Note: The syntax of the file path does *not* depend on the file system of the platform where the file is actually stored; it depends only on the platform where your PeopleCode is executing.

Returns

A File object if successful; Null otherwise.

Example

The following example opens an existing UCS-2 file for reading:

```
&MYFILE = GetFile(&SOMENAME, "E", "U");
If &MYFILE.IsOpen Then
   while &MYFILE.ReadLine(&SOMESTRING);
      /* Process the contents of each &SOMESTRING */
   End-While;
   &MYFILE.Close();
End-If;
```

The following example opens a numbered file for writing in a non-Unicode format, without overwriting any existing files:

```
&MYFILE = GetFile("c:\temp\item*.txt", "N", %FilePath_Absolute);
If &MYFILE.IsOpen Then
   &MYFILE.WriteLine("Some text.");
   &MYFILE.Close();
End-If;
```

The following example uses the CHARSET field to indicate the character set to be used:

```
&MYFILE = GetFile("INPUT.DAT", "R", RECORD.CHARSET);
```

Related Links

FileExists

FindFiles

GetTempFile

"Folder Class" (PeopleTools 8.54: PeopleCode API Reference)

"Open" (PeopleTools 8.54: PeopleCode API Reference)

"GetPosition" (PeopleTools 8.54: PeopleCode API Reference)

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"SetPosition" (PeopleTools 8.54: PeopleCode API Reference)
"IsOpen" (PeopleTools 8.54: PeopleCode API Reference)
"File Access Interruption Recovery" (PeopleTools 8.54: PeopleCode API Reference)

GetGanttChart

Syntax

GetGanttChart(*RecordName.FieldName*)

Description

Use the GetGanttChart function to get a reference to a Gantt object.

A chart must be associated with a record and field merely so that the chart object can be instantiated in PeopleCode. Which record and field you use doesn't matter. Commonly, the same derived/work record is used for all the charts in an application.

Parameters

RecordName.FieldName	Specify the record and field associated with the chart you want to get.

Returns

A reference to a Gantt object.

Example

```
&gGantt = GetGanttChart(CHARTREC_WRK.CHART_FLD);
```

Related Links

"Using the Gantt Class" (PeopleTools 8.54: PeopleCode API Reference)

GetGrid

Syntax

GetGrid(**Page.***page_name*, *grid_name*)

Description

Use the GetGrid function to instantiate an object of the Grid class and populate it with the grid specified by *grid_name*. The *grid_name* corresponds to the Page Field Name on the General tab of that grid's page field properties.

Use the GetGrid function to return a reference to a Grid object. If you want to access an AnalyticGrid object, use the GetAnalyticGrid function instead.

Note: If more than one occurs count was specified for the grid in Application Designer, GetGrid will return only the first occurrence of the grid.

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Note: PeopleSoft builds a page grid one row at a time. Because the Grid class applies to a complete grid, you can't attach PeopleCode that uses the Grid class to events that occur before the grid is built; the earliest event you can use is the Activate event for a page.

See "PeopleCode Events" (PeopleTools 8.54: PeopleCode Developer's Guide).

Specifying the Grid Name

When you place a grid on a page, the grid is automatically named the same as the name of the primary record of the scroll for the grid (from the Page Field Name field) This is the name you use with the GetGrid function.

Note: If the name of the record changes, the Page Field Name is *not* automatically updated. You must change this name if you want the name of the grid to reflect the name of the record.

To change a grid name:

1. Open the page definition in PeopleSoft Application Designer.
2. Select the grid and access the page field properties.
3. On the General tab, type the new grid name in the Page Field Name field.

Note: Every grid on a page must have a unique name.

Parameters

Page.*page_name*	Specify the name of the page definition containing the grid you want.
grid_name	Specify the Page Field Name on the General tab of the grid's page field properties. Specify a grid name consisting of any combination of uppercase letters, digits and "#", "$", "@", and "_".

Returns

A Grid object populated with the requested grid.

Example

This example retrieves the grid named EMPL_GRID within a scroll:

```
local Grid &MYGRID;

&MYGRID = GetGrid(Page.EMPLOYEE_CHECKLIST, "EMPL_GRID");
```

Related Links

"GetColumn" (PeopleTools 8.54: PeopleCode API Reference)
GetAnalyticGrid

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GetHTMLText

Syntax

GetHTMLText(**HTML.***textname* [, *paramlist*])

Where *paramlist* is an arbitrary-length list of values of undetermined (Any) data type in the form:

inval1 [, *inval2*] ...

Description

Use the GetHTMLText function to retrieve a predefined HTML text from an HTML definition in the user's current language, or the base language if no entry exists in the user's current language. If any values are included in *paramlist*, they are substituted into the HTML text based on positional reference (for example, `%BIND(:1)` is the first parameter, `%BIND(:2)` is the second, and so on.)

Note: Use the GetHTMLText function only to retrieve HTML, or HTML that contains a JavaScript program, from an HTML definition. If you have an HTML definition that contains *only* JavaScript, use the GetJavaScriptURL response class method to access it.

See "GetJavaScriptURL" (PeopleTools 8.54: PeopleCode API Reference).

Restrictions on Use

Use this function with the PeopleSoft Pure Internet Architecture only. If run from a two-tier environment, the parameter substitution does *not* take place. This function cannot be used within Application Engine programs.

Parameters

HTML. ***textname***	Specify the name of an existing HTML text from an HTML definition.

Returns

The resulting HTML text is returned as a string.

Example

The following is the text in the HTML definition TEST_HTML:

```
This is a %BIND(:1) and %BIND(:2) test.
```

The following is the PeopleCode program:

```
Local Field &HTMLfield;

&string = GetHTMLText(HTML.TEST_HTML, "good", "simple");
&HTMLfield = GetRecord(Record.CHART_DATA).HTMLAREA;
&HTMLfield.Value = &string;
```

The output from &string (displayed in an HTML area control) is:

```
This is a good and simple test.
```

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Related Links

"Understanding Internet Script Classes" (PeopleTools 8.54: PeopleCode API Reference)

"Using HTML Definitions and the GetHTMLText Function" (PeopleTools 8.54: PeopleCode Developer's Guide)

"Using HTML Areas" (PeopleTools 8.54: Application Designer Developer's Guide)

GetImageExtents

Syntax

GetImageExtents(**IMAGE.***ImageName*)

Description

Use the GetImageExtents function to return the width and height of the image specified by *ImageName*.

Parameters

ImageName	Specify the name of the image on the page. This image must exist on the page.

Returns

An array of data type number, where element 1 is the image height and element 2 is the image width.

Example

```
Local array of number &ImageExtents;

&ImageExtents = GetImageExtents(Image.PT_TREE_EXPANDED);

WinMessage("Height is " | &ImageExtents[1] | " and width is " | &ImageExtents[2]);
```

Related Links

"Specifying Image Field Attributes" (PeopleTools 8.54: Application Designer Developer's Guide)

GetInterlink

Syntax

GetInterlink(**Interlink.***name*)

Description

Use the GetInterlink function to instantiate a Business Interlink definition object based on a Business Interlink definition created in Application Designer. The Business Interlink object can provide a gateway for PeopleSoft applications to the services of any external system.

Note: Business Interlinks is a deprecated product. Use Integration Broker instead.
See *PeopleTools: Integration Broker*.

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After you use this function, you may want to refresh your page. The Refresh rowset class reloads the rowset (scroll) using the current page keys. This causes the page to be redrawn. `GetLevel0().Refresh()` refreshes the entire page. If you only want a particular scroll to be redrawn, you can refresh just that part.

Generally, do not use the GetInterlink function in a program you create from scratch. If you drag a Business Interlink definition from the project workspace (in Application Designer) to an open PeopleCode editor window, a "template" is created, with values filled in based on the Business Interlink definition you dragged in.

The following is the template created from dragging the Business Interlink definition LDAP_SEARCHBIND to an open PeopleCode editor window.

```
/* ===>
   This is a dynamically generated PeopleCode template to be used only as a helper
 to the application developer.  You need to replace all references to '<*>' OR
 default values with  references to PeopleCode variables and/or a Rec.Fields.*/

/* ===> Declare and instantiate: */
Local Interlink &LDAP_SEARCHBI_1;
Local BIDocs &inDoc;
Local BIDocs &outDoc;
Local Boolean &RSLT;
Local number  &EXECRSLT;
&LDAP_SEARCHBI_1 =  GetInterlink(INTERLINK.LDAP_SEARCHBIND);

/* ===> You can use the following assignments to set the configuration parameters.
*/

&LDAP_SEARCHBI_1.Server = "jtsay111198.peoplesoft.com";
&LDAP_SEARCHBI_1.Port = 389;
&LDAP_SEARCHBI_1.User_DN = "cn=Admin,o=PeopleSoft";
&LDAP_SEARCHBI_1.Password = &password;
&LDAP_SEARCHBI_1.UserID_Attribute_Name = "uid";
&LDAP_SEARCHBI_1.URL = "///file:C:/User/Documentum/XML%20Applications/proddoc/
peoplebook_upc/peoplebook_
upc.dtd";
&LDAP_SEARCHBI_1.BIDocValidating = "Off";


/* ===> You might want to call the following statement in a loop if there is more t⇒
han one row of data to be added.  */

/* ===> Add inputs: */
&inDoc = &LDAP_SEARCHBI_1.GetInputDocs("");
&ret = &inDoc.AddValue("User_ID", <*>);
&ret = &inDoc.AddValue("User_Password", <*>);
&ret = &inDoc.AddValue("Connect_DN", <*>);
&ret = &inDoc.AddValue("Connect_Password", <*>);
&Directory_Search_ParmsDoc = &inDoc.AddDoc("Directory_Search_Parms");
&ret = &Directory_Search_ParmsDoc.AddValue("Host", <*>);
&ret = &Directory_Search_ParmsDoc.AddValue("Port", <*>);
&ret = &Directory_Search_ParmsDoc.AddValue("Base", <*>);
&ret = &Directory_Search_ParmsDoc.AddValue("Scope", <*>);
&ret = &Directory_Search_ParmsDoc.AddValue("Filter", <*>);


/* ===> The following statement executes this instance: */
&EXECRSLT = &LDAP_SEARCHBI_1.Execute();
If ( &EXECRSLT <> 1 ) Then
   /* The instance failed to execute */
Else
&outDoc = &LDAP_SEARCHBI_1.GetOutputDocs("");
&ret = &outDoc.GetValue("Distinguished_Name", <*>);
&ret = &outDoc.GetValue("return_status", <*>);
```

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```
&ret = &outDoc.GetValue("return_status_msg", <*>);

End-If; /* If NOT &RSLT ...  */
```

Parameters

Interlink. ***name***	Specify the name of the Business Interlink definition from which to instantiate a Business Interlink object.

Returns

A Business Interlink object.

Example

The following example instantiates a Business Interlink object based on the Business Interlink definition QE_RP_SRAALL.

```
Local Interlink &SRA_ALL_1;

&SRA_ALL_1 = GetInterlink(Interlink.QE_RP_SRAALL);
```

Related Links

"Understanding Business Interlink Class" (PeopleTools 8.54: PeopleCode API Reference)

GetJavaClass

Syntax

GetJavaClass(*ClassName*)

Description

Use the GetJavaClass function to access a Java class so that you can manipulate it in PeopleCode. This is used for those classes that have static members, where it isn't appropriate to instantiate an object of the class. You can call only static methods, that is, class methods, with the object created with this function.

In Java, you access such static members of a class by using the class name:

```
result = java.class.name.SomeStaticMethod();
```

To do this in PeopleCode, do the following:

```
&Result = GetJavaClass("java.class.name").SomeStaticMethod();
```

Note: If you create a class that you want to call using GetJavaClass, it can be located in a directory specified in the PS_CLASSPATH environment variable or in other specified locations. The PeopleCode API Reference provides details on where you can place custom and third-party Java classes.

See "System Setup for Java Classes" (PeopleTools 8.54: PeopleCode API Reference).

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Parameters

ClassName	Specify the name of an already existing class. This parameter takes a string value.

Returns

A JavaObject that refers to the named Java class.

Example

The Java class **java.lang.reflect.Array** has no public constructors and has only static methods. The methods are used to manipulate Java array objects. One of these static methods is GetInt:

```
public static int getInt(Object array, int index)
```

To use this method, get the class by using GetJavaClass. This code illustrates accessing the value of the fifth element of an integer array.

```
Local JavaObject &RefArray, &MyArray;

. . .

&RefArray = GetJavaClass("java.lang.reflect.Array");

. . .

&MyArray = CreateJavaArray("int[]", 24);

. . .

&FifthElement = &RefArray.getInt(&MyArray, 4);
```

Related Links

CreateJavaObject
CreateJavaArray
"Understanding Java Class" (PeopleTools 8.54: PeopleCode API Reference)

GetLEDGauge

Syntax

GetLEDGauge(*RecordName*.*FieldName*)

Description

Use the GetLEDGauge function to get a reference to an LEDGauge object.

A gauge must be associated with a record and field merely so that the gauge object can be instantiated in PeopleCode. Which record and field you use doesn't matter. Commonly, the same derived/work record is used for all the charts in an application.

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Parameters

RecordName.FieldName	Specify the record and field name associated with the LED gauge.

Returns

A reference to an LEDGauge object.

Example

```
&MyGauge = GetLEDGauge(GAUGEREC_WRK.GAUGE_FLD);
```

Related Links

"Using the Gauge Classes" (PeopleTools 8.54: PeopleCode API Reference)

GetLevel0

Syntax

`GetLevel0``()`

Description

Use the GetLevel0 function to create a rowset object that corresponds to level 0 of the component buffer. If used from PeopleCode that isn't associated with a page, it returns the base rowset from the current context.

Parameters

GetLevel0 has no parameters. However, it does have a default method, GetRow, and a shortcut. Specifying `GetLevel0()(1)` is the equivalent of specifying `GetLevel0().GetRow(1)`.

Returns

This function returns a rowset object that references the base rowset. For a component, this is the level 0 of the page. For a Application Engine program, this is the state record rowset. For a message, this is the base rowset.

Note: You can also get the base rowset for a message using the GetRowset message class method, that is, `&MSG.GetRowset()`.

Example

The following code sample returns the level one rowset.

```
Local Rowset &ROWSET;

&ROWSET = GetLevel0().GetRow(1).GetRowset(SCROLL.LEVEL1_REC);
```

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The following is equivalent to the previous example.

```
Local Rowset &ROWSET;

&ROWSET = GetLevel0()(1).GetRowset(SCROLL.LEVEL1_REC);
```

To reference a level 2 rowset you would have code similar to this:

```
Local Rowset &ROWSET_LEVEL2, &ROWSET_LEVEL0, &ROWSET_LEVEL1;

&ROWSET_LEVEL2 = GetLevel0().GetRow(1).GetRowset(SCROLL.LEVEL1_REC).GetRow(5).
 GetRowset(SCROLL.LEVEL2_REC);

   /* or */

&ROWSET_LEVEL0 = GetLevel0();
&ROWSET_LEVEL1 = &ROWSET_LEVEL0.GetRow(1).GetRowset(SCROLL.LEVEL1_REC);
&ROWSET_LEVEL2 = &ROWSET_LEVEL1.GetRow(5).GetRowset(SCROLL.LEVEL2_REC);
   /* or */
&ROWSET_LEVEL2 = GetLevel0()(1).LEVEL1_REC(5).GetRowset(SCROLL.LEVEL2_REC);
```

Related Links

GetRowset

"Understanding Rowset Class" (PeopleTools 8.54: PeopleCode API Reference)

"Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide)

GetMethodNames

Syntax

GetMethodNames(*Type, Name*)

Description

Use the GetMethodNames function to return either the method names for a Component Interface, or the function names of a WEBLIB record.

Parameters

Type Specify the type of methods or functions you want returned. This parameter takes a string value. The values are:

- WebLib
- CompIntfc

Name Specify the name of the Component Interface or WEBLIB record that you want to know the methods or functions for.

Returns

An array of string containing the method or function names.

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Example

```
Local array of string &Array;

&Array = GetMethodNames("CompIntfc", CompIntfc.USER_PROFILE);

&Array = GetMethodNames("WebLib", Record.WEBLIB_PORTAL);
```

Related Links

"Component Interface Examples" (PeopleTools 8.54: PeopleCode API Reference)
"Web Libraries" (PeopleTools 8.54: PeopleCode API Reference)

GetMessage

Syntax

GetMessage()

Description

Use the GetMessage function to return a message.

Note: This function has been deprecated and remains for backward compatibility only. Use the IntBroker class GetMessage method instead.

It retrieves a message from the message queue for the current message being processed.

Note: The GetMessage function does not load the message with data. It always creates a new instance of a message object. You must use another method, such as GetRowset, to populate the message object. In addition, you must populate the message object with data before running any methods on it.

Related Links

"GetMessage" (PeopleTools 8.54: PeopleCode API Reference)

Parameters

None.

Returns

A reference to an empty message object if successful, NULL if not successful.

Example

```
Local message &MSG;
&MSG = GetMessage();
```

Related Links

CreateMessage
"GetRowset" (PeopleTools 8.54: PeopleCode API Reference)
"Understanding Message Classes" (PeopleTools 8.54: PeopleCode API Reference)

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GetMessageInstance

Syntax

GetMessageInstance(*pub_id*, *pub_nodename*, *channelname*)

Description

Use the GetMessageInstance function to get a message from the message queue.

Note: This function has been deprecated and is no longer supported.

GetMessageXmlDoc

Syntax

GetMessageXmlDoc()

Description

Use the GetMessageXmlDoc function in any of the messaging PeopleCode events.

Note: This function has been deprecated and remains for backward compatibility only. Use the Message class GetXMLDoc method instead.

It retrieves an XML message, either from the message queue for asynchronous messages, or in memory for synchronous messages, for the current message being processed. An XML message is a message that is unstructured, that is, isn't based on a record hierarchy. It creates and loads a data tree for the default message version, and returns NULL if not successful.

Related Links

"GetXmlDoc" (PeopleTools 8.54: PeopleCode API Reference)

Parameters

None.

Returns

A reference to an XmlDoc object if successful, NULL if not successful.

Example

The following example uses the GetMessageXmlDoc built-in function.

```
Local XmlDoc &BIGMAN;
Local XmlNode &node, &root;
Local string &outstring;
Local Rowset &LEVEL0;
Local Record &SALES_ORDER_INFO, &REC;

&CRLF = Char(13) | Char(10);

&BIGMAN = GetMessageXmlDoc();
```

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```
&root = &BIGMAN.DocumentElement;
&child_count = &root.ChildNodeCount;

/* Get values out of XMLDoc */
&node_array = &root.GetElementsByTagName("QE_ACCT_ID");
&acct_id_node = &node_array.Get(2);
&account_id_value = &acct_id_node.NodeValue;

&node_array = &root.GetElementsByTagName("QE_ACCOUNT_NAME");
&acct_name_node = &node_array.Get(2);
&account_name_value = &acct_name_node.NodeValue;

&node_array = &root.GetElementsByTagName("QE_ADDRESS");
&address_node = &node_array.Get(2);
&address_value = &address_node.NodeValue;

&node_array = &root.GetElementsByTagName("QE_PHONE");
&phone_node = &node_array.Get(2);
&phone_value = &phone_node.NodeValue;

&outstring = "GetMessageXMLDoc Test";
&outstring = &outstring | &CRLF | &account_id_value | &CRLF | &account_name_value
 | &CRLF | &address_value | &CRLF | &phone_value;

&SALES_ORDER_INFO = CreateRecord(Record.QE_SALES_ORDER);
&SALES_ORDER_INFO.GetField(Field.QE_ACCT_ID).Value = &account_id_value;
&SALES_ORDER_INFO.GetField(Field.DESCRLONG).Value = &outstring;
&SALES_ORDER_INFO.Update();
```

Related Links

PublishXmlDoc

SyncRequestXmlDoc

"Understanding XmlDoc Classes" (PeopleTools 8.54: PeopleCode API Reference)

"Understanding Message Classes" (PeopleTools 8.54: PeopleCode API Reference)

GetNextNumber

Syntax

GetNextNumber ({*record.field* | *record_name*, *field_name*}, *max_number*)

Description

Use the GetNextNumber function to increment the value in a record for the field you specify by one and returns that value. You might use this function to increment an employee ID field by one when you are adding a new employee. If the new value generated exceeds *max_number*, a negative value is returned and the field value isn't incremented.

The maximum value possible for *max_number* is 2147483647.

PeopleCode Event Considerations

Because this function results in a database update (specifically, UPDATE, INSERT, and DELETE) it should only be issued in the following events:

- SavePreChange
- WorkFlow

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- SavePostChange

If you use this function in an event other than these, you need to ensure that the dataflow is correct and that you do not receive unexpected results.

GetNextNumber and GetNextNumberWithGapsCommit

The following is some of the differences between the two functions, to enable you to better chose which one is better for your application.

GetNextNumber	***GetNextNumberWithGapsCommit***
No AutoCommit (which can be a problem, as the table is locked until all Save events are finished.)	AutoCommit (this can be a performance enhancement as table is not locked as long).
	Ability to use WHERE criteria for maintaining multiple sequence numbers in a single record.
	Ability to increment by more than 1.
Allowed in SavePostChange	Can be used in any PeopleCode event.

Parameters

record.field

Specify the record and field identifiers for the field for which you want the new number. This is the recommended way to identify the field.

record_name

Specify as a string the name of the record containing the field for which you want the new number. This parameter with *field_name* was used prior to PeopleTools 8.

field_name

Specify as a string the name of the field for which you want the new number. This parameter with *record_name* was used prior to PeopleTools 8.

Note: If you use the older syntax (*record_name*, *field_name*), you have to manually update these two parameters in your programs whenever that record or field is renamed. The new syntax (*record.field)* is automatically updated, so you won't have to maintain it.

---

max_number

Specify the highest allowed value for the field you're incrementing. The maximum value possible for *max_number* is 2147483647.

Returns

A Number value equal to the highest value of the field specified plus one.

GetNextNumber returns an error if the value to be returned would be greater than *max_number*. The function returns one of the following:

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Numeric Value	*Constant Value*	*Description*
Number	N/A	The new number
-1	%GetNextNumber_SQLFailure	SQL failure
-2	%GetNextNumber_TooBig	Number too large, beyond *max_number*
-3	%GetNextNumber_NotFound	No number found, invalid data format

Example

```
If %Component = "RUN_AR33000" Then
   DUN_ID_NUM = GetNextNumber(INSTALLATION_AR.DUN_ID_NUM, 99999999);
End-if;
```

The following uses the constant to check for the value returned:

```
&VALUE = GetNextNumber(INSTALLATION_AR.DUN_ID_NUM, 999);

Evaluate &VALUE
When = %GetNextNumber_SQLFailure
     /* do processing */
When = %GetNextNumber_TooBig
     /* do processing */
When = %GetNextNumber_NotFound
     /* Do processing */
When-other
     /* do other processing */
End-Evaluate;
```

Related Links

GetNextNumberWithGaps

GetNextNumberWithGaps

Syntax

GetNextNumberWithGaps(*record.field*, *max_number*, *increment* [, *WHERE_Clause*, *paramlist*])

Where *paramlist* is an arbitrary-length list of values in the form:

var1 [, *var2*] ...

Description

Use the GetNextNumberWithGaps function to determine the highest value in a table for the field you specify, and return that value plus *increment*.

Note: This function has been deprecated and remains for backward compatibility only. Use the GetNextNumberWithGapsCommit function instead.

This function also enables you to specify a SQL WHERE clause as part of the function for maintaining multiple sequence numbers in a single record.

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Note: GetNextNumberWithGaps also issues a COMMIT after incrementing the sequence number if no other database updates have occurred since the last COMMIT. This limits the time a database lock is held on the row and so may improve performance.

PeopleCode Event Considerations

Because this function results in a database update (specifically, UPDATE, INSERT, and DELETE) it should only be issued in the following events:

- SavePreChange
- WorkFlow

If you use this function in an event other than these, you need to ensure that the dataflow is correct and that you do not receive unexpected results.

Parameters

record.field Specify the record and field identifiers for the field for which you want the new number. This is the recommended way to identify the field.

max_number Specify the highest allowed value for the field you're incrementing. You can specify up to 31 digits for this value.

increment Specify the value you want the numbers incremented by. You can specify up to 31 digits for this value.

WHERE_Clause Specify a WHERE clause for maintaining multiple sequence numbers.

paramlist Parameters for the WHERE clause.

Returns

A Number value equal to the highest value of the field specified plus one.

GetNextNumberWithGaps returns an error if the value to be returned would be greater than *max_number*. The function returns one of the following:

Numeric Value	*Constant Value*	*Description*
Number	N/A	The new number
-1	%GetNextNumber_SQLFailure	SQL failure
-2	%GetNextNumber_TooBig	Number too large, beyond *max_number*
-3	%GetNextNumber_NotFound	No number found, invalid data format

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Example

The following PeopleCode:

```
&greg = GetNextNumberWithGaps(GREG.DURATION_DAYS, 999999, 50,
"where emplid = :1", 8001);
```

results in the following:

```
2-942   21.53.09    0.000 Cur#4.PTTST81B RC=0 Dur=0.000 Connect=PTTST81B/sa/
2-943   21.53.09    0.000 Cur#4.PTTST81B RC=0 Dur=0.000 COM Stmt=UPDATE PS_GREG
 SET DURATION_DAYS = DURATION_DAYS + 50 where emplid = 8001
2-944   21.53.09    0.000 Cur#4.PTTST81B RC=0 Dur=0.000 EXE
2-945   21.53.09    0.000 Cur#4.PTTST81B RC=0 Dur=0.000 COM Stmt=SELECT DURATION_
DAYS FROM PS_GREG where emplid = 8001
2-946   21.53.09    0.000 Cur#4.PTTST81B RC=0 Dur=0.000 EXE
2-947   21.53.09    0.000 Cur#4.PTTST81B RC=0 Dur=0.000 Fetch
2-948   21.53.09    0.010 Cur#4.PTTST81B RC=0 Dur=0.010 Commit
2-949   21.53.09    0.010 Cur#4.PTTST81B RC=0 Dur=0.010 Disconnect
```

Related Links

GetNextNumber

GetNextNumberWithGapsCommit

Syntax

GetNextNumberWithGapsCommit(*record.field*, *max_number*, *increment* [, *WHERE_Clause*, *paramlist*])

Where *paramlist* is an arbitrary-length list of values in the form:

var1 [, *var2*] ...

Description

Use the GetNextNumberWithGapsCommit function to return the sequence number value plus *increment* for the given *field* residing in the given *record*. This function also enables you to specify a SQL Where clause as part of the function for maintaining multiple sequence numbers in a single record.

This function is typically used for obtaining a new sequence number for the application, for example, getting a new Purchase Order number to be used in the application transaction.

Use this function instead of the GetNextNumberWithGaps function. The GetNextNumberWithGaps function is very restrictive in its usage. The GetNextNumberWithGapsCommit function can be used in any event. The sequence number (*record.field*) is incremented right away and it doesn't hold any database internal row lock beyond the execution of this function.

Note: A secondary database connection is used to increment and retrieve *record.field*. The default behavior is to keep the secondary database connection persistent in order to improve performance for the next GetNextNumberWithGapsCommit usage. If the database administrator finds the persistent connection too high an overhead for the production environment (which should not be the case since PeopleSoft uses application server to mulitplex the database connection), the database administrator can change the default behavior to use an on-demand connection method. The persistent second connection is disabled using DbFlags bit eight in the application server and process scheduler configuration files. The second connection can be completely disabled using DbFlags bit four in the application server and process scheduler configuration files

---

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Considerations Using GetNextNumberWithGapsCommit

The following restrictions apply to the GetNextNumberWithGapsCommit function:

- PeopleSoft does not recommend Using both the GetNextNumberWithGapsCommit function and the GetNextNumber function in the same application, on the same table, in the same unit of work. This can lead to lock contention or deadlocking.
- For a DB2 UDB for z/OS database, isolate the table that contains the sequence number to its own tablespace and set the locksize parameter to row.

Related Links

"DbFlags" (PeopleTools 8.54: System and Server Administration)

Parameters

record.field Specify the record and field names for the field for which you want the new number. This is the recommended way to identify the field.

max_number Specify the highest allowed value for the field you're incrementing. You can specify up to 31 digits for this value.

increment Specify the value you want the numbers incremented by. You can specify up to 31 digits for this value.

WHERE_Clause Specify a SQL Where clause for maintaining multiple sequence numbers.

paramlist Specify the parameters for the SQL Where clause.

Returns

A number value equal to the highest value of the field specified plus one increment.

The GetNextNumberWithGapsCommit function returns an error if the value to be returned would be greater than *max_number*. The function returns one of the following:

Numeric Value	*Constant Value*	*Description*
Number	None	The new number
-1	%GetNextNumber_SQLFailure	SQL failure
-2	%GetNextNumber_TooBig	Number returned is too large, beyond *max_number*.
-3	%GetNextNumber_NotFound	No number found, invalid data format.

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Example

The following PeopleCode increments the MCF_EMAIL_ID field by one and returns the new value, committing immediately.

```
&LAST_AUTO_NBR = GetNextNumberWithGapsCommit(MCF_INSTALL.MCF_EMAIL_ID, 2147483647,
 1);
```

The above code produces output similar to the following:

```
1-192    10.39.54    0.320 Cur#2.1980.DB844901 RC=0 Dur=0.320 Connect=Secondry
/DB844901/testdb2/
1-193    10.39.54    0.000 GNNWGC ---- Successful obtain Second DB connection
1-194    10.39.54    0.010 Cur#2.1980.DB844901 RC=0 Dur=0.010 COM Stmt=UPDATE PS_
MCF_INSTALL SET MCF_EMAIL_ID = MCF_EMAIL_ID + 1
1-195    10.39.54    0.000 Cur#2.1980.DB844901 RC=0 Dur=0.000 COM Stmt=SELECT MCF_
EMAIL_ID FROM PS_MCF_INSTALL
1-196    10.39.54    0.000 Cur#2.1980.DB844901 RC=0 Dur=0.000 Commit
1-197    10.39.54    0.000 Cur#2.1980.DB844901 RC=0 Dur=0.000 Disconnect
```

Related Links

GetNextNumber

GetNextProcessInstance

Syntax

GetNextProcessInstance([*Commit*])

Description

Use the GetNextProcessInstance function to retrieve the next available process instance from the Process Scheduler System table. When determining to find the next process instance in the sequence, the function ensures the next available process instance does not exist in both the Process Request and Message Log tables.

By default, the function commits the changes to the Process Scheduler system table to set it to the next available process instance for the next available request. If this function is called within a PeopleCode function for which issuing a COMMIT to the database destroys a unit of work, specify "0" for *Commit.*

Parameters

Commit Specify whether the current data instance should be committed to the database. This parameter takes a string value: "1", commit the data, "0", do not commit the data. "1" is the default value.

Returns

An integer representing the next available process instance if successful, otherwise 0 in case of a failure.

Related Links

"Understanding Process Request Classes" (PeopleTools 8.54: PeopleCode API Reference)

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GetNRXmlDoc

Syntax

GetNRXmlDoc(*NRID, EntityName*)

Description

Use the GetNRXmlDoc function in any of the messaging PeopleCode events. It retrieves an XML message, categorized as non-repudiation, from the message queue for the specified non-repudiation ID. An XML message is a message that is unstructured, that is, isn't based on a record hierarchy. It creates and loads a data tree for the default message version, and returns Null if not successful.

Parameters

NRID	Specify the non-repudiation ID for the XML message that you want to retrieve. This parameter takes a numeric value.
EntityName	Specify the name of the entity that signed the data, as a string. For Peoplesoft, this is the node name.

Returns

A reference to an XmlDoc object if successful, Null if not successful.

Related Links

"Understanding XmlDoc Classes" (PeopleTools 8.54: PeopleCode API Reference)

GetOrgChart

Syntax

GetOrgChart(*RecordName.FieldName*)

Description

Use the GetOrgChart function to get a reference to an OrgChart object.

A chart must be associated with a record and field merely so that the chart object can be instantiated in PeopleCode. Which record and field you use doesn't matter. Commonly, the same derived/work record is used for all the charts in an application.

Parameters

RecordName.FieldName	Specify the record and field associated with the chart you want to get.

Returns

A reference to a an OrgChart object.

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Example

```
&ocOrgChart = GetOrgChart(CHARTREC_WRK.CHART_FLD);
```

Related Links

"Using the OrgChart Class" (PeopleTools 8.54: PeopleCode API Reference)

GetPage

Syntax

GetPage(**PAGE.***pagename*)

Description

Use the GetPage function to return a reference to a page object. Generally, page objects are used to hide or unhide pages in a component.

Generally, the PeopleCode used to manipulate a page object would be associated with PeopleCode in the Activate event.

Note: The page object shouldn't be used until after the Component Processor has loaded the page: that is, don't instantiate this object in RowInit PeopleCode, use it in PostBuild or Activate instead.

Note

An expression of the form

```
PAGE.name.property
```

is equivalent to **GetPage**(*name*).*property*.

Parameters

PAGE. ***pagename***	The name of the page for which you want to create an object reference. Must be a page in the current context.

Returns

A page object that references the page.

Example

In the following example, a page is hidden based on the value of the current field.

```
If PAYROLE_TYPE = "Global" Then
   GetPage(PAGE.JOB_EARNINGS).Visible = False;
End-If;
```

Related Links

"Understanding Page Class" (PeopleTools 8.54: PeopleCode API Reference)

"Specifying Data with Contextual References" (PeopleTools 8.54: PeopleCode Developer's Guide)

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GetPageField

Syntax

```
GetPageField(Page.pagename, [scrollpath. [target_row, ]] page_field_name)
```

where *scrollpath* is:

```
[RECORD.level1_recname, level1_row, [RECORD.level2_recname, level2_row, ]]
RECORD.target_recname
```

To prevent ambiguous references, you can use **SCROLL.** *scrollname*, where *scrollname* is the same as the scroll level's primary record name.

Description

Use the GetPageField function to reference a specific page field anywhere in the current component. Generally, you will need to use GetPageField to reference radio buttons, which represent multiple instances of a record field.

Note: The page field name is not the same as the record field name. The page field name is the name specified on the General tab for the page field properties in the page definition in Application Designer. The GetField function, by contrast, uses the record field name as an argument.

If you need to reference a field that is unique in the current context, you can use the GetField function.

See Idiv, Idiv, GetField, "Understanding Current Context" (PeopleTools 8.54: PeopleCode Developer's Guide).

Parameters

Pagename	The name of the page specified in the page definition, preceded by the keyword **Page**. The *pagename* page must be in the current component. You can also pass the %page system variable in this parameter (without the **Page** reserved word).
scrollpath	A construction that specifies a scroll level in the component buffer. This parameter is optional. The default is the current scroll.
target_row	The row number of the row in which the field occurs. This parameter is optional. The default is the current row.
page_field_name	The name of the page field specified in the page field properties in the page definition.

Returns

This function returns a field object that references a specific instance of a page field in the component buffer.

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Example

The following example initializes four Field objects to four specific radio button page fields and conditionally sets their labels to either a long version or a short version.

```
&Fld1 = GetPageField(Page.GNNWG_PAGE, "INITIALIZE");  /* Initialize Radio Button */
&Fld2 = GetPageField(Page.GNNWG_PAGE, "COMMIT");  /* Commit Radio Button */
&Fld3 = GetPageField(Page.GNNWG_PAGE, "ROLLBACK");  /* Rollback Radio Button */
&Fld4 = GetPageField(Page.GNNWG_PAGE, "SAMFAIL");  /* SAMFAIL Radio Button */

If &SetLabel = "Long"  Then
   &Fld1.Label = "Initialize_Long_Label_Name";
   &Fld2.Label = "Commit_Long_Label_Name";
   &Fld3.Label = "Rollback_Long_Label_Name";
    &Fld4.Label = "SAMFAIL_Long_Label_Name";
Else
   &Fld1.Label = "Initialize";
   &Fld2.Label = "Commit";
   &Fld3.Label = "Rollback";
   &Fld4.Label = "SAMFAIL";
End-If;
```

Even though all of the radio buttons represent the same record field, GetPageField enables you to reference each radio button individually.

Related Links

"Understanding the Field Class" (PeopleTools 8.54: PeopleCode API Reference)

"Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide)

Idiv

GetField

GetPageTitle

Syntax

GetPageTitle()

Description

Use the GetPageTitle function to return the title of the page.

Important! Use this function within fluid applications only.

Parameters

None.

Returns

A string value.

Example

```
PTLAYOUT.PAGETITLE_GROUPBOX.Label = GetPageTitle();
```

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GetPageType

Syntax

GetPageType(*Page.PAGE_NAME*)

Description

Use the GetPageType function to return the page type—for example, header, footer, prompt, and so on.

Important! Use this function within fluid applications only.

Parameters

Page.PAGE_NAME Specifies the page ID as a string value. Alternatively, you can use the %Page system variable (without the Page. reserved word) to speify the current page.

Returns

One of the following integer values:

Numeric Value	*Constant Value*	*Description*
0	%MainPage	The main, or primary fluid page. A main fluid page definition contains the bulk of the transaction fields and controls.
1	%SubPage	A standard subpage that contains a grouping of fields--such as an address block--which is defined to be reusable within multiple other page definitions.
2	%SecondaryPage	A standard secondary page that you access through another page, usually by clicking a link or push button.
3	%PopupPage	A standard, display-only pop-up page that you access through another page, usually by clicking a link or push button.
4	%HeaderPage	A page displayed in the <header> section of the HTML acting as the banner area fixed at the top of every page within the fluid component.
5	%SidePage	Reserved for future use.

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Numeric Value	*Constant Value*	*Description*
6	%FooterPage	A page displayed in the <footer> section of the HTML at the bottom of every page within the fluid component, containing elements related to the end of a transaction, such as a Save button.

Example

```
If GetPageType(Page.QE_NUI_SHOP_FT) <> %FooterPage Then
...
End-If;
If GetPageType(Page.QE_NUI_SHOP_SIDE) <> %SidePage Then
...
End-If;
```

Related Links

"Selecting Page Types" (PeopleTools 8.54: Fluid User Interface Developer's Guide)

GetProgramFunctionInfo

Syntax

GetProgramFunctionInfo(*ProgramId*)

Where *ProgramId* is the following for PeopleCode user-defined functions:

RECORD.*RecordName***.FIELD.***FieldName***.METHOD.***MethodName*

Where *ProgramId* is the following for Component Interface user-defined methods:

COMPONENTINTERFACE.*CIName***.METHODS.Methods**

Description

Use the GetProgramFunctionInfo function to determine the full signature and return values of a PeopleCode user-defined function, or a Component Interface method.

Considerations Using Component Interfaces

Component Interfaces only support type conversion of primitive data types back and forth between PeopleCode values and those using inside Component Interface processing.

Component Interface processing traps all errors that occur inside the invocation of the Component Interface and on failure simply returns a false value.

Parameters

ProgramId Specify the full name of the function or the Component Interface method, as a string.

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Returns

An array of array of any.

There is one array for every function or method defined in the program. Each array contains the following information:

1. The name of the function.
2. The signature of the parameters as a comma-separated string (see additional information below.)
3. The signature of the result (see result list below.)
4. The annotation of the Doc tag.
5. A boolean indicator of whether this function is to be exported (as indicated by the noexp tag).
6. A boolean indicator of whether this function is permitted to be called by this user. This only makes sense for Functions defined as CI methods in Component Interface PeopleCode. The default value is True.

The parameters may be modified by the following values:

Value	***Description***
?	An optional parameter.
*	A repeated parameter.
&	A parameter reference (PARM_NAME)

The possibly values of the result are as follows. Note the use of both lower and upper case letters.

Value	***Description***
D	Dec
d	Date
S	String
A	Any
B	Boolean
V	None
t	Time
T	DateTime
I	Image

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Value	*Description*
i	Integer
O	Object
f	Float
9	Number
x	Unknown
[<value>	Array A single bracket indicates a single array. Two brackets indicates a two-dimensional array, three brackets a three-dimensional array, and so on. The value following the bracket indicates the type of array. For example, `[i` indicates an array of integer, `[[S` indicates an array of array of string.

Example

In the following example, this code is associated with the record QE_ABSENCE_HIST, on the field QE_REASON, in the FieldChange event.

```
Function Update(&1 As string) Returns number NoExport
   Doc "this is some attached annotation"
   Return 1.23;
End-Function;
/* everything else . . */
```

The following PeopleCode program:

```
Local array of array of any &r;
&r = GetProgramFunctionInfo("RECORD.QE_ABSENCE_HIST.FIELD.QE_REASON.METHOD.Field
Change");
```

Returns a two-dimensional array with a single row that contains the following:

&r[1][1] – the name of the function “Update”

&r[1][2] – the signature of the parameter “S&”

&r[1][3] – the signature of the result “9”

&r[1][4] – the annotation of the doc tag “this is some attached annotation”

&r[1][5] – a boolean indicator of whether this function is to be exported. In this case it returns false.

The following example is used with a Component Interface program:

```
Function Update(&1 As string) Returns number NoExport
   Doc "this is some attached annotation"
   Return 1.23;
End-Function;
```

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```
Function Updateagain(&1 As string) Returns number
   Doc "this is some more attached annotation"
   Return 1.23;
End-Function;

Local File &log;

Function LogText(&msg As string)
   If &log = Null Then
      Return
   End-If;
   &log.WriteLine(&msg);
End-Function;


Function CreateCI(&Name As string) Returns ApiObject
   Local ApiObject &CI;
   /** Get Component Interface **/
   &CI = %Session.GetCompIntfc(@("CompIntfc." | &Name));
   /* instantiate */
   &CI.PROCESSNAME = "AEMINITEST";
   &CI.PROCESSTYPE = "Application Engine";
   &CI.RUNCONTROLID = 99;
   &CI.Create();
   Return &CI;
End-Function;

Function DisplayProgramFuncInfo(&r As array of array of any)

   Local integer &i;

   For &i = 1 To &r.Len
      Local string &o;
      &o = &r [&i][1] | "(" | &r [&i][2] | ";" | &r [&i][3] | ") doc '"
      | &r [&i][4] | "'";
      If &r [&i][5] = 0 Then
         &o = &o | " noexport ";
      Else
         &o = &o | " export ";
      End-If;
      If &r [&i][6] = 0 Then
         &o = &o | " no permission ";
      Else
         &o = &o | " permitted ";
      End-If;
      LogText(&o);
   End-For;
End-Function;

Function SetupParameters(&Names As array of string, &Sigs As array of string)
 Returns array of any
   Local array of any &p = CreateArrayAny();
   Local integer &i;

   /* could use the parameter name to get values out of a dom?? */
   /* Base types we could handle
//  D = Dec
//  S = String
//  d = Date
//  A = Any
//  B = Boolean
//  V = None
//  t = Time
//  T = DateTime
//  I = Image
//  O = Object
//  i = Integer
//  f = Float
//  9 = Number
//  x = Unknown
```

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```
*/
   For &i = 1 To &Sigs.Len
      Local string &parName = RTrim(LTrim(&Names [&i + 1]));
/* first name is create/get/?? */
      /* Here is where you'd get the value for this particular parameter
 and then push it properly onto the parameter array */
      Evaluate Substring(&Sigs [&i], 1, 1)
      When = "D"
         &p.Push(1);
         Break;
      When = "S"
         &p.Push("String for " | &parName);
         Break;
      When = "9"
      When = "i"
         &p.Push(&i);
         Break;
      When-Other
         &p.Push("Unimplemented . . .");
      End-Evaluate
   End-For;

   Return &p;
End-Function;

Function CallUDMMethod(&ci As ApiObject, &funcInfo As array of array of any,
 &methodName As string) Returns any

   /* an example of calling a user defined method on a ci */

   /* 1. find it in the funcinfo */
   Local integer &i = 1;
   Local integer &nFuncs = &funcInfo.Len;

   While &i <= &nFuncs
      /* name should match and it should be exportable (the default)
   and the doc tag should have something in it
   and it should be permitted */
      If &funcInfo [&i][1] = &methodName And
            &funcInfo [&i][5] <> 0 And
            Len(&funcInfo [&i][4]) > 0 And
            &funcInfo [&i][6] <> 0 Then
         Break;
      End-If;
      &i = &i + 1;
   End-While;

   If &i > &nFuncs Then
      LogText("not found");
      Return False;
   End-If;

   /* 2. Next get the info necessary to call the function based on the signature
 info */
   Local string &parSignatures = &funcInfo [&i][2];
   Local boolean &bPars = False;
   Local array of any &Pars;
   If Len(&parSignatures) > 0 Then
      &bPars = True;
      Local array of string &parSignature = Split(&parSignatures, ",");
      Local array of string &parNames = Split(&funcInfo [&i][4], ",");
/* first one should be Create/get/? */
      /* number of parameters should match number of parameter names  */
      If &parSignature.Len <> &parNames.Len - 1 Then
         LogText("length mismatch");
         Return False;
      End-If;
      &Pars = SetupParameters(&parNames, &parSignature);
   Else
      &Pars = CreateArrayAny();
   End-If;
```

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```
   /* 3. Call the udm method with our parameters */
   Return &ci.InvokeMethodUDF(&methodName, &Pars);

End-Function;

QE_ABSENCE_HIST.QE_REASON.Value = ""; /* clean it up */
Local string &ciName = "PROCESSREQUEST";

Local ApiObject &CI = CreateCI(&ciName);

Local array of any &pars = CreateArrayAny("First parameter", 2);
/* check with variable for method name */
Local string &methodname = "FoxTest";
/* add in a bogus parameter  - tested - works - fails with false return :-( as per ⇒
usual in api objects*/
Local string &bogus = "bogus par";

&log = GetFile("C:\temp\junk\udflog.txt", "a", %FilePath_Absolute);
LogText("====================================");
LogText("Result of direct call: " | &CI.InvokeMethodUDF(&methodname, &pars /* , &bo⇒
gus */));
rem LogText("&ci: " | &CI);

/* do this the new way - at least model how a webservices Peoplecode implementation⇒
 could do it */
Local string &ciObjid = "COMPONENTINTERFACE." | &ciName | ".METHOD.Methods";
/* get the program information */
Local array of array of any &progInfo;
&progInfo = GetProgramFunctionInfo(&ciObjid);
/* returns a an array of arrays: an array for each function defined in the program.

Each row has the following ([i] = position i):
[1] = program name (string)
[2] = comma separated list of parameter signatures (string)
[3] = result signature (string)
[4] = text that was with the doc tag. Convention here is a comma separated list of ⇒
values:
    first item is one of either Create or Get, specifying what method has to be cal⇒
led first
    second and subsequent items are the names of the parameters (this information i⇒
s not obtainable from the
    program information. These are the names to be exposed as the web service param⇒
eter names

    e.g. the above function would have a doc like "Create, StringParameter, Numeric⇒
Parameter"
[5] = an integer setting: 0=no export and 1=export (the default)
[6] = an integer setting indicating the permission for user to call this (only appl⇒
ies to CI programs)
  0=no permission and 1=permitted (the default)

*/
DisplayProgramFuncInfo(&progInfo);
If &CI = Null Then
   &CI = CreateCI(&ciName);
End-If;
LogText("Result of indirect call: " | CallUDMMethod(&CI, &progInfo, &methodname));
```

Related Links

"Understanding Component Interface Class" (PeopleTools 8.54: PeopleCode API Reference)

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GetPubContractInstance

Syntax

GetPubContractInstance(*pub_id*, *pub_nodename*, *channelname*, *sub_nodename*)

Description

Note: This function is no longer available. It has been replaced with the GetPubXmlDoc function.

See GetPubXmlDoc.

GetPubHeaderXmlDoc

Syntax

GetPubHeaderXmlDoc(*PubID*, *PubNode*, *ChannelName*, *VersionName*[, *Segment*])

Description

Use the GetPubHeaderXmlDoc function to retrieve the message header from the message queue.

Note: This function has been deprecated and remains for backward compatibility only. Use the IntBroker class GetMessage method instead.

The message header, also known as the message instance, is the published message *before* any transformations were performed.

Note: This function should *not* be used in standard message processing. It should only be used when correcting or debugging a publication contract that is in error.

Related Links

"GetMessage" (PeopleTools 8.54: PeopleCode API Reference)

Parameters

PubID	Specify the PubID of the message.
PubNode	Specify the Pub Node Name of the message.
ChannelName	Specify the channel name of the message.
VersionName	Specify the version name of the message.
Segment	Specify an integer representing which segment you want to access. The default value is one, which means that if you do not specify a segment, the first segment is accessed.

Returns

A reference to an XmlDoc object if successful, NULL if not successful.

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Related Links

ReSubmitPubHeaderXmlDoc

GetPubXmlDoc

GetPubXmlDoc

Syntax

```
GetPubXmlDoc(PubID, PubNode, ChannelName, VersionName,
MessageName, SubNode [, Segment])
```

Description

Use the GetPubXmlDoc function to retrieve a message from the message queue.

Note: This function has been deprecated and remains for backward compatibility only. Use the IntBroker class GetMessage method instead.

This is the message *after* any transformations have been preformed. It creates and loads a data tree for the specified message version, and returns NULL if not successful. This function is used for publication contract error correction when the error correction process needs to fetch a particular message instance for the publication contract in error. SQL on the Publication Contract table is used to retrieve the key fields.

Note: This function should *not* be used in standard message processing. It should only be used when correcting or debugging a publication contract that is in error.

Related Links

"GetMessage" (PeopleTools 8.54: PeopleCode API Reference)

Parameters

PubID	Specify the PubID of the message.
PubNode	Specify the Pub Node Name of the message.
ChannelName	Specify the channel name of the message.
VersionName	Specify the version name of the message.
MessageName	Specify the name of the message.
SubNode	Specify the subnode of the message.
Segment	Specify an integer representing which segment you want to access. The default value is one, which means that if you do not specify a segment, the first segment is accessed.

Returns

A reference to an XmlDoc object if successful, NULL if not successful.

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Related Links

ReSubmitPubXmlDoc

ReSubmitPubHeaderXmlDoc

GetRatingBoxChart

Syntax

GetRatingBoxChart(*RecordName.FieldName*)

Description

Use the GetRatingBoxChart function to get a reference to an RatingBoxChart class object.

A chart must be associated with a record and field merely so that the chart object can be instantiated in PeopleCode. Which record and field you use doesn't matter. Commonly, the same derived/work record is used for all the charts in an application.

Parameters

RecordName.FieldName	Specify the record and field associated with the chart you want to get.

Returns

A reference to a RatingBoxChart object.

Example

```
&rbRatingBoxChart = GetRatingBoxChart(CHARTREC_WRK.CHART_FLD);
```

Related Links

"Using the RatingBoxChart Class" (PeopleTools 8.54: PeopleCode API Reference)

GetRecord

Syntax

GetRecord([**RECORD.***recname*])

Description

Use the GetRecord function to create a reference to a record object for the current context, that is, from the row containing the currently executing program.

The following code:

```
&REC = GetRecord();
```

is equivalent to:

```
&REC = GetRow().GetRecord(Record.recname);
```

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or

```
&REC = GetRow().recname;
```

Note: This function is invalid for PeopleCode programs located in events that aren't associated with a specific row and record at the point of execution. That is, you cannot use this function in PeopleCode programs on events associated with high-level objects like pages (the *Activate* event) or components (component events).

Parameters

With no parameters, this function returns a record object for the current context (the record containing the program that is running).

If a parameter is given, **RECORD.** *recname* must specify a record in the current row.

Returns

GetRecord returns a record object.

Example

In the following example, the level 2 rowset (scroll) has two records: EMPL_CHKLST_ITM, (the primary record) and CHKLST_ITM_TBL. If the code is running from a field on the EMPL_CHKLST_ITM record, the following returns a reference to that record:

```
&REC = GetRecord(); /*returns primary record */
```

The following returns the other record in the current row.

```
&REC2 = GetRecord(RECORD.CHKLST_ITM_TBL);
```

The following event uses the @ symbol to convert a record name that’s been passed in as a string to a component name.

```
Function set_sub_event_info(&REC As Record, &NAME As string)
   &FLAGS = CreateRecord(RECORD.DR_LINE_FLG_SBR);
   &REC.CopyFieldsTo(&FLAGS);
   &INFO = GetRecord(@("RECORD." | &NAME));
   If All(&INFO) Then
      &FLAGS.CopyFieldsTo(&INFO);
   End-If;
End-Function;
```

Related Links

CreateRecord

"Understanding Message Classes" (PeopleTools 8.54: PeopleCode API Reference)

"Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer’s Guide)

"Specifying Data with Contextual References" (PeopleTools 8.54: PeopleCode Developer’s Guide)

GetReferenceArea

Syntax

GetReferenceArea()

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Description

Use the GetReferenceArea function to get a reference to a ReferenceArea object. ReferenceArea instances can then be associated with a Chart object.

Parameters

None.

Returns

A reference to a ReferenceArea object.

Example

```
&MyRefArea = GetReferenceArea();
```

Related Links

"Using the ReferenceArea Class" (PeopleTools 8.54: PeopleCode API Reference)

GetReferenceLine

Syntax

GetReferenceLine()

Description

Use the GetReferenceLine function to get a reference to a ReferenceLine object. ReferenceLine instances can then be associated with a Chart object.

Parameters

None.

Returns

A reference to a ReferenceLine object.

Example

```
&MyRefLine = GetReferenceLine();
```

Related Links

"Using the ReferenceLine Class" (PeopleTools 8.54: PeopleCode API Reference)

GetRelField

Syntax

GetRelField(*ctrl_field*, *related_field*)

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Description

Use the GetRelField function to retrieve the value of a related display field and returns it as an unspecified (Any) data type.

Note: This function remains for backward compatibility only. Use the GetRelated field class method instead.

The field *ctrl_field* specifies the display control field, and *related_field* specifies the name of the related display field whose value is to be retrieved. In most cases, you could get the value of the field by referencing it directly. However, there are two instances where GetRelField can be useful:

- If there are two related display fields bound to the same record field, but controlled by different display control fields, use this function to specify which of the two related display fields you want.
- If all of a page's level-zero fields are search keys, the Component Processor does not load the entire row of level-zero data into the component buffer; it only loads the search keys. Adding a non-search-key level-zero field to the page would cause the Component Processor to load the entire row into the component buffer. To prevent a large row of data from being loaded into the buffer, you may occasionally want to make a level-zero display-only field a related display, even though the field is in the primary level-zero record. You won't be able to reference this related display field directly, but you can using GetRelField.

See "GetRelated" (PeopleTools 8.54: PeopleCode API Reference).

Using GetRelField With a Control Field

PeopleCode events on the Control Field can be triggered by the Related Edit field. When this happens, there can be different behavior than with other types of fields:

- If the events are called from FieldEdit of the Control Field, and that FieldEdit is triggered by a change in the Related Edit field, the functions return the previous value.
- If the events are called from FieldChange of the Control Field, and that FieldChange is triggered by a change in the Related Edit field, the functions return the value entered into the Related Edit. This may be a partial value that will subsequently be expanded to a complete value when the processing is complete.

Example

In the following example, there are two related display fields in the page bound to PERSONAL_DATA.NAME. One is controlled by the EMPLID field of the high-level key, the other controlled by an editable DERIVED/WORK field in which the user can enter a new value. Use GetRelField to get the value of the related display controlled by EMPLID.

```
/* Use a related display of a required non-default field to verify
 * that the new Employee Id is not already in use */
If GetRelField(EMPLID, PERSONAL_DATA.NAME) <> "" Then
   Error MsgGet(1000, 65, "New Employee ID is already in use.  Please reenter.");
End-If;
```

Related Links

"Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide)

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GetRow

Syntax

```
GetRow()
```

Description

Use the GetRow function to obtain a row object for the current context, that is the row containing the currently executing program.

Using the GetRow function is equivalent to:

```
&ROW = GetRowset().GetRow(CurrentRowNumber());
```

Note: For PeopleCode programs located in events that are not associated with a specific row at the point of execution, this function is invalid. That is, you cannot use this function in PeopleCode programs on events associated with high-level objects like pages or components.

Parameters

None.

Returns

GetRow returns a row object that references the current row in the component buffers. If the program is not being run from a page (such as from Application Engine, or as part of a Message program) it references that data.

Example

```
Local Row &ROW;

&ROW = GetRow();
```

Related Links

GetRowset

"Understanding Row Class" (PeopleTools 8.54: PeopleCode API Reference)

"Specifying Data with Contextual References" (PeopleTools 8.54: PeopleCode Developer's Guide)

GetRowset

Syntax

```
GetRowset([SCROLL.scrollname])
```

Description

Use the GetRowset function to get a rowset object based on the current context. That is, the rowset is determined from the row containing the program that is running.

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Syntax Format Considerations

An expression of the form

```
RECORD.scrollname.property
```

or

```
RECORD.scrollname.method(. . .)
```

is converted to an object expression by using GetRowset(**SCROLL.** *scrollname*).

Parameters

If a parameter is specified, it must be the name of the primary record for the scroll that is a child of the current context.

Returns

With no parameters, GetRowset returns a rowset object for the rowset containing the currently running program. If a parameter is specified, it returns a rowset for that child scroll. *scrollname* must be the name of the primary record for the scroll.

Example

In the following example, RS1 is a level 1 rowset, and RS2 is a child rowset of RS1.

```
Local Rowset &RS1, &RS2;

&RS1 = GetRowset();
&RS2 = GetRowset(SCROLL.EMPL_CHKLST_ITM);
```

Related Links

GetLevel0

"Understanding Rowset Class" (PeopleTools 8.54: PeopleCode API Reference)

"Specifying Data with Contextual References" (PeopleTools 8.54: PeopleCode Developer's Guide)

GetRowsetCache

Syntax

GetRowsetCache([**Rowset.**]*name*, [*language*])

Description

Use GetRowsetCache to return the existing rowset cache with the given name.

Note: This function returns a RowsetCache object, *not* a rowset object. You must use the Get RowsetCache method in order to convert a RowsetCache object into a rowset object.

Every time you use the GetRowsetCache function, you should verify that the function executed successfully by testing for a null object. For example:

```
Local RowsetCache &RSC;
```

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```
&RSC = GetRowsetCache(Rowset.MyRowset);

If All(&RSC) Then
  /* do processing */
Else
  /* call to populate rowset cache */
End-if;
```

Parameters

Record. ***name***

Specify the name of a RowsetCache. If you just specify *name*, you must enclose the name in quotation marks.

language

Specify which language the rowset cache is retrieved from.

Possible values are:

%RowsetCache_SignonLang – Fetch the rowset cache for the sign-on language. If it doesn't exist then return failure.

%RowsetCache_BaseLang – Fetch the rowset cache for the base language only. If it doesn't exist then return failure.

%RowsetCache_SignonOrBaseLang – Fetch the rowset cache for the sign-on language. If the rowset cache for the sign-on language doesn't exist then fetch the base language rowset cache. If the base language rowset cache doesn't exist then return failure.

This parameter is optional.

The default is %RowsetCache_SignonLang

Returns

A RowsetCache object populated with the rowset cache instance specified.

Example

```
&Cache1 = GetRowsetCache("AAROWSET1");
```

Related Links

CreateRowsetCache

"Understanding a Rowset Cache" (PeopleTools 8.54: PeopleCode API Reference)

GetSearchRecName

Syntax

GetSearchRecName()

Description

Use the GetSearchRecName function to return the search record name for the component.

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Important! Use this function within fluid applications only.

Parameters

None.

Returns

A string value.

Example

```
&strRecName = GetSearchRecordName();
```

Related Links

GetAddSearchRecName
"Setting Use Properties" (PeopleTools 8.54: Application Designer Developer's Guide)

GetSelectedTreeNode

Syntax

GetSelectedTreeNode(**RECORD.***recordname*)

Description

Use the GetSelectedTreeNode function to determine what node the user has selected in a dynamic tree control.

Note: Dynamic tree controls have been deprecated. Use the GenerateTree function or Tree Viewer.

Related Links

GenerateTree, Understanding View Trees

GetSession

Syntax

GetSession()

Description

Use the GetSession function to retrieve a PeopleSoft session object.

After you use GetSession, you can instantiate many other types of objects, like Component Interfaces, data trees, and so on.

After you use GetSession you must connect to the system using the Connect property.

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If you are connecting to the existing session and not doing additional error checking, you may want to use the %Session system variable instead of GetSession. %Session returns a connection to the existing session.

Parameters

None.

Returns

A PeopleSoft session object.

Example

```
Local ApiObject &MYSESSION;

&MYSESSION = GetSession();
```

Related Links

"Understanding Component Interface Class" (PeopleTools 8.54: PeopleCode API Reference)
"Understanding the Portal Registry" (PeopleTools 8.54: PeopleCode API Reference)
"Understanding Query Classes" (PeopleTools 8.54: PeopleCode API Reference)
"Understanding the Verity Search Classes" (PeopleTools 8.54: PeopleCode API Reference)
"Understanding Session Class" (PeopleTools 8.54: PeopleCode API Reference)
"Understanding Tree Classes" (PeopleTools 8.54: PeopleCode API Reference)
%Session

GetSetId

Syntax

```
GetSetId({FIELD.fieldname | text_fieldname}, set_ctrl_fieldvalue, {RECORD.recname |
text_recname}, treename)
```

Description

Use the GetSetId function to return a string containing a setID based on a set control field (usually BUSINESS_UNIT), a set control value, and one of the following:

- The name of a control table (or view) belonging to a record group in the TableSet Control controlled by the set control value.
- The name of a tree in the TableSet Control controlled by the set control value.

If you want to pass a control record name to the function, you must pass an empty string in the *treename* parameter. Conversely, if you want to pass a tree name, you must pass an empty string in the *text_recname* parameter. In practice, tree names are rarely used in this function.

Note: This function does not validate the parameters passed to it. It is up to your application to ensure that only valid data is used. If an invalid value is used, the defined default value is used.

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Parameters

fieldname	Specify the set control field name as a FIELD reference. Use this parameter (recommended) or the *text_fieldname* parameter.
text_fieldname	Specify the name of the set control field as a string. Use this parameter or the *fieldname* parameter.
set_ctrl_fieldvalue	Specify the value of the set control field as a string.
recname	Specify as a RECORD reference the name of the control record belonging to the record group for which you want to obtain the setID corresponding to the set control value. Use this parameter (recommended) or the *text_recname* parameter.
text_recname	Specify as a string the name of the control record belonging to the record group for which you want to obtain the setID corresponding to the set control field value. Use this parameter or the *recname* parameter.
treename	Specify as a string the name of the tree for which you want to obtain the setID corresponding to the set control field value.

Returns

GetSetId returns a five-character setID string.

Example

In this example, BUSINESS_UNIT is the Set Control Field, and PAY_TRMS_TBL is a control table belonging to a record group controlled by the current value of BUSINESS_UNIT. The function returns the setID for the record group.

```
&SETID = GetSetId(FIELD.BUSINESS_UNIT, &SET_CTRL_VAL, RECORD.PAY_TRMS_TBL, "");
```

Related Links

"Control Tables" (PeopleTools 8.54: Application Designer Developer's Guide)

GetSQL

Syntax

```
GetSQL(SQL.sqlname [, paramlist])
```

Where *paramlist* is an arbitrary-length list of values in the form:

```
inval1 [, inval2] ...
```

Description

Use the GetSQL function to instantiate a SQL object and associates it with the SQL definition specified by *sqlname*. The SQL definition must already exist, either created using Application Designer or the StoreSQL function.

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Processing of the SQL definition is the same as for a SQL statement created by the CreateSQL function.

Setting Data Fields to Null

This function does *not* set Component Processor data buffer fields to NULL after a row not found fetching error. However, it does set fields that aren't part of the Component Processor data buffers to NULL.

Using Arrays With paramlist

You can use a parameter of type "Array of Any" in place of a list of bind values. This is primarily used when you do not know the number of values being supplied until the code runs.

For example, suppose you had a SQL definition INSERT_TEST, that had PeopleCode that dynamically (that is, at runtime) generated the following SQL statement:

```
"INSERT INTO PS_TESTREC (TESTF1, TESTF2, TESTF3, TESTF4, . . .TESTN) VALUES (:1, :2⇒
, %DateTimeIn(:3), %TextIn(:4). . .N)";
```

Suppose you have placed the values to be inserted into an Array of Any, say &AAny:

```
&AAny = CreateArrayAny("a", 1, %DateTime, "abcdefg", . . .N);
```

You can execute the insert by:

```
GetSQL(SQL.INSERT_TEST, &AAny);
```

Because the Array of Any promotes to absorb any remaining select columns, it must be the last parameter for the SQL object Fetch method or (for results) SQLExec. For binding, it must be the only bind parameter, as it is expected to supply all the bind values needed.

Parameters

SQL.*sqlname*	Specify the name of a SQL definition.
paramlist	Specify input values for the SQL string.

Returns

A SQL object.

Example

The following code creates and opens an SQL object on the SQL definition stored as ABCD_XY (for the current market, database type and as of date). It binds the given input values, and executes the statement. If the SQL.ABCD is a SELECT, this should be followed by a series of Fetch method calls.

```
&SQL = GetSQL(SQL.ABCD_XY, ABSENCE_HIST, &EMPLID);
```

The following is a generic function that can be called from multiple places to retrieve a specific record using the SQL Objects.

```
Local SQL &SQL;
Local string &SETID, &TEMPLATE;
Local date &EFFDT;

Function FTP_GET_TEMPLATE(&REC As Record) Returns Boolean ;
```

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```
   &TEMPLATE = FTP_RULE_TEMPLATE;
   &EFFDT = EFFDT;
   &SETID = SETID;
   &SQL = GetSQL(SQL.FTP_TEMPLATE_SELECT, &SETID, &TEMPLATE, &EFFDT);
   If &SQL.Status = 0 Then
      If &SQL.Fetch(&REC) Then
         &SQL.Close();
         Return True;
      End-If;
   Else
      &TITLE = MsgGet(10640, 24, "SQL Error");
      MessageBox(64, &TITLE, 10640, 23, "SQL Object Not Found in SQL", SQL.FTP_TEMP⇒
LATE_SELECT);
   End-If;
   &SQL.Close();
   Return False;
End-Function;
```

The SQL definition FTP_TEMPLATE_SELECT has the following code. Note that it uses the %List and %EFFDTCHECK meta-SQL statements. This makes the code easier to maintain: if there are any changes to the underlying record structure, this SQL definition won't have to change:

```
SELECT %List(FIELD_LIST,FTP_DEFAULT_TBL A)
FROM PS_FTP_TEMPLATE_TBL A
WHERE A.SETID = :1  AND A.FTP_RULE_TEMPLATE = :2
AND %EFFDTCHECK(FTP_DEFAULT_TBL A1,A,:3)  AND A.EFF_STATUS = 'A'
```

Related Links

CreateSQL

DeleteSQL

FetchSQL

SQLExec

"Understanding SQL Class" (PeopleTools 8.54: PeopleCode API Reference)

"Open" (PeopleTools 8.54: PeopleCode API Reference)

GetStatusMeterGauge

Syntax

GetStatusMeterGauge(*RecordName.FieldName*)

Description

Use the GetStatusMeterGauge function to get a reference to a StatusMeterGauge object.

A gauge must be associated with a record and field merely so that the gauge object can be instantiated in PeopleCode. Which record and field you use doesn't matter. Commonly, the same derived/work record is used for all the charts in an application.

Parameters

RecordName.FieldName	Specify the record and field name associated with the status meter gauge.

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Returns

A reference to a StatusMeterGauge object.

Example

```
&MyGauge = GetStatusMeterGauge(GAUGEREC_WRK.GAUGE_FLD);
```

Related Links

"Using the Gauge Classes" (PeopleTools 8.54: PeopleCode API Reference)

GetStoredFormat

Syntax

GetStoredFormat(*scrollpath, target_row,* [*recordname*.]*fieldname*)

where *scrollpath* is:

[**RECORD**.*level1_recname, level1_row,* [**RECORD**.*level2_recname, level2_row,*]]
RECORD.*target_recname*

To prevent ambiguous references, you can also use **SCROLL**.*scrollname*, where *scrollname* is the same as the scroll level's primary record name.

Description

Use the GetStoredFormat function to return the name of a field's custom stored format.

Note: This function remains for backward compatibility only. Use the StoredFormat field class property instead.

To return the format for a field on level zero of the page, pass 1 in *target_row*.

Related Links

"StoredFormat" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

scrollpath	A construction that specifies a scroll level in the component buffer.
target_row	An integer specifying the row of the target field. If you are testing a field on level zero, pass 1 in this parameter.
[*recordname* .]*fieldname*	The name of the field from which to get the stored format name. The field can be on any level of the active page. The *recordname* prefix is required if the call to GetStoredFormat is not on the record definition *recordname*.

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Returns

Returns a String equal to the name of the stored custom format for the field.

Example

This example returns a string containing the custom format for postal codes on level zero of the page or on the current row of scroll level one. This function is called in the RowInit event, so no looping is necessary.

```
Function get_postal_format() Returns string
   &CURR_LEVEL = CurrentLevelNumber();
   Evaluate &CURR_LEVEL
   When = 0
      &FORMAT = GetStoredFormat(POSTAL, 1);
   When = 1
      &FORMAT = GetStoredFormat(POSTAL, CurrentRowNumber(1));
   End-Evaluate;
   Return (&FORMAT);
End-Function;
```

Related Links

SetDisplayFormat

"Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

GetSubContractInstance

Syntax

GetSubContractInstance(*pub_id*, *pub_nodename*, *channelname*, *messagename*, *sub_name*)

Description

Note: This function is no longer available. It has been replaced with the GetSubXmlDoc function.

See GetSubXmlDoc.

GetSubXmlDoc

Syntax

GetSubXmlDoc(*PubID*, *PubNode*, *ChannelName*, *VersionName*, *MessageName*[, *Segment*])

Description

Use the GetSubXmlDoc function to retrieve a message from the message queue.

Note: This function has been deprecated and remains for backward compatibility only. Use the IntBroker class GetMessage method instead.

It creates and loads a data tree for the specified message version, and returns NULL if not successful. This function is used for subscription contract error correction, when the error correction process needs to fetch

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a particular message instance for the subscription contract in error. SQL on the Subscription Contract table is used to retrieve the key fields.

Note: This function should *not* be used in standard message processing. It should only be used when correcting or debugging a subscription contract that is in error.

Related Links

"GetMessage" (PeopleTools 8.54: PeopleCode API Reference)

Parameters

PubID	Specify the PubID of the message.
PubNode	Specify the Pub Node Name of the message.
ChannelName	Specify the channel name of the message.
VersionName	Specify the version name of the message.
MessageName	Specify the name of the message.
Segment	Specify an integer representing which segment you want to access. The default value is one, which means that if you do not specify a segment, the first segment is accessed.

Returns

A reference to an XmlDoc object if successful, NULL if not successful.

Related Links

ReSubmitSubXmlDoc

GetSyncLogData

Syntax

```
GetSyncLogData(GUID, pubnode, chnlname, msg_name, logtype [, message_version])
```

Description

Use the GetSyncLogData to return a log containing information about the specified synchronous message.

Note: This function has been deprecated and remains for backward compatibility only. Use the IntBroker class GetSyncLogData method instead.

You can use this information for debugging. Using this function, you can obtain the request and response data in a synchronous request, both pre- and post-transformation.

This function is used in the PeopleCode for the Message Monitor.

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Related Links

"GetSyncLogData" (PeopleTools 8.54: PeopleCode API Reference)

Parameters

GUID	Specify the GUID for the published synchronous message as a string. This property is populated after the message is sent.
pubnode	Specify the name of the node that the synchronous message was published from as a string.
chnlname	Specify the name of the channel the synchronous message was published to as a string.
msg_name	Specify the message definition name that you want to retrieve log data from as a string.
Log_type	Specify the type of log data you want to obtain, as a number. Values are: 1: the original request 2: the transformed request 3: the original response 4: the transformed response
message_version	Specify the message version name as a string.

Returns

An XML string containing the log data.

Example

```
Local String &guid, &pubnode, &channel, &msg_name;
Local Number &log_type;
..
..
&descrlong = GetSyncLogData(&guid, &pubnode, &channel, &msg_name, &log_type);
```

GetTempFile

Syntax

GetTempFile(*filename*, *mode* [, *charset*] [, *pathtype*])

Description

The GetTempFile function provides an alternative to GetFile. Similar to GetFile, use the GetTempFile function to instantiate a new file object from the File class, associate it with an external file, and open the file so you can use File class methods to read from or write to it.

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GetTempFile differs from GetFile in two respects: \

- GetTempFile does not perform an implicit commit.
- GetTempFile does not make the associated file available through the Report Repository even when the calling PeopleCode program is run through the Process Scheduler.

Therefore, GetTempFile can be a good choice when you wish to avoid implicit database commits and when you do not need to have the file managed through the Report Repository. Otherwise, GetTempFile operates exactly the same as GetFile. For additional information about GetTempFile, see the documentation on GetFile.

See GetFile.

Parameters

filespec

Specify the name, and optionally, the path, of the file you want to open.

mode

A string indicating how you want to access the file. The mode can be one of the following:

"R" (Read mode): opens the file for reading, starting at the beginning.

"W" (Write mode): opens the file for writing.

Warning! When you specify Write mode, any existing content in the file is discarded.

"A" (Append mode): opens the file for writing, starting at the end. Any existing content is retained.

"U" (Update mode): opens the file for reading or writing, starting at the beginning of the file. Any existing content is retained. Use this mode and the GetPosition and SetPosition methods to maintain checkpoints of the current read/write position in the file.

In Update mode, any write operation clears the file of all data that follows the position you set.

Note: Currently, the effect of the Update mode and the GetPosition and SetPosition methods is not well defined for Unicode files. Use the Update mode only on files stored with a non-Unicode character set.

"E" (Conditional "exist" read mode): opens the file for reading only if it exists, starting at the beginning. If it doesn't exist, the Open method has no effect. Before attempting to read from the file, use the IsOpen property to confirm that it's open.

"N" (Conditional "new" write mode): opens the file for writing, only if it doesn't already exist. If a file by the same

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name already exists, the Open method has no effect. Before attempting to write to the file, use the IsOpen property to confirm that it's open. You can insert an asterisk (*) in the file name to ensure that a new file is created. The system replaces the asterisk with numbers starting at 1 and incrementing by 1, and checks for the existence of a file by each resulting name in turn. It uses the first name for which a file *doesn't* exist. In this way you can generate a set of automatically numbered files. If you insert more than one asterisk, all but the first one are discarded.

charset

A string indicating the character set you expect when you read the file, or the character set you want to use when you write to the file. You can abbreviate Unicode UCS-2 to "U" and the host operating system's default non-Unicode (sometimes referred to as the ANSI character set) to "A". All other character sets must be spelled out in full, for example, ASCII, Big5, Shift-JIS, UTF8, or UTF8BOM.

If "A" is specified as the character set, or you do not specify a character set, the character set used is dependent on the application server configuration. On a Windows application server, the default non-Unicode character set is dependent on the Windows ANSI Codepage (ACP) which can be checked using the DOS command chcp. On a Unix application server, the default non-Unicode character set is specified in the application server configuration file, psappsrv.cfg, and can be modified using PSADMIN. You can also use a record field value to specify the character set (for example, RECORD.CHARSET.)

A list of supported character set names valid for this argument can be found in *PeopleTools: Global Technology*.

See "Character Sets Across the Tiers of the PeopleSoft Architecture" (PeopleTools 8.54: Global Technology).

Note: If you attempt to read data from a file using a different character set than was used to write that data to the file, the methods used generate a runtime error or the data returned is unusable.

When a file is opened for reading using the "U" *charset* argument, GetFile expects the file to begin with a Unicode byte order mark (BOM). This mark indicates whether the file is written in big endian order or little endian order. A BOM consisting of the hex value 0xFEFF indicates a big endian file, a BOM consisting of the hex value 0xFFEF indicates a little endian file. If the Unicode UCS-2 file being opened does not start with a BOM, an error is returned. The BOM is automatically stripped from the file when it is read into the buffers by GetFile.

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When a file is opened for writing using the “U” *charset* argument, the appropriate Unicode BOM is automatically written to the start of the file depending on whether the application server hardware platform operates in little endian or big endian mode.

BOMs are only expected or supported for files in Unicode character sets such as UTF8, UTF8BOM, and UCS2. For consuming applications that do expect the BOM for UTF-8 files, the UTF8BOM character set is to create UTF-8 files with the BOM.

Note: For example, the UTF-8 BOM is represented by the sequence 0xEF BB BF. This sequence can be misinterpreted by a non-Unicode character set such as ISO-8859-1 and appears as ISO characters ï»¿.

When working with XML documents, specify UTF8 or UTF8BOM for *charset*.

If you are writing an XML file using a different character set, you must remember to include a character set declaration in the XML file.

pathtype

If you have prepended a path to the file name, use this parameter to specify whether the path is an absolute or relative path. The valid values for this parameter are:

- %FilePath_Relative (default)
- %FilePath_Absolute

If you don’t specify *pathtype* the default is %FilePath_Relative.

If you specify a relative path, that path is appended to the path constructed from a system-chosen environment variable. A complete discussion of relative paths and environment variables is provided in documentation on the File class.

See "Working With Relative Paths" (PeopleTools 8.54: PeopleCode API Reference).

If the path is an absolute path, whatever path you specify is used verbatim. You must specify a drive letter and the complete path. You can’t use any wildcards when specifying a path.

The Component Processor automatically converts platform-specific separator characters to the appropriate form for where your PeopleCode program is executing. On a Windows system, UNIX "/" separators are converted to "\", and on a UNIX system, Windows "\" separators are converted to "/".

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Note: The syntax of the file path does *not* depend on the file system of the platform where the file is actually stored; it depends only on the platform where your PeopleCode is executing.

Returns

A file object if successful; Null otherwise.

Related Links

GetFile
"Open" (PeopleTools 8.54: PeopleCode API Reference)

GetThreshold

Syntax

```
GetThreshold()
```

Description

Use the GetThreshold function to get a reference to a Threshold object. Threshold instances can then be associated with gauge instances.

Parameters

None.

Returns

A reference to a Threshold object.

Example

```
&MyThreshold = GetThreshold();
```

Related Links

"Using the Threshold Class" (PeopleTools 8.54: PeopleCode API Reference)

GetTreeNodeParent

Syntax

```
GetTreeNodeParent(node)
```

Description

Use the GetTreeNodeParent function to access data from dynamic tree controls.

Note: Dynamic tree controls have been deprecated. Use the GenerateTree function or Tree Viewer.

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Related Links

GenerateTree, Understanding View Trees

GetTreeNodeRecordName

Syntax

GetTreeNodeRecordName(*node*)

Description

Use the GetTreeNodeRecordName function in accessing data from dynamic tree controls.

Note: Dynamic tree controls have been deprecated. Use the GenerateTree function or Tree Viewer.

Related Links

GenerateTree, Understanding View Trees

GetTreeNodeValue

Syntax

GetTreeNodeValue(*node*, [*recordname*.]*fieldname*)

Description

Use the GetTreeNodeValue function in accessing data from dynamic tree controls.

Note: Dynamic tree controls have been deprecated. Use the GenerateTree function or Tree Viewer.

Related Links

GenerateTree, Understanding View Trees

GetURL

Syntax

GetURL(**URL.***URLIdentifier*)

Description

Use the GetURL function to return the URL, as a string, for the specified *URLIdentifier*. The *URLIdentifier* must exist and been created using URL Maintenance.

Note: If the URL identifier contains spaces, you must use quotation marks around *URLIdentifier*. For example, `GetURL(URL."My URL");`

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If a language-specific URL exists for the user's current session language, and the user is not calling GetURL from a batch program, it is returned. Otherwise, the base language version of the URL is returned.

When GetURL is called from an application engine program, the URL is retrieved either from the base URL table or the related language table depending on the language code. The language code is provided by the User Profile for the user that executed the application engine program. The language code does not come from the language that the user specified when logging into the system.

Parameters

URLIdentifier	Specify a URL Identifier for a URL that already exists and was created using the URL Maintenance page.

Returns

A string containing the URL value for that URL Identifier, using the user's language preference.

Example

Suppose you have a URL with the identifier PEOPLESOFT, and the following URL:

```
http://www.peoplesoft.com
```

From the following code example

```
&PS_URL = GetURL(URL.PEOPLESOFT);
```

&PS_URL has the following value:

```
http://www.peoplesoft.com
```

Suppose you have the following URL stored in the URL Maintenance, with the name QE_CALL:

```
/S/WEBLIB_QE_MCD.QE_MCD_MAIN.FieldFormula.iScript_Call
```

You could combine this in the following code to produce an HTML string used as part of a response:

```
&output = GetHTMLText(HTML.QE_PHONELIST, %Request.RequestURI | "?" |
GetURL(URL.QE_CALL));
```

Related Links

ViewURL

"URL Maintenance" (PeopleTools 8.54: System and Server Administration)

GetUserOption

Syntax

GetUserOption(*Level, OPTN*)

Description

Use the GetUserOption function to return the default value for the specified option.

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Parameters

Level	Specify the option category level as a string.
OPTN	Specify the option as a string.

Returns

The default value for the specified option.

Example

```
Local Any &MyValue;

&MyValue = GetUserOption("PPLT", "TZONE");
```

Related Links

SetUserOption

"Understanding Personalizations" (PeopleTools 8.54: Security Administration)

GetWLFieldValue

Syntax

GetWLFieldValue(*fieldname*)

Description

When the user has opened a page from a Worklist (by selecting one of the work items) use the GetWLFieldValue function to retrieve the value of a field from the current row of the application Worklist record. You can use the %WLName system variable to check whether the page was accessed from a Worklist.

Returns

Returns the value of a specified field in the Worklist record as an Any data type.

Example

This example, from RowInit PeopleCode, populates page fields with values from the Worklist record. The %WLName system variable is used to determine whether there is a currently active Worklist (that is, whether the user accessed the page using a Worklist).

```
&WL = %WLName;
If &WL > " " Then
   &TEMP_NAME = "ORDER_NO";
   ORDER_NO = GetWLFieldValue(&TEMP_NAME);
   &TEMP_NAME = "BUSINESS_UNIT";
   BUSINESS_UNIT = GetWLFieldValue(&TEMP_NAME);
   &TEMP_NAME = "SCHED_Date";
   &SCHED_Date = GetWLFieldValue(&TEMP_NAME);
   SCHED_Date = &SCHED_Date;
   &TEMP_NAME = "DEMAND_STATUS";
   DEMAND_STATUS = GetWLFieldValue(&TEMP_NAME);
End-If;
```

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Related Links

MarkWLItemWorked
TriggerBusinessEvent
%WLName

Global

Syntax

```
Global data_type &var_name
```

Description

Use the Global statement to declare PeopleCode global variables. A global variable, once declared in any PeopleCode program, remains in scope throughout the PeopleSoft session. The variable must be declared with the Global statement in any PeopleCode program in which it is used.

Declarations tend to appear at the beginning of the program, intermixed with function declarations.

Not all PeopleCode data types can be declared as Global. For example, ApiObject data types can only be declared as Local.

Parameters

data_type	Specify a PeopleCode data type.
&var_name	A legal variable name.

Example

The following example declares a global variable and then assigns it the value of a field:

```
global string &AE_APPL_ID;
&AE_APPL_ID = AE_APPL_ID;
```

Related Links

Local
Component
"Data Types" (PeopleTools 8.54: PeopleCode Developer's Guide)

Gray

Syntax

```
Gray(scrollpath, target_row, [recordname.]fieldname)
```

where *scrollpath* is:

```
[RECORD.level1_recname, level1_row, [RECORD.level2_recname, level2_row, ]]
RECORD.target_recname
```

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To prevent ambiguous references, you can also use **SCROLL.** *scrollname*, where *scrollname* is the same as the scroll level's primary record name.

If you put the function on the same scroll level as the field being changed, you can use the following syntax:

```
Gray(Fieldname)
```

The more complex syntax can be used to loop through a scroll on a lower level than the PeopleCode program.

Description

Use the Gray function to make a field unavailable for entry a page field, preventing the user from making changes to the field.

Note: This function remains for backward compatibility only. Use the Enabled field class property instead.

Gray makes a field display-only, while Hide makes it invisible. You can undo these effects using the built-in functions Ungray and Unhide.

Note: If you specify a field as Display Only in Application Designer, using the PeopleCode functions Gray, followed by Ungray, will not make it editable. This function shouldn't be used in any event prior to RowInit.

Related Links

"Enabled" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide), "Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

scrollpath	A construction that specifies a scroll level in the component buffer.
target_row	An integer specifying the row on the target scroll level where the referenced buffer field is located.
[*recordname* .]*fieldname*	The name of the field to gray. The field can be on scroll level one, two, or three of the active page. The *recordname* prefix is required if the call to **Gray** is not on the record definition *recordname*.

Returns

Optionally returns a Boolean value indicating whether the function succeeded.

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Example

This example, which would typically be found in the RowInit event, disables the page's address fields if the value of the SAME_ADDRESS_EMPL field is "Y".

```
If SAME_ADDRESS_EMPL = "Y" Then
   Gray(STREET1);
   Gray(STREET2);
   Gray(CITY);
   Gray(STATE);
   Gray(ZIP);
   Gray(COUNTRY);
   Gray(HOME_PHONE);
End-if;
```

Related Links

Hide

Ungray

Unhide

GrayMenuItem

Syntax

GrayMenuItem(**BARNAME.***menubar_name*, **ITEMNAME.***menuitem_name*)

Description

Note: The GrayMenuItem function is supported for compatibility with previous releases of PeopleTools. New applications should use DisableMenuItem instead.

Related Links

DisableMenuItem

PeopleCode Built-in Functions and Language Constructs: H

The PeopleCode built-In functions and language constructs beginning with the letter H are listed in alphabetical order within this topic.

Related Links

Typographical Conventions

Hash

Syntax

Hash(*ClearTextString*)

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Description

The Hash function returns a fixed length value, based on the input. The output is always 28 characters. The input is variable length, with no maximum size.

Regardless of the operating system platform, underlying character encoding or hardware byte order, identical character strings always generate identical hash values regardless of the platform on which the hash generation is run. Because of this, hash output should not be used as a unique key to a table of data. Given the output of hash, it is impossible to determine the input.

Some of the original data is deliberately lost during the conversion process. This way, even if you know the algorithm, you can't “un-hash” the data.

Generally the Hash function is used like a checksum, to compare hashed values to ensure they match.

Parameters

ClearTextString	Specify the string you want converted.

Returns

A hash string.

Example

```
MessageBox("Please confirm password");

&HASHPW = Hash(&PASSWD);
&OPERPSWD = USERDEFN.OPERPSWD.Value;

If not (&HASHPW = &OPERPSWD) Then
   /* do error handling */
End-if;
```

Related Links

Decrypt

Encrypt

HashWithSalt

HashWithSalt

Syntax

HashWithSalt(*cleartext_string*, *&salt_string*)

Description

Use the HashWithSalt function to generate a hashed (or “salted”) string. The output is Base64 encoded. For example, use the HashWithSalt function to generate a password for storage in the database. Because the HashWithSalt function generates output from the clear text password and a randomly generated salt value, it provides more secure hashing than the Hash function.

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Important! When you store a hashed password generated by HashWithSalt in PSOPRDEFN.OPERPSWD, you *must* also store the salt string used in PSOPRDEFN.OPERPSWDSALT.

To compare a clear text input value with an hashed value, use either the VerifyOprPassword function (for hashed and stored passwords) or the VerifyHash function for other salted strings.

Parameters

cleartext_string Specifies the string, such as a password, to be hashed.

&salt_string Specifies the randomly generated salt value as a string value.

Important! If the supplied salt value is a null value, then the HashWithSalt function will generate a salt value that will be returned as the value of this variable or record field.

Returns

A String value.

Example

The following examples demonstrate three methods for generating and storing a hashed password:

- Method 1 – Presents a loop that could process a series of passwords. In this specific case, only one salt value is generated and the loop is executed once only. Because SecureRandomGen is based on the Java security SecureRandom function, it is more efficient to call it once to return an array of required salt values than it is to call it for each salt value required.

```
/* method 1 */
Local array of string &operpwsdsalt;
Local string &resultSalt;
&operpwsdsalt = SecureRandomGen();
If (&operpwsdsalt <> Null) Then
   For &i = 1 To &operpwsdsalt.Len
      &resultSalt = &operpwsdsalt [&i];
      &pswd = HashWithSalt(&OPRPSWD, &operpwsdsalt [&i]);
      PSOPRDEFN.OPERPSWD = &pswd;
      PSOPRDEFN.OPERPSWDSALT = &resultSalt;
   End-For;
End-If;
```

- Method 2 – Uses the &resultSalt variable as a salt value to generate the hashed password. When the &resultSalt variable is null, HashWithSalt generates a salt value, which in turn is automatically returned back to the variable. Both the hashed password and the salt value are stored together in the database.

```
/* method 2 */
Local string &resultSalt;
&pswd = HashWithSalt(&OPRPSWD, &resultSalt);
PSOPRDEFN.OPERPSWD = &pswd;
PSOPRDEFN.OPERPSWDSALT = &resultSalt;
```

- Method 3 – Uses the PSOPRDEFN.OPERPSWDSALT field as a salt value to generate the hashed password, which is then stored in the database. When PSOPRDEFN.OPERPSWDSALT

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is null, HashWithSalt generates a salt value, which in turn is automatically returned back to the PSOPRDEFN.OPERPSWDSALT field.

```
/* method 3 */
&pswd = HashWithSalt(&OPRPSWD, PSOPRDEFN.OPERPSWDSALT);
PSOPRDEFN.OPERPSWD = &pswd;
```

Related Links

Hash
SecureRandomGen
VerifyHash
VerifyOprPassword

HermiteCubic

Syntax

HermiteCubic(*DataPoints*)

Description

Use the HermiteCubic function to compute a set of interpolating equations for a set of at least three datapoints. This particular Hermitian cubic is designed to mimic a hand-drawn curve.

Parameters

DataPoints This parameter takes an array of array of number. The array's contents are an array of six numbers. The first two of these six numbers are the x and y points to be fit. The last four are the four coefficients to be returned from the function: **a**, **b**, **c** and **d**.**a** is the coefficient of the x^0 term, **b** is the coefficient of the x^1 term, **c** is the coefficient of the x^2 term, and **d** is the coefficient of the x^3 term.

Returns

A modified array of array of numbers. The elements in the array correspond to the elements in the array used for *DataPoints*.

Related Links

CubicSpline
LinearInterp

Hide

Syntax

Hide(*scrollpath*, *target_row*, [*recordname*.]*fieldname*)

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where *scrollpath* is:

```
[RECORD.level1_recname, level1_row, [RECORD.level2_recname, level2_row, ]]
RECORD.target_recname
```

To prevent ambiguous references, you can also use **SCROLL**.*scrollname*, where *scrollname* is the same as the scroll level's primary record name.

Description

Use the Hide function to make a page field invisible.

Note: This function remains for backward compatibility only. Use the Visible field class property instead.

You can display the field again using Unhide, but Unhide has no effect on a field that has been made display-only in the page definition.

Gray, Hide, Ungray, and Unhide usually appear in RowInit programs that set up the initial display of data, and in FieldChange programs that change field display based on changes the user makes to a field. Generally, you put the functions on the same scroll level as the field that is being changed. This reduces the complexity of the function's syntax to:

```
Hide(fieldname)
```

The more complex syntax can be used to loop through a scroll on a lower level than the PeopleCode program.

Note: This function shouldn't be used in any event prior to RowInit.

Related Links

"Visible" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide), "Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

scrollpath	A construction that specifies a scroll level in the component buffer.
target_row	An integer specifying the row on the target scroll level where the referenced buffer field is located.
[*recordname* .]*fieldname*	The name of the field to hide. The field can be on scroll level one, two, or three of the active page. The *recordname* prefix is required if the call to Hide is not on the record definition *recordname*

Returns

Boolean (optional). Hide returns a Boolean value indicating whether it executed successfully.

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Example

This example hides the page's address fields if SAME_ADDRESS_EMPL is equal to "Y":

```
If SAME_ADDRESS_EMPL = "Y" Then
   Hide(STREET1);
   Hide(STREET2);
   Hide(CITY);
   Hide(STATE);
   Hide(COUNTRY);
   Hide(HOME_PHONE);
End-if;
```

Related Links

Gray

Ungray

Unhide

HideMenuItem

Syntax

HideMenuItem(**BARNAME.***menubar_name*, **ITEMNAME.***menuitem_name*)

Description

Use the HideMenuItem function to hide a specified menu item. To apply this function to a pop-up menu, use the PrePopup Event of the field with which the pop-up menu is associated.

If you're using this function with a pop-up menu associated with a page (not a field), the earliest event you can use is the PrePopup event for the first "real" field on the page (that is, the first field listed in the Order view of the page in Application Designer.)

When a menu is first displayed, all menus are visible by default, so there is no need for a function to re-display a menuitem that has been hidden.

Restrictions on Use With a Component Interface

This function is ignored (has no effect) when used by a PeopleCode program that's been called by a Component Interface.

Parameters

menubar_name	Name of the menu bar that owns the menuitem, or, in the case of pop-up menus, the name of the pop-up menu that owns the menuitem.
menuitem_name	Name of the menu item.

Returns

None.

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Example

```
HideMenuItem(BARNAME.MYPOPUP1, ITEMNAME.DO_JOB_TRANSFER);
```

Related Links

DisableMenuItem
EnableMenuItem
"PrePopup Event" (PeopleTools 8.54: PeopleCode Developer's Guide)

HideRow

Syntax

```
HideRow(scrollpath) [, target_row])
```

Where *scrollpath* is:

```
[RECORD.level1_recname, level1_row, [RECORD.level2_recname, level2_row, ]]
RECORD.target_recname
```

To prevent ambiguous references, you can also use **SCROLL.** *scrollname*, where *scrollname* is the same as the scroll level's primary record name.

Description

Use the HideRow function to hide a row occurrence programmatically.

Note: This function remains for backward compatibility only. Use the Visible row class property instead.

It hides the specified row and any associated rows at lower scroll levels.

Hiding a row just makes the row invisible, it does not affect database processing such as inserting new rows, updating changed values, or deleting rows.

When you hide a row, it becomes the last row in the scroll or grid, and the other rows are renumbered accordingly. If you later use UnHideRow to make the row visible again, it is *not* moved back to its original position, but remains in its new position. When HideRow is used in a loop, you have to process rows from the highest number to the lowest to achieve the correct results.

Note: HideRow cannot be executed from the same scroll level as the row that is being hidden, or from a lower scroll level. Place the PeopleCode in a higher scroll level record.

Related Links

"Visible" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide), "Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

scrollpath	A construction that specifies a scroll level in the component buffer.

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target_row An integer specifying which row in the scroll to hide. If this parameter is omitted, the row on which the PeopleCode program is executing is assumed.

Returns

Boolean (optional). HideRow returns a Boolean value indicating whether the function executed successfully.

Example

This example hides all rows in scroll level 1 where the EXPORT_SW field is equal to "Y". Note that the loop has to count backwards from **ActiveRowCount** to 1.

```
For &ROW = ActiveRowCount(RECORD.EXPORT_OBJECT) to 1
step - 1
      &EXPORT_SW = FetchValue(EXPORT_OBJECT.EXPORT_SW, &ROW);
      If &EXPORT_SW  "Y" Then
         HideRow(RECORD.EXPORT_OBJECT, &ROW);
      Else
         /* WinMessage("not hiding row " | &ROW);*/
      End-if;
End-for;
```

Related Links

UnhideRow

DeleteRow

HideScroll

Syntax

HideScroll(*scrollpath*)

Where *scrollpath* is:

[**RECORD.***level1_recname*, *level1_row*, [**RECORD.***level2_recname*, *level2_row*,]]
RECORD.*target_recname*

To prevent ambiguous references, you can also use **SCROLL.** *scrollname*, where *scrollname* is the same as the scroll level's primary record name.

Description

Use the HideScroll function to programmatically hide a scroll bar and all data items within the scroll.

Note: This function remains for backward compatibility only. Use the HideAllRows rowset class method instead.

Typically this function is used in RowInit and FieldChange PeopleCode to modify the page based on user action.

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Related Links

"HideAllRows" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide), "Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

scrollpath A construction that specifies a scroll level in the component buffer.

Returns

HideScroll returns a Boolean value indicating whether the function executed successfully.

Example

This example, from RowInit PeopleCode, initializes the visibility of the scroll based on a field setting:

```
If %Component = COMPONENT.APPR_RULE Then
   If APPR_AMT_SW = "N" Then
      HideScroll(RECORD.APPR_RULE_LN, CurrentRowNumber(1), RECORD.APPR_RULE_DETL, C⇒
urrentRowNumber(2), RECORD.APPR_RULE_AMT);
   Else
      UnhideScroll(RECORD.APPR_RULE_LN, CurrentRowNumber(1), RECORD.APPR_RULE_DETL,⇒
 CurrentRowNumber(2), RECORD.APPR_RULE_AMT);
   End-If;
End-If;
```

The corresponding FieldChange PeopleCode dynamically changes the appearance of the page based on user changes to the APPR_AMT_SW field:

```
If APPR_AMT_SW = "N" Then
   HideScroll(RECORD.APPR_RULEs_LN, CurrentRowNumber(1), RECORD.APPR_RULE_DETL, Cur⇒
rentRowNumber(2), RECORD.APPR_RULE_AMT);
   &AMT_ROWS = ActiveRowCount(RECORD.APPR_RULE_LN, CurrentRowNumber(1), RECORD.APPR⇒
_RULE_DETL, CurrentRowNumber(2), RECORD.APPR_RULE_AMT);
   For &AMT_LOOP = &AMT_ROWS To 1 Step - 1
      DeleteRow(RECORD.APPR_RULE_LN, CurrentRowNumber(1), RECORD.APPR_RULE_DETL, Cu⇒
rrentRowNumber(2), RECORD.APPR_RULE_AMT, &AMT_LOOP);
   End-For;
Else
   UnhideScroll(RECORD.APPR_RULE_LN, CurrentRowNumber(1), RECORD.APPR_RULE_DETL, Cu⇒
rrentRowNumber(2), RECORD.APPR_RULE_AMT);
End-If;
```

Related Links

UnhideRow

HideRow

UnhideScroll

HistVolatility

Syntax

HistVolatility(*Closing_Prices*, *Trading_Days*)

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Description

Use the HistVolatility function to compute the historical volatility of a market-traded instrument.

Parameters

Closing_Prices	An array of number. The elements in this array contain a vector of closing prices for the instrument.
Trading_Days	The number of trading days in a year.

Returns

A number.

Related Links

ConvertRate

Hour

Syntax

```
Hour(time_value)
```

Description

Use the Hour function to extract a Number value for the hour of the day based on a time or DateTime value. The value returned is a whole integer and is not rounded to the nearest hour.

Parameters

time_value	A DateTime or Time value.

Returns

Returns a Number equal to a whole integer value from 0 to 23 representing the hour of the day.

Example

If &TIMEOUT contains a Time value equal to 04:59:59 PM, the following example sets &TIMEOUT_HOUR to 16:

```
&TIMEOUT_HOUR = Hour(&TIMEOUT);
```

Related Links

Minute

Second

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PeopleCode Built-in Functions and Language Constructs: I

The PeopleCode built-In functions and language constructs beginning with the letter I are listed in alphabetical order within this topic.

Related Links

Typographical Conventions

IBPurgeDomainStatus

Syntax

IBPurgeDomainStatus()

Description

Use the IBPurgeDomainStatus function to purge the domain status.

Parameters

None.

Returns

A boolean value: true if the functions completes successfully, false otherwise.

IBPurgeNodesDown

Syntax

IBPurgeNodesDown()

Description

Use the IBPurgeNodesDown function to purge the down nodes from the service operation monitor.

Parameters

None.

Returns

Boolean: true if the function completes successfully, false otherwise.

Idiv

Syntax

Idiv(*x, divisor*)

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Description

The Idiv function is an explicit integer division operation. It divides one number (*x*) by another (*divisor*).

Parameters

X	Specify an integer to be divided.
divisor	Specify the integer used to divide the first parameter.

Returns

An integer value.

Example

The following example sets &I1 to 1 and &I2 to -1:

```
&I1 = Idiv(3, 2);

&I2 = Idiv(17, 10);
```

Related Links

Mod
Int
Integer
Round
Truncate
Value

If

Syntax

```
If condition Then
statement_list
[Else
statement_list]
End-If
```

Description

Use the If statement to execute statements conditionally, depending on the evaluation of a conditional expression. The Then and Else clauses of an If consist of arbitrary lists of statements. The Else clause may be omitted. If condition evaluates to True, all statements in the Then clause are executed; otherwise, all statements in the Else clause are executed.

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Example

The following example's first If statement checks for BEGIN_DT and RETURN_DT, and makes sure that RETURN_DT is greater (later) than BEGIN_DT. If this is True, the execution continues at the following line, otherwise execution continues at the line beginning with WinMessage:

```
If All(BEGIN_DT, RETURN_DT) AND
      BEGIN_DT = RETURN_DT Then
   &DURATION_DAYS = RETURN_DT - BEGIN_DT;
   If &DURATION_DAYS  999 Then
      DURATION_DAYS = 999;
   Else
      DURATION_DAYS = &DURATION_DAYS;
   End-if;
Else
   WinMessage("The beginning date is later then the return date!");
End-if;
```

Related Links

#If

InboundPublishXmlDoc

Syntax

InboundPublishXmlDoc(*&XmlDoc*, **Message.***MessageName*, **Node.***PubNodeName* [, *Enqueue*])

Description

Use the InboundPublishXmlDoc function to send an asynchronous message that simulates an inbound request from an external node. The content data is based on an XmlDoc object.

Note: This function has been deprecated and remains for backward compatibility only. Use the IntBroker class InboundPublish method instead.

This function is used to test inbound message processing. Though you are sending a message to yourself, it goes through all the inbound message processing on *PubNodeName*.

The *&XmlDoc* object must already be instantiated and populated. The message included in the function call should be a nonrowset-based message, that is, one that isn't based on a hierarchical record structure.

Related Links

"InBoundPublish" (PeopleTools 8.54: PeopleCode API Reference)

Parameters

&XmlDoc	Specify an already instantiated and populated XmlDoc object that you want to test.
MessageName	Specify an already existing nonrowset-based message, prefaced with the reserved word **Message**.

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PubNodeName Specify a node. This is for Sender Specified Routing (SSR), prefixed with the reserved word **Node**. The node defines the target for the published message.

Enqueue Specify if the message is enqueued. This parameter takes a Boolean value.

Returns

A Boolean value: True if the message was successfully published, False otherwise.

Example

The following code example re-publishes the XmlDoc and simulates that it is coming from the node EXTERNAL.

```
Local XMLDOC &xmldoc = GetMessageXmlDoc();

InBoundPublishXmlDoc(&xmldoc, NODE.EXTERNAL);
```

Related Links

GetMessageXmlDoc

SyncRequestXmlDoc

InitChat

Syntax

InitChat(*logical queue ID*, *application data URL*, *customer username*, [*chat_subject*][, *chat_question*][, *wizard_URL*][, *priority*][, *skill_level*][, *cost*])

Description

Use the InitChat function to engage a customer and an agent in a chat session. It places a chat request on a MultiChannel Framework queue and immediately launches a customer chat window. When an agent accepts this task from the queue, the system launches an agent chat window.

Note: Chats are implicitly queued with the current language setting of the initiator (%Language_user). Chats are only assigned to agents who have this language in their language list as specified on the Languages page of the Agents component.

Parameters

logical queue ID Specifies the logical queue in which the task should be queued. It is a string value.

The logical queue ID is a case-sensitive value. The case used in the InitChat function must exactly match the case used when creating the logical queue ID on the Queues page.

application data relative URL This is the relative URL of the application page you want the agent to see on the left side of the agent-to-customer chat

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window when the agent accepts the chat. This value needs to be provided by your program.

Note: This URL parameter must *not* point to content that includes JavaScript that breaks surrounding frames or that references the "top" window. In addition, the application page should not contain URL links to such content. This is because the Agent Chat Console is framed by the RenServer API which sends and receives the chat text.

---

customer username

This reflects the name of the customer or end user initiating the chat request. This value can be derived from the signon mechanism (%UserID) or by prompting the user.

This is the name used to identify the chat requestor in the MultiChannel Framework chat console. For example, in the chat history window, all text sent by the customer is prefixed with this name.

chat_subject

This is an optional string parameter. The application can indicate a subject of the chat request.

This could be prompted from the user or inferred from the page from which the chat is initiated. The system displays the subject on the agent's chat console when it assigns the chat to an agent.

chat_question

This is an optional string parameter. The application can indicate a specific question to be addressed in the chat. This could be prompted from the user or inferred from the page from which the chat is initiated.

The value appears in the agent's chat window history box immediately after accepting the chat. This enables the agent to know the customer's question without having to ask.

wizard_URL

This feature leads the agent to an application page from which the agent can select a URL to push to the customer. This is an optional string parameter. This is the relative URL of the application page you wish the agent to launch when the agent clicks the Grab button on the Agent Chat console.

If you do not provide this value, a default wizard is launched with no application-specific functionality.

If you do provide this value, the application page must provide a wizard for pushing a URL to the customer.

The wizard page provided by the application must be able to write the URL generated by the wizard to the URL field. The URL field is defined by PeopleSoft. In addition, you need to embed the HTML definition, MCF_GRABURL, which provides the Push and Push and Close buttons that push the URL in the URL field to the customer.

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See the Example section for examples showing the PeopleCode that would be used to generate the relative URL that is passed in to InitChat and the PeopleCode that would be used to embed the provided MCF_GRABURL definition into your application page.

priority

This is an optional parameter. It is an integer value expressing the priority level of the request. The minimum value is 0 and there is no maximum value.

Specify the priority of this chat task. A higher value means a higher priority. MultiChannel Framework tasks are ordered on a physical queue based on their assigned priority, which means the system assigns a task of a higher priority before it assigns a task of a lower priority.

If no value is specified, the system uses the default value specified for that task type on the Task Configuration page.

When tasks have the same priority, the system orders the tasks according to time they were created. For example, suppose the following tasks exist: Priority 2 created at 11:15 AM and Priority 2 created at 11:16 AM. In this case, the system places the task created at 11:15 AM before the task created at 11:16 AM.

skill level

This is an optional parameter. It is an integer value expressing the minimum skill level required of the agent to whom the system routes the request. You set an agent's skill level in the Agent page. The minimum value is 0 and there is no maximum value.

The queue server assigns this task type to an available agent on that queue with the lowest skill level greater than or equal to the skill level required by the task.

If no value is specified, the system uses the default value specified for that task type in the Task Configuration page.

cost

This is an optional parameter. It is an integer value measuring the workload each task places on an agent. The cost of a task is an estimate of the tasks's expected complexity and of the time required to resolve the task. The minimum value is 0, and there is no maximum value.

The cost of a task is added to an agent's workload after accepting a task on the MultiChannel Framework console. A task can't be assigned to an agent if the difference between the current workload and the maximum workload defined for that agent on the Agent configuration page is less than the cost of this task.

If you do not specify a value, the system uses the default value specified for that task in the Task Configuration pages.

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Note: If the required skill level or cost submitted exceeds the highest skill level or maximum workload of any of the agents on that queue, the task cannot be assigned.

Returns

Returns a unique Chat ID in the form of an integer. You can use this ID to reference the chat in the chat log.

If unsuccessful, it returns a message number. The message set ID for MultiChannel Framework is 162.

For example, 1302 is returned when an invalid task type or no value is provided.

Example

For example, the following PeopleCode could be used to generate the relative URL that is passed in to **InitChat**.

```
&WizURL = GenerateComponentContentRelURL(%Portal, %Node, MenuName.PT_MCF, "GBL", Co⇒
mponent.MCF_DEMO_CMP, Page.MCF_URLWIZARD, "U");
```

The following is an example of embedding the provided MCF_GRABURL definition into your application page, using the GetHTMLText function.

```
Function IScript_GrabURL()
   &cssPTMCFDEF = %Response.GetStyleSheetURL(StyleSheet.PTMCFDEF);
   &cssPTSTYLEDEF = %Response.GetStyleSheetURL(StyleSheet.PTSTYLEDEF);
   &titleGrabURL = MsgGetText(162, 1170, "URL Wizard");
   &psDomain = SetDocDomainForPortal();
   If (&psDomain = "") Then
      &psDomain = SetDocDomainToAuthTokenDomain();
   End-If;
   &labelBtPush = MsgGetText(162, 1181, "Push");
   &labelBtPushClose = MsgGetText(162, 1186, "Push and Close");
   &HTML = GetHTMLText(HTML.MCF_GRABURL, &titleGrabURL, &cssPTSTYLEDEF, &cssPTMCFDE⇒
F, &psDomain, &labelBtPush, &labelBtPushClose);
   %Response.Write(&HTML);
End-Function;
```

The following is an example of the usage of InitChat.

```
&ret = InitChat("SALES", "http://www.support.company.com/products.html",
"John Smith", "Widgets", "How to order widgets", "", 2, 2);
```

The following example illustrates how to pass a PeopleCode-generated URL using the GenerateComponentContentRelURL function for Application Data URL and wizards.

```
     &urlTestComponent = GenerateComponentContentRelURL(%Portal, %Node, MenuName.UT⇒
ILITIES, "GBL", Component.MESSAGE_CATALOG1, Page.MESSAGE_CATALOG, "U");

   &WizURL = GenerateComponentContentRelURL(%Portal, %Node, MenuName.PT_MCF, "GBL",⇒
 Component.MCF_DEMO_CMP, Page.MCF_URLWIZARD, "U");

   try

      &ret = InitChat(&QUEUEID, &urlTestComponent, &Username, &subject, &question, ⇒
&wizurl, &priority, &minskill);
   catch Exception &E

      MessageBox(0, "", 0, 0, "Caught exception: " | &E.ToString());
   end-try;
```

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InsertImage

Syntax

```
InsertImage(scrollpath, target_row, [recordname.]fieldname)
```

where *scrollpath* is:

```
[SCROLL.level1_recname, level1_row, [SCROLL.level2_recname, level2_row,]]
SCROLL.target_recname
```

Description

Use the InsertImage function to associate an image file with a record field on a page. After the image file is associated with the record field, it can be saved to the database when the component is saved.

The following are the valid types of image files that can be associated with a record field:

- BMP
- DIB
- JPEG
- PNG
- SVG

InsertImage uses a search page to enable the end user to select the image file to be used. This is the same search page used to add an attachment.

Note: To update an image field using this function, be sure that PSIMAGEVER field is also on the same record as the image field being updated.

Virus scanning can be performed on all files uploaded with the InsertImage function.

See "Setting Up Virus Scanning" (PeopleTools 8.54: PeopleCode Developer's Guide).

Restrictions on Use in PeopleCode Events

InsertImage is a "think-time" function, which means it shouldn't be used in any of the following PeopleCode events:

- SavePreChange
- SavePostChange
- Workflow
- RowSelect
- Any PeopleCode event that fires as a result of a ScrollSelect (or one of its relatives) function calls, or a Select (or one of its relatives) Rowset class method.

See "Understanding Restrictions on Method and Function Use" (PeopleTools 8.54: PeopleCode Developer's Guide).

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Image Size Considerations

The size of the image that can be saved to the database depends on the database platform.

Database Platform	*Size limitation*
DB2/400	30 KB
DB2/MVS	31 KB
DB2/Unix	31 KB

Platforms other than those listed here are effectively without a size limit, that is, they allow for images equal to or greater than 2 GB.

Platform size limitations are subject to change.

Parameters

scrollpath A construction that specifies a scroll area in the component buffer.

target_row The row number of the target row.

[*recordname* .]*fieldname* The name of the field to be associated with the image file. The field can be on scroll level one, two, or three of the active page. The *recordname* prefix is required if the function call is not on the record definition *recordname*

Returns

The InsertImage function returns either a constant or a number:

Numeric Value	*Constant Value*	*Description*
0	%InsertImage_Success	Image was successfully associated with the record field.
1	%InsertImage_Failed	Image was not successfully associated with the record field. When the component is saved the image file will not be saved to the database.
2	%InsertImage_Canceled	User canceled the transaction so image file isn't associated with record field.
3	%InsertImage_ExceedsMaxSize	Image exceeds the maximum allowed size.
13	%Attachment_ViolationFound	File violation detected by virus scan engine.

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Numeric Value	Constant Value	Description
14	%Attachment_VirusScanError	Virus scan engine error.
15	%Attachment_VirusConfigError	Virus scan engine configuration error.
16	%Attachment_VirusConnectError	Virus scan engine connection error.

Example

```
&RC = InsertImage(EMPL_PHOTO.EMPLOYEE_PHOTO);
```

Related Links

DeleteImage

InsertRow

Syntax

```
InsertRow(scrollpath, target_row [, turbo])
```

where *scrollpath* is:

```
[RECORD.level1_recname, level1_row, [RECORD.level2_recname, level2_row, ]
RECORD.target_recname
```

To prevent ambiguous references, you can also use **SCROLL.** *scrollname*, where *scrollname* is the same as the scroll level's primary record name.

Description

Use the InsertRow function to programmatically perform the ALT+7 and ENTER (RowInsert) function.

Note: This function remains for backward compatibility only. Use the InsertRow method of the Rowset class instead.

InsertRow inserts a new row in the scroll buffer and causes a RowInsert PeopleCode event to fire, followed by the events that normally follow a RowInsert, as if the user had manually pressed ALT+7 and ENTER.

In scrolls that are not effective-dated, the new row is inserted *after* the target row specified in the function call. However, if the scroll is effective-dated, then the new row is inserted *before* the target row, and all the values from the previous current row are copied into the new row, except for EffDt, with is set to the current date.

Note: InsertRow cannot be executed from the same scroll level where the insertion will take place, or from a lower scroll level. Place the PeopleCode in a higher scroll level record.

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Turbo Mode

The InsertRow built-in function can be executed in turbo mode or non-turbo mode. In turbo mode, default processing is performed on the row being inserted only, which provides a performance improvement over non-turbo mode. In non-turbo mode, default processing is performed on all rows.

Turbo mode is available as an option to the InsertRow, RowScrollSelect, RowScrollSelectNew, ScrollSelect, and ScrollSelectNew PeopleCode built-in functions. To execute any of these functions in turbo mode, pass a value of True in the optional *turbo* parameter. Non-turbo mode is the default for these functions.

Note: For the Flush, InsertRow, and Select methods of the Rowset class, turbo mode is the only available operating mode.

Related Links

"InsertRow" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide), "Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

scrollpath	A construction that specifies a scroll level in the component buffer.
target_row	The row number indicating the position where the new row will be inserted.
turbo	Specifies whether default processing is performed on the entire scroll buffer (non-turbo mode) or just the row being inserted (turbo mode). Pass a value of True to perform processing in turbo mode. Non-turbo mode is the default.

Returns

Optionally returns a Boolean value indicating whether the function executed successfully.

Example

The example inserts a row on the level-two page scroll. The PeopleCode has to be in the scroll-level-one record:

```
InsertRow(RECORD.BUS_EXPENSE_PER, &L1_ROW, RECORD.BUS_EXPENSE_DTL, &L2_ROW);
```

Related Links

DeleteRow
HideRow
UnhideRow

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Int

Syntax

Int(*decimal*)

Description

Use the Int function to truncate a decimal number *x* to an integer and returns the result as a Number value.

Note: PeopleSoft only supports 32 bit integers. The largest integer value we support is 4294967295.

Parameters

decimal A decimal number to be truncated.

Returns

Returns a Number equal to *decimal* truncated to a whole integer.

Example

The following example sets &I1 to 1 and &I2 to -4:

```
&I1 = Int(1.975);
&I2 = Int(-4.0001);
```

Related Links

Mod
Round
Truncate
Value

Integer

Syntax

Integer(*decimal*)

Description

Use the Integer function to convert *decimal* to an integer (32 bit signed twos complement number) by truncating any fraction part towards zero and returns the result as an Integer value.

Differences between Int and Integer

There is one primary difference between the Int function and the Integer function.

- The Int function rounds to a number in floating-decimal-point representation with a range of -9,999,999,999,999,999,999,999,999,999,999,999 to 9,999,999,999,999,999,999,999,999,999,999,999.

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- The Integer function truncates to a number in 32 bit binary twos-complement representation with a range of -2,147,483,648 to 2,147,483,647.

Parameters

decimal	A decimal number to be truncated to an integer.

Returns

Returns an Integer equal to *decimal* truncated to a whole integer. If *decimal* is outside the range that can be represented by an integer type, the result isn't defined.

Related Links

Mod
Int
Round
Truncate
Value

IsAddMode

Syntax

```
IsAddMode()
```

Description

Use the IsAddMode function to return a Boolean value indicating whether the component build process is in add mode.

Important! Use this function within fluid applications only.

Parameters

None.

Returns

A Boolean value.

Related Links

SetAddMode
"Component Build Processing in Add Modes" (PeopleTools 8.54: PeopleCode Developer's Guide)

IsAlpha

Syntax

```
IsAlpha(String)
```

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Description

Use the IsAlpha function to determine if *String* contains only textual characters, including alphabetic characters from several scripts including Latin, Greek, Cyrillic and Thai, ideographic characters from Chinese, Japanese and Korean and Japanese kana. It excludes all punctuation, numerics, spaces and control codes

Parameters

String	Specify the string you want to search for alphabetic and other textual characters.

Returns

A Boolean value: true if the string contains only alphabetic and textual characters, false if it contains any numbers, punctuation or spaces.

Example

```
&Value = Get Field().Value;
If IsAlpha(&Value) Then
   /* do textual processing */
Else
   /* do non-textual processing */
End-if;
```

Related Links

IsAlphaNumeric
IsDigits
IsDate
IsDateTime
IsNumber
IsTime

IsAlphaNumeric

Syntax

IsAlphaNumeric(*String*)

Description

Use the IsAlphaNumeric function to determine if *String* contains only textual and numeric characters.

Textual characters include all characters valid for the IsAlpha function. Alphanumeric characters do *not* include sign indicators and comma and period decimal points. If you want to check for numbers as well as sign indicators, use the IsNumber function.

Parameters

String	Specify the string you want to search for alphanumeric characters.

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Returns

A Boolean value: True if the string contains only alphanumeric characters, False otherwise.

Example

```
&Value = Get Field().Value;
If IsAlphaNumeric(&Value) Then
   /* do alphanumeric processing */
Else
   /* do non-alphanumeric processing */
End-if;
```

Related Links

IsNumber

IsAlpha

IsBackEnabled

Syntax

```
IsBackEnabled()
```

Description

Use the IsBackEnabled function to return a Boolean value indicating whether the Back button is enabled on the component.

Important! Use this function within fluid applications only.

Parameters

None.

Returns

A Boolean value.

Example

```
If Not (IsBackEnabled()) Then
   PT_WORK.PT_BUTTON_BACK.Visible = False;
End-If;
```

Related Links

"Setting Component Properties for Fluid Components" (PeopleTools 8.54: Fluid User Interface Developer's Guide)

IsDate

Syntax

```
IsDate(Value)
```

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Description

Use the IsDate function to determine if *Value* contains a valid date.

You can use this function when you want to determine if a value is compatible with the Date built-in function.

Unintialized date variables, 0 numerics, or blank strings return true. If these values are possibilities for a variable passed to the IsDate function, you should add an additional check to ensure there is a value, such as using the All function.

Parameters

Value	Specify either a string or number you want to search for a valid date. *Value* is a number of the format YYYYMMDD or string of the format YYYY-MM-DD.

Returns

A Boolean value: True if the string contains a valid date, False otherwise.

Example

```
If IsDate(&Num) Then
   &Datevalue = Date(&Num);
End-if;
```

Related Links

IsAlphaNumeric
IsDigits
IsDateTime
IsNumber
IsTime

IsDateTime

Syntax

IsDateTime(*String*)

Description

Use the IsDateTime function to determine if *String* contains a date/time string in the standard PeopleSoft format, that is, in the following format:

```
yyyy-mm-dd hh:mm:ss.mmmmmm
```

Parameters

String	Specify the string you want to search for a valid PeopleSoft date/time.

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Returns

A Boolean value: True if the string contains a valid PeopleSoft date/time, False otherwise.

Example

The following example uses the short form of dot notation, by combining the getting the field value with getting the value of IsDateTime and making it a conditional statement:

```
If IsDateTime(GetField().Value) Then
   /* do date processing */
Else
   /* do non-date processing */
End-if;
```

Related Links

IsAlphaNumeric
IsDigits
IsDate
IsNumber
IsTime

IsDaylightSavings

Syntax

```
IsDaylightSavings(datetime, {timezone | "Local" | "Base"})
```

Description

Use the IsDaylightSavings function to determine if daylight saving time is active in the specified time zone at the specified date and time. For time zones that don't observe daylight saving time, this function always returns False.

The system's base time zone is specified on the PSOPTIONS table.

Parameters

datetime The DateTime value you want to check.

***timezone* | Local | Base** Specify a value for converting *datetime*. The values are:

- *timezone* - a time zone abbreviation or a field reference to be used for converting *datetime*.
- **Local** - use the local time zone for converting *datetime.*
- **Base** - use the base time zone for converting *datetime*.

Returns

A Boolean value: True if daylight saving time is active in the specified time zone at the specified date and time. Returns False otherwise.

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Example

In the first example, TESTDTTM has value of 01/01/99 10:00:00AM. &OUTPUT is False.

```
&OUTPUT = IsDaylightSavings(TESTDTTM, "EST")
```

In this example, TESTDTTM has value of 04/05/99 12:00:00AM. &OUTPUT has a value of True: 12:00am PST = 3:00am EST, so daylight saving time has switched on.

```
&OUTPUT = IsDaylightSavings(TESTDTTM, "EST")
```

In this example, TESTDTTM has value of 04/05/99 12:00:00AM. &OUTPUT returns False: 12:00am PST = 1:00am MST, so daylight saving time hasn't started yet.

```
&OUTPUT = IsDaylightSavings(TESTDTTM, "MST")
```

In this example, TESTDTTM has value of 07/07/99 10:00:00. &OUTPUT returns False: ESTA is Indiana time, where they do not observe daylight saving time.

```
&OUTPUT = IsDaylightSavings(TESTDTTM, "ESTA")
```

Related Links

ConvertDatetimeToBase
ConvertTimeToBase
DateTimeToTimeZone
TimeToTimeZone
TimeZoneOffset
"PeopleTools Options" (PeopleTools 8.54: System and Server Administration)

IsDigits

Syntax

IsDigits(*String*)

Description

Use the IsDigits function to determine if *String* contains only digit (numeric) characters. Numeric characters do *not* include sign indicators and comma and period decimal points. If you want to check for numbers as well as sign indicators, use the IsNumber function.

Parameters

String	Specify the string you want to search.

Returns

A Boolean value: True if the string contains digits, False otherwise.

Example

```
If IsDigits(&MyValue) Then
   /* do processing */
Else
```

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```
   /* do error processing */
End-if;
```

Related Links

IsAlpha
IsAlphaNumeric
IsDate
IsDateTime
IsNumber
IsTime

IsFluidMode

Syntax

IsFluidMode([**Component.***COMPONENT_NAME*] [, **Market.***MARKET*])

Description

Use the IsFluidMode function to return a Boolean value indicating whether fluid mode is enabled on the specified component. If neither optional parameter is specified, then the function operates on the current component.

Important! Use this function within fluid applications only.

Parameters

Component.*COMPONET_NAME*	Specifies the component ID as a string value.
Market.*MARKET*	Specifies the market ID as a string value. Alternatively, you can specify the %Market system variable (without the **Market.** reserved word).

Returns

A Boolean value.

Example

```
Function SetGroupletCRefData(&Portal As ApiObject, &CRef As ApiObject)
...

   If PORTAL_CREF_ADM.PORTAL_URLTYPE = "UPGE" Then
      If IsFluidMode(PORTAL_CREF_ADM.PNLGRPNAME, PORTAL_CREF_ADM.MARKET) = True The⇒
n
         &CRef.IsFluid = 1;
      Else
         &CRef.IsFluid = 0;
      End-If;
...
```

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Related Links

"Setting Component Properties for Fluid Components" (PeopleTools 8.54: Fluid User Interface Developer's Guide)

IsFluidSearchStart

Syntax

IsFluidSearchStart()

Description

Use the IsFluidSearchStart function to return a Boolean value indicating whether the user has already run a search on this component.

Important! Use this function within fluid applications only.

Parameters

None.

Returns

A Boolean value.

Example

```
If (IsFluidSearchStart()) Then
   Local ApiObject &Portal = %Session.GetPortalRegistry();
   &Portal.Open(%Portal);
   Local string &sComponentUrl = GenerateComponentContentURL(%Portal, %Node, @("Men⇒
uname." | %Menu), %Market, @("Component." | %Component), "", "");
   Local ApiObject &thisCref = &Portal.FindCRefByURL(&sComponentUrl);
   If &thisCref <> Null And
         All(&thisCref.Label) Then
      PTLAYOUT.PAGETITLE_GROUPBOX.Label = &thisCref.Label;
   Else
      PTLAYOUT.PAGETITLE_GROUPBOX.Label = MsgGetText(124, 522, "Message Not Found: ⇒
Search"); /* TBD - need message set for label */
   End-If;
Else
   PTLAYOUT.PAGETITLE_GROUPBOX.Label = GetPageTitle();
   AddOnLoadScript("SearchPageClose();");
End-If;
```

IsGroupletRequest

Syntax

IsGroupletRequest()

Description

Use the IsGroupletRequest function to return a Boolean value indicating whether the request was initiated by a tile (also referred to as a grouplet) or a regular component.

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Important! Use this function within fluid applications only.

Parameters

None.

Returns

A Boolean value.

Example

```
If Not IsGroupletRequest() Then
   If Not &bUsePhoneLayout Then
      &chart.HighlightSelectedDataPoint = True;
      &chart.IsChartDrillable = True;
      &chart.IsDrillable = True;
      REM &chart.AdditionalStyleSuffix = "CHARTDRILL";
   End-If;
End-If;


If &bUsePhoneLayout And
      Not IsGroupletRequest() Then
   PTPG_NUI_CHTOPT.PTPG_GROUP_BOX1.FreeFormStyleName = "ptpg_chart_phone";
   PTS_SRCH.PTS_CHART_GB.FreeFormStyleName = "ptpg_chartarea_phone";
End-If;
```

IsHidden

Syntax

IsHidden(*scrollpath*, *target_row*)

Where *scrollpath* is:

[**RECORD.***level1_recname*, *level1_row*, [**RECORD.***level2_recname*, *level2_row*,]
RECORD.*target_recname*

To prevent ambiguous references, you can also use **SCROLL.** *scrollname*, where *scrollname* is the same as the scroll level's primary record name.

Description

Use the IsHidden function to verify whether a row is hidden or not.

Note: This function remains for backward compatibility only. Use the Visible row class property instead.

It returns True if the row is hidden, otherwise it returns False. IsHidden must be called in a PeopleCode program on a higher scroll level than one you are checking.

Related Links

"Visible" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide)

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Parameters

scrollpath	A construction that specifies a scroll level in the component buffer.
target_row	The row number indicating the position of the row.

Example

The following example tests whether a specific row on scroll level one is hidden:

```
&ROW_CNT = ActiveRowCount(RECORD.LD_SHP_INV_VW);
&FOUND = True;
If &ROW_CNT = 1 Then
   &ORDER = FetchValue(LD_SHP_INV_VW.ORDER_NO, 1);
   If None(&ORDER) Then
      &FOUND = False;
   End-If;
End-If;
If &FOUND Then
   For &I = 1 To &ROW_CNT
      If Not IsHidden(RECORD.LD_SHP_INV_VW, &I) Then
         UpdateValue(ITEM_SELECTED, &I, "N");
      End-If;
   End-For;
End-If;
```

Related Links

GenerateScriptContentURL

UnhideRow

IsHomeEnabled

Syntax

IsHomeEnabled()

Description

Use the IsHomeEnabled function to return a Boolean value indicating whether the Home button is enabled on the component.

Important! Use this function within fluid applications only.

Parameters

None.

Returns

A Boolean value.

Example

```
If Not (IsHomeEnabled()) Then
   PT_WORK.PT_BUTTON_HOME.Visible = False;
```

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```
End-If;
```

Related Links

"Setting Component Properties for Fluid Components" (PeopleTools 8.54: Fluid User Interface Developer's Guide)

IsLogoutEnabled

Syntax

IsLogoutEnabled()

Description

Use the IsLogoutEnabled function to return a Boolean value indicating whether the Logout button is enabled on the component.

Important! Use this function within fluid applications only.

Parameters

None.

Returns

A Boolean value.

Example

```
If Not (IsLogoutEnabled()) Then
   PT_WORK.PT_BUTTON_LOGOUT.Visible = False;
End-If;
```

Related Links

"Setting Component Properties for Fluid Components" (PeopleTools 8.54: Fluid User Interface Developer's Guide)

IsMenuItemAuthorized

Syntax

IsMenuItemAuthorized(**MENUNAME.***menuname*, **BARNAME.***barname*, **ITEMNAME.***menuitem_name*, **PAGE.***component_item_name*[, *action*])

Description

The IsMenuItemAuthorized function returns True if the current user is allowed to access the specified menu item.

Note: You do not need to use this function to gray internal link pushbuttons/hyperlinks. This function is generally used for transfers that are part of some PeopleCode processing.

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Parameters

menuname The name of the menu where the page is located, prefixed with the reserved word **MENUNAME**.

barname The name of the menu bar where the page is located, prefixed with the reserved word **BARNAME**.

menu_itemname The name of the menu item where the page is located, prefixed with the reserved word **ITEMNAME**.

component_item_name Specify the component item name of the page to be displayed on top of the component when it displays. The component item name is specified in the component definition. If you specify a page, it must be prefixed with the keyword **PAGE**. You can also specify a null ("") for this parameter.

action String representing the action mode in which to start up the page. If *action* is omitted, the current action is used. Values are:

Constant	*Description*
%Action_Add	Add
%Action_UpdateDisplay	Update/Display
%Action_UpdateDisplayAll	Update/Display All
%Action_Correction	Correction
%Action_DataEntry	Data Entry
%Action_Prompt	Prompt

Returns

A Boolean value: True if the user is authorized to access the specified page, False otherwise.

Related Links

DoModal
DoModalComponent
Transfer
TransferPage

IsMessageActive

Syntax

```
IsMessageActive(Message.Message_Name)
```

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Description

Use the IsMessageActive built-in function to determine whether the specified message definition has been set to inactive in Application Designer.

Note: This function has been deprecated and remains for backward compatibility only. Use the IntBroker class IsOperationActive method instead.

Note: This function is used only with XmlDoc messages, that is, after you get an XmlDoc message (using GetMessageXmlDoc) use this function to determine if the message is active. Use the IsActive message class property to determine if a rowset-based message definition is active.

This function returns True if the message definition for the XmlDoc message is active, False if it's been inactivated from Application Designer. If you have a lot of PeopleCode associated with publishing an XmlDoc message, you might use this function to check if the message is active before you publish it.

Related Links

"IsOperationActive" (PeopleTools 8.54: PeopleCode API Reference)

Parameters

Message_Name	Specify the name of the message you want to inquire about. The message name must be prefixed with the reserved work **Message.** This function is used only with XmlDoc message definitions.

Returns

A Boolean value: True if the message is active, False otherwise.

Example

```
&Active = IsMessageActive(Message.MyMessage);
If &Active Then
   /* code for getting message, populating it and publishing it */
End-if;
```

Related Links

"IsActive" (PeopleTools 8.54: PeopleCode API Reference)

"Understanding XmlDoc Classes" (PeopleTools 8.54: PeopleCode API Reference)

IsModal

Syntax

IsModal()

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Description

The IsModal function returns True if executed from PeopleCode running in a modal secondary page and False if executed elsewhere. This function is useful in separating secondary page-specific logic from general PeopleCode logic.

Restrictions on Use With a Component Interface

This function is ignored (has no effect) when used by a PeopleCode program that's been called by a Component Interface.

Parameters

None.

Returns

A Boolean value.

Example

The following example executes logic specific to a secondary page:

```
If Not IsModal() Or
      Not (%Page = PAGE.PAY_OL_REV_RUNCTL Or
         %Page = PAGE.PAY_OL_RE_ASSGN_C Or
         %Page = PAGE.PAY_OL_RE_ASSGN_S) Then
   Evaluate COUNTRY
   When = "USA"
   When = "CAN"
      If Not AllOrNone(ADDRESS1, CITY, STATE) Then
         Warning MsgGet(1000, 5, "Address should consist of at least Street (Line 1⇒
), City, State, and Country.")
      End-If;
      Break;
   When-Other;
      If Not AllOrNone(ADDRESS1, CITY, COUNTRY) Then
         Warning MsgGet(1000, 6, "Address should consist of at least Street (Line 1⇒
), City, and Country.")
      End-If;
   End-Evaluate;
End-If;
```

Related Links

DoModal

EndModal

IsModalComponent

Syntax

IsModalComponent()

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Description

Use the IsModalComponent function to test whether a secondary component is currently executing, enabling you to write PeopleCode that only executes when a component has been called with DoModalComponent.

Restrictions on Use With a Component Interface

This function is ignored (has no effect) when used by a PeopleCode program that's been called by a Component Interface.

Parameters

None.

Returns

Returns a Boolean value: True if the current program is executing from a secondary component, False otherwise.

Example

```
If IsModalComponent() then
/* Logic that executes only if component is executing modally.  */
end-if;
```

Related Links

DoModalComponent

IsModalPanelGroup

Syntax

IsModalPanelGroup()

Description

Use the IsModalPanelGroup function to test whether a secondary component is currently executing.

Note: The IsModalPanelGroup function is supported for compatibility with previous releases of PeopleTools. New applications should use the IsModalComponent function instead.

Related Links

IsModalComponent

IsNavBarEnabled

Syntax

IsNavBarEnabled()

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Description

Use the IsNavBarEnabled function to return a Boolean value indicating whether the NavBar button is enabled on the component.

Important! Use this function within fluid applications only.

Parameters

None.

Returns

A Boolean value.

Example

```
If Not (IsNavBarEnabled()) Then
   PT_WORK.PT_BUTTON_NAVBAR.Visible = False;
Else
   If %Request.BrowserDeviceFormFactor = %FormFactor_Small Then
      PT_WORK.PT_BUTTON_NAVBAR.Label = PT_WORK.PT_BUTTON_NAVBAR.GetLongLabel("PT_NA⇒
VIGATOR");
   End-If;
   AddStyleSheet(StyleSheet.PTNUI_NAVBAR_CSS);
   AddOnLoadScript("PTNavBar.Url = '" | GetNavBarURL( True) | "';");
End-If;
```

Related Links

"Setting Component Properties for Fluid Components" (PeopleTools 8.54: Fluid User Interface Developer's Guide)

IsNextInListEnabled

Syntax

IsNextInListEnabled()

Description

Use the IsNextInListEnabled function to return a Boolean value indicating whether the Next in List button is enabled on the component.

Important! Use this function within fluid applications only.

Parameters

None.

Returns

A Boolean value.

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Example

```
If ( Not (IsSearchEnabled())) Then
   PT_WORK.PT_BUTTON_NEXTLST.Visible = False;
   PT_WORK.PT_BUTTON_RETLST.Visible = False;
   PT_WORK.PT_BUTTON_PREVLST.Visible = False;
Else

   If (IsFluidSearchStart() Or
         Not (IsNextInListEnabled())) Then
      PT_WORK.PT_BUTTON_NEXTLST.Visible = False;
   Else
      PT_WORK.PT_BUTTON_NEXTLST.Visible = True;
   End-If;
   If (IsFluidSearchStart() Or
         Not (IsPrevInListEnabled())) Then
      PT_WORK.PT_BUTTON_PREVLST.Visible = False;
   Else
      PT_WORK.PT_BUTTON_PREVLST.Visible = True;
   End-If;

   If IsFluidSearchStart() Then
      PT_WORK.PT_BUTTON_RETLST.Visible = False;
   Else
      PT_WORK.PT_BUTTON_RETLST.Visible = True;
   End-If;

End-If;
```

Related Links

IsSearchEnabled

"Setting Component Properties for Fluid Components" (PeopleTools 8.54: Fluid User Interface Developer's Guide)

IsNotifyEnabled

Syntax

IsNotifyEnabled()

Description

Use the IsNotifyEnabled function to return a Boolean value indicating whether the Notify button is enabled for the classic component. This corresponds to the Notify toolbar option on the component's Internet tab.

Important! Use this function within classic applications only.

Parameters

None.

Returns

A Boolean value.

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IsNumber

Syntax

IsNumber(*Value*)

Description

Use the IsNumber function to determine if *Value* contains a valid numeric value. Numeric characters include sign indicators and comma and period decimal points.

To determine if a value is a number and if it's in the user's local format, use the IsUserNumber function.

Parameters

Value	Specify a string you want to search to determine if it is a valid number.

Returns

A Boolean value: True if *Value* contains a valid numeric value, False otherwise.

Example

```
&Value = Get Field().Value;
If IsNumber(&Value) Then
   /* do numeric processing */
Else
   /* do non-numeric processing */
End-if;
```

Related Links

IsAlpha
IsAlphaNumeric
IsDigits
IsDate
IsDateTime
IsTime
IsUserNumber

IsOperatorInClass

Syntax

IsOperatorInClass(*operclass1* [, *operclass2*]. . .)

Description

The IsInOperatorClass takes an arbitrary-length list of strings representing the names of operator classes and determines whether the current operator belongs to any class in a list of classes.

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Note: The IsOperatorInClass function is supported for compatibility with previous releases of PeopleTools. New applications should use the IsUserInPermissionList function instead.

Related Links

IsUserInPermissionList

ISOToDate

Syntax

ISOToDate(*textdatetime*)

Description

Use the ISOToDate function to convert the text value *textdatetime* in ISO 8601 format to a date value in the base time zone. This function automatically calculates whether daylight saving time is in effect for the base time zone.

The system's base time zone is specified in the PSOPTIONS table.

Parameters

textdatetime

Specify a date/time represented as text in the ISO 8601 format: *YYYY-MM-DD***T***hh***:***mm***:***ss*[**.***S*]*TZD* (for example, 1999-01-01T19:20:30.000000+0800)

In which:

- *YYYY* is a four-digit year.
- *MM* is a two-digit month (01 through 12).
- *DD* is a two-digit day of the month (01 through 31).
- *hh* is a two digits of hour (00 through 23).
- *mm* is a two digits of minute (00 through 59).
- *ss* is two digits of second (00 through 59).
- *S* is milliseconds in one or up to six digits.
- *TZD* is a time zone designator (**Z**, +/-*hh***:***mm* or +/-*hhmm*).

Returns

Returns a date value in the base time zone.

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Example

In the following example, assuming the base time (as defined in PSOPTIONS) is PST, &DATE would have a date value of "1999-01-01":

```
&DATE= ISOToDate("1999-01-01T18:00:00.000000-0800");
```

Related Links

ConvertDatetimeToBase
DateTimeToISO
DateTimeValue
ISOToDateTime

ISOToDateTime

Syntax

ISOToDateTime(*textdatetime*)

Description

Use the ISOToDatetime function to convert the text value *textdatetime* in ISO 8601 format to a DateTime value in base time zone. This function automatically calculates whether daylight savings time is in effect for the base time zone.

The system's base time zone is specified on the PSOPTIONS table.

Parameters

textdatetime

Specify a date/time represented as text in the ISO 8601 format: *YYYY-MM-DD***T***hh***:***mm***:***ss*[**.***S*]*TZD* (for example, 1999-01-01T19:20:30.000000+0800)

In which:

- *YYYY* is a four-digit year.
- *MM* is a two-digit month (01 through 12).
- *DD* is a two-digit day of the month (01 through 31).
- *hh* is a two digits of hour (00 through 23).
- *mm* is a two digits of minute (00 through 59).
- *ss* is two digits of second (00 through 59).
- *S* is milliseconds in one or up to six digits.
- *TZD* is a time zone designator (**Z**, +/-*hh***:***mm* or +/-*hhmm*).

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Returns

Returns a DateTime value in the base time zone.

Example

In each of the following examples, assuming the base time (as defined in PSOPTIONS) is PST, &DATETIME would have a DateTime value of "1999-01-01 18:00:00.000000":

```
&DATETIME= ISOToDateTime("1999-01-01T18:00:00.000000-08:00");
&DATETIME= ISOToDateTime("1999-01-01T21:00:00.000000-0500");
&DATETIME= ISOToDateTime("1999-01-02T02:00:00.0Z");
```

Related Links

ConvertDatetimeToBase

DateTimeToISO

DateTimeValue

ISOToDate

IsPinEnabled

Syntax

IsPinEnabled()

Description

Use the IsPinEnabled function to return a Boolean value indicating whether the Add To (pin) button is enabled on the component.

Important! Use this function within fluid applications only.

Parameters

None.

Returns

A Boolean value.

Example

```
If Not (IsPinEnabled()) Or
      %Request.BrowserDeviceFormFactor = %FormFactor_Small Then
   PT_WORK.PT_ADD_TO_HP.Visible = False;
   PT_WORK.PT_ADD_TO_NAVBAR.Visible = False;
   PT_WORK.PT_ADD_TO_FAV.Visible = False;
Else
   AddStyleSheet(StyleSheet.PTNUI_PINTO_CSS);
   AddJavaScript(HTML.PTNUI_PINTO_JS);
   AddOnLoadScript("portalContextNodeURI = '" | getPortalContextNode() | "';");
   PT_WORK.PT_ADD_TO_HP.JavaScriptEvents = "href=""javascript:PTPinTo.SavePin('LP')⇒
;""";
   PT_WORK.PT_ADD_TO_NAVBAR.JavaScriptEvents = "href=""javascript:PTPinTo.SavePin('⇒
NB');""";
   PT_WORK.PT_ADD_TO_FAV.JavaScriptEvents = "href=""javascript:PTPinTo.SavePin('FAV⇒
```

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```
');""";
End-If;
```

Related Links

"Setting Component Properties for Fluid Components" (PeopleTools 8.54: Fluid User Interface Developer's Guide)

IsPrevInListEnabled

Syntax

IsPrevInListEnabled()

Description

Use the IsPrevInListEnabled function to return a Boolean value indicating whether the Previous in List button is enabled on the component.

Important! Use this function within fluid applications only.

Parameters

None.

Returns

A Boolean value.

Example

```
If ( Not (IsSearchEnabled())) Then
   PT_WORK.PT_BUTTON_NEXTLST.Visible = False;
   PT_WORK.PT_BUTTON_RETLST.Visible = False;
   PT_WORK.PT_BUTTON_PREVLST.Visible = False;
Else

   If (IsFluidSearchStart() Or
         Not (IsNextInListEnabled())) Then
      PT_WORK.PT_BUTTON_NEXTLST.Visible = False;
   Else
      PT_WORK.PT_BUTTON_NEXTLST.Visible = True;
   End-If;
   If (IsFluidSearchStart() Or
         Not (IsPrevInListEnabled())) Then
      PT_WORK.PT_BUTTON_PREVLST.Visible = False;
   Else
      PT_WORK.PT_BUTTON_PREVLST.Visible = True;
   End-If;

   If IsFluidSearchStart() Then
      PT_WORK.PT_BUTTON_RETLST.Visible = False;
   Else
      PT_WORK.PT_BUTTON_RETLST.Visible = True;
   End-If;

End-If;
```

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Related Links

IsSearchEnabled

"Setting Component Properties for Fluid Components" (PeopleTools 8.54: Fluid User Interface Developer's Guide)

IsSaveEnabled

Syntax

IsSaveEnabled()

Description

Use the IsSaveEnabled function to return a Boolean value indicating whether the Save button is enabled on the component (on the Internet tab).

Important! Use this function within fluid applications only.

Parameters

None.

Returns

A Boolean value.

Example

```
If Not (IsSaveEnabled()) Then
   PT_WORK.PT_BUTTON_SAVE.Visible = False;
End-If;
```

Related Links

"Setting Internet Properties" (PeopleTools 8.54: Application Designer Developer's Guide)

IsSearchEnabled

Syntax

IsSearchEnabled()

Description

Use the IsSearchEnabled function to return a Boolean value indicating whether the Enable Search Page check box is set for the current component.

Important! Use this function within fluid applications only.

Parameters

None.

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Returns

A Boolean value.

Example

```
If ( Not (IsSearchEnabled())) Then
   PT_WORK.PT_BUTTON_NEXTLST.Visible = False;
   PT_WORK.PT_BUTTON_RETLST.Visible = False;
   PT_WORK.PT_BUTTON_PREVLST.Visible = False;
Else

   If (IsFluidSearchStart() Or
         Not (IsNextInListEnabled())) Then
      PT_WORK.PT_BUTTON_NEXTLST.Visible = False;
   Else
      PT_WORK.PT_BUTTON_NEXTLST.Visible = True;
   End-If;
   If (IsFluidSearchStart() Or
         Not (IsPrevInListEnabled())) Then
      PT_WORK.PT_BUTTON_PREVLST.Visible = False;
   Else
      PT_WORK.PT_BUTTON_PREVLST.Visible = True;
   End-If;

   If IsFluidSearchStart() Then
      PT_WORK.PT_BUTTON_RETLST.Visible = False;
   Else
      PT_WORK.PT_BUTTON_RETLST.Visible = True;
   End-If;

End-If;
```

Related Links

"Setting Component Properties for Fluid Components" (PeopleTools 8.54: Fluid User Interface Developer's Guide)

IsSearchDialog

Syntax

IsSearchDialog()

Description

Use the IsSearchDialog function to determine whether a search dialog, add dialog, or data entry dialog box is currently executing. Use it to make processes conditional on whether a search dialog box is running.

Returns

Returns a Boolean value: True if a search dialog box is executing, False otherwise.

Example

```
If Not (IsSearchDialog()) Then
   If %Component = COMPONENT.SALARY_GRADE_TBL Then
      If All(SALARY_MATRIX_CD) Then
         Gray(RATING_SCALE)
      End-If;
```

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```
      calc_range_spread();
   End-If;
End-If;
```

Related Links

IsUserInPermissionList

IsTime

Syntax

IsTime(*Value*)

Description

Use the IsTime function to determine if *Value* contains a valid Time.

You can use this function when you want to determine if a value is compatible with the Time function.

Parameters

Value	Specify either a string or number you want to search for to determine if it's a valid Time.

Returns

A Boolean value: True if the string contains a valid Time value, False otherwise.

Example

```
If IsTime(&Num) Then
   &Timevalue = Time(&Num);
End-if;
```

Related Links

IsAlpha
IsAlphaNumeric
IsDigits
IsDate
IsDateTime
IsNumber
IsTime

IsUserInPermissionList

Syntax

IsUserInPermissionList(*PermissionList1* [, *PermissionList2*]. . .)

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Description

Use the IsUserInPermissionList function to take an arbitrary-length list of strings representing the names of Permission Lists and determine whether the current user belongs to any of the Permission Lists.

Parameters

PermissionList An arbitrary-length list of string, each of which represents a Permission List.

Returns

Returns a Boolean value: True if the current user has access to one or more of the Permission Lists, False otherwise.

Related Links

ExecuteRolePeopleCode
ExecuteRoleQuery
ExecuteRoleWorkflowQuery
IsUserInRole
%PermissionLists
%PrimaryPermissionList
%Roles
%RowSecurityPermissionList
"Defining Permissions" (PeopleTools 8.54: Security Administration)
"Managing Permission Lists" (PeopleTools 8.54: Security Administration)

IsUserInRole

Syntax

```
IsUserInRole(rolename1 [, rolename2]. . .)
```

Description

Use the IsUserInRole function to take an arbitrary-length list of strings representing the names of roles and determine whether the current user belongs to any role in an array of roles.

Parameters

rolename An arbitrary-length list of strings, each of which represents a role.

Returns

Returns a Boolean value: True if the current user belongs to one or more of the roles in the user role array, False otherwise.

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Related Links

"Understanding Roles" (PeopleTools 8.54: Security Administration)

IsUserNumber

Syntax

IsUserNumber(*Value*)

Description

Use the IsUserNumber function to determine if *Value* contains a valid numeric value that uses the locale-specific form of the number for the current user. Numeric characters include sign indicators and comma and period decimal points.

For example, if your regional settings specified periods for the thousands separator, and the number uses commas, this function returns false.

To determine if a value is a number regardless if it's in the user's local format, use the IsNumber function.

Parameters

Value	Specify a string you want to search to determine if it is a valid number in the correct format.

Returns

A Boolean value: True if *Value* contains a valid numeric value in the correct format, False otherwise.

Example

```
&Value = Get Field().Value;
If IsUserNumber(&Value) Then
   /* display number */
Else
   /* do other processing */
End-if;
```

Related Links

IsAlpha
IsAlphaNumeric
IsDigits
IsDate
IsDateTime
IsTime
IsNumber
ValueUser

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PeopleCode Built-in Functions and Language Constructs: J-L

The PeopleCode built-In functions and language constructs beginning with the letters J, K, and L are listed in alphabetical order within this topic.

Related Links

Typographical Conventions

Left

Syntax

Left(*source_str, num_chars*)

Description

Use the Left function to return a substring containing the leftmost number of characters in *source_str*. *num_chars* specifies how many characters to extract. If the string contains Unicode non-BMP characters, each code unit of the surrogate pair is counted as a separate character and care should be taken not to split the surrogate pair.

Parameters

source_str	A String from which to derive the substring.
num_chars	A Number specifying how many characters to take from the left of *source_str*. The value of *num_chars* must be greater than or equal to zero. If *num_chars* is greater than the length of *source_str*, Left returns the entire string. If *num_chars* is omitted, it is assumed to be one.

Returns

Returns a String value derived from *source_str*.

Example

The following example sets &SHORT_ZIP to "90210":

```
&SHORT_ZIP = Left("90210-4455", 5);
```

Related Links

Right

Len

Syntax

Len(*str*)

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Description

Use the Len function to determine the number of characters in a string. If the string contains Unicode non-BMP characters, each code unit of the surrogate pair is counted as a separate character.

Returns

Returns a Number value equal to the number of characters, including spaces, in *str*.

Example

The following example sets &STRLEN to 10, then to 0:

```
&STRLEN = Len("PeopleSoft");
&STRLEN = Len("");
```

Related Links

Lenb

Lenb

Syntax

Lenb(*str*)

Description

Note: This function has been deprecated and is no longer supported.

LinearInterp

Syntax

LinearInterp(*DataPoints*)

Description

Use the LinearInterp function to compute a set of lines through a sequence of at least two points.

Parameters

DataPoints This parameter takes an array of array of number. The array's contents are an array of six numbers. The first two of these six numbers are the x and y points to be fit. The last four are the four coefficients to be returned from the function: **a**, **b**, **c** and **d**.**a** is the coefficient of the x^0 term, **b** is the coefficient of the x^1 term, **c** is the coefficient of the x^2 term, and **d** is the coefficient of the x^3 term.

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Returns

A modified array of array of numbers. The elements in the array correspond to the elements in the array used for *DataPoints*. The **c** and **d** elements contain zeros.

Related Links

CubicSpline
HermiteCubic

Ln

Syntax

```
Ln(i)
```

Description

Use the Ln function to determine the natural logarithm of a number. Natural logarithms are based on the constant *e*, which equals 2.71828182845904. The number *i* must be a positive real number. Ln is the inverse of the Exp function.

Returns

A Number equal to the natural logarithm of *i*.

Example

The following examples set &I to 2.302585 and &J to 1:

```
&I = Ln(10);
&J = Ln(2.7182818);
```

Related Links

Exp
Log10

LoadABN

Syntax

```
LoadABN(&DS_rowset, &chart_rowset, &relactions_rowset, node, initial_node[,
disp_relactions][, fldr_img_class_ID][, CREF_img_class_ID])
```

Description

Use this function to load data into the SmartNavigation chart and to generate an HTML code fragment that will be rendered in the browser as menu drop-downs, fly-outs, and breadcrumbs. The function loads data for the node specified by the *node* parameter from the rowset data source into the SmartNavigation chart rowset. If the data source contains siblings of *node,* the siblings are loaded and displayed in the chart at the same level as *node.*

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The LoadABN function is applicable to rowset data sources only, and not to tree data sources. The standalone data source record specified by the *&DS_rowset* parameter must include the PT_ABNORGND_SBR, PT_ABNNDURL_SBR, PT_ABNNDDTL_SBR and PTORGBOXFLD_SBR subrecords in that order. Prior to calling the LoadABN function, data must be loaded from the applicable database data source into the standalone rowset data source.

Because this standalone rowset data source includes the PT_ABNORGND_SBR subrecord, the data is organized by an organization chart hierarchy of parent and child nodes. To simplify loading data from the database data source, it should also be organized using the organization chart hierarchy.

Related Links

"Creating an Organization Chart" (PeopleTools 8.54: PeopleCode API Reference)

Parameters

&DS_rowset

Specifies the data source as a standalone rowset.

&chart_rowset

Specifies the SmartNavigation chart rowset. Typically, this is the rowset returned by the GetABNChartRowSet function.

&relactions_rowset

Specifies the related actions rowset. Typically, this is the rowset returned by the GetABNRelActnRowSet function.

node

Specifies the currently requested chart node. Typically, this is returned directly by calling the GetABNNode function.

initial_node

Specifies the initial chart node. Typically, this is returned directly by calling the GetABNInitialNode function.

disp_relactions

Specifies a Boolean value indicating whether to display the related actions folder in the fly-out menus. True indicates to display the related actions folder; False indicates that the related actions folder is not displayed. The default value is True.

This is an optional parameter. However, if you want to use custom folder or CREF icons (with the *fldr_img_class_ID* or *CREF_img_class_ID* parameters, respectively), you must explicitly define the *disp_relactions* parameter.

fldr_img_class_ID

Specifies the class ID for a custom folder icon as a string. This class must be defined in a style sheet, and the style sheet must be assigned to the SmartNavigation folder.

See "Understanding SmartNavigation Icons" (PeopleTools 8.54: Portal Technology).

This is an optional parameter. To use the default folder icon, you can omit this parameter or specify the null string "". However, to ensure forward compatibility, you must specify the null string.

CREF_img_class_ID

Specifies the class ID for a custom CREF icon as a string. This class must be defined in a style sheet, and the style sheet must be assigned to the SmartNavigation folder.

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See "Understanding SmartNavigation Icons" (PeopleTools 8.54: Portal Technology).

This is an optional parameter. To use the default CREF icon, you can omit this parameter or specify the null string "". However, to ensure forward compatibility, you must specify the null string.

Returns

None.

Example

```
LoadABN(&rs_DataSource, &rs_ChartRowset, &rs_RelatedActions, GetABNNode(&reqParams)⇒
, GetABNInitialNode(&reqParams), False, "myfldricon", "mycreficon");
```

Related Links

GetABNChartRowSet
GetABNInitialNode
GetABNNode
GetABNRelActnRowSet

Local

Syntax

Local *data_type* &*var_name* [= *expression*]

Description

Use the Local statement to explicitly define local variables in PeopleCode.

Variable declarations can appear at the start of the program, intermixed with function declarations. Local variable declarations can also appear in the body of a program, including inside functions.

The scope of local variables declared outside of a function is the PeopleCode program. The scope of local variables declared inside a function is to the end of the function. Also, these function local variables are different variables for each call of the function (even for recursive calls,) in the same manner as parameters.

Local variable declarations intermixed with the body of the program or inside functions can include initialization, that is, the variable can be set to a value at the same time it is declared.

In the absence of an initialization, the system automatically initializes temporary variables. Declared variables always have values appropriate to their declared type. Undeclared local variables are initialized as null strings.

Parameters

data_type Any PeopleCode data type.

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&var_name A legal variable name.

expression Specify the value of the variable. This parameter is optional.

Example

```
local string &LOC_FIRST;
```

The following example scopes the local variable &Constant as a local variable, as well as initializing it.

```
Local Number &Constant = 42;
```

Related Links

Global
Component
"Data Types" (PeopleTools 8.54: PeopleCode Developer's Guide)

LogObjectUse

Syntax

LogObjectUse([*annotation*])

Description

Use the LogObjectUse function to write to the system log a list of all the current PeopleCode objects with the current count, the object class name, and the maximum count of objects of this type.

While this function is mainly used to determine memory usage, the output is also an informative display of the object use in your system at a particular point in time.

Parameters

annotations Specify a string to become the first line in the log file. This enables you to easily identify output corresponding to your use of this built-in.

Returns

None.

Example

The following is an example of output that can be generated in the system log.

```
PeopleCode side - after Java
         1902 JavaPeerReference
            0 Field                                        14
            0 ContentRefCollection                          4
            0 PortalCollection                              3
           83 String                                   116459
            0 PT_NAV:NavEndNode                             6
            0 PT_NAV:NavFolderNode                         35
            0 PT_NAV:NavTheme                               1
```

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```
  0 PT_NAV:NavNodeCollection                          4
  0 PortalRegistry                                    7
  0 PT_BRANDING:HeaderLinkBase                        1
  0 PT_NAV:NavNode                                   45
  0 PT_BRANDING:HeaderLinkHP                          1
  0 BIDocs                                            4
  0 PT_NAV:NavPortal                                  1
  1 SyncServer                                        1
  0 TabDefinition                                     1
951 Rowset                                       220001
  0 FolderCollection                                  4
  0 SQL                                               5
  0 Folder                                           69
  1 Response                                         14
  1 Foxtest                                           3
  0 Record                                            1
 23 Array                                           264
  1 Request                                          15
  0 AttributeCollection                              40
  0 UserHomepage                                      2
  0 Portal                                            3
  0 NodeCollection                                    3
  0 UserTabCollection                                 1
  0 ObjPropRef                                        3
951 FOXTEST:Test                                 110001
  0 PT_BRANDING:BrandingBase                          3
  0 ContentRef                                       13
  0 PT_NAV:NavPagelet                                 1
  0 TabDefinitionCollection                           1
  0 Session                                          10
  0 NetworkNode                                       3
```

Related Links

%PerfTime

"Understanding PeopleCode Programs and Events" (PeopleTools 8.54: PeopleCode Developer's Guide)

Log10

Syntax

Log10(*x*)

Description

Use the Log10 function to return the base-10 logarithm of a number *x* as a number value. The number *x* must be a positive real number.

Returns

Returns a Number equal to the base-10 logarithm of *x*.

Example

The following example sets &X to 1 and &Y to 1.39794:

```
&X = Log10(10);
&Y = Log10(25);
```

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Related Links

Exp
Ln

Lower

Syntax

Lower(*string*)

Description

Use the Lower function to convert all uppercase characters in a text string to lowercase characters and returns the result as a String value. Lower does not change characters that are not letters or characters do not have case sensitivity.

Returns

A String value equal to string, but in all lowercase format.

Example

The example sets &GOODKD to "k d lang":

```
&GOODKD = Lower("K D Lang");
```

Related Links

Proper
Upper

LTrim

Syntax

LTrim(*string*[, *trim_string*])

Description

Use the LTrim function to return a string formed by deleting from the beginning of *string*, all occurrences of each character in *trim_string*. If *trim_string* is omitted, " " is assumed; that is, leading blanks are trimmed.

Example

The following removes leading blanks from &NAME:

```
&TRIMMED = LTrim(&NAME);
```

The following removes leading punctuation marks from REC.INP:

```
&TRIMMED = LTrim(REC.INP, ".,;:!?");
```

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Related Links

RTrim

PeopleCode Built-in Functions and Language Constructs: M

The PeopleCode built-In functions and language constructs beginning with the letter M are listed in alphabetical order within this topic.

Related Links

Typographical Conventions

MAddAttachment

Syntax

```
MAddAttachment(URLDestination, DirAndFilePrefix, Prompts, &UserFileArray,
&ActualSizeArray, &DetailedReturnCodeArrayName [, MaxSize [, PreserveCase[,
UploadPageTitle[, AllowLargeChunks[, StopOnError]]]]])
```

Description

Use the MAddAttachment function to upload one or more files from an end-user machine to a specified storage location. The *Prompts* parameter specifies that maximum number of files that the end user can upload at one time. Use the AddAttachment function to upload a single file.

Important! It is the responsibility of the calling PeopleCode program to store the returned file names for further use.

If a file exists at a particular place on a storage location and then another file with the same name is uploaded to that same place on that same storage location, the original file will be silently overwritten by the new file. If that is not the behavior you desire, it is recommended that you implement PeopleCode to guarantee the ultimate uniqueness of either the name of the file at its place on the storage location or the name of its place (the subdirectory) on the storage location.

You cannot use a relative path to specify the file that is to be uploaded; you must use a full path. If end users experience problems in uploading files, ensure that they browse to the file they wish to upload rather than attempting to manually enter the full path name of the file. This problem can manifest itself differently depending on the browser used. For example, with some browser versions, the PeopleSoft page appears to be in an infinite “Processing” state. Information is available on working with different browsers.

See My Oracle Support, “Troubleshooting Browser Limitations”

Additional information that is important to the use of MAddAttachment can be found in the *PeopleTools: PeopleCode Developer's Guide*:

- PeopleTools supports multiple types of storage locations.

  See "Understanding File Attachment Storage Locations" (PeopleTools 8.54: PeopleCode Developer’s Guide).

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- Certain characters are illegal in file names; other characters in file names are converted during file transfer.

  See "Application Development Considerations" (PeopleTools 8.54: PeopleCode Developer's Guide).

- Non-ASCII file names are supported by the PeopleCode file attachment functions.

  See "Attachments with non-ASCII File Names" (PeopleTools 8.54: PeopleCode Developer's Guide).

- The PeopleCode file attachment functions do not provide text file conversions when files are attached or viewed.

  See "Considerations When Attaching Text Files" (PeopleTools 8.54: PeopleCode Developer's Guide).

- Because MAddAttachment is interactive, it is known as a "think-time" function, and is restricted from use in certain PeopleCode events.

  See "Restrictions on Invoking Functions in Certain PeopleCode Events" (PeopleTools 8.54: PeopleCode Developer's Guide).

- You can restrict the file types that can be uploaded to or downloaded from your PeopleSoft system.

  See "Restricting the File Types That Can Be Uploaded or Downloaded" (PeopleTools 8.54: PeopleCode Developer's Guide).

- You can restrict the file types that can be uploaded to or downloaded from your PeopleSoft system.

  See "Restricting the File Types That Can Be Uploaded or Downloaded" (PeopleTools 8.54: PeopleCode Developer's Guide).

- Virus scanning can be performed on all files uploaded with the MAddAttachment function.

  See "Setting Up Virus Scanning" (PeopleTools 8.54: PeopleCode Developer's Guide).

Parameters

URLDestination

A reference to a URL. This can be either a URL identifier in the form **URL**.*URL_ID*, or a string. This is the storage location to which the files in this invocation of MAddAttachment are transferred.

Note: When the *URLDestination* parameter is specified as a string value, forward slashes (/) are required. Backward slashes (\) are not supported for a string value.

Note: Oracle recommends that you do not use a URL of the form `file://file_name` with the PeopleCode file processing functions.

See "Understanding URL Strings Versus URL Objects" (PeopleTools 8.54: PeopleCode Developer's Guide).

DirAndFilePrefix

A directory and file name prefix. This is appended to the *URLDestination* to make up the full URL when the file is

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transferred to an FTP server or, when the file transferred to a database table, to make the file name unique.

Note: If the destination location is an FTP server, then it is *very* important whether the value passed into a call of MAddAttachment for the *DirAndFilePrefix* parameter ends with a slash or not. If the value for the *DirAndFilePrefix* parameter ends with a slash, then it will be appended to the value of the *URLDestination* and used to indicate the relative (to the configured root directory of the FTP server) path name of the directory in which the uploaded file will be stored. If the value for the *DirAndFilePrefix* parameter does not end with a slash, then the portion of it prior to its right-most slash will be appended to the value of the *URLDestination* and used to indicate the relative (to the configured root directory of the FTP server) path name of the directory in which the uploaded file will be stored, and the portion after the right-most slash will be prepended to the name of the file that will be created at the destination.

Note: Because the *DirAndFilePrefix* parameter is appended to the URL, it also requires forward slashes ("/"). Backward slashes ("\") are not supported for this parameter.

Prompts

Specifies the number of files that the end user will be prompted to upload as an integer.

&UserFileArray

Returns the names of the files on the source system as an array of strings.

Note: You can specify this parameter as a zero-length array of string. The array will be populated by MAddAttachment with the actual file names.

Note: The file name for each user-selected file cannot be greater than 64 characters.

&ActualSizeArray

Returns the file sizes in kilobytes for the uploaded files as an array of numbers.

Note: You can specify this parameter as a zero-length array of number. The array will be populated by MAddAttachment with the actual file sizes.

&DetailedReturnCodeArray

Returns the return code for each individual file attachment operation as an array of numeric constants.

Note: You can specify this parameter as a zero-length array of number. The array will be populated by MAddAttachment with the actual return codes.

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MaxSize

Specify, in kilobytes, the maximum size of each file.

If you specify 0, it indicates "no limit," so any file size can be uploaded. The default value of this parameter is 0.

Note: The system cannot check the size of the file selected by the end user until that file has been uploaded to the web server.

PreserveCase

Specify a Boolean value to indicate whether the case of the extension of the file to be uploaded is preserved or not at the storage location; *True*, preserve the case, *False*, convert the file name extension to all lowercase letters.

The default value is False.

Warning! If you use the *PreserveCase* parameter, it is important that you use it in a consistent manner with all the relevant file-processing functions or you may encounter unexpected file-not-found errors.

Note: MAddAttachment provides no indication of a conversion in the file name it returns.

UploadPageTitle

Specify a string value to be displayed in the title bar of the file attachment dialog box (as its title). This string should be simple text and contain no HTML elements. If no value is specified, the default value is "File Attachment."

Note: In accessibility mode, the string value of the UploadPageTitle parameter is displayed in the body of the file attachment dialog box rather than as the title of the window.

Note: The parameter does *not* automatically handle localization issues. The string passed into the function is the exact string embedded in the page. You and your application are responsible for any translation issues.

AllowLargeChunks

Specify a Boolean value to indicate whether to allow large chunks.

If the value specified in the Maximum Attachment Chunk Size field on the PeopleTools Options page is larger than is allowed for retrieval, then the system breaks the file upload into the largest sized chunks allowed. If *AllowLargeChunks* is set to True, this behavior can be overridden so that it is possible for an end user to upload a file in chunks that are too large for the system to retrieve. If *AllowLargeChunks* is set to False, the system will use the largest size chunk that is allowed for retrieval, or the configured chunk size, whichever is smaller.

Note: If the chunks are too big to be retrieved, then any file retrieval built-in function, such as GetAttachment, will fail.

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Note: The *AllowLargeChunks* parameter is only applicable when the storage location is a database record. It has no impact when the storage location is an FTP site or an HTTP repository, since attachments at those locations are never chunked.

See "PeopleTools Options" (PeopleTools 8.54: System and Server Administration)

This is an optional parameter.

The default value is False.

StopOnError

Specify a Boolean value to indicate whether to continue processing files when a system error is encountered.

If *StopOnError* is set to False, processing continues with the next selected file. If *StopOnError* is set to True, MAddAttachment terminates on the first system error encountered (for example, %Attachment_Failed, %Attachment _FileTransferFailed, and so on). No attempt is made to upload any of the remaining files. For each of the remaining files, a return code of %Attachment_Unprocessed is returned as the detailed return code.

This is an optional parameter.

The default value is False.

Returns

The MAddAttachment function returns one of the following summary return codes that you can check for either as an integer or as a constant value:

Numeric Value	*Constant Value*	*Description*
0	%Attachment_Success	The upload was successful if and only if the upload was not cancelled, at least one non-empty file name was specified by the user, and all the files specified with non-empty names were successfully uploaded.
1	%Attachment_Failed	Either the user cancelled the upload, the user specified no files to upload, or at least one of the specified files did not successfully upload.

In addition, the MAddAttachment function returns detailed return codes in the array specified by the *&DetailedReturnCodeArray* parameter. The array contains the number of elements specified by the *Prompts* parameter even if some files remain unprocessed or were not selected by the user. You can check for the detailed return codes either as integers or as constant values:

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Numeric Value	*Constant Value*	*Description*
0	%Attachment_Success	File was transferred successfully.
1	%Attachment_Failed	File transfer failed due to unspecified error. The following are some possible situations where %Attachment_Failed could be returned: • Failed to initialize the process due to some internal error. • Failed due to unexpected or bad reply from server. • Failed to allocate memory due to some internal error. • Failed due to timeout. • Failed due to non-availability of space on FTP server. • Failed to close SSL connection. • Failed due to an unspecified error on the HTTP repository. If the HTTP repository resides on a PeopleSoft web server, then you can configure tracing on the web server to report additional error details. See "Debugging File Attachment Problems" (PeopleTools 8.54: PeopleCode Developer's Guide).
2	%Attachment_Cancelled	File transfer didn't complete because the operation was canceled by the end user.

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Numeric Value	*Constant Value*	*Description*
3	%Attachment_FileTransferFailed	File transfer failed due to unspecified error during FTP attempt. The following are some possible situations where %Attachment_ FileTransferFailed could be returned: • Failed due to mismatch in file sizes. • Failed to write to local file. • Failed to store the file on remote server. • Failed to read local file to be uploaded • No response from server. • Failed to overwrite the file on remote server.
6	%Attachment_FileExceedsMaxSize	File exceeds maximum size, if specified.
7	%Attachment_DestSystNotFound	Cannot locate destination system for FTP. The following are some possible situations where %Attachment_ DestSystNotFound could be returned: • Improper URL format. • Failed to connect to the server specified.

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Numeric Value	*Constant Value*	*Description*
8	%Attachment_DestSysFailedLogin	Unable to login to destination system for FTP. The following are some possible situations where %Attachment_ DestSysFailedLogin could be returned: • Unsupported protocol specified. • Access denied to server. • Failed to connect using SSL Failed to verify the certificates. • Failed due to problem in certificates used. • Could not authenticate the peer certificate. • Failed to login with specified SSL level. • Remote server denied logon. • Problem reading SSL certificate.
9	%Attachment_FileNotFound	Cannot locate file. The following are some possible situations where %Attachment_ FileNotFound could be returned: • Remote file not found. • Failed to read remote file.
11	%Attachment_NoFileName	File transfer failed because no file name was specified.
12	%Attachment_FileNameTooLong	File transfer failed because name of selected file name is too long. Maximum is 64 characters.

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Numeric Value	*Constant Value*	*Description*
20	%Attachment_Unprocessed	This file was not processed. The following are some possible situations where %Attachment_ Unprocessed could be returned: 1. This file was not processed due to an error in processing another file attachment. 2. This file was not processed because the operation was canceled by the user.
13	%Attachment_ViolationFound	File violation detected by virus scan engine.
14	%Attachment_VirusScanError	Virus scan engine error.
15	%Attachment_VirusConfigError	Virus scan engine configuration error.
16	%Attachment_VirusConnectError	Virus scan engine connection error.
21	%Attachment_Rejected	File transfer failed because the file extension is not allowed.

Example

```
&retcode = MAddAttachment(URL.MYFTP, ATTACHSYSFILENAME, 4, &MyFileArray, &MySzArray⇒
, &MyRtrnCodeArray, 0, False, "Upload Attachments", False, True);
```

The following example demonstrates initialization of the arrays used to store the values returned by MAddAttachment:

```
&prompts = 2;
Local array of string &AttachUsrFiles;
&AttachUsrFiles = CreateArrayRept("", 0);

Local array of number &AttachSzs;
&AttachSzs = CreateArrayRept(0, 0);

Local array of number &AttachRtrnCds;
&AttachRtrnCds = CreateArrayRept(0, 0);

If Exact(Left(&URL_ID, 4), "URL.") Then
   &sum_rt_cd = MAddAttachment(@(&URL_ID), ATTACHSYSFILENAME, &prompts, &AttachUsrF⇒
iles, &AttachSzs, &AttachRtrnCds);
Else
   &sum_rt_cd = MAddAttachment(&URL_ID, ATTACHSYSFILENAME, &prompts, &AttachUsrFile⇒
s, &AttachSzs, &AttachRtrnCds);
End-If;
```

Related Links

"Debugging File Attachment Problems" (PeopleTools 8.54: PeopleCode Developer’s Guide)

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CleanAttachments
CopyAttachments
DeleteAttachment
DetachAttachment
GetAttachment
PutAttachment
ViewAttachment
"Understanding the File Attachment Functions" (PeopleTools 8.54: PeopleCode Developer's Guide)

MarkPrimaryEmailAddress

Syntax

MarkPrimaryEmailAddress(*Type*)

Description

Use the MarkPrimaryEmailAddress function to specify which email address is the primary email address for the current user. You can only have one primary email address per user.

Parameters

Type Specify the type that you want to change the email address to. This parameter takes a string value. The valid values are:

Value	*Description*
BB	Blackberry email address
BUS	Business email address
HOME	Home email address
OTH	Other email address
WORK	Work email address

Returns

None.

Related Links

AddEmailAddress
ChangeEmailAddress
DeleteEmailAddress

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MarkWLItemWorked

Syntax

MarkWLItemWorked()

Description

Use the MarkWLItemWorked function to mark the current Worklist entry as worked using this function. This function works only if you've invoked a page from the Worklist. This function should be called only in Workflow PeopleCode. You can use the %WLName system variable to check whether the page has been accessed using a Worklist.

Note: If the Worklist entry was created using a web service, and you do not need to send any additional information other than the Mark Worked reply message, you can use this function to mark the Worklist entry as worked. However, if you need to send additional data, you must use the WorklistEntry class SaveWithCustomData method to mark the Worklist entry as finished.

See "SaveWithCustomData" (PeopleTools 8.54: PeopleCode API Reference).

Parameters

None.

Returns

Returns a Boolean value indicating whether it executed successfully. The return value is not optional.

Example

This example, which would be in the WorkFlow event, checks to see whether a page check box MARK_WORKED_SW is selected, and if so, it marks the item in the worklist as complete:

```
If MARK_WORKED_SW = "Y" Then
   If MarkWLItemWorked() Then
   End-If;
End-If;
```

Related Links

GetWLFieldValue

%WLName

Max

Syntax

Max(*param_list*)

Where *param_list* has the form

parameter1, *parameter2* [, *parameter3*, . . . *parameterN*]

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Description

Use the Max function to determine the maximum value in the parameter list. The type of every item in the parameter list must be compatible with the first parameter in the list.

For example, if the first parameter is a string and the second parameter is a number with value 123.456, the second parameter is converted to the string "123.456" before the comparison is performed.

If all the values in the parameter list are alpha characters, "Z" is greater than "A" so Max("Z", "A") returns "Z".

Parameters

param_list	Specify a list of items to be compared. All items in the parameter list must be of the same type. If a value isn't defined, the system assumes it's of the same type as the first parameter.

Returns

The item in the list that has the maximum value.

Example

```
&RSULT = Max("A", "B", "C", "D", "E");
```

Related Links

Min

MCFBroadcast

Syntax

```
MCFBroadcast(ClusterID,QueueID, ChannelID, AgentState, AgentPresence, Message,
MessageSetNumber, MessageNumber, DefaultMessage, SecurityLevel, ImportanceLevel,
SenderId, NameValueString)
```

Description

Use the MCFBroadcast function to broadcast a notification message. You can specify whether to send the message to agents, to a queue, or even system wide. This function is used with the MultiChannel Framework.

Parameters

ClusterID	Specify the name of the cluster that you want to broadcast the message to, such as, RENCLSTR_001, as a string.
QueueID	Specify the name of the physical or logical queue that you want to broadcast the message to, such as, SALES, as a string.
ChannelID	Specify the name of the channel, or task, for the broadcast, such as Email, Chat, Voice or Generic, as a string.

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AgentState	Specify the state of the agents you want to broadcast the message to, such as Available, as a string.
AgentPresence	Specify the presence of the agents you want to broadcast the message to, such as Active, as a string.
Message	Specify the text of the message you want to broadcast, as a string.
MessageSetNumber	Specify the message set number of a message from the message catalog if you want to broadcast a message from the message catalog. You must also specify values for the *MessageNumber* and *DefaultMessageText* parameters if you want to broadcast this type of message. Specify the message set number as a number.
MessageNumber	Specify the message number of a message from the message catalog if you want to broadcast a message from the message catalog. You must also specify values for the *MessageSetNumber* and *DefaultMessageText* parameters if you want to broadcast this type of message. Specify the message number as a number.
DefaultMessageText	Specify the text to be used if the specified message catalog message isn't found. Use the *MessageSetNumber* and *MessageNumber* parameters to specify the catalog message. Specify the default message text as a string.
SercurityLevel	Specify the security level for the broadcast message, as a string.
ImportanceLevel	Specify the importance level of the broadcast message, as a string.
SenderID	Specify the ID of the sender of the broadcast message, as a string.
NameValueString	Specify a string containing name-value pairs specific to your application.

Returns

None.

Example

The following example would broadcast a message to a specific logical queue:

```
MCFBroadcast("", "SALES", "", "", "Best of Luck!", "", "", "Default Message", "PRIV⇒
1", "URGENT", "Admin", "EffDate, 2005-10-25:12:00:45");
```

Related Links

"Understanding Universal Queue Classes" (PeopleTools 8.54: PeopleCode API Reference)

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MessageBox

Syntax

```
MessageBox(style, title, message_set, message_num, default_msg_txt[, paramlist])
```

where *paramlist* is an arbitrary-length list of parameters of undetermined (Any) data type to be substituted in the resulting text string, in the form:

```
param1 [, param2]. . .
```

Description

Use the MessageBox function to display a message box window. This function combines dialog-display ability with the text-selection functionality of MsgGet, MsgGetText, or MsgGetExplainText. The *style* parameter selects the buttons to be included. *title* determines the title of message.

Note: The *title* parameter is ignored for messages displayed in the PeopleSoft Pure Internet Architecture. The title of a message box displayed by the browser is always “Message”.
Also, *style* is ignored if the message has any severity other than Message.

The remaining parameters are used to retrieve and process a text message selected from the Message Catalog.

MessageBox can be used for simple informational display, where the user reads the message, then clicks an OK button to dismiss the message box. Use MessageBox as a way of branching based on user choice, in which case the message box contains two or more buttons (such as OK and Cancel or Yes, No, and Cancel). The value returned by the function tells you which button the user clicked, and your code can branch based on that value.

In the MessageBox dialogs, both the Text and the Explanation, that is, more detailed information stored in the Message Catalog, are included.

If MessageBox displays buttons other than OK, it causes processing to stop while it waits for user response. This makes it a "user think-time" function, restricting its use to certain PeopleCode events.

See MsgGet, MsgGetText, MsgGetExplainText"Understanding Restrictions on Method and Function Use" (PeopleTools 8.54: PeopleCode Developer’s Guide).

Message Retrieval

MessageBox retrieves a message from the Message Catalog and substitutes the values of the parameters into the text message and explanation.

You can access and update the Message Catalog by accessing PeopleTools, Utilities, Administration, Message Catalog. You can enter message text in multiple languages. The *message_set* and *message_num* parameters specify the message to retrieve from the catalog. If the message is not found in the Message Catalog, the default message provided in *default_msg_txt* is used. Message sets 1 through 19,999 are reserved for use by PeopleSoft applications. Message sets 20,000 through 32,767 can be used by PeopleSoft users.

The optional *paramlist* is a comma-separated list of parameters; the number of parameters in the list is arbitrary. The parameters are referenced in the message text using the % character followed by an integer corresponding to the position of the parameter in the *paramlist*. For example, if the first and second parameters in *paramlist* were &FIELDNAME and &USERNAME, they would be inserted into

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the message string as %1 and %2. To include a literal percent sign in the string, use %%; %\ is used to indicate an end-of-string and terminates the string at that point. This is generally used to specify fixed-length strings with trailing blanks.

Message Severity

MessageBox specifies processing for error handling functions based on the message severity, which you can set in the Message Catalog. This enables you to change the severity of an error without changing the underlying PeopleCode, by setting the severity level for the message in the Message Catalog. The message severity settings and processing options are:

Severity	*Processing*
Message	The message is displayed and processing continues.
Warning	The message is displayed and treated as a warning.
Error	The message is displayed and treated as an error.
Cancel	The message is displayed and forces a Cancel.

In addition, in the PeopleSoft Pure Internet Architecture the Message Severity dictates how the message displays:

- If the message has a severity of Warning, Error, or Cancel, the message is displayed in a pop-up dialog box with a single OK button regardless of the value of the *style* parameter.
- If the message has a severity of Message and *style* is **%MsgStyle_OK** (0), the message displays in a pop-up dialog box with the single **OK** button.
- If the message has a severity of Message and *style* is not **%MsgStyle_OK** (0), the message displays in a separate window.

Restrictions on Use in PeopleCode Events

If MessageBox displays any buttons other than OK, it returns a value based on the end user response and interrupts processing until the end user has clicked one of the buttons. This makes it a "user think-time" function, subject to the same restrictions as other think-time functions which means that it cannot be used in any of the following PeopleCode events:

- SavePreChange.
- Workflow.
- RowSelect.
- SavePostChange.
- Any PeopleCode event that fires as a result of a ScrollSelect (or one of its relatives) function calls, or a Select (or one of its relatives) Rowset class method.

If the *style* parameter specifies a single button (that is, the **OK** button), the function can be called in any PeopleCode event.

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See "Understanding Restrictions on Method and Function Use" (PeopleTools 8.54: PeopleCode Developer's Guide).

Restrictions on Use With PeopleSoft Pure Internet Architecture

In the PeopleSoft Pure Internet Architecture, you can't change the icon of a message box. You can change the number and type of buttons, and the default button, but the message always displays with the warning icon (a triangle with an exclamation mark in it.)

In addition, you can't change the message box title. The message box title is always 'Message'.

If the message has a severity of Warning and the MessageBox PeopleCode is in a SaveEdit event, the message is displayed in a new window with the OK and Cancel buttons.

Restrictions on Use With Application Engine

If you call MessageBox from a PeopleCode action in an Application Engine program, the syntax is the same. However, all GUI-related parameters like style and title are ignored. You should use 0 and "".

Note: If you have an existing MessageBox in code called from a page, it should work as is.

The actual message data is routed to PS_MESSAGE_LOG at runtime, and you can view it from the Process Monitor by drilling down to the process details.

Parameters

style Either a numerical value or a constant specifying the contents and behavior of the dialog box. This parameter is calculated by cumulatively adding either a value or a constant from each of the following list of categories:

Note: In PeopleSoft Pure Internet Architecture *style* is ignored if the message has any severity other than Message. If the message has a severity of Warning and the MessageBox PeopleCode is in a SaveEdit event, the message is displayed in a new window with the OK and Cancel buttons.

Category	*Value*	*Constant*	*Meaning*
Buttons	0	%MsgStyle_OK	The message box contains one push button: OK.
	1	%MsgStyle_OKCancel	The message box contains two pushbuttons: OK and Cancel.
	2	%MsgStyle_ AbortRetryIgnore	The message box contains three pushbuttons: Abort, Retry, and Ignore.
	3	%MsgStyle_YesNoCancel	The message box contains three pushbuttons: Yes, No, and Cancel.

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Category	Value	Constant	Meaning
	4	%MsgStyle_YesNo	The message box contains two push buttons: Yes and No.
	5	%MsgStyle_RetryCancel	The message box contains two push buttons: Retry and Cancel.

title Title of message box. If a null string is specified, then PeopleTools provides an appropriate value.

Note: The *title* parameter is ignored for messages displayed in the PeopleSoft Pure Internet Architecture. The title of a message box displayed by the browser is always "Message".

---

message_set The message set number of the message to be displayed. When message set and number are provided, it overrides the specified text. A value less than one indicates that the message comes from the provided text and not the Message Catalog.

message_num The message number of the message to be displayed.

default_msg_txt Default text to be displayed in the message box.

paramlist A comma-separated list of parameters; the number of parameters in the list is arbitrary. The parameters are referenced in the message text using the % character followed by an integer corresponding to the position of the parameter in the *paramlist*.

Returns

Returns either a Number value or a constant. The return value is zero if there is not enough memory to create the message box. In other cases the following menu values are returned:

Value	Constant	Meaning
-1	%MsgResult_Warning	Warning was generated.
1	%MsgResult_OK	OK button was selected.
2	%MsgResult_Cancel	Cancel button was selected.
3	%MsgResult_Abort	Abort button was selected.
4	%MsgResult_Retry	Retry button was selected.
5	%MsgResult_Ignore	Ignore button was selected.
6	%MsgResult_Yes	Yes button was selected.

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Value	*Constant*	*Meaning*
7	%MsgResult_No	No button was selected.

Note: In PeopleSoft Pure Internet Architecture, pressing the ESC key has no effect.

Example

Suppose the following string literal is stored in the Message Catalog as the message text:

```
Expenses of employee %1 during period beginning %2 exceed allowance.
```

The following is stored in the Explanation:

```
You do not have the authority to approve this expense. Only a director
can approve this.
```

Here %1 is a placeholder for the employee ID and %2 a placeholder for the expense period date. The following MessageBox call provides bind variables corresponding to these placeholders at the end of its parameter list:

```
MessageBox(0, "", 30000, 1, "Message not found.", BUS_EXPENSE_PER.EMPLID, BUS_EXPEN⇒
SE_PER.EXPENSE_PERIOD_DT);
```

Image: Example of a message box

If the message severity is Error or Warning, the call would display a message box similar to this:

Suppose the following is stored in the Message Catalog as the message text:

```
File not found.
```

The following is stored in the Explanation:

```
The file you specified wasn't found. Either select retry, and specify a new file, o⇒
r cancel.
```

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Suppose this message had a Severity of message, and you used the %MsgStyle_RetryCancel, in the following code:

```
MessageBox(%MsgStyle_RetryCancel, "", 30000, 2, "Message not found.");
```

Image: Example message with Retry and Cancel buttons

This is how the message displays:

Image: Critical type error message

If the message severity is of type Cancel, a critical message is displayed similar to the following:

Related Links

MsgGet
MsgGetText
MsgGetExplainText

Min

Syntax

Min(*param_list*)

Where *param_list* has the form

parameter1, parameter2 [, *parameter3, . . . parameterN*]

Description

Use the Min function to determine the minimum value in the parameter list. The type of every item in the parameter list must be compatible with the first parameter in the list.

For example, if the first parameter is a string and the second parameter is a number with value 123.456, the second parameter is converted to the string "123.456" before the comparison is performed.

If all the values in the parameter list are alpha characters, "a" is less than "m", so Min("a", "m") returns "a".

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Parameters

param_list	Specify a list of items to be compared. All items in the parameter list must be of the same type. If a value isn't defined, the system assumes it's of the same type as the first parameter.

Returns

The item in the list that has the minimum value.

Example

```
&RES = Min(&A, Max(&B, &C, &D), "-20");
```

Related Links

Max

Minute

Syntax

Minute(*timevalue*)

Description

Use the Minute function to extract the minute component of a Time value.

Returns

Returns the minute part of *timevalue* as a Number data type.

Example

If &TIMEOUT contains "16:48:01" then the example sets &TIMEOUT_MINUTES to 48:

```
&TIMEOUT_MINUTES = Minute(&TIMEOUT);
```

Related Links

Hour
Second

Mod

Syntax

Mod(*x*, *divisor*)

Description

The Mod function is the modulus math function, which divides one number (*x*) by another (*divisor*) and returns the remainder.

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Returns

Returns a Number equal to the remainder of the division of the number *x* by *divisor*.

Example

The example sets &NUM1 to 1 and &NUM2 to 0:

```
&NUM1 = Mod(10,3);
&NUM2 = Mod(10,2);
```

Related Links

Int
Round
Truncate

Month

Syntax

Month(*datevalue*)

Description

Use the Month function to return the month of the year as an integer from 1 to 12 for the specified *datevalue*. The Month function accepts a date or DateTime value as a parameter.

Parameters

datevalue	A date or DateTime value on the basis of which to determine the month.

Returns

Returns a Number value from 1 to 12 specifying the month of the year.

Example

This example sets &HIRE_MONTH to 3:

```
&HIREDATE = DateTime6(1997, 3, 15, 10, 9, 20);
&HIRE_MONTH = Month(&HIRE_DATE);
```

Related Links

Date
Date3
DateValue
Day
Days360
Days365
Weekday

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Year

MsgGet

Syntax

```
MsgGet(message_set, message_num, default_msg_txt[, paramlist])
```

where *paramlist* is an arbitrary-length list of parameters of undetermined (Any) data type to be substituted in the resulting text string, in the form:

```
param1 [, param2]. . .
```

Description

Use the MsgGet function to retrieve a message from the Message Catalog and substitutes in the values of the parameters into the text message.

You can access and update messages on Message Catalog page (select PeopleTools, Utilities, Administration, Message Catalog). You can enter message text in multiple languages. The Message Catalog also enables you to enter more detailed "Explain" text about the message. The *message_set* and *message_num* parameters specify the message to retrieve from the catalog. If the message is not found in the Message Catalog, the default message provided in *default_msg_txt* is used. Message sets 1 through 19,999 are reserved for use by PeopleSoft applications. Message sets 20,000 through 32,767 can be used by PeopleSoft users.

The optional *paramlist* is a comma-separated list of parameters; the number of parameters in the list is arbitrary. The parameters are referenced in the message text using the % character followed by an integer corresponding to the position of the parameter in the *paramlist*. For example, if the first and second parameters in *paramlist* were &FIELDNAME and &USERNAME, they would be inserted into the message string as %1 and %2. To include a literal percent sign in the string, use %%; %\ is used to indicate an end-of-string and terminates the string at that point. This is generally used to specify fixed-length strings with trailing blanks.

MsgGet prefixes the message with "[Message Set# and Message Error#]", so it can be processed by a user not conversant in the translated language.

Example

```
&MsgText = MsgGet(30000, 2, "Message not found");
```

Related Links

MsgGetText
MsgGetExplainText
MessageBox
"Message Catalog" (PeopleTools 8.54: System and Server Administration)

MsgGetExplainText

Syntax

```
MsgGetExplainText(message_set, message_num, default_msg_txt[, paramlist])
```

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where *paramlist* is an arbitrary-length list of parameters of undetermined (Any) data type to be substituted in the resulting text string, in the form:

```
param1 [, param2]. . .
```

Description

Use the MsgGetExplainText function to retrieve the Explain text of a message from the Message Catalog and substitutes the values of the parameters in *paramlist* into the explain text. It returns the resulting message explain text as a String data type.

You can access and update messages on Message Catalog page (select PeopleTools, Utilities, Administration, Message Catalog). You can enter messages in multiple languages.

Message sets 1 through 19,999 are reserved for use by PeopleSoft applications. Message sets 20,000 through 32,767 can be used by PeopleSoft users.

Unlike the MsgGet function, MsgGetExplainText returns the message without a message set and message number appended to the message.

Parameters

message_set

Specify the message set to be retrieved from the catalog. This parameter takes a number value.

message_num

Specify the message number to be retrieved from the catalog. This parameter takes a number value.

default_msg_txt

Specify the text to be displayed if the message isn't found. This parameter takes a string value.

paramlist

Specify values to be substituted into the message explain text.

The parameters listed in the optional *paramlist* are referenced in the message explain text using the % character followed by an integer referencing the position of the parameter in the function call. For example, if the first and second parameters in *paramlist* were &FIELDNAME and &USERNAME, they would be inserted into the message string as %1 and %2.

Note: This substitution only takes place in message explain text when the MsgGetExplainText function is used. If you use a message box, the parameter substitution will *not* occur in the explain text.

To include a literal percent sign in the string, use %%; %\ is used to indicate an end-of-string and terminates the string at that point. This is generally used to specify fixed-length strings with trailing blanks.

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Example

Suppose the following explain text is stored in the Message Catalog:

```
A reference was made to a record.field (%1.%2) that is not defined within Applicati⇒
on Designer.  Check for typographical errors in the specification of the record.fie⇒
ld or use Application Designer to add the new field or record.
```

Here %1 is a placeholder for the record name and %2 a placeholder for the field name. If the record.field in error was MyRecord.Field5, the above would resolve as follows:

```
A reference was made to a record.field (MyRecord.Field5) that is not defined within⇒
 Application Designer.  Check for typographical errors in the specification of the ⇒
record.field or use Application Designer to add the new field or record.
```

Related Links

MsgGet

MsgGetText

MessageBox

"Message Catalog" (PeopleTools 8.54: System and Server Administration)

MsgGetText

Syntax

MsgGetText(*message_set*, *message_num*, *default_msg_txt*[, *paramlist*])

where *paramlist* is an arbitrary-length list of parameters of undetermined (Any) data type to be substituted in the resulting text string, in the form:

param1 [, *param2*]. . .

Description

Use the MsgGetText function to retrieve a message from the Message Catalog and substitutes the values of the parameters in *paramlist* into the text message. It returns the resulting message text as a String data type.

You can access and update messages on Message Catalog page (select PeopleTools, Utilities, Administration, Message Catalog). You can enter message text in multiple languages. The *message_set* and *message_num* parameters specify the message to retrieve from the catalog. If the message is not found in the Message Catalog, the default message provided in *default_msg_txt* is used. Message sets 1 through 19,999 are reserved for use by PeopleSoft applications. Message sets 20,000 through 32,767 can be used by PeopleSoft users.

The parameters listed in the optional *paramlist* are referenced in the message text using the % character followed by an integer referencing the position of the parameter in the function call. For example, if the first and second parameters in *paramlist* were &FIELDNAME and &USERNAME, they would be inserted into the message string as %1 and %2. To include a literal percent sign in the string, use %%; %\ is used to indicate an end-of-string and terminates the string at that point. This is generally used to specify fixed-length strings with trailing blanks.

Unlike the MsgGet function, MsgGetText returns the message without a message set and message number appended to the message.

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Example

```
&MsgText = MsgGetText(30000, 2, "Message not found");
```

Related Links

MsgGet
MsgGetExplainText
MessageBox
"Message Catalog" (PeopleTools 8.54: System and Server Administration)

PeopleCode Built-in Functions and Language Constructs: N

The PeopleCode built-In functions and language constructs beginning with the letter N are listed in alphabetical order within this topic.

Related Links

Typographical Conventions

NextEffDt

Syntax

NextEffDt(*field*)

Description

Use the NextEffDt function to return the value of the specified *field* from the record with the next effective date (and effective sequence number if specified). The return value is an Any data type. This function is valid only for effective-dated records.

If the next record doesn't exist, the statement is skipped. If the NextEffDt function isn't a top-level statement, that is, if it's contained within a compound statement or a loop, the statement is skipped and execution restarts with the *next* top-level statement.

In the following example, execution skips to the top If statement:

```
If ACTION <> "REH" Then  /* skip to here if NextEffDt fails to find next record */
   If    STD_HOURS <> NextEffDt(STD_HOURS) And
         Day(EFFDT) <> 1 Then
      Error MsgGet(30000, 8, "Meldung nicht vorhanden - WAZ bzw. Beschäftigungsgrad⇒
änderungen sind nur zum ersten eines Monats zulässig.")
   End-If;
End-If;
/* if NextEffDt fails, run to here directly */
```

Related Links

NextRelEffDt, PriorRelEffDt, PriorEffDt

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NextRelEffDt

Syntax

NextRelEffDt(*search_field, fetch_field*)

where *fieldlist* is an arbitrary-length list of fields in the form:

field1 [,*field2*]. . .

Description

Use the NextRelEffDt function to locate the next occurrence of the *search_field* with the next effective date (and effective sequence number if the record contains an effective sequence number). It then returns the value of the specified *fetch_field* corresponding to the *search_field*. The return value is an Any data type. Typically, this function is used to retrieve values for related display fields.

This function is valid only for effective-dated records.

If a next record doesn't exist, the statement is skipped. If the NextRelEffDt function isn't a top-level statement, that is, if it's contained within a compound statement or a loop, the statement is skipped and execution restarts with the *next* top-level statement.

Related Links

GetRelField, NextEffDt, PriorRelEffDt, PriorEffDt

NodeDelete

Syntax

NodeDelete(*nodeName*)

Description

Use the NodeDelete function to delete the specified node and all subordinate objects (transactions, node properties, certificates, and so on.)

Warning! Once this function has completed, you cannot recover the node.

Event Considerations

PeopleSoft recommends only using this function in the SavePostChange event. In addition, you should put a warning in the SaveEdit event, so the user has a chance to change their mind about deleting the node.

If you use a pushbutton on a page to delete a node, PeopleSoft recommends the following code in the FieldChange event:

```
If %Page = Page.YourDeletePage Then
/* changes the record in the buffer so that the DoSaveNow fires */
   PSMSGNODEDEFN.DESCR = PSMSGNODEDEFN.DESCR | " ";
   DoSaveNow();
   ClearKeyList();
/* Transfer to another component or display information message; */
End-If;
```

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Parameters

nodeName	Specify the name of the node you want to delete, as a string. All node names are uppercase.

Returns

A Boolean value: True, the function completed successfully deleted, False otherwise.

Example

```
&Rslt = NodeDelete("QEM_TEST_NODE");

If Not &Rslt Then

   /* Do error processing */

End-if;
```

Related Links

NodeRename
NodeSaveAs
"Configuring Nodes" (PeopleTools 8.54: Integration Broker Administration)

NodeRename

Syntax

NodeRename(*oldNodeName*, *newNodeName*)

Description

Use the NodeRename function to rename a node. All node names are uppercase.

Event Considerations

PeopleSoft recommends using this function only in the SavePreChange event. This gives the user a chance to edit any other page fields before executing, which may be important because this function affects several tables.

Parameters

oldNodeName	Specify the name of the node that you want to change, as a string.
newNodeName	Specify the new name for the node, as a string.

Returns

A Boolean value: True, the function completed successfully deleted, False otherwise.

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Example

```
&Rslt = NodeRename("QEM_TEST_NODE", "QE_TEST_NODE");

If Not &Rslt Then

   /* Do error processing */

End-if;
```

Related Links

NodeDelete
NodeSaveAs
"Configuring Nodes" (PeopleTools 8.54: Integration Broker Administration)

NodeSaveAs

Syntax

NodeSaveAs(*oldNodeName*, *newNodeName*)

Description

Use the NodeSaveAs function to create a copy of the node specified by *oldNodeName*, and save it to the database as *newNodeName*. All node names are uppercase.

Event Considerations

PeopleSoft recommends using this function only in the SavePreChange event. This gives the user a chance to edit any other page fields before executing, which may be important because this function affects several tables.

Parameters

oldNodeName	Specify the name of the node that you want to copy, as a string.
newNodeName	Specify the name for the new node, as a string.

Returns

A Boolean value: True, the function completed successfully deleted, False otherwise.

Example

```
&Rslt = NodeSaveAs("PRODUCTION_NODE", "MY_TEST_NODE");

If Not &Rslt Then

   /* Do error processing */

End-if;
```

Related Links

NodeRename

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NodeDelete
"Configuring Nodes" (PeopleTools 8.54: Integration Broker Administration)

NodeTranDelete

Syntax

NodeTranDelete(*MsgNodeName*, *EffDt*, *TrxType*, *RqstMsgName*, *RqstMsgVer*)

Description

Use the NodeTranDelete function to delete a node transaction.

Warning! If you delete a node transaction, any transaction modifier using that transaction is also deleted.

Parameters

MsgNodeName	Specify the message node name as a string.
EffDt	Specify the effective date as a string.
TrxType	Specify the transaction type as a string.
RqstMsgName	Specify the request message name as a string.
RqstMsgVer	Specify the request message version as a string.

Returns

A Boolean value, True if the function completed successfully, False otherwise.

Example

```
&ret = NodeTranDelete("QE_LOCAL", "1900-01-01",  "IA",  "ROLESYNCH_MSG",
"VERSION_1");
```

Related Links

RelNodeTranDelete

None

Syntax

None(*fieldlist*)

where *fieldlist* is an arbitrary-length list of fields in the form:

[*recordname.*]*fieldname1* [, [*recordname.*]*fieldname2*] ...

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Description

The None function takes an arbitrary number of field names as parameters and tests for values. None returns True if none of the specified fields contain a value. It returns False if any one of the fields contains a value.

A blank character field, or a zero (0) numeric value in a required numeric field is considered a null value.

Related Functions

All	Checks to see if a field contains a value, or if all the fields in a list of fields contain values. If any of the fields is Null, then All returns False.
AllOrNone	Checks if either all the field parameters have values, or none of them have values. Use this in cases where if an end user fills in one field, she must all fill in the other related values.
OnlyOne	Checks if exactly one field in the set has a value. Use this when the end user must fill in only one of a set of mutually exclusive fields.
OnlyOneOrNone	Checks if no more than one field in the set has a value. Use this in cases when a set of fields is both optional and mutually exclusive; that is, if the end user puts can put a value into one field in a set of fields, or leave them all empty.

Example

The following example uses None to check whether REFERRAL_SOURCE has a value:

```
If None(REFERRAL_SOURCE) or
   REFERRAL_SOURCE = "EE" Then
   Gray(EMP_REFERRAL_ID);
End-if;
```

The following example uses None with a variable:

```
&ONETIME = FetchValue(POSN_INCUMB_WS.EMPLID, 1);
   If None(&ONETIME) Then
   /* do processing */
End-if;
```

Related Links

All

AllOrNone

OnlyOne

OnlyOneOrNone

NotifyQ

Syntax

```
NotifyQ(logical queue ID, task type)
```

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Description

Use the NotifyQ function to notify the queue server of an incoming task. NotifyQ should *always* follow the use of the EnQueue function. EnQueue inserts the task into the PeopleSoft database, and NotifyQ notifies the queue server about a task's existence and location.

When you process a batch of tasks to be enqueued, PeopleSoft recommends calling NotifyQ just once (after the last task is processed). NotifyQ forces the queue server to reorder its internal lists and save its state to the database, and therefore affects performance.

NotifyQ is not required for chat or voice tasks, and should not be used for these tasks.

Note: If tasks of different types or tasks that are assigned to different logical queues are enqueued, at least one NotifyQ is required for each logical queue and for each task type. This ensures that the system is notified of tasks waiting to be assigned.

Parameters

logical queue ID

Specifies the logical queue in which the task should be queued. It is a string value.

The logical queue ID is a case-sensitive value. The case used in the NotifyQ function must exactly match the case used when creating the logical queue ID on the Queues page.

task type

Specifies the type of task to be inserted. It is a string value. The valid values are:

- email
- generic

Returns

Returns 0 if the function was successful.

If unsuccessful, it returns a message number. The message set ID for MultiChannel Framework is 162.

For example, 1302 is returned when an invalid task type or no value is provided.

Example

```
&strtasknum = EnQueue(&queueID, "email", &MyCompURL, &langcode,
&subject, "QEDMO", 15, 60, &cost, &priority, &minskill);

&nret = NotifyQ(&queueID, "email");
   If &nret = 0 Then
         MessageBox(0, "", 162, 1547, "Queue Successfully notified.");

   End-If
```

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NumberToDisplayString

Syntax

NumberToDisplayString(*Format*, *Number* [, *Width*] [, *Precision*])

Description

Use the NumberToDisplayString function to format *Number* according to the pattern specified in *Format*. The decimal and thousand's separator are formatted with what is with the current user's personalizations.

Specify the *Width* and *Precision* parameters when you want to dynamically specify the width or precision. Both width and precision can be set based on *Format*. For example, the following statically specifies the width to be 6, and the precision to be 2:

```
&MyValue = NumberToDisplayString("%6.2", &Num);
```

The following example show the width taken dynamically from the &Width variable:

```
&MyValue = NumberToDisplayString("%*.2", &Num, &Width);
```

The following example shows how both the width and the precision values are taken dynamically from the &Width and &Precision variables, respectively.

```
&MyValue = NumberToDisplayString("%*.*", &Num, &Width, &Precision);
```

Parameters

Format Specify the pattern for how *Number* is supposed to be formatted. See Using the Format parameter, below.

Number Specify the number to be formatted.

Width Specify the width of the string to be formatted.

Precision Specify the precision of the string to be formatted.

Using the Format Parameter

The *Format* parameter has the following format:

```
%[flags][width][.precision][R | T] [type]
```

- *Flags* have the following format:

Flag	***Description***
-	Left align the number.
$	Fill out field on left hand side with international currency symbol.
#	Force the number to have a decimal point.

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Flag	*Description*
blank	Pad left hand side with blanks only indicating a negative number with a '-' sign.
+	Prefix output with plus sign.
M	Append " (cr)" on right for negative numbers and " (dr)" for positive numbers.
m	Opposite of M: " (dr)" for negative and " (cr)" for positive.
A	Bracket negative numbers with "[" and "]".
a	Bracket negative numbers with "(" and ")".
q	Display zeros as blanks.
Q	Display zeros as "None".
0	Pad left hand side with zeroes. This must be the last flag before any other pattern indicators.

- *Width* must be specified as a non-negative integer. Specifying an asterisks ("*") allows for dynamic field width specification. The maximum width is 50.
- *Precision* specifies how many digits follow the ".". It must be specified as a non-negative integer. Specifying an asterisks ("*") allows for a dynamic precision specification. The maximum precision is 50.
- *R* specifies rounding in conversion from the internal PeopleCode representation, that is, specifying 12.345 with precision of 2 (%n.2Rt) prints 12.35. In the absence of the R control rounding is the default.
- *T* specifies truncation in conversion from the internal PeopleCode representation, that is, specifying 2.345 with precision of 2 (%n.2Tt) prints 12.34.
- *Type* has the following format:

Type	*Description*
t	Type has format like printf %f. For example, the form dddd. dddd. This is the default value.
v	1000ths separator delimited output. For example, if the separator is a comma, the format is 1,000,000.02.
w	Scientific format like printf %e. For example, the form d.ddddeddd where "e" indicates exponent. d specifies 1 decimal digit and dddd specifies an arbitrary number.

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Type	*Description*
W	Scientific format (like above, for "w") except "e" is "E".
z	Scientific Engineering format like printf %e where the exponent is always a multiple of 3 and the mantissa is between 1 and a 1000.
Z	Scientific Engineering format (like above, for "z") except "e" is "E".

Returns

A string value.

Example

In the following example, &Str1 would be "0001234,56".

```
&Num = 1234.56;

&Str1 = NumberToDisplayString("%#010.2t", &Num);
```

In the following example, &Str2 would be "$$$1234.56".

```
&Num = 1234.56;

&Str2 = NumberToDisplayString("%$10.2", &Num);
```

In the following example, &Str3 would be " 1,234.56".

```
&Num = 1234.56;

&Str3 = NumberToDisplayString("%10.2v", &Num);
```

In the following example, &Str4 would be "1.23456e+003".

```
&Num = 1234.56;

&Str4 = NumberToDisplayString("%w", &Num);
```

Related Links

NumberToString

NumberToString

Syntax

NumberToString(*Format*, *Number* [, *Width*] [, *Precision*])

Description

Use the NumberToString function to format *Number* according to the pattern specified in *Format*.

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Specify the *Width* and *Precision* parameters when you want to dynamically specify the width or precision. Both width and precision can be set based on *Format*. For example, the following statically specifies the width to be 6, and the precision to be 2:

```
&MyValue = NumberToString("%6.2", &Num);
```

The following example show the width taken dynamically from the &Width variable:

```
&MyValue = NumberToString("%*.2", &Num, &Width);
```

The following example shows how both the width and the precision values are taken dynamically from the &Width and &Precision variables, respectively.

```
&MyValue = NumberToString("%*.*", &Num, &Width, &Precision);
```

Parameters

Format Specify the pattern for of how *Number* is supposed to be formatted.

Number Specify the *Number* to be formatted.

Width Specify the width of the string to be formatted.

Precision Specify the precision of the string to be formatted.

Using the Format Parameter

The *Format* parameter has the following format:

```
%[flags][width][.precision][R | T] [type]
```

- *Flags* have the following format:

Flag	***Description***
-	Left align the number.
$	Fill out field on left hand side with international currency symbol.
#	Force the number to have a decimal point.
blank	Pad left hand side with blanks only indicating a negative number with a '-' sign.
+	Prefix output with plus sign.
M	Append " (cr)" on right for negative numbers and " (dr)" for positive numbers.
m	Opposite of M: " (dr)" for negative and " (cr)" for positive.
A	Bracket negative numbers with "[" and "]".

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Flag	*Description*
a	Bracket negative numbers with "(" and ")".
q	Display zeros as blanks.
Q	Display zeros as "None".
0	Pad left hand side with zeroes. This must be the last flag before any other pattern indicators.

- *Width* must be specified as a non-negative integer. Specifying an asterisks ("*") allows for dynamic field width specification. The maximum width is 50.
- *Precision* specifies how many digits follow the ".". It must be specified as a non-negative integer. Specifying an asterisks ("*") allows for a dynamic precision specification. The maximum precision is 50.
- *R* specifies rounding in conversion from the internal PeopleCode representation, that is, specifying 12.345 with precision of 2 (%n.2Rt) prints 12.35. In the absence of the R control rounding is the default.
- *T* specifies truncation in conversion from the internal PeopleCode representation, that is, specifying 2.345 with precision of 2 (%n.2Tt) prints 12.34.
- *Type* has the following format:

Type	*Description*
t	Type has format like printf %f. For example, the form dddd.dddd. This is the default value.
v	1000ths separator delimited output. For example, if the separator is a comma, the format is 1,000,000.02.
w	Scientific format like printf %e. For example, the form d.ddddeddd where "e" indicates exponent. d specifies 1 decimal digit and dddd specifies an arbitrary number.
W	Scientific format (like above, for "w") except "e" is "E".
z	Scientific Engineering format like printf %e where the exponent is always a multiple of 3 and the mantissa is between 1 and a 1000.
Z	Scientific Engineering format (like above, for "z") except "e" is "E".

Returns

A string value.

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Example

In the following example, &Str1 would be "0001234.56".

```
&Num = 1234.56;

&Str1 = NumberToString("%#010.2t", &Num);
```

In the following example, &Str2 would be "$$$1234.56".

```
&Num = 1234.56;

&Str2 = NumberToString("%$10.2", &Num);
```

In the following example, &Str3 would be " 1,234.56".

```
&Num = 1234.56;

&Str3 = NumberToString("%10.2v", &Num);
```

In the following example, &Str4 would be "1.23456e+003".

```
&Num = 1234.56;

&Str4 = NumberToString("%w", &Num);
```

Related Links

NumberToDisplayString
String
Value

PeopleCode Built-in Functions and Language Constructs: O

The PeopleCode built-In functions and language constructs beginning with the letter O are listed in alphabetical order within this topic.

Related Links

Typographical Conventions

ObjectDoMethod

Syntax

ObjectDoMethod(*obj_this*, *str_method_name* [, *paramlist*])

Where *paramlist* is a list of parameters of arbitrary length:

param1 [, *param2*]. . .

Description

Use the ObjectDoMethod function to invoke the method specified by *str_method_name* for the object *object_this*, passing in any required parameters using *paramlist*.

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You can use ObjectDoMethod with Component Interfaces, Application Classes, OLE Automation objects, and so on.

This method can be useful if you know the number of parameters you need to pass for a method. If you do not know how many parameters you may need to pass when you write your PeopleCode, use the ObjectDoMethodArray function.

Parameters

obj_this	Specify an already instantiated object. This variable must have been instantiated either with CreateObject, or another function or method that creates objects.
str_method_name	A string containing the name of an exposed method of *obj_this*.
paramlist	The parameter list to pass to the *str_method_name* method.

Returns

None.

Example

This simple example instantiates an Excel worksheet object, makes it visible, names it, saves it, and displays its name.

```
&WORKAPP = CreateObject("Excel.Application");
&WORKBOOKS = ObjectGetProperty(&WORKAPP, "Workbooks");
ObjectDoMethod(&WORKBOOKS, "Add", "C:\TEMP\INVOICE.XLT"); /* This associates the IN⇒
VOICE template w/the workbook */
ObjectDoMethod(&WORKAPP, "Save", "C:\TEMP\TEST1.XLS");
ObjectSetProperty(&WORKAPP, "Visible", True);
```

This simple example invokes a user-defined method associated with the current component interface object:

```
ObjectDoMethod(%CompIntfcName, &inMethodName);
```

Related Links

CreateObject
ObjectGetProperty
ObjectSetProperty
CreateObjectArray
ObjectDoMethodArray
"Using OLE Functions" (PeopleTools 8.54: PeopleCode Developer’s Guide)

ObjectDoMethodArray

Syntax

ObjectDoMethodArray(*Object_Name*, *Method_Name*, *Array_of_Args*)

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Description

Use the ObjectDoMethodArray function to invoke the method specified by *method_name* for the object *object_name*, passing in any required parameters using the array.

Use this function when you're not certain, at the time you're writing your PeopleCode program, how many parameters a method is going to require. If you know the number of parameters, use the ObjectDoMethod function instead.

The array of parameters is an array of Any. It can only be one-dimensional. You cannot pass in field references, that is, you can't pass in references of the form `RECORD.FIELDNAME`.

If you do not want to supply any parameters, you can use an empty array, or a reference to a Null array.

Parameters

Object_Name	Specify an already instantiated object on which the method is to be evaluated.
Method_Name	Specify the name of an exposed method for the object.
Array_Of_Args	Specify an Array of Any containing the parameters for the method.

Returns

Depends on the specified object and method if a result is returned or not.

Example

```
&MyRslt = ObjectDoMethodArray(&MyObject, "My-Method", &MyArray);
```

Related Links

CreateObject
ObjectGetProperty
ObjectSetProperty
CreateObjectArray
ObjectDoMethod
"Using OLE Functions" (PeopleTools 8.54: PeopleCode Developer's Guide)
"Understanding Arrays" (PeopleTools 8.54: PeopleCode API Reference)

ObjectGetProperty

Syntax

ObjectGetProperty(*obj_this*, *str_property_name* [, *index_param_list*])

Description

Use the ObjectGetProperty function to return the value of a property *str_property_name* of the object *obj_this*.

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Note: The object must have already been instantiated, either using CreateObject or another function or method that returns an object. Default" OLE Automation object properties are not supported. You must specify the object property that you want to retrieve explicitly.

Parameters

obj_this	Specify an already instantiated object. This variable must have been instantiated either with CreateObject or another function or method that creates objects.
str_property_name	A string containing the name of an exposed property of *obj_this*.
index_param_list	A comma-separated list for accessing an OLE automation object indexed property. (These parameters are only used with OLE/COM objects.)

Returns

Returns an Any value equal to the value of the *str_property_name* property of the *obj_this* object.

Example

This simple example instantiates an Excel worksheet object, makes it visible, names it, saves it, and displays its name.

```
&WORKAPP = CreateObject("Excel.Application");
&WORKBOOKS = ObjectGetProperty(&WORKAPP, "Workbooks");
ObjectDoMethod(&WORKBOOKS, "Add", "C:\TEMP\INVOICE.XLT"); /* This associates the IN⇒
VOICE template w/the workbook */
ObjectDoMethod(&WORKAPP, "Save", "C:\TEMP\TEST1.XLS");
ObjectSetProperty(&WORKAPP, "Visible", True);
```

Excel Worksheets had an index property called Range that has the following signature:

```
Property Range (Cell1 [, Cell2]) as Range
```

In the following example, the range is A1:

```
&CELL = ObjectGetProperty(&SHEET, "Range", "A1");
```

Related Links

CreateObject
ObjectDoMethod
ObjectSetProperty
CreateObjectArray
ObjectDoMethodArray
"Using OLE Functions" (PeopleTools 8.54: PeopleCode Developer's Guide)

ObjectSetProperty

Syntax

ObjectSetProperty(*obj_this*, *str_property_name*, *val* [, *index_param_list*])

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Description

Use the ObjectSetProperty function to set the value of a property *str_property_name* of the object *obj_this* to *val*.

The object must have already been instantiated, either using CreateObject or another function or method that returns an object.

Note: Default OLE Automation object properties are not supported. You must specify the object property that you want to set explicitly.

Parameters

obj_this	Specify an already instantiated object. This variable must have been instantiated either with **CreateObject** or another function or method that creates objects.
str_property_name	A string containing the name of an exposed property of *obj_this*.
val	*str_property_name* is set to this value.
index_param_list	A comma-separated list of parameters for accessing an OLE automation object indexed property. (This is only used with COM/OLE objects.)

Returns

None.

Example

This simple example instantiates an Excel worksheet object, makes it visible, names it, saves it, and displays its name.

```
&WORKAPP = CreateObject("Excel.Application");
&WORKBOOKS = ObjectGetProperty(&WORKAPP, "Workbooks");
ObjectDoMethod(&WORKBOOKS, "Add", "C:\TEMP\INVOICE.XLT"); /* This associates the IN⇒
VOICE template w/the workbook */
ObjectDoMethod(&WORKAPP, "Save", "C:\TEMP\TEST1.XLS");
ObjectSetProperty(&WORKAPP, "Visible", True);
```

Related Links

CreateObject
ObjectDoMethod
ObjectGetProperty
CreateObjectArray
ObjectDoMethodArray
"Using OLE Functions" (PeopleTools 8.54: PeopleCode Developer’s Guide)

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OnlyOne

Syntax

OnlyOne(*fieldlist*)

where *fieldlist* is an arbitrary-length list of fields in the form:

[*recordname.*]*fieldname1* [, [*recordname.*]*fieldname2*] ...

Description

Use the OnlyOne function to check a list of fields and return True if one and only one of the fields has a value. If all of the fields are empty, or if more than one of the fields has a value, OnlyOne returns False. This function is used to validate that only one of a set of mutually exclusive fields has been given a value.

A blank character field, or a zero numeric value in a required numeric field is considered a Null value.

Related Functions

All	Checks to see if a field contains a value, or if all the fields in a list of fields contain values. If any of the fields is Null, then All returns False.
None	Checks that a field or list of fields have no value. None is the opposite of All.
AllOrNone	Checks if either all the field parameters have values, or none of them have values. Use this in cases where if an end user fills in one field, she must all fill in the other related values.
OnlyOneOrNone	Checks if no more than one field in the set has a value. Use this in cases when a set of fields is both optional and mutually exclusive; that is, if the end user puts can put a value into one field in a set of fields, or leave them all empty.

Example

You typically use OnlyOne as follows:

```
If OnlyOne(param_one, param_two)
   Then value_a = "y";
End-if;
```

Related Links

All
AllOrNone
None
OnlyOneOrNone

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OnlyOneOrNone

Syntax

OnlyOneOrNone(*fieldlist*)

where *fieldlist* is an arbitrary-length list of fields in the form:

[*recordname.*]*fieldname1* [, [*recordname.*]*fieldname2*] ...

Description

Use the OnlyOneOrNone function to check a list of fields and return True if either of these conditions is true:

- Only one of the fields has a value.
- None of the fields has a value.

This function is useful when you have a set of mutually exclusive fields in a page and the entire set of fields is optional. The end user can leave all the fields blank or enter a value in one of the fields only.

A blank character field, or a zero numeric value in a required numeric field is considered a null value.

Related Functions

All	Checks to see if a field contains a value, or if all the fields in a list of fields contain values. If any of the fields is Null, then All returns False.
None	Checks that a field or list of fields have no value. None is the opposite of All.
AllOrNone	Checks if either all the field parameters have values, or none of them have values. Use this in cases where if an end user fills in one field, she must fill in all the other related values.
OnlyOne	Checks if exactly one field in the set has a value. Use this when the end user must fill in only one of a set of mutually exclusive fields.

Example

You typically use OnlyOneOrNone as follows:

```
If OnlyOneOrNone(param_one, param_two)
   Then value_a = "y";
End-if;
```

Related Links

All
AllOrNone
None
OnlyOne

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OverrideCNAVDisplayMode

Syntax

OverrideCNAVDisplayMode([*disable*])

Description

Use the OverrideCNAVDisplayMode function to specify whether to disable conditional navigation.

Conditional navigation can be disabled for the life of a component by invoking this function as the first executable statement in a PeopleCode PreBuild event. Alternatively, conditional navigation can be temporarily disabled for just a segment of code in other PeopleCode events.

Important! When temporarily disabling conditional navigation, you must explicitly re-enable it by calling OverrideCNavDisplayMode(False). Failing to do so will leave conditional navigation disabled for the remainder of the code execution.

The following methods, properties, and functions are “conditional navigation aware,” which means that they will generate a URL or return a value that is dependent on the conditional navigation configuration as well as on the current state as set by the OverrideCNAVDisplayMode function:

- AbsoluteContentURL property (content reference class and content reference link class).
- AbsolutePortalURL property (content reference class and content reference link class).
- FindCRefByName method (PortalRegistry class).
- FindCRefByURL method (PortalRegistry class).
- FindCRefLinkByName method (PortalRegistry class).
- GenerateComponentContentRelURL built-in function.
- GenerateComponentContentURL built-in function.
- GenerateComponentPortalRelURL built-in function.
- GenerateComponentPortalURL built-in function.
- GenerateComponentRelativeURL built-in function.
- GenerateHomepagePortalURL built-in function.
- GenerateHomepageRelativeURL built-in function.
- GetAbsoluteContentURL method (PortalRegistry class).
- GetURL built-in function.
- Transfer built-in function.
- ViewURL built-in function.

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Parameters

disable Specifies whether to disable conditional navigation as a Boolean value.

The default value is True.

Returns

(Optional) A Boolean value. True if the function executed successfully, False otherwise.

Example 1

The following example temporarily disables conditional navigation to generate a URL to a classic component. Then, conditional navigation is re-enabled for the remainder of the program's execution.

```
/* Disable conditional navigation before generating the URL. */
OverrideCNavDisplayMode( True);
&URL = GenerateComponentPortalURL(%Portal, %Node, MenuName."ROLE_MANAGER", "GBL", C⇒
omponent."HR_PROMOTE_APPR", "", "");

/* IMPORTANT: Re-enable conditional navigation */
OverrideCNavDisplayMode( False);
&URL = &URL | "?Action=U&BUSINESS_UNIT=US100&REQ_ID=0000000067";
&URL = &URL | "&SKIPCNAV=1"; /* Add this  to skip Pre and Post Processing */

/* Invoke MCFOutboundEmail.Send to send the email including the generated URL */
...
```

Example 2

The following example disables conditional navigation for the life of the component:

```
/* PORTAL_CREF_ADM.GBL.PreBuild */
OverrideCNavDisplayMode( True);
```

Related Links

"Understanding Conditional Navigation" (PeopleTools 8.54: Portal Technology)

PeopleCode Built-in Functions and Language Constructs: P-Q

The PeopleCode built-In functions and language constructs beginning with the letters P and Q are listed in alphabetical order within this topic.

Related Links

Typographical Conventions

PanelGroupChanged

Syntax

PanelGroupChanged()

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Description

Use the PanelGroupChanged function to determine whether a component has changed since the last save, whether by the user or by PeopleCode.

Note: The PanelGroupChanged function is supported for compatibility with previous releases of PeopleTools. New applications should use the ComponentChanged function instead.

Related Links

ComponentChanged

PingNode

Syntax

PingNode(*MsgNodeName*)

Description

Use the PingNode function to ping the specified node. It returns an XmlDoc object that you must go through to find the status of the node.

Parameters

MsgNodeName	Specify the name of the message node you want to ping, as a string.

Returns

An XmlDoc object. The node in the XmlDoc object with the name of **status** contains information about the node you pinged.

Example

```
Local XmlDoc &ErrorInfo;

&ErrorInfo = PingNode("TESTNODENAME");
   &Root = &ErrorInfo.DocumentElement;
   &MsgNodeArray = &Root.GetElementsByTagName("msgnode");
   For &M = 1 To &MsgNodeArray.Len
      &MsgNode = &MsgNodeArray [&M];
      &MsgText = &MsgNode.FindNode("status").NodeValue;
      If &MsgText <> "Success (117,73)" Then
         Error ("Web Server not available for web service");
      End-If;
   End-For;
```

Related Links

"Understanding Arrays" (PeopleTools 8.54: PeopleCode API Reference)

"Understanding Message Classes" (PeopleTools 8.54: PeopleCode API Reference)

"Understanding XmlDoc Classes" (PeopleTools 8.54: PeopleCode API Reference)

"Understanding Managing Messages" (PeopleTools 8.54: Integration Broker)

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PriorEffDt

Syntax

PriorEffDt(*field*)

Description

Use the PriorEffDt function to return the value of the specified field from the record with the prior effective date. This function is valid only for effective-dated records.

If the record contains an effective sequence number field, the value of this field is compared along with the effective-date field when the prior effective date/effective record sequence is determined. Therefore, if there is an effective-sequence number, it's possible that the effective-date field will be the same as the current record, but the sequence number would be earlier.

If a prior record does not exist, the statement is skipped. If the PriorEffDt function is not a top-level statement, that is, if it's contained with a compound statement or a loop, the statement is skipped and execution begins with the next top-level statement.

In the following example, execution skips to the top If statement:

```
If ACTION <> "REH" Then  /* skip to here if PriorEffdt fails to find prior record *⇒
/
   If    STD_HOURS <> PriorEffdt(STD_HOURS) And
         Day(EFFDT) <> 1 Then
      Error MsgGet(30000, 8, "Meldung nicht vorhanden - WAZ bzw. Beschäftigungsgrad⇒
änderungen sind nur zum ersten eines Monats zulässig.")
   End-If;
End-If;
/* if PriorEffdt fails, run to here directly */
```

Example

```
If CURRENCY_CD = PriorEffdt(CURRENCY_CD) Then
      Evaluate ACTION
      When = "PAY"
         If ANNUAL_RT = PriorEffdt(ANNUAL_RT) Then
            Warning MsgGet(1000, 27, "Pay Rate Change action is chosen and Pay Rate⇒
 has not been changed.");
         End-if;
         Break;
      When = "DEM"
         If ANNUAL_RT >= PriorEffdt(ANNUAL_RT) Then
            Warning MsgGet(1000, 29, "Demotion Action is chosen and Pay Rate has no⇒
t been decreased.");
         end-if;
      When-other
      End-evaluate;
      WinMessage("This message appears after executing either of the BREAK statemen⇒
ts or after all WHEN statements are false");
   End-if;
```

Related Links

NextEffDt

NextRelEffDt

PriorRelEffDt

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PriorRelEffDt

Syntax

PriorRelEffDt(*search_field*, *fetch_field*)

Description

Use the PriorRelEffDt function to locate the prior occurrence of the *search_field* with the prior effective date (and effective-sequence number if specified), then return the value of the specified *fetch_field* corresponding to the *search_field*. The return value is an Any data type. Typically, this function is used to retrieve values for related display fields.

This function is valid only for effective-dated records.

If a prior record does not exist, then the statement is skipped. If the PriorRelEffDt function isn't a top-level statement, that is, if it's contained within a compound statement or a loop, the statement is skipped and execution restarts with the *next* top-level statement.

Related Links

NextEffDt, NextRelEffDt, PriorEffDt

PriorValue

Syntax

PriorValue(*fieldname*)

Description

Use the PriorValue function in FieldEdit and FieldChange PeopleCode to obtain the prior value of a buffer field that the user just changed. It returns the value that was in the buffer field before the user changed it, *not* the value of the field the last time the component was saved.

PriorValue gives correct results only in FieldEdit and FieldChange PeopleCode, and only for the buffer field where the function is executing. If you pass another field name to the function, it returns the current value of the buffer field, not the prior value.

Parameters

fieldname	The name of the record field. For correct results, this must be the name of the field where the call to PriorValue executes.

Returns

Returns an Any value equal to the value that was in the current buffer field immediately prior to the last edit.

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Example

The following example from FieldChange PeopleCode gets the prior value of a field:

```
&PRIOR = PriorValue(QUANTITY);
DERIVED_TEST.TOTAL_AMT = (DERIVED_TEST.TOTAL_AMT  -  &PRIOR) + QUANTITY;
```

Related Links

CurrentRowNumber

Product

Syntax

Product(*numlist*)

where *numlist* is an arbitrary-length list of numbers in the form

n1 [, *n2*]. . .

Description

Use the Product function to multiply all the numbers in *numlist* and returns the product as a Number data type. The numbers in the list can be any number expressed as a number, variable, or expression.

Returns

Returns a Number value equal to the product of the numbers in *numlist*.

Example

The example sets &N2 to 96:

```
&N2 = Product(4,80,0.3);
```

Related Links

Fact

Prompt

Syntax

Prompt(*title*, *heading*, {*fieldlist* | *&Record*})

where *fieldlist* is an arbitrary-length list of fields in the form:

field1 [, *label1* [, *tempvar1*]] [, *field2* [, *label2* [, *tempvar2*]]]...

Note that the *label* parameter is required before the temporary variable.

Description

Use the Prompt function to display a page prompting the user to insert values into one or more text boxes. If the user cancels the page, any entered values are discarded and the function returns False. When the

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prompt page is displayed, the text boxes are initially filled with default values from the fields in *fieldlist*. The user can change the values in the text boxes, then if the user clicks OK, the values are placed either into the buffer for the appropriate field, or into a temporary variable, if a *tempvar* for that field is provided in the function call.

Prompt can also take a record object. This is primarily used with the Query classes, when running a query, to prompt the end user for the prompt values of a query.

Prompt is a think-time function, and as such cannot be used during the PeopleCode attached to the following events:

- SavePreChange
- Workflow
- RowSelect
- SavePostChange
- Any PeopleCode event that fires as a result of a ScrollSelect (or one of its relatives) function calls, or a Select (or one of its relatives) Rowset class method.

Prompt should also not be called in any PeopleCode event that fires as a result of a ScrollSelect or its relatives, or a Select Rowset class method or its relatives.

Related Links

"Understanding Restrictions on Method and Function Use" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

title Used as the title for the page.

heading Displayed in the page above the fields. If a zero-length string ("") is passed, the heading line is omitted in the page.

fieldlist* | *&Record A list of one or more fields; each field in the list consists of a [*recordname*.]*fieldname* followed by an optional label and an optional temporary variable for storing the input value. The label parameter is required if you supply the temporary variable parameter.

Instead of a list of fields, you can also specify an already instantiated and populated record object.

field The name of the field being prompted for, the form [*recordname*.]*fieldname*.

label Optional label for the prompted field. If this parameter is omitted, the field RFT Long value is used. This parameter is required before the *tempvar* parameter.

tempvar Optional temporary variable to receive the user-entered value. If this parameter is omitted, the value is placed into the buffer for the field specified. Using a temp variable enables the

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PeopleCode program to inspect and process the entered value without affecting the buffer contents.

Returns

Optionally returns a Boolean value:

- False if the user clicks the Cancel button.
- True if the user clicks the OK button.

Example

The following example prompts for a single field, using calls to the MsgGetText function to retrieve values for the window title and prompt, and places the result into FISCAL_YEAR field:

```
Prompt(MsgGetText(5000, 182, " "), MsgGetText(5000, 184, " "), FISCAL_YEAR);
```

To following example places the results of the prompt into a temporary variable:

```
Prompt("Change Voucher", "", VOUCHER_ID, "Change Voucher ID to", &NEW_VOUCHER_ID);
```

The following code is in the USA push button FieldChange PeopleCode, and calls for the single field as shown in the page.

```
When = PAGE.PERSONAL_DATA1
        /* Administer Global Personnel - USA Flag Btn on PERSONAL_DATA1 Page */
         Prompt("US Social Security Number", "", PERSONAL_DATA.SSN);
         Break;
```

Proper

Syntax

Proper(*string*)

Description

Use the Proper function to capitalize the first letter in a text *string* and any other letters in a text *string* that follow any character other than another letter. It also converts all other letters in a text *string* to lowercase. Punctuation and other characters that have no case sensitivity are not changed.

Returns

Returns a String value with the first character of each word capitalized.

Example

The example sets the value of &BADKD to "K. D. Lang".

```
&BADKD = Proper("k.  d.  LANG")
```

Related Links

Lower

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Upper

PublishXmlDoc

Syntax

```
PublishXmlDoc(&XmlDoc, Message.MessageName [, Node.NodeName])
```

Description

Use the PublishXmlDoc function to send an asynchronous message that is based on an XmlDoc object.

Note: This function has been deprecated and remains for backward compatibility only. Use the IntBroker class Publish method instead.

The XmlDoc object must already be instantiated and populated. The message included in the function call should be an *unstructured* message, that is, one that isn't based on a hierarchical record structure.

If you want to retrieve an XmlDoc message that was sent asynchronously, use the GetMessageXmlDoc built-in function.

If you want to handle an XmlDoc as a Message object, you need to define a Message object with a hierarchical structure and migrate the data in the XmlDoc object into the Message object.

Related Links

"Publish" (PeopleTools 8.54: PeopleCode API Reference)

Parameters

&XmlDoc	Specify an already instantiated and populated XmlDoc object that you want to send as an asynchronous message.
MessageName	Specify an already existing nonrowset-based message, prefaced with the reserved word **Message**.
NodeName	Specify a node. This is for Sender Specified Routing (SSR), prefixed with the reserved word **Node**. The node defines the target for the published message.

Returns

A Boolean value: True if the message was successfully published, False otherwise.

Example

```
Local XmlDoc &MyDoc;

. . .

PublishXmlDoc(&MyDoc, Message.MyXmlMessage, Node.MyNode);
```

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Related Links

GetMessageXmlDoc

SyncRequestXmlDoc

PutAttachment

Syntax

```
PutAttachment(URLDestination, DirAndSysFileName, DirAndLocalFileName[,
LocalDirEnvVar[, PreserveCase[, AllowLargeChunks]]])
```

Description

Use the PutAttachment function to upload a file from the file system of the application server to the specified storage location. The *file system of the application server* includes any directories accessible from the application server including those on local disks as well as on network shares.

Note: It is the responsibility of the calling PeopleCode program to store the specified file name for further use.

If a file exists at a particular place on a storage location and then another file with the same name is uploaded to that same place on that same storage location, the original file will be silently overwritten by the new file. If that is not the behavior you desire, it is recommended that you implement PeopleCode to guarantee the ultimate uniqueness of either the name of the file at its place on the storage location or the name of its place (the subdirectory) on the storage location.

Note: If the web server load-balances via Jolt session pooling, then it may be difficult to anticipate which application server machine will be expected to have the specified file.

Note: If the specified destination subdirectories do not exist at the storage location, this function tries to create them.

Additional information that is important to the use of PutAttachment can be found in the *PeopleTools: PeopleCode Developer's Guide*:

- PeopleTools supports multiple types of storage locations.

  See "Understanding File Attachment Storage Locations" (PeopleTools 8.54: PeopleCode Developer’s Guide).

- Certain characters are illegal in file names; other characters in file names are converted during file transfer.

  See "Application Development Considerations" (PeopleTools 8.54: PeopleCode Developer’s Guide).

- Non-ASCII file names are supported by the PeopleCode file attachment functions.

  See "Attachments with non-ASCII File Names" (PeopleTools 8.54: PeopleCode Developer’s Guide).

- The PeopleCode file attachment functions do not provide text file conversions when files are attached or viewed.

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See "Considerations When Attaching Text Files" (PeopleTools 8.54: PeopleCode Developer's Guide).

File System Considerations

If you are uncertain which type of file system the file is going to be transferred from, either a Unix or Windows system, you should simply specify a file name for the *DirAndLocalFileName* parameter and either explicitly set the *LocalDirEnvVar* parameter or accept its default value, which is "TMP" (indicating that the value of the TMP environment variable will be used).

The following code example works for Windows systems, but *not* Unix systems:

```
&retcode = PutAttachment(&FTPINFO, &TARGETFILENAME, "c:\temp\resume.doc");
```

The following code example works for Unix systems, but *not* Windows systems:

```
&retcode = PutAttachment(&FTPINFO, &TARGETFILENAME, "/tmp/resume.doc");
```

The following two examples work for *both* Windows and Unix systems:

```
&retcode = PutAttachment(&FTPINFO, &TARGETFILENAME, "resume.doc");
```

```
&retcode = PutAttachment(&FTPINFO, &TARGETFILENAME, "resume.doc", "PS_CFG_HOME");
```

Parameters

URLDestination

A reference to a URL. This can be either a URL identifier the form **URL**.*URL_ID*, or a string. This (along with the corresponding *DirAndSysFileName*) indicates a file's destination location.

Note: When the *URLDestination* parameter is specified as a string value, forward slashes (/) are required. Backward slashes (\) are not supported for a string value.

See "Understanding URL Strings Versus URL Objects" (PeopleTools 8.54: PeopleCode Developer's Guide).

DirAndSysFileName

The relative path and file name of the file at the storage location. This is appended to *URLDestination* to form the full URL where the file will be transferred to. This parameter takes a string value.

Note: Because the *DirAndSysFileName* parameter is appended to the URL, it also requires forward slashes ("/"). Backward slashes ("\") are not supported for this parameter.

DirAndLocalFileName

The name, relative path name, or full path name of the source file on the application server. This parameter takes a string value. If you specify only a name or a relative path name for the source file, the file will be searched for in or relative to:

- The directory indicated by the value of the environment variable specified by the *LocalDirEnvVar* parameter.

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- The directory indicated by the value of the TMP environment variable if the *LocalDirEnvVar* parameter has not been specified.

Important! If a reference to the uploaded file is to be stored in a file reference table, then the PeopleCode that calls PutAttachment must restrict the length of the file name portion of the value of the *DirAndLocalFileName* parameter to 64 characters. Otherwise, that file name will be too long to be stored in that file reference table as a user file name.

LocalDirEnvVar

This optional parameter takes a string value.

If *LocalDirEnvVar* is specified, then its value will be prefixed to the value of the *DirAndLocalFileName* parameter to form the full path name of the source file on the application server's file system. With this parameter, you can avoid the need to hard-code the full path name.

If *LocalDirEnvVar* is not specified and the value of the *DirAndLocalFileName* parameter is already a full path file name, then that value will itself be used as the full path name of the source file on the application server. If *LocalDirEnvVar* is not specified and the value of the *DirAndLocalFileName* parameter is not a full path file name, then the value of the TMP environment variable will be prefixed to the value of the *DirAndLocalFileName* parameter to form the full path name of the source file on the application server.

Note: Do not specify *LocalDirEnvVar* if you use an absolute path for the *DirAndLocalFileName* parameter.

Note: In order to use the optional parameter *PreserveCase,* you must pass some value for *LocalDirEnvVar.* If you want to use the default behavior of *LocalDirEnvVar* and also use *PreserveCase,* you can specify "" (the empty string) for *LocalDirEnvVar.* Then the function behaves as if no value is specified. In this situation, if you wish to use the TMP environment variable, it must be explicitly specified.

PreserveCase

Specify a Boolean value to indicate whether the case of the extension of the file specified in *DirAndSysFileName* is preserved at the storage location: True, preserve the case, False, convert the file name extension in *DirAndSysFileName* to all lower case letters.

The default value is False.

For a particular file, save the value specified for this parameter so that it may be used when later calling other file-processing built-in functions on this file.

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Warning! If you use the *PreserveCase* parameter, it is important that you use it in a consistent manner with all the relevant file-processing functions or you may encounter unexpected file-not-found errors.

This is an optional parameter.

AllowLargeChunks

Specify a Boolean value to indicate whether to allow large chunks.

If the value specified in the Maximum Attachment Chunk Size field on the PeopleTools Options page is larger than is allowed for retrieval, then the system breaks the file upload into the largest sized chunks allowed. If *AllowLargeChunks* is set to True, this behavior can be overridden so that it is possible for an end user to upload a file in chunks that are too large for the system to retrieve. If *AllowLargeChunks* is set to False, the system will use the largest size chunk that is allowed for retrieval, or the configured chunk size, whichever is smaller.

The default value is False.

Note: If the chunks are too big to be retrieved, then any file retrieval built-in function, such as GetAttachment, will fail.

Note: The *AllowLargeChunks* parameter is only applicable when the storage location is a database record. It has no impact when the storage location is an FTP site or an HTTP repository, since attachments at those locations are never chunked.

See "PeopleTools Options" (PeopleTools 8.54: System and Server Administration)

This is an optional parameter.

Returns

You can check for either an integer or a constant value:

Numeric Value	*Constant Value*	*Description*
0	%Attachment_Success	File was transferred successfully.

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Numeric Value	*Constant Value*	*Description*
1	%Attachment_Failed	File transfer failed due to unspecified error. The following are some possible situations where %Attachment_Failed could be returned: • Failed to initialize the process due to some internal error. • Failed due to unexpected/bad reply from server. • Failed to allocate memory due to some internal error. • Failed due to timeout. • Failed due to non-availability of space on FTP server. • Failed to close SSL connection. • Failed due to an unspecified error on the HTTP repository. If the HTTP repository resides on a PeopleSoft web server, then you can configure tracing on the web server to report additional error details. See "Debugging File Attachment Problems" (PeopleTools 8.54: PeopleCode Developer's Guide).

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Numeric Value	*Constant Value*	*Description*
3	%Attachment_FileTransferFailed	File transfer failed due to unspecified error during FTP attempt. The following are some possible situations where %Attachment_ FileTransferFailed could be returned: • Failed due to mismatch in file sizes. • Failed to write to local file. • Failed to store the file on remote server. • Failed to read local file to be uploaded • No response from server. • Failed to overwrite the file on remote server.
4	%Attachment_NoDiskSpaceAppServ	No disk space on the application server.
7	%Attachment_DestSystNotFound	Cannot locate destination system for FTP. The following are some possible situations where %Attachment_ DestSystNotFound could be returned: • Improper URL format. • Failed to connect to the server specified.

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Numeric Value	*Constant Value*	*Description*
8	%Attachment_DestSysFailedLogin	Unable to login to destination system for FTP. The following are some possible situations where %Attachment_DestSysFailedLogin could be returned: • Unsupported protocol specified. • Access denied to server. • Failed to connect using SSL Failed to verify the certificates. • Failed due to problem in certificates used. • Could not authenticate the peer certificate. • Failed to login with specified SSL level. • Remote server denied logon. • Problem reading SSL certificate.
9	%Attachment_FileNotFound	Cannot locate file. The following are some possible situations where %Attachment_FileNotFound could be returned: • Remote file not found. • Failed to read remote file.

Example

The following uploads the file, `HRarchive/NewHire/11042000resume.txt`, to the FTP server from `c:\NewHires\resume.txt` on the application server machine.

```
&retcode = PutAttachment("ftp://anonymous:hobbit1@ftp.ps.com/HRarchive/", "NewHire/⇒
11042000resume.txt", "C:\NewHires\resume.txt");
```

Related Links

"Debugging File Attachment Problems" (PeopleTools 8.54: PeopleCode Developer's Guide)

CleanAttachments

CopyAttachments

DeleteAttachment

DetachAttachment

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GetAttachment
MAddAttachment
ViewAttachment
"Understanding the File Attachment Functions" (PeopleTools 8.54: PeopleCode Developer's Guide)

Quote

Syntax

Quote(*String*)

Description

Use the Quote function to enclose a string in single quotation marks. This function also can be used to put quotation marks around SQL statements.

Parameters

String Specify the string you want to enclose in single quotation marks.

Returns

The string specified by *String* enclosed in single quotation marks.

Example

The following code returns 'Bob':

```
&QuotedString = Quote("Bob");
```

The following code returns 'Bob"s' (two single quotes to represent the apostrophe)

```
&QuotedString = Quote("Bob's");
```

The following code returns '%" OR USER ID LIKE "%':

```
&QuotedString = Quote("%' OR USERID LIKE '%");
```

PeopleCode Built-in Functions and Language Constructs: R

The PeopleCode built-In functions and language constructs beginning with the letter R are listed in alphabetical order within this topic.

Related Links

Typographical Conventions

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Radians

Syntax

Radians(*angle*)

Description

Use the Radians function to convert the given angle from degree measurement to radian measurement.

Parameters

angle	The size of an angle in degrees.

Returns

The size of the given angle in radians.

Example

The following example returns the equivalent size in radians of an angle measuring 65.5 degrees:

```
&RADIAN_SIZE = Radians(65.5);
```

The following example returns the value of **pi**, that is, 180 degrees expressed as radians:

```
&PI = Radians(180);
```

Note: This example represents **pi** with a high degree of accuracy, but no computer system can represent irrational numbers exactly. Thus, the results of extended calculations based on **pi** have the potential for a cumulative reduction in precision.

Related Links

Acos
Asin
Atan
Cos
Cot
Degrees
Sin
Tan

Rand

Syntax

Rand( )

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Description

Use the Rand function to generate a random number greater than or equal to 0 and less than 1. To generate a random integer that is greater than or equal to 0 but less than *x*, use `Int(Rand()*x)`.

Returns

Returns a random Number value greater than or equal to 0 and less than 1.

Example

The example sets &RANDOM_NUM to a random value less than 100.

```
&RANDOM_NUM = Int(Rand( )*100)
```

Related Links

Int

RecordChanged

Syntax

The syntax of the RecordChanged function varies, depending on whether you use a scroll path reference or a contextual reference to designate the row being tested.

Using a scroll path reference, the syntax is:

```
RecordChanged(scrollpath, target_row)
```

where *scrollpath* is:

```
[RECORD.level1_recname, level1_row, [RECORD.level2_recname, level2_row,]]
RECORD.target_recname
```

To prevent ambiguous references, you can also use **SCROLL.** *scrollname*, where *scrollname* is the same as the scroll level's primary record name.

Using a contextual reference the syntax is:

```
RecordChanged(RECORD.target_recname)
```

A contextual reference specifies the current row on the scroll level designated by **RECORD.** *target_recname.*

An older construction, in which a record field expression is passed, is also supported. The record field is any field in the row where the PeopleCode program is executing (typically the one on which the program is executing).

```
RecordChanged(recordname.fieldname)
```

Description

Use the RecordChanged function to determine whether the data in a specific row has been modified since it was retrieved from the database either by the user or by a PeopleCode program.

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Note: This function remains for backward compatibility only. Use the IsChanged record class property instead.

This is useful during save processing for making updates conditional on whether rows have changed.

Note: The word "record" is used in this function name in a misleading way. Remember that this function (like the related functions RecordDeleted and RecordNew) checks the state of a row, not a record.

Related Links

"IsChanged" (PeopleTools 8.54: PeopleCode API Reference), "DeleteEnabled" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide), "Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide), "Specifying Data with Contextual References" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

scrollpath	A construction that specifies a scroll level in the component buffer.
RECORD .*target_recname*	The primary scroll record of the scroll level where the row being referenced is located. As an alternative, you can use **SCROLL.** *scrollname.*

Returns

Returns a Boolean value:

- True if any data in the target row has been changed.
- False if no data in the target row has been changed.

Example

This example shows a **RecordChanged** call using a contextual reference:

```
If RecordChanged(RECORD.BUS_EXPENSE_DTL) Then
   WinMessage("Changed row msg from current row.", 64);
End-If;
```

The following example, which would execute on level one, checks rows on level two to determine which have been changed:

```
For &I = 1 To ActiveRowCount(RECORD.BUS_EXPENSE_PER, CurrentRowNumber(1), RECORD.BU⇒
S_EXPENSE_DTL);
   If RecordChanged(RECORD.BUS_EXPENSE_PER, CurrentRowNumber(1), RECORD.BUS_EXPENSE⇒
_DTL, &I) Then
      WinMessage("Changed row message from level one.", 64);
   End-If;
End-For;
```

Related Links

FieldChanged

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RecordDeleted
RecordNew

RecordDeleted

Syntax

The syntax of the RecordDeleted function varies, depending on whether you use a scroll path reference or a contextual reference to designate the row being tested.

Using a scroll path reference, the syntax is:

```
RecordDeleted(scrollpath, target_row)
```

where *scrollpath* is:

```
[RECORD.level1_recname, level1_row, [RECORD.level2_recname, level2_row,]]
RECORD.target_recname
```

To prevent ambiguous references, you can also use **SCROLL.** *scrollname*, where *scrollname* is the same as the scroll level's primary record name.

Using a contextual reference the syntax is:

```
RecordDeleted(RECORD.target_recname)
```

A contextual reference specifies the current row on the scroll level designated by **RECORD.** *target_recname.*

An older construction, in which a record field expression is passed, is also supported. The record field is any field in the row where the PeopleCode program is executing (typically the one on which the program is executing).

```
RecordDeleted(recordname.fieldname)
```

Description

Use the RecordDeleted function to verify if a row of data has been marked as deleted, either by an end-user row delete (F8) or by a call to DeleteRow.

Note: This function remains for backward compatibility only. Use the IsDeleted record class property instead.

RecordDeleted is useful during save processing to make processes conditional on whether a row has been deleted.

Deleted rows are not actually removed from the buffer until after the component has been successfully saved, so you can check for deleted rows all the way through SavePostChange PeopleCode.

RecordDeleted is not typically used in a loop, because it is easier to put it on the same scroll level as the rows being checked in SavePreChange or SavePostChange PeopleCode: these events execute PeopleCode on every row in the scroll, so no looping is necessary.

Note: To avoid confusion, note that this function (like the related functions RecordChanged and RecordNew) checks the state of a row, not a record.

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Related Links

"IsDeleted" (PeopleTools 8.54: PeopleCode API Reference), "IsDeleted" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide), "Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide), "Specifying Data with Contextual References" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

scrollpath	A construction that specifies a scroll level in the component buffer.
RECORD. ***target_recname***	The primary scroll record of the scroll level where the row being referenced is located. As an alternative, you can use **SCROLL.** *scrollname.*

Returns

Returns a Boolean value:

- True if the target row has been deleted.
- False if the target row has not been deleted.

Example

This example shows a RecordDeleted call using a contextual reference

```
If RecordDeleted(RECORD.BUS_EXPENSE_DTL) Then
   WinMessage("Deleted row msg from current row.", 64);
End-If;
```

The following example, which would execute on level zero, checks rows on level one to determine which have been deleted:

```
For &I = 1 To TotalRowCount(RECORD.BUS_EXPENSE_PER, CurrentRowNumber(1), RECORD.BUS⇒
_EXPENSE_DTL);
   If RecordDeleted(RECORD.BUS_EXPENSE_PER, CurrentRowNumber(1), RECORD.BUS_EXPENSE⇒
_DTL, &I) Then
      WinMessage("Deleted row message from level one.", 64);
   End-If;
End-For;
```

Note that the loop is delimited by TotalRowCount. For loops delimited by ActiveRowCount don't process deleted rows.

Related Links

FieldChanged

RecordChanged

RecordNew

TotalRowCount

ActiveRowCount

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RecordNew

Syntax

The syntax of the RecordNew function varies, depending on whether you use a scroll path reference or a contextual reference to designate the row being tested.

Using a scroll path reference, the syntax is:

```
RecordNew(scrollpath, target_row)
```

where *scrollpath* is:

```
[RECORD.level1_recname, level1_row, [RECORD.level2_recname, level2_row,]]
RECORD.target_recname
```

To prevent ambiguous references, you can also use **SCROLL.** *scrollname*, where *scrollname* is the same as the scroll level's primary record name.

Using a contextual reference the syntax is:

```
RecordNew(RECORD.target_recname)
```

A contextual reference specifies the current row on the scroll level designated by **RECORD.** *target_recname.*

An older construction, in which a record field expression is passed, is also supported. The record field is any field in the row where the PeopleCode program is executing (typically the one on which the program is executing).

```
RecordNew(recordname.fieldname)
```

Description

Use the RecordNew function to check a specific row to determine whether it was added to the component buffer since the component was last saved.

Note: This function remains for backward compatibility only. Use the IsNew row class property instead.

This function is useful during save processing to make processes conditional on whether or not a row is new.

Note: To avoid confusion, remember that this function (like the related functions RecordChanged and RecordDeleted) checks the state of a row, not a record. In normal PeopleSoft usage, the word "record" denotes a table-level object (such as a table, view, or Derived/Work record).

Related Links

"IsNew" (PeopleTools 8.54: PeopleCode API Reference), "Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide), "Specifying Data with Contextual References" (PeopleTools 8.54: PeopleCode Developer's Guide)

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Parameters

scrollpath	A construction that specifies a scroll level in the component buffer.
RECORD. ***target_recname***	The primary scroll record of the scroll level where the row being referenced is located. As an alternative, you can use **SCROLL.** *scrollname.*

Returns

Returns a Boolean value:

- True if the target row is new.
- False if the target row is not new.

Example

This example shows a RecordNew call using a contextual reference:

```
If RecordNew(RECORD.BUS_EXPENSE_DTL) Then
   WinMessage("New row msg from current row.", 64);
End-If;
```

The following example, which would execute on level one, checks rows on level two to determine which have been added:

```
For &I = 1 To ActiveRowCount(RECORD.BUS_EXPENSE_PER, CurrentRowNumber(1), RECORD.BU⇒
S_EXPENSE_DTL);
   If RecordNew(RECORD.BUS_EXPENSE_PER, CurrentRowNumber(1), RECORD.BUS_EXPENSE_DTL⇒
, &I) Then
      WinMessage("New row message from level one.", 64);
   End-If;
End-For;
```

Related Links

FieldChanged

RecordChanged

RecordDeleted

RefreshTree

Syntax

RefreshTree(**Record.***bound_recname*)

Description

Use the RefreshTree function to update a dynamic tree.

Note: Dynamic tree controls have been deprecated. Use the GenerateTree function or Tree Viewer.

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Related Links

GenerateTree, Understanding View Trees

RelNodeTranDelete

Syntax

```
RelNodeTranDelete(RelationshipId , SrcTrxType, SrcNode, SrcRqstMsgName, SrcRqstMsgVer,
TgtNode, TgtRqstMsgName, TgtRqstMsgName, TgtRqstMsgVer)
```

Description

Use the RelNodeTranDelete function to delete a transaction modifier.

Parameters

RelationshipId	Specify the relationship ID as a string.
ScrTrxType	Specify the source transaction type as a string.
SrcNode	Specify the source node as a string.
ScrRqstMsgName	Specify the source request message name as a string.
ScrRqstMsgVer	Specify the source request message version as a string.
TgtNode	Specify the target node as a string.
TgtRqstMsgName	Specify the target request message name as a string.
TgtRqstMsgName	Specify the target message name as a string.
TgtRqstMsgVer	Specify the target request message version as a string.

Returns

A Boolean value, True if the function completed successfully, False otherwise.

Example

```
&ret = RelNodeTranDelete("QE_TEST", "CMS_TEST", "CMS_TEST_LOCAL", "OA",  "ROLESYNCH⇒
_MSG",  "VERSION_1", "CMS_TEST_LOCAL2",   "ROLESYNCH_MSG2",  "VERSION_1",);
```

Related Links

NodeTranDelete

"Managing Service Operation Versions" (PeopleTools 8.54: Integration Broker)

RemoteCall

Syntax

```
RemoteCall(dispatcher_name [, service_paramlist] [, user_paramlist])
```

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where *service_paramlist* and *user_paramlist* are arbitrary-length lists of parameters in the form:

```
var1, val1 [, var2, val2]. . .
```

Description

Use the RemoteCall function to call a Tuxedo service from a PeopleSoft application. A typical use of Remote Call is to run data-intensive, performance-sensitive programs near or on the database server.

Note: After PeopleTools 8 you can no longer use RemoteCall to start an Application Engine program. You must use CallAppEngine instead.

Because complex PeopleCode processes can now be run on the application server in three-tier mode, the RemoteCall PeopleCode function has more limited utility. However, RemoteCall can still be very useful, because it provides a way to take advantage of existing COBOL processes.

- In three-tier mode, RemoteCall always runs on the application server.
- In two-tier mode, RemoteCall always runs on the client.

This means that it is no longer necessary to set a location for the remote call in PeopleSoft Configuration Manager.

Each RemoteCall service can have zero or more standard parameters and any number of user parameters. The standard parameters are determined by the RemoteCall dispatcher, the user parameters by the COBOL program being run.

There is only one RemoteCall dispatcher delivered with PeopleTools 7, PSRCCBL, which executes a COBOL program using the connect information of the current end user.

In the application server configuration file, you can specify where RemoteCall can find the COBOL executables

RemoteCall can be used from any type of PeopleCode except SavePostChange, SavePreChange, Workflow, and RowSelect. However, remote programs that change data should not be run as part of the SaveEdit process, because the remote program may complete successfully even though an error occurs in a later part of the save process. For remote programs that change data, the normal place for them would be in the FieldChange PeopleCode behind a command push button, or in a pop-up menu item.

After you use RemoteCall, you may want to refresh your page. The Refresh method, on a rowset object, reloads the rowset (scroll) using the current page keys. This causes the page to be redrawn. The following code refreshes the entire page:

```
GetLevel0().Refresh()
```

If you only want a particular scroll to be redrawn, you can refresh just that part.

Related Links

CallAppEngine, "Refresh" (PeopleTools 8.54: PeopleCode API Reference), "Remote Call Options" (PeopleTools 8.54: System and Server Administration)

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Parameters

The parameters passed to RemoteCall can be broken into three parts: the RemoteCall *Dispatcher Name*, the standard *Parameter Lists* for the service, and the *User Parameter Lists* for the program being called on the service.

Dispatcher Name

The *dispatcher_name* parameter is a string value that specifies the type of RemoteCall performed. For PeopleTools 7 there is only one RemoteCall dispatcher delivered, PSRCCBL, which executes a COBOL program using the connect information of the current end user, so the value you pass to this parameter should always be "PSRCCBL". Future versions of PeopleTools may provide support for Red Pepper, SQR, or customer supplied remote calls.

Parameter Lists

Both the standard parameter list and user parameter list have the same form. Think of the parameters passed to the service as being passed as pairs of variable names and values of input and output parameters:

```
variable_name, value
```

Where:

- *variable_name* is a string literal or string variable that contains the name of the input or output variable as referenced in the remote program. For example, if the remote program expects a variable named "USERNAME", then the PeopleCode should use "USERNAME" or &VARIABLE (which had been assigned the value "USERNAME").
- For input variables, *value* is the value to be passed to the remote program with the variable name. It can be either a variable or literal with a data type that corresponds to the *variable_name* variable. For output variables, *value* is the value returned to the PeopleCode program from the remote program. It must be a variable in this case, representing the buffer into which the value is returned.

An arbitrary number of parameters can be passed to the service. There is, however, a limitation on the number of variables that can be passed in PeopleCode, which is limited by the size of the PeopleCode parameter stack, currently 128.

In the case of the PSRCCBL dispatcher, there are three standard parameters, listed in the following table:

Dispatcher	*Parameter*	*Required*	*Description*
PSRCCBL	PSCOBOLPROG	Y	Name of the COBOL program to run.
PSRCCBL	PSRUNCTL	N	Run-control parameter to pass to the COBOL program.
PSRCCBL	INSTANCE	N	Process instance parameter to pass to the COBOL program.

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User Parameter List

For PSRCCBL, the remote COBOL program must match the user parameters to the usage of its application. The names of the parameters are sent to the server and can be used by the COBOL program. The COBOL program returns any modified (output) parameters by name. Parameters which are not returned are not modified, and any extra returned parameters (that is, parameters beyond the number passed or of different names) are discarded with no effect.

Returns

None.

Example

You could use the following PeopleCode to execute the program "CBLPROG1":

```
Rem Set the return code so we are sure it is sent back.
&Returncode = -1;
Rem Set the parameters that will be sent across.
&param1 = "John";
&param2 = "Smith";
Rem Set the standard parameters that indicate program name and run-control.
&RemoteCobolPgm = "CBLPROG1";
/* call the remote function */
RemoteCall ("PSRCCBL",
"PSCOBOLPROG", &RemoteCobolPgm,
"PSRUNCTL", workrec.runctl,
"FirstName", &param1,
"LastName", &param2,
"Returncode", &Returncode,
"MessageSet", &msgset,
"MessageID", &msgid,
"MessageText1", &msgtext1,
"MessageText2", &msgtext2);
if &Returncode <> 0
   WinMessage(MsgGet(&msgset, &msgid, "default message", &msgtext1, &msgtext2));
end-if;
```

Related Links

Exec

WinExec

"Using the RemoteCall Feature" (PeopleTools 8.54: PeopleCode Developer’s Guide)

RemoveDirectory

Syntax

RemoveDirectory(*path* [, *remove_parameters*])

where *remove_parameters* can be in the form:

path_type [+ *directory_type*]

Description

Use the RemoveDirectory function to remove the directory specified by *path*. You can also specify whether to remove just the directory, or to delete the directory and all subdirectories, including any files, that is, to remove the entire directory tree.

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Parameters

path

Specify the directory to be removed.

remove_parameters

Specify additional considerations about the directory to be removed.

Specify whether the path is an absolute or relative path. Values are:

- %FilePath_Relative (default)
- %FilePath_Absolute

The default is %FilePath_Relative.

If you specify a relative path, that path is appended to the path constructed from a system-chosen environment variable. A complete discussion of relative paths and environment variables is provided in documentation on the File class.

See "Working With Relative Paths" (PeopleTools 8.54: PeopleCode API Reference).

If the path is an absolute path, whatever path you specify is used verbatim. You must specify a drive letter as well as the complete path. You can't use any wildcards when specifying a path.

The Component Processor automatically converts platform-specific separator characters to the appropriate form for where your PeopleCode program is executing. On a Windows system, UNIX "/" separators are converted to "\", and on a UNIX system, Windows "\" separators are converted to "/".

Note: The syntax of the file path does *not* depend on the file system of the platform where the file is actually stored; it depends only on the platform where your PeopleCode is executing.

Specify whether to remove only the specified directory or to remove the directory and all its subdirectories. The default is to just remove the specified directory.

The valid values are:

- %Remove_Subtree
- %Remove_Directory (default)

Returns

None.

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Example

The following example is for a Windows operating system:

```
RemoveDirectory("C:\temp\mydir\temp", %filepath_absolute + %remove_subtree);
```

The following example is for a UNIX operating system:

```
RemoveDirectory("/temp/mydir/temp", %filepath_absolute + %remove_subtree);
```

Related Links

CreateDirectory
DeleteAttachment
FileExists
FindFiles
"Understanding File Layout" (PeopleTools 8.54: PeopleCode API Reference)

RenameDBField

Syntax

```
RenameDBField(Field.NewFieldName, Field.OldFieldName [, FixRefsOnly])
```

Description

Use the RenameDBField function to modify a field definition to have a new name. This function also cleans up most references, such as in PeopleCode programs and on records so they now use the new name.

Note: Because using this function changes records that are used to build application tables, you must rebuild (alter) the specified project before these changes can be used.

Considerations Using this Function

In SQL associated with records of type view, the field name is *not* changed. You must fix those by hand.

This function is intended for use during configuration time *only*, before active runtime usage is initiated. Using this function during active runtime is not supported. Changes to data definitions are *not* recognized on currently loaded component. In general, changes aren't recognized until the component is reloaded.

This operation is time consuming.

Warning! These operations take place in a separate transaction from the page's save status: the initiation of any of these operations immediately changes the definitions, even if the page is subsequently cancelled.

Parameters

NewFieldName	Specify the new field name to be used. This name must be prefixed by the reserved word **Field**.
OldFieldName	Specify the name of the field to be changed. This name must be prefixed by the reserved word **Field**.

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FixRefsOnly

Specify to rename all references of *OldFieldName* to *NewFieldName* whether or not *NewFieldName* exists or not. This paramter takes a Boolean value. The default value is False.

For example, suppose a company renames a field PROJECT to MYPROJECT. Then they receive a patch which has records, pages, code, and so on that references Field.PROJECT. In this case you could set this parameter to True, rename MYPROJECT to PROJECT, and have all the references to the field PROJECT redirect to the field MYPROJECT even if *neither field exists* in the database, nor if only one exists.

Note: Using this parameter is a completely freeform path to renaming references. Be aware that the system won't work if pages and records are not eventually pointing to a valid field.

Returns

A constant value. The values are:

Value	*Description*
%MDA_Success	Bulk operation completed successfully.
%MDA_Failure	Bulk operation did not complete successfully.
%MDA_FieldNotFound	The field specified by *OldFieldName* wasn't found in the specified project or page list.
%MDA_Duplicate	The field specified by *NewFieldName* already exists.

Example

```
&ret = RenameDBField(Field.OrgId, Field.DeptId, True);
If (&ret = %MDA_Success) Then
    MessageBox(0, "Metadata Fn Status", 0, 0, "RenameDBField succeeded");
Else
    MessageBox(0, "Metadata Fn Status", 0, 0, "RenameDBField failed");
End-If;
```

The following example de-references the field name for the function.

```
&oldcf = "CF1";
&newcf = "XYZ_STORE_ID";
&new = "FIELD." | &newcf;
&old = "FIELD." | &oldcf;
&ret = RenameDBField(@(&new), @(&old));
If (&ret = 0) Then
   MessageBox(0, "RenameDBField", 0, 0, "Succeeded");
Else
   MessageBox(0, "RenameDBField", 0, 0, "Failed");
End-If;
```

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Related Links

RenamePage

RenameRecord

RenamePage

Syntax

RenamePage(**Page.***NewPageName*, **Page.***OldPageName*)

Description

Use the RenamePage function to modify a page definition to have a new name. This function also cleans up most references so they now use the new name.

Considerations Using this Function

This function is intended for use during configuration time *only*, before active runtime usage is initiated. Using this function during active runtime is not supported. Changes to data definitions are *not* recognized on currently loaded component. In general, changes aren't recognized until the component is reloaded.

This operation is time consuming

Warning! These operations take place in a separate transaction from the page's save status: the initiation of any of these operations immediately changes the definitions, even if the page is subsequently cancelled.

Parameters

NewPageName Specify the new page name to be used. This name must be prefixed by the reserved word **Page**.

OldPageName Specify the name of the page to be changed. This name must be prefixed by the reserved word **Page**.

Returns

A constant value. The values are:

Value	*Description*
%MDA_Success	Bulk operation completed successfully.
%MDA_Failure	Bulk operation did not complete successfully.
%MDA_PageNotFound	The page specified with *OldPageName* wasn't found.

Example

```
&ret =  RenamePage(PAGE.OrgIdTbl, PAGE.DeptIdTbl);
If (&ret = %MDA_Success) Then
   MessageBox(0, "Metadata Fn Status", 0, 0, "RenamePage succeeded");
Else
```

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```
   MessageBox(0, "Metadata Fn Status", 0, 0, "RenamePage failed");
End-If;
```

Related Links

RenameDBField

RenameRecord

RenameRecord

Syntax

RenameRecord(**Record.***NewRecordName*, **Record.***OldRecordName*)

Description

Use the RenameRecord function to modify a record definition to have a name. This function also cleans up most references so they now use the new name.

Note: Because using this function changes records that are used to build application tables, you must rebuild (alter) the specified project before these changes can be used.

Considerations Using this Function

This function is intended for use during configuration time *only*, before active runtime usage is initiated. Using this function during active runtime is not supported. Changes to data definitions are *not* recognized on currently loaded component. In general, changes aren't recognized until the component is reloaded.

This operation is time consuming.

Warning! These operations take place in a separate transaction from the page's save status: the initiation of any of these operations immediately changes the definitions, even if the page is subsequently cancelled.

Parameters

NewRecordName Specify the new record name to be used. This name must be prefixed by the reserved word **Record**.

OldRecordName Specify the name of the record to be changed. This name must be prefixed by the reserved word **Record**.

Returns

A constant value. The values are:

Value	*Description*
%MDA_Success	Bulk operation completed successfully.
%MDA_Failure	Bulk operation did not complete successfully.

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Value	*Description*
%MDA_RecordNotFound	The record specified with *OldRecordName* wasn't found.

Example

```
&ret = RenameRecord(RECORD.OrgIdTbl, RECORD.DeptIdTbl);
If (&ret = %MDA_Success) Then
   MessageBox(0, "Metadata Fn Status", 0, 0, "RenameRecord succeeded");
Else
   MessageBox(0, "Metadata Fn Status", 0, 0, "RenameRecord failed");
End-If;
```

Related Links

RenameDBField

RenamePage

Repeat

Syntax

```
Repeat
statement_list
Until logical_expression
```

Description

Use the Repeat loop to cause the statements in *statement_list* to be repeated until *logical_expression* is True. Any kind of statements are allowed in the loop, including other loops. A Break statement inside the loop causes execution to continue with whatever follows the end of the loop. If the Break is in a nested loop, the Break does not apply to the outside loop.

Example

The following example repeats a sequence of statements until a complex Boolean condition is True:

```
Repeat
      &J = &J + 1;
      &ITEM = FetchValue(LOT_CONTROL_INV.INV_ITEM_ID, &J);
      &LOT = FetchValue(LOT_CONTROL_INV.INV_LOT_ID, &J);
Until (&ITEM = &INV_ITEM_ID And &LOT = &INV_LOT_ID) Or &J = &NUM_LOT_ROWS;
```

Replace

Syntax

```
Replace(oldtext, start, num_chars, newtext)
```

Description

Use the Replace function to replace a specified number of characters in a string.

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Parameters

oldtext	A String value, part of which is to be replaced.
start	A Number designating the position in *oldtext* from which to start replacing characters.
num_chars	A Number, specifying how many characters to replace in *oldtext*.
newtext	A String value that replaces *num_chars* characters.

Returns

Returns a String value in which specific characters in *oldtext* are replaced with *newtext*.

Example

After the following statement &NEWDATESTR equals "1997":

```
&NEWDATESTR = Replace("1996",3,2,"97");
```

If this example, where the number of characters in *newtext* is less than *num_chars*, &SHORTER equals "txtx":

```
&SHORTER = Replace("txt123",4,3,"x");
```

In this example, where the number of characters in *newtext* is greater than *num_chars*, &LONGER equals "txtxxxx":

```
&LONGER = Replace("txt123",4,3,"xxxx");
```

Related Links

Substitute

Rept

Syntax

Rept(*str*, *reps*)

Description

Use the Rept function to replicate a text string a specified number of times and combine the result into a single string.

Parameters

str	A String value to be replicated.
reps	A Number value specifying how many times to replicate *str*. If *reps* is 0, Rept returns an empty string. If *reps* is not a whole integer, it is truncated.

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Returns

Returns a String value equal to *str* repeated *reps* times.

Example

This example sets &SOMESTARS to "**********".

```
&SOMESTARS = Rept("*",10);
```

ResizeImage

Syntax

```
ResizeImage(URL.source_URL, URL.dest_URL, array_of_sizes [, type][, aspect_ratio])
```

Description

Use the ResizeImage function to create one or more resized copies of the source image. Depending on the image source, ResizeImage supports the following image formats only:

- Record field: BMP and JPEG.
- File system folder: BMP, GIF, JPEG, and PNG.

The resized images can be created in file system folder or in a database table. When the destination location is a file system folder, then the name of the resized image is created from the source image file name along with the resize dimensions. For example, if file1.jpg is resized to 40 x 60 pixels, then the resulting file name would be file14060.jpg. If the same file is resized to 10%. the resulting file name would be file110.jpg.

When a database table is specified as the destination location, the PS_PT_IMG_TMPSTORE table is used to temporarily store the images instead of the specified database table. Using the return code of the function invocation as a key value, your application must retrieve the resized images from the PS_PT_IMG_TMPSTORE table.

Column Name	*Data Type*	*Description*
PT_IMG_UUID*	Nbr	The return value of the ResizeImage method. All the resized images stored in database for a specific invocation are stored with this identifier.
PT_IMG_FILESEQNO*	Nbr	The sequence number for multiple resizings of the same source image file.
PT_IMG_WIDTH*	Nbr	The image width in pixels.
PT_IMG_HEIGHT*	Nbr	The image height in pixels.
PT_IMG_IMGNAME	Char	The file name of the source image.
PT_IMG_IMGDATA	Long	The image data for the re-sized image.
PSIMAGEVER	Nbr	The image version.

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Column Name	Data Type	Description
LAST_UPDATE_DTTM	DtTm	The last update timestamp.
OPRID	Char	The operator ID

* Represents a key field. The composite key for a specific resized image would consist of: PT_IMG_UUID + PT_IMG_FILESEQNO + PT_IMG_WIDTH + PT_IMG_HEIGHT + PT_IMG_IMGNAME.

Three image manipulation testing pages provide a sample application that allows an administrator to predefine resize dimensions (Image Size page), predefine groupings of dimensions (Image Group page), and then test the usage of these predefined groups for resizing images (Test Utility page). See "Image Manipulation Testing Utilities" (PeopleTools 8.54: System and Server Administration) for more information.

Parameters

URL.*source_URL*

Specifies the location of the source image (or images) as a URL object. The source location can be either a database record or a folder on the application server's file system containing one or more image files.

When the URL object specifies a database record, you must define three URL properties: to specify the column name from which image data has to be read (), the column name from which the image name has to be taken (), and destination image type ().

- IMG_DATA_COLUMN: The record field containing the image.
- IMG_NAME_COLUMN: The record field containing the name of the image.
- IMG_FILE_FORMAT: The record field specifying the image format. This field serves as a filter, and only images of the specified format are resized.

Note: If the source record includes more than one row of data, then the IMG_FILE_FORMAT field is ignored.

URL.*dest_URL*

Specifies the location of the resized image (or images) as a URL object. The destination location can be either a database record or a folder on the application server's file system.

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Important! When the destination location is specified as a database record, the PS_PT_IMG_TMPSTORE table is used to temporarily store the images instead of the specified record. Using the return code of the function invocation as a key value, your application must retrieve the resized images from the PS_PT_IMG_TMPSTORE table. See the "Description" for more information on using the PS_PT_IMG_TMPSTORE table.

array_of_sizes

Specifies resize dimensions as an array of integer. The contents of the array are retrieved in pairs or one-by-one depending on the value of the *type* parameter. In addition, the array must be terminated with two 0s or one 0, depending on the *type* parameter.

- If *type* is 0 (%Resize_ByDimensions), the values in the array are retrieved in pairs representing the width and height (in pixels) of the resize dimensions. Terminate the array with two 0s. For example, the following array would resize the images to 20x20 pixels, 80x100 pixels, and to a width of 40 pixels maintaining the source images' aspect ratio:

```
&resize_array = CreateArray(20, 20, 80, 100, 40,
 0, 0, 0);
```

- If *type* is 1 (%Resize_ByPercentage), the values in the array are retrieved one-by-one representing the percentage to resize the images. Terminate the array with a single 0. For example, the following array would resize the images to 10% and 50%:

```
&resize_array = CreateArray(10, 50, 0);
```

Important! Oracle recommends that you do not resize images to dimensions larger than the original size or to a percentage larger than 100%.

type

Specifies an optional numeric value indicating how to retrieve the values from the *array_of_sizes* array:

- %Resize_ByDimensions (0) – The values in the array are retrieved in pairs representing the width and height (in pixels) of the resize dimensions.
- %Resize_ByPercentage (1) – The values in the array are retrieved one-by-one representing the percentage to resize the images.

aspect_ratio

Specifies an optional Boolean value indicating whether to maintain the aspect ratio of the source image:

- If *aspect_ratio* is True *and* either the height or width is 0, the aspect ratio of the source image is maintained. Otherwise, if both height and width are non-zero values,

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then *aspect_ratio* is ignored and the image is resized to the specified aspect ratio.

- If *aspect_ratio* is False, then a resize is performed *only if* both height and width are non-zero values. Otherwise, if either the height or width is 0, no resize is performed.

True is the default value. In addition, the *aspect_ratio* parameter is ignored when the *type* parameter is 1 (%Resize_ ByPercentage).

Returns

An Integer value representing the unique identifier for the resize invocation. A negative number indicates that the function terminated with an error.

Example

In the following example, a Resize method is defined to invoke the ResizeImage function. The source and destination URLs are passed into the method and then on to the function invocation. The third input parameter to the method is a group of predefined sizes. These predefined sizes are retrieved from a table and are converted into the &ImgDimensions array, which is the third required input parameter to the ResizeImage function.

```
method Resize
   /+ &SourceImgPath as String, +/
   /+ &DestImagPath as String, +/
   /+ &ImgGroupDefn as String +/
   /+ Returns Number +/

   Local number &retcode;
   Local Rowset &RS1, &RS2;
   Local Record &REC_IMGGROUP, &REC_SIZEDEFN;
   Local string &ImgSizeName;
   Local number &I, &width, &height;
   Local array of number &ImgDimensions;
   &ImgDimensions = CreateArray(0);

   &RS1 = CreateRowset(Record.PT_IMG_IMGGROUP);
   &RS1.Fill("where PT_IMG_GROUPNAME = :1", &ImgGroupDefn);

   Local Row &dimrow;

   For &I = 1 To &RS1.ActiveRowCount
      &dimrow = &RS1.GetRow(&I);
      &ImgSizeName = &dimrow.PT_IMG_IMGGROUP.PT_IMG_SIZENAME.Value;

      SQLExec("SELECT PT_IMG_WIDTH, PT_IMG_HEIGHT FROM PS_PT_IMG_SIZEDEFN WHERE PT_⇒
IMG_SIZENAME = :1", &ImgSizeName, &width, &height);

      &ImgDimensions.Push(&width);
      &ImgDimensions.Push(&height);
   End-For;

   If Exact(Left(&SourceImgPath, 4), "URL.") Then
      If Exact(Left(&DestImagPath, 4), "URL.") Then
         &retcode = ResizeImage(@(&SourceImgPath), @(&DestImagPath), &ImgDimensions⇒
);
      Else
         &retcode = ResizeImage(@(&SourceImgPath), &DestImagPath, &ImgDimensions);
      End-If
   Else
```

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```
      If Exact(Left(&DestImagPath, 4), "URL.") Then
         &retcode = ResizeImage(&SourceImgPath, @(&DestImagPath), &ImgDimensions);
      Else
         &retcode = ResizeImage(&SourceImgPath, &DestImagPath, &ImgDimensions);
      End-If
   End-If;

   Return &retcode;

end-method;
```

Related Links

"Understanding URL Strings Versus URL Objects" (PeopleTools 8.54: PeopleCode Developer's Guide)

"URL Maintenance" (PeopleTools 8.54: System and Server Administration)

"Image Manipulation Testing Utilities" (PeopleTools 8.54: System and Server Administration)

ReSubmitPubHeaderXmlDoc

Syntax

ReSubmitPubHeaderXmlDoc(*PubID, PubNode, ChannelName, VersionName*)

Description

Use the ReSubmitPubHeaderXmlDoc function to programmatically resubmit a message instance, as the message instance existed before any transformations were performed, much the same as you can do in the message monitor. This function resubmits the corresponding publication contract header.

Note: This function has been deprecated and remains for backward compatibility only. Use the IntBroker class Resubmit method instead.

You may want to use this method after an end user has finished fixing any errors in the message data, and you want to resubmit the message, rerunning the PeopleCode.

The function is only available when the XML message has one of the following statuses:

- Error
- Timeout
- Edited
- Canceled

Related Links

"Resubmit" (PeopleTools 8.54: PeopleCode API Reference)

Parameters

PubID	Specify the PubID as a number.
PubNode	Specify the Pub node as a string.
ChannelName	Specify the channel name as a string.

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VersionName	Specify the version name as a string.

Returns

A Boolean value: True if function completed successfully, False otherwise.

Related Links

ReSubmitPubXmlDoc

ReSubmitPubXmlDoc

Syntax

```
ReSubmitPubXmlDoc(PubID, PubNode, ChannelName, VersionName, MessageName, SubNode[,
Segment])
```

Description

Use the ReSubmitPubXmlDoc function to programmatically resubmit a message, much the same as you can do in the message monitor.

Note: This function has been deprecated and remains for backward compatibility only. Use the IntBroker class Resubmit method instead.

This is the message publication as it exists *after* any transformations have been preformed. This function resubmits the corresponding publication contract.

You may want to use this method after an end user has finished fixing any errors in the message data, and you want to resubmit the message, rerunning the PeopleCode.

The function is only available when the message has one of the following statuses:

- Error
- Timeout
- Edited
- Canceled

Related Links

"Resubmit" (PeopleTools 8.54: PeopleCode API Reference)

Parameters

PubID	Specify the PubID as a number.
PubNode	Specify the Pub node as a string.
ChannelName	Specify the channel name as a string.
VersionName	Specify the version name as a string.

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MessageName	Specify the name of the message as a string.
SubNode	Specify the name of the sub node as a string.
Segment	Specify an integer representing which segment you want to access. The default value is one, which means that if you do not specify a segment, the first segment is accessed.

Returns

A Boolean value: True if function completed successfully, False otherwise.

Related Links

ReSubmitSubXmlDoc

ReSubmitPubHeaderXmlDoc

ReSubmitSubXmlDoc

Syntax

```
ReSubmitSubXmlDoc(PubID, PubNode, ChannelName, VersionName, MessageName,
SubscriptionName[, Segment])
```

Description

Use the ReSubmitSubXmlDoc function to programmatically resubmit a message, much the same as you can do in the message monitor. This function resubmits the corresponding subscription contract.

Note: This function has been deprecated and remains for backward compatibility only. Use the IntBroker class Resubmit method instead.

You may want to use this method after an end user has finished fixing any errors in the message data, and you want to resubmit the message, rerunning the subscription PeopleCode.

The function is only available when the message has one of the following statuses:

- Error
- Timeout
- Edited
- Canceled

Related Links

"Resubmit" (PeopleTools 8.54: PeopleCode API Reference)

Parameters

PubID	Specify the PubID as a number.

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PubNode	Specify the Pub node as a string.
ChannelName	Specify the channel name as a string.
VersionName	Specify the version name as a string.
MessageName	Specify the name of the message as a string.
SubscriptionName	Specify the name of the subscription as a string.
Segment	Specify an integer representing which segment you want to access. The default value is one, which means that if you do not specify a segment, the first segment is accessed.

Returns

A Boolean value: True if function completed successfully, False otherwise.

Related Links

ReSubmitPubHeaderXmlDoc
ReSubmitPubXmlDoc

Return

Syntax

Return [*expression*]

Description

Use the Return function to return from the currently active function; the flow of execution continues from the point where the function was called. If the function returns a result, that is, if a return value is specified in the Returns clause of the function definition, *expression* specifies the value to pass back to the caller and must be included. If the function does not return a result, the *expression* is not allowed. If Return appears in a main program, it acts the same as the Exit function.

Example

In the example a Boolean return value is specified in the Returns clause of the Function statement. The Return statement returns a True or False value to the calling routine, based on the contents of &UPDATEOK.

```
function run_status_upd(&PROCESS_INSTANCE, &RUN_STATUS) returns Boolean;
   &UPDATEOK = SQLExec( )("update PS_PRCS_RQST set run_status = :1  where process_i⇒
nstance = :2", &RUN_STATUS, &PROCESS_INSTANCE);
   If &UPDATEOK Then
      Return True;
   Else
      Return False;
   End-if;
End-function;
```

Related Links

Function

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Exit

ReturnToServer

Syntax

```
ReturnToServer({True | False | &NODE_ARRAY, | &Message})
```

Description

Use the ReturnToServer function to return a value from a PeopleCode messaging program to the publication or subscription server.

Note: ReturnToServer is a special case of a built-in function that's no longer supported. The deprecated handler for OnRequest subscriptions cannot be upgraded. ReturnToServer can only be used in an OnRequest event fired using the deprecated handler. This means that ReturnToServer no longer works and is not valid in any case other than when the code has already been written and used in a deprecated handler.

You would use this in either your publication or subscription routing code, to either return an array of nodes that the message should be published to, or to do error processing (return False if entire message wasn't received.)

What is returned depends on where the PeopleCode program is called from.

From OnRoute Publication:

- True: All nodes the message was published to are returned.
- False: No nodes are returned (generally used with error checking).
- &NODE_ARRAY: The nodes specified in the array are returned.
- &Message: Return a response message. This must be an already instantiated message object.

Note: You can return XmlDoc objects as responses. Only homogeneous type transactions are supported, that is, you can only return an XmlDoc object as a response *if and only if* an XmlDoc object was used in the request. Similarly, you can only return a Message object if and only if a Message object was used in the request.

From OnRoute Subscription:

- True: The subscription node is returned.
- False: No node is returned. This is generally used with error checking.

Parameters

True | False |*&NODE_ARRAY* | *&Message*	Specify True if you want publication nodes or the subscription node returned. Specify False if you do not want any nodes returned, and nothing written to the database. This is generally used with error checking.

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Specify an object reference to an array of node names if you want to return a list of nodes to be published to.

Specify a reference to a response message if you want to return a message.

Returns

None.

Example

The following is an example of a publication routing rule, which would be in the OnRoutePublication. It is used to create publication contracts.

```
local message &MSG;
local array &NODE_ARRAY;
&MSG = GetMessage();
&EMPLID = &MSG.GetRowset()(1).QA_INVEST_HDR.EMPLID.Value;
&SELECT_SQL = CreateSQL("select PUBNODE from PS_EMPLID_NODE where EMPLID = :1", &EM⇒
PLID);
&NODE_ARRAY = CreateArray();

While &SELECT_SQL.Fetch(&PUBNODE)
   &NODE_ARRAY.Push(&PUBNODE);
End-While;
ReturnToServer(&NODE_ARRAY);
```

The following is an example of a subscription routing rule, which would be placed in the OnRouteSubscribe event:

```
local message &MSG;

&MSG = GetMessage();
&BUSINESS_UNIT = &MSG.GetRowset()(1).PO_HDR.BUSINESS_UNIT.Value;
SQLExec("Select BUSINESS_UNIT From PS_BUSINESS_UNIT where BUSINESS_UNIT = :1",&BUSI⇒
NESS_UNIT,&FOUND);
If all(&FOUND) Then
   ReturnToServer(True);
Else
   ReturnToServer(False);
End-if;
```

The following is a basic example of using an XmlDoc object:

```
Local XmlDoc &xmldoc;
. . .
/* build xmldoc */
. . .
ReturnToServer(&xmldoc);
```

Related Links

"Understanding XmlDoc Classes" (PeopleTools 8.54: PeopleCode API Reference)

"Understanding Managing Messages" (PeopleTools 8.54: Integration Broker)

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ReValidateNRXmlDoc

Syntax

ReValidateNRXmlDoc(*NRID, EntityName*)

Description

Use the ReValidateNRXmlDoc function to revalidate a non-repudiation XML message. After a document has been signed and validated, you can use this function to verify it was delivered or received by the system calling the function. This function is primarily used by the Message Monitor.

Parameters

NRID	Specify the non-repudiation ID for the XML message that you want to revalidate. This parameter takes a numeric value.
EntityName	Specify the name of the entity that signed the data, as a string. For Peoplesoft, this is the node name.

Returns

A Boolean value: True if message is revalidated, False otherwise.

Related Links

GetNRXmlDoc

"Understanding XmlDoc Classes" (PeopleTools 8.54: PeopleCode API Reference)

RevalidatePassword

Syntax

RevalidatePassword()

Description

Use the RevalidatePassword function to revalidate the password that the current user used to sign onto the PeopleSoft application.

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Note: In certain scenarios such as LDAP authentication and depending on the implementation, the user ID used for signon might differ from the operator ID of user profile in effect after signon. RevalidatePassword automatically accounts for this and requests revalidation based on the signon ID.

Image: Dialog box generated by RevalidatePassword

This function displays a window similar to the following prompting the user for the same password that the user signed onto the PeopleSoft application:

Restrictions on Use in PeopleCode Events

Control does not return to the line after RevalidatePassword until after the user has filled in a value or pressed ENTER. This interruption of processing makes RevalidatePassword a “think-time” function which means that it shouldn’t be used in any of the following PeopleCode events:

- SavePreChange.
- Workflow.
- RowSelect.
- SavePostChange.
- Any PeopleCode event that fires as a result of a ScrollSelect (or one of its relatives) function calls, or a Select (or one of its relatives) Rowset class method.

See "Understanding Restrictions on Method and Function Use" (PeopleTools 8.54: PeopleCode Developer’s Guide).

Restrictions on Use in Signon PeopleCode

RevalidatePassword does *not* work in signon PeopleCode. If you use this function in signon PeopleCode, you create an infinite loop.

Returns

Returns a numeric value or a constant: you can check for either.

Value	*Constant*	*Meaning*
0	%RevalPW_Valid	Password Validated
1	%RevalPW_Failed	Password Validation Check Failed
2	%RevalPW_Cancelled	Password Validation Cancelled

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Example

RevalidatePassword is commonly used in the SaveEdit PeopleCode to verify that the user entering the data is the same as the one who signed onto the PeopleSoft application.

```
&TESTOP = RevalidatePassword();
Evaluate &TESTOP
   /* Password does not match the current user's password */
When 1
   Error MsgGet(48, 18, "Message not found: This password does not match the curren⇒
t value.");
   Break;
End-Evaluate;
```

Right

Syntax

Right(*str* [, *num_chars*])

Description

Use the Right function to return a specified number of characters from the right side of a string. The function is useful if, for example, you want to get the last set of characters in a zip code or other fixed-length identification string. If the string contains Unicode non-BMP characters, each code unit of the surrogate pair is counted as a separate character and care should be taken not to split the surrogate pair.

Parameters

str	A String value from which you want to get the rightmost characters.
num_chars	A Number value, greater than or equal to zero. If *num_chars* is omitted it is assumed to be equal to 1.

Returns

Returns a String value equal to the rightmost *num_chars* character(s) in *str*.

Example

If &ZIP is equal to "90210-4455", the following example sets &SUFFIX to "4455":

```
&SUFFIX = Right(&ZIP, 4)
```

Related Links

Left

Round

Syntax

Round(*dec*, *precision*)

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Description

Use the Round function to round a decimal number to a specified precision.

Parameters

dec	A Number value to be rounded.
precision	A number value specifying the decimal precision to which to round *dec*.

Returns

Returns a Number value equal to *dec* rounded up to *precision* decimal places.

Example

The following examples set the value of &TMP to 2.2, 9, then 24.09:

```
&TMP = Round(2.15,1);
&TMP = Round(8.789,0);
&TMP = Round(24.09372,2);
```

Related Links

Int
Mod
Truncate

RoundCurrency

Syntax

RoundCurrency(*amt*, *currency_cd*, *effdt*)

Description

Different currencies are represented at different decimal precessions. The RoundCurrency function is a rounding function that takes currency precision into account, using a value stored in the CURRENCY_CD_TBL PeopleTools table.

Parameters

amt	The amount to be rounded.
currency_cd	The currency code.
effdt	The effective date of currency rounding.

Returns

Returns a Number value equal to *amt* rounded to the currency precision for *currency_cd*.

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Example

The following example rounds 12.567 to 12.57, using the appropriate currency precision for US Dollars ("USD"):

```
&RESULT = RoundCurrency(12.567, "USD", EFFDT);
```

Related Links

"Understanding Currency-Specific Settings" (PeopleTools 8.54: Global Technology)

RowFlush

Syntax

```
RowFlush(scrollpath, target_row)
```

Where *scrollpath* is:

```
[RECORD.level1_recname, level1_row,  [RECORD.level2_recname, level2_row, ]
RECORD.target_recname
```

To prevent ambiguous references, you can use **SCROLL.** *scrollname*, where *scrollname* is the same as the scroll level's primary record name.

Description

Use the RowFlush function to remove a specific row from a page scroll and from the component buffer.

Note: This function remains for backward compatibility only. Use the FlushRow rowset method instead.

Rows that are flushed are not deleted from the database.

RowFlush is a specialized and rarely used function. In most situations, you will want to use DeleteRow to remove a row from the component buffer and remove it from the database as well when the component is saved.

Related Links

"FlushRow" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide), "Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

scrollpath	A construction that specifies a scroll level in the component buffer.
target_row	The row number of the row to flush.

Returns

None.

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Example

The following example flushes a row in a view from the component buffer:

```
RowFlush(RECORD.BNK_RCN_DTL_VW, &ROW1);
```

Related Links

ScrollFlush
DeleteRow

RowScrollSelect

Syntax

```
RowScrollSelect(levelnum, scrollpath, Record.sel_recname [, sqlstr [, bindvars]] [,
turbo])
```

Where *scrollpath* is:

```
[RECORD.level1_recname, level1_row, [Record.level2_recname, level2_row, ]
Record.target_recname
```

and where *bindvars* is an arbitrary-length list of bind variables in the form:

```
bindvar1 [, bindvar2]. . .
```

To prevent ambiguous references, you can use **Scroll.** *scrollname*, where *scrollname* is the same as the scroll level's primary record name.

Description

The RowScrollSelect is similar to ScrollSelect except that it reads data from the select record into a scroll under a specific parent row, rather than automatically distributing the selected rows under the correct parent rows throughout the buffer.

Note: This function remains for backward compatibility only. Use the Select rowset method instead.

You must use the WHERE clause in the SQL string to ensure that only rows that match the parent row are read into the scroll from the select record. Otherwise, all rows are read in under the specified parent row.

Related Links

ScrollSelect, "Select" (PeopleTools 8.54: PeopleCode API Reference), "Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

levelnum	Specifies the scroll level of the scroll area into which selected rows will be read. It can be 1, 2, or 3.
scrollpath	A construction that specifies a scroll level in the component buffer.
Record. ***sel_recname***	Specifies the select record. The *selname* record must be defined in Application Designer and SQL created as a table or a view,

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unless *sel_recname* and *target_recname* are the same. The *sel_recname* record can contain fewer fields than *target_recname*, although it must contain any key fields to maintain dependencies page records. This enables you to limit the amount of data read into the component buffers.

sqlstr Contains a WHERE clause to restrict the rows selected from *sel_recname* and/or an ORDER BY clause to sort the rows. The WHERE clause may contain the PeopleSoft SQL platform functions that are used for SQLExec processing, such as %DateIn or %Substring.

bindvars A list of bind variables to be substituted in the WHERE clause.

turbo Setting this parameter to True turns on turbo mode for RowScrollSelect. This will improve the performance of ScrollSelect verbs by as much as 300%, but should be implemented with caution on existing applications.

See InsertRow.

Returns

The number of rows read (optional.) This counts only lines read into the specified scroll. It does not include any additional rows read into autoselect child scrolls of the scroll.

Example

Here is an example of RowScrollSelect using bind variables:

```
If All(QTY_PICKED) Then
   &LEVEL1ROW = CurrentRowNumber(1);
   &LEVEL2ROW = CurrentRowNumber(2);
   &ORDER_INT_LINE_NO = FetchValue(Record.SHIP_SUM_INV_VW, &LEVEL1ROW,
   ORDER_INT_LINE_NO, &LEVEL2ROW);
   &INV_ITEM_ID = FetchValue(Record.SHIP_SUM_INV_VW, &LEVEL1ROW,
   INV_ITEM_ID, &LEVEL2ROW);
   &QTY = RowScrollSelect(3, Record.SHIP_SUM_INV_VW, CurrentRowNumber(1),
    RECORD.SHIP_DTL_INV_VW, CurrentRowNumber(2), Record.DEMAND_LOC_INV,
    RECORD.DEMAND_LOC_INV, "WHERE BUSINESS_UNIT = :1 AND ORDER_NO = :2
    AND DEMAND_SOURCE = :3 AND SOURCE_BUS_UNIT = :4
    AND ORDER_INT_LINE_NO = :5 AND SCHED_LINE_NO = :6 AND INV_ITEM_ID = :7
    AND DEMAND_LINE_NO = :8", SHIP_HDR_INV.BUSINESS_UNIT, ORDER_NO, DEMAND_SOURCE,
    SOURCE_BUS_UNIT, ORDER_INT_LINE_NO, SCHED_LINE_NO, INV_ITEM_ID, DEMAND_LINE_NO,⇒
 True);
End-If;
```

Related Links

RowScrollSelectNew

ScrollSelect

ScrollSelectNew

ScrollFlush

SQLExec

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RowScrollSelectNew

Syntax

```
RowScrollSelectNew(levelnum, scrollpath, RECORD.sel_recname, [sqlstr [, bindvars]] [,
turbo])
```

Where *scrollpath* is:

```
[Record.level1_recname, level1_row, [Record.level2_recname, level2_row, ]
Record.target_recname
```

where *bindvars* is an arbitrary-length list of bind variables in the form:

```
binvar1 [, bindvar2]. . .
```

To prevent ambiguous references, you can use **Scroll.** *scrollname*, where *scrollname* is the same as the scroll level's primary record name.

Description

The RowScrollSelectNew function is similar to RowScrollSelect, except that all rows read into the work scroll are marked *new* so they are automatically inserted into the database at Save time.

Note: This function remains for backward compatibility only. Use the SelectNew rowset method instead.

This capability can be used, for example, to insert new rows into the database by selecting data using a view of columns from another database tables.

Related Links

RowScrollSelect, "SelectNew" (PeopleTools 8.54: PeopleCode API Reference), "Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

level
Specifies the scroll level of the scroll area into which selected rows are read. It can be 1, 2, or 3.

scrollpath
A construction that specifies a scroll level in the component buffer.

Record. ***sel_recname***
Specifies the select record. The *selname* record must be defined in the record definition and SQL created as a table or a view, unless *sel_recname* and *target_recname* are the same. The *sel_recname* record can contain fewer fields than *target_recname*, although it must contain any key fields to maintain dependencies with other page records. This enables you to limit the amount of data read into the data buffers.

sqlstr
Contains a WHERE clause to restrict the rows selected from *sel_recname* and/or an ORDER BY clause to sort the rows. The WHERE clause may contain the PeopleSoft SQL platform

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functions that are used for SQLExec processing, such as %DateIn or %Substring.

bindvars A list of bind variables to be substituted in the WHERE clause. The same restrictions that exist for SQLExec exist for these variables.

turbo Setting this parameter to True turns on turbo mode for RowScrollSelectNew. This will improve the performance of ScrollSelect verbs by as much as 300%, but should be implemented with caution on existing applications.

See InsertRow.

Returns

The number of rows read (optional.) This counts only lines read into the specified scroll. It does not include any additional rows read into autoselect child scrolls of the scroll.

Example

The following example reads rows into the level 2 scroll and marks the rows as new:

```
&QTY = RowScrollSelectNew(2, Record.BI_LINE_VW, &ROW1, Record.BI_LINE_DST, Record.B⇒
I_LINE_DST, "where business_unit = :1 and invoice = :2 and line_seq_num = :3", BI_H⇒
DR.BUSINESS_UNIT, BI_HDR.INVOICE, &CURR_LINE_SEQ);
```

Related Links

RowScrollSelect
ScrollSelect
ScrollSelectNew
ScrollFlush
SQLExec

RTrim

Syntax

RTrim(*string*[, *trim_string*])

Description

Use the RTrim function to remove characters, usually trailing blanks, from the right of a string.

Parameters

string A String from which you want to remove trailing characters.

trim_string A String consisting of a list of characters, all occurrences of which are removed from the right of *string*. Characters in *trim_string* that occur in *string* to the left of any character not in *trim*

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_string are be removed. If this parameter is not specified, " " is assumed.

Returns

Returns a String formed by deleting, from the end of *source_str*, all occurrences of each character specified in *trim_str*.

Example

The following example removes trailing blanks from &NAME and places the results in &TRIMMED:

```
&TRIMMED = RTrim(&NAME);
```

The following example removes trailing punctuation marks from REC.INP and places the results in &TRIMMED:

```
&TRIMMED = RTrim(REC.INP, ".,;:!?");
```

Related Links

LTrim

PeopleCode Built-in Functions and Language Constructs: S

The PeopleCode built-In functions and language constructs beginning with the letter S are listed in alphabetical order within this topic.

Related Links

Typographical Conventions

ScheduleProcess

Syntax

```
ScheduleProcess(process_type, process_name   [, run_location] [, run_cntl_id] [,
process_instance]   [, run_dttm] [, recurrence_name] [, server_name])
```

Description

Use the ScheduleProcess function to schedule a process or job, writing a row of data to the Process Request table (PSPRCSRQST).

Note: This function is no longer supported. Use the CreateProcessRequest function instead.

Related Links

CreateProcessRequest

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ScrollFlush

Syntax

ScrollFlush(*scrollpath*)

Where *scrollpath* is:

[**RECORD.***level1_recname*, *level1_row*, [**RECORD.***level2_recname*, *level2_row*,]**RECORD.***target_recname*

To prevent ambiguous references, you can use **SCROLL.** *scrollname,* where *scrollname* is the same as the scroll level's primary record name.

Description

Use the ScrollFlush function to remove all rows inside the target scroll area and frees its associated buffer.

Note: This function remains for backward compatibility only. Use the Flush rowset method instead.

Rows that are flushed are not deleted from the database. This function is often used to clear a work scroll before a call to ScrollSelect.

Related Links

"Flush" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide), "Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

scrollpath A construction that specifies a scroll level in the component buffer.

Returns

None.

Example

The following example clears the level-one scroll then fills the level-one and level-two scrolls.

```
/* Throw away all rows */
ScrollFlush(RECORD.DBFIELD_VW);
/* Fill in new values */
&FIELDSEL = "where FIELDNAME like '" | FIELDNAME | "%'";
&ORDERBY = " order by FIELDNAME";
ScrollSelect(1, RECORD.DBFIELD_VW, RECORD.DBFIELD_VW, &FIELDSEL | &ORDERBY);
ScrollSelect(2, RECORD.DBFIELD_VW, RECORD.DBFIELD_LANG_VW, RECORD.DBFIELD_LANG_VW, ⇒
&FIELDSEL | " and LANGUAGE_CD = :1" | &ORDERBY, DBFIELD_SRCH.LANGUAGE_CD);
```

Related Links

RowFlush

RowScrollSelect

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RowScrollSelectNew
ScrollSelect
ScrollSelectNew

ScrollSelect

Syntax

```
ScrollSelect(levelnum, [Record.level1_recname,  [Record.level2_recname,]]
Record.target_recname, Record.sel_recname [, sqlstr [, bindvars]] [, turbo])
```

where *bindvars* is an arbitrary-length list of bind variables in the form:

```
bindvar1 [, bindvar2]. . .
```

Description

The ScrollSelect function, like the related ScrollSelect functions (ScrollSelectNew, RowScrollSelect, and RowScrollSelectNew) reads data from database tables or views into a scroll area on the active page.

Note: This function remains for backward compatibility only. Use the Select rowset class method instead.

See "Select" (PeopleTools 8.54: PeopleCode API Reference).

Using ScrollSelect

ScrollSelect automatically places child rows in the target scroll area under the correct parent row in the next highest scroll area. If it cannot match a child row to a parent row an error occurs.

ScrollSelect selects rows from a table or view and adds the rows to a scroll area of a page. Let's call the record definition of the table or view that it selects from the *select record*; and let's call the record definition normally referenced by the scroll area (as specified in the page definition) the *default scroll record*. The select record can be the same as the default scroll record, or it can be a different record definition that has compatible fields with the default scroll record. If you define a select record that differs from the default scroll record, you can restrict the number of fields that are loaded into the component buffers by including only the fields that you actually need.

ScrollSelect accepts a SQL string that can contain a WHERE clause restricting the number of rows selected into the scroll area. The SQL string can also contain an ORDER BY clause to sort the rows.

ScrollSelect functions generate a SQL SELECT statement at runtime, based on the fields in the select record and WHERE clause passed to them in the function call. This gives ScrollSelect functions a significant advantage over SQLExec: they enable you to change the structure of the select record without affecting the PeopleCode, unless the field affected is referred to in the WHERE clause string. This can make the application easier to maintain.

Often, ScrollSelect is used to select rows into a *work scroll*, which is sometimes hidden using HideScroll. A work scroll is a scroll in which the No Auto Select option is selected on the record definition in Application Designer so that PeopleTools does not automatically populate the scroll at page startup. You can right-click on the scroll or grid then select the scroll's No Auto Select attribute check box in the record property dialog box.

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Depending on how you intend the scroll to be used by the end user, you may also want to select No Auto Update to prevent database updates, and prevent row insertions or deletions in the scroll area by selecting No Row Insert or No Row Update.

To call ScrollSelect at page startup, place the function call in the RowInit event of a key field on the parent scroll record. For example, if you want to fill scroll level one, place the call to ScrollSelect in the RowInit event of a field on level zero.

Parameters

levelnum

Specifies the level of the scroll level to be filled (the target scroll area. The value can be 1, 2, or 3.

target_recname

Specifies a record identifying the target scroll, into which the selected rows are read. If *target_recname* is on scroll level 2, it must be proceeded by a **Record.** *level1_recname*. If it is on level 3, you must specify both **Record.** *level1_recname* and **Record.** *level2_recname*.

Record. ***sel_recname***

Specifies the select record. The *selname* record must be defined in Application Designer and SQL created (using Build, Project) as a table or a view, unless *sel_recname* and *target_recname* are the same. The *sel_recname* record can contain fewer fields *target_recname*, although it must contain any key fields to maintain dependencies with other page records. This enables you to limit the amount of data read into the component buffers.

sqlstr

Contains a WHERE clause to restrict the rows selected from *sel_recname* and/or an ORDER BY clause to sort the rows. The WHERE clause can contain the PeopleSoft meta-SQL functions such as %Datein or %CurrentDateIn. It can also contain inline bind variables.

bindvars

A list of bind variables to be substituted in the WHERE clause. The same restrictions that exist for SQLExec exist for these variables.

turbo

Setting this parameter to True turns on turbo mode for ScrollSelect. This will improve the performance of ScrollSelect verbs by as much as 300%, but should be implemented with caution on existing applications.

See InsertRow.

Returns

The number of rows read (optional.) This counts only lines read into the specified scroll. It does not include any additional rows read into autoselect child scrolls of the scroll.

Example

This example uses WHERE clauses to reset the rows in two scroll areas:

```
&FIELD_CNT = ActiveRowCount(DBFIELD_VW.FIELDNAME);
```

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```
For &I = 1 to &FIELD_CNT;
   If RecordChanged(DBFIELD_VW.FIELDNAME, &I, DBFIELD_LANG_VW.FIELDNAME, 1)    Then
      &FIELDNAME = FetchValue(DBFIELD_VW.FIELDNAME, &I);
      &RET = WinMessage("Descriptions for " | &FIELDNAME | " have been changed. Dis⇒
card changes?", 289, "DBField Changed!");
      If &RET = 2 Then
         /* Cancel selected */
         Exit;
      End-if;
   End-if;
End-for;
/* Now throw away all rows */
ScrollFlush(Record.DBFIELD_VW);
/* Fill in new values */
&FIELDSEL = "where FIELDNAME like '" | FIELDNAME | "%'";
&ORDERBY = " order by FIELDNAME";
&QTY1 = ScrollSelect(1, Record.DBFIELD_VW, Record.DBFIELD_VW, &FIELDSEL | &ORDERBY)⇒
;
&QTY2 = ScrollSelect(2, Record.DBFIELD_VW, Record.DBFIELD_LANG_VW, Record.DBFIELD_L⇒
ANG_VW, &FIELDSEL | " and LANGUAGE_CD = :1" | &ORDERBY, DBFIELD_SRCH.LANGUAGE_CD);
```

Related Links

RowScrollSelect

RowScrollSelectNew

ScrollFlush

ScrollSelectNew

SQLExec

ScrollSelectNew

Syntax

```
ScrollSelectNew(levelnum, [Record.level1_recname, [Record.level2_recname, ]]
Record.target_recname, Record.sel_recname [, sqlstr [, bindvars]] [, turbo])
```

and where *bindvars* is an arbitrary-length list of bind variables in the form:

```
bindvar1 [, bindvar2]. . .
```

Description

The ScrollSelectNew function is similar to ScrollSelect, except that all rows read into the work scroll are marked *new* so they are automatically inserted into the database at Save time.

Note: This function remains for backward compatibility only. Use the SelectNew rowset class method instead.

This capability can be used, for example, to insert new rows into the database by selecting data using a view of columns from other database tables.

Related Links

ScrollSelect, "SelectNew" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide)

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Parameters

levelnum Specifies the level of the scroll level to be filled (the target scroll area. The value can be 1, 2, or 3.

target_recname Specifies a record identifying the target scroll, into which the selected rows are read. If *target_recname* is on scroll level 2, it must be proceeded by a **Record.** *level1_recname*. If it is on level 3, you must specify both **Record.** *level1_recname* and **Record.** *level2_recname*.

Record. ***sel_recname*** Specifies the select record. The *selname* record must be defined in Application Designer and SQL created as a table or a view (using Build, Project), unless *sel_recname* and *target_recname* are the same. The *sel_recname* record can contain fewer fields *target_recname*, although it must contain any key fields to maintain dependencies with other records on the page. This enables you to limit the amount of data read into the component buffers.

sqlstr Contains a WHERE clause to restrict the rows selected from *sel_recname* and/or an ORDER BY clause to sort the rows. The WHERE clause may contain the PeopleSoft SQL platform functions that are used for SQLExec processing, such as %Datein or %Substring.

bindvars A list of bind variables to be substituted in the WHERE clause. The same restrictions that exist for SQLExec exist for these variables.

turbo Setting this parameter to True turns on turbo mode for ScrollSelectNew. This will improve the performance of ScrollSelect verbs by as much as 300%, but should be implemented with caution on existing applications.

See InsertRow.

Returns

The number of rows read (optional.) This counts only lines read into the specified scroll. It does not include any additional rows read into autoselect child scrolls of the scroll.

Example

The following statement selects rows from DATA2 and reads them into scroll level one on the page. If the end user saves the page, these rows will be inserted into DATA1:

```
&QTY = ScrollSelectNew(1, Record.DATA1, Record.DATA2, "Where SETID = :1 and CUST_ID⇒
 = :2", CUSTOMER.SETID, CUSTOMER.CUST_ID);
```

Related Links

RowScrollSelect

RowScrollSelectNew

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ScrollSelect
ScrollFlush
SQLExec

Second

Syntax

Second(*timevalue*)

Description

Use the Second function to extract the seconds component of a Time value.

Parameters

timevalue	A Time value from which to extract seconds.

Returns

Returns a Number equal to the seconds part of *timevalue*.

Example

Assume that &TIMEOUT contains Time value of 16:48:21. The following would set &SECS to 21:

```
&SECS = Second(&TIMEOUT);
```

Related Links

Hour
Minute

SecureRandomGen

Syntax

SecureRandomGen([*num*][, *bytes*])

Description

Use the SecureRandomGen function to generate one or more cryptographically secure pseudo-random number generator (CSPRNG) values. For example, a CSPRNG value can be used as a salt to then generate a hashed (or “salted”) string, such as a hashed password.

Note: Because SecureRandomGen is based on the Java security SecureRandom function, it is more efficient to call it once to return an array of required salt values than it is to call it for each salt value required.

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Parameters

num Specifies the number of random numbers to generate. If this value is not specified, one random number is generated.

bytes Specifies the size of each random number in bytes. If this value is less than 1 or not specified, the default is 16 bytes (128 bits).

Returns

An array of string.

Example

In this example, SecureRandomGen generates an array with one 16-byte value:

```
Local array of string &operpwsdsalt;

&operpwsdsalt = SecureRandomGen();
```

In this example, SecureRandomGen generates an array with four 16-byte values:

```
Local array of string &operpwsdsalt;

&operpwsdsalt = SecureRandomGen(4);
```

In this example, SecureRandomGen generates an array with four 32-byte values.

```
Local array of string &operpwsdsalt;

&operpwsdsalt = SecureRandomGen(4, 32);
```

Related Links

HashWithSalt

SendMail

Syntax

SendMail(*flags*, *recipients*, *CCs*, *BCCs*, *subject*, *text*, [, *attachment_filenames*] [, *attachment_titles*] [, *Mail_From*] [, *Mail_Sep*] [, *Content_Type*] [, *Reply_To*] [, *Sender*])

Description

Important! The SendMail function has been deprecated. Use the MCFOutboundEmail class instead.

The SendMail function was formerly used to send an email message from a PeopleSoft application page.

Parameters

flags An integer value. This parameter is ignored.

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recipients

A string consisting of a delimiter-separated list of email addresses containing the names of the message's primary recipients.

Note: The delimiter is specified by the *Mail_Sep* parameter.

CCs

A string consisting of a delimiter-separated list of email addresses that are sent copies of the message.

Note: The delimiter is specified by the *Mail_Sep* parameter.

BCCs

A string consisting of a delimiter-separated list of email addresses that are sent copies of the message. These recipients won't appear on the message list.

Note: The delimiter is specified by the *Mail_Sep* parameter.

subject

A string containing the text that appears in the message's Subject field.

text

The text of the message.

attachment_filenames

A string consisting of a semicolon-separated list of fully qualified file names, containing the complete path to the file and the file name itself.

attachment_titles

Another semicolon-separated list containing titles for each of the files provided in the *attachment_filenames* parameter. The titles appear near the attachment icons in place of the fully qualified file name.

Mail_From

A string used to populate the 'reply-to' field. If this parameter isn't specified, the sender address from application server configuration file is used.

Mail_Sep

Specify the delimiter to be used to separate one email address from another. The default value is a semicolon (;).

Content_Type

Specify the content type of the email as a string. The default value is plain text.

If you want to specify HTML, you should use the following:

```
Content-type: text/html; charset=utf8
```

Reply_To

Specify the email address that the receiver should use when replying to this email instead of the *Mail_From* value.

Sender

Specifies who the email is from, as a string. This may be different than the values specified for *Mail_From* or *Reply_To* parameters.

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Returns

Returns a number:

Return Code	*Description*
0	No error
-1	No mail interface installed.

Related Links

"MCFOutboundEmail Class" (PeopleTools 8.54: PeopleCode API Reference)

SetAddMode

Syntax

SetAddMode(*add_mode*)

Description

Use the SetAddMode function to indicate that the component build occurs in add mode.

Important! Use this function within fluid applications only.

Parameters

add_mode Specifies a Boolean value indicating whether the component build process should occur in add mode or not.

Returns

None.

Example

```
If (&nAction = 0) Then
   REM &nAction=0 for Add mode aka New mode;
   SetAddMode( True);
Else
   If (&nAction = 2) Then
      REM &nAction=2 for Keyword Search;
      PTS_SRCH.PTS_VIEWMODE.Value = "L";
      &bDoSesSearch = True;
      SetAddMode( False);
   Else
      REM &nAction=1 for Real time Search;
      SetAddMode( False);
   End-If;
End-If;
```

Related Links

IsAddMode

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"Component Build Processing in Add Modes" (PeopleTools 8.54: PeopleCode Developer's Guide)

SetAuthenticationResult

Syntax

```
SetAuthenticationResult(AuthResult [, UserId] [,ResultDocument] [,PasswordExpired]
[DaysLeftBeforeExpire])
```

Description

Use the SetAuthenticationResult function in signon PeopleCode to customize the authentication process. It enables the developer using signon PeopleCode to implement additional authentication mechanisms beyond the basic PeopleSoft ID and password authentication.

When *PasswordExpired* is True, it indicates the password is expired, the passwordexpired.html page is displayed during login when signon PeopleCode is enabled.

When *DaysLeftBeforeExpire* is greater than 0, and *PasswordExpired* is False, indicating that the password will expire in x days, the passwordwarning.html page is displayed during login when signon PeopleCode is enabled.

Note: If you set *AuthResult* to False, *ResultDocument* must be the text of an error message. This text is displayed on the signon screen.

Parameters

AuthResult

Specify whether the authentication is successful. This parameter takes a Boolean value. If True is used, the end user of the UserId specified on the Signon page is allowed access to the system.

When AuthResult is True, the customer is responsible for providing a logout to the end user. They will remain logged in until a logout command is issued from the user, or the session expires.

UserId

Specify the UserId of the user signing on. The default value is the UserId entered on the signon page. This parameter takes a string value. This is the value returned by %SignonUserId

ResultDocument

When *ResultDocument* is blank ("""), this parameter value is ignored. Otherwise, specify a message to be displayed in the signonresultdoc.html file when *AuthResult* is True.

If AuthResult is False, the ResultDocument text value is displayed on the signon screen. If ResultDocument has a value, any values in *PasswordExpired* and *DaysLeftBeforeExpire* are ignored.

PasswordExpired

Specify if the user's password has expired. The values are:

- False (default) if the user's password hasn't expired.

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- True if the user's password has expired

If this value is specified as True, the user is allowed to log in, but is able to access only a limited portion of the system: just enough to change their expired password.

DaysLeftBeforeExpire A numeric value indicating the number of days left before the password expires. If the value is greater than 0, a warning is displayed when Authorized is True and Expired is False.

Returns

A Boolean value: True if function completed successfully, False otherwise.

Example

```
If updateUserProfile(%SignonUserId, %SignonUserPswd, &array_attribs) Then
   SetAuthenticationResult(True, &SignonUserID, "", False);
End-If;
```

The following example is within a function used for logging onto a system:

```
    If (AddToDateTime(&fmc_wsl_exp_date, 0, 0, 0, 0, 10, 0) >= %Datetime) Then
         /* WSL logon was within last x minutes, so accept WSL for PS logon */
         SetAuthenticationResult( True, Upper(&userID), "", False);
      Else
         /* WSL logonn was too long ago, so request a more recent WSL logon */
         SetAuthenticationResult( False, "getmorerecentcookie", "", False,7); /*dis⇒
plays the customized passwordwarning.html. */
      End-If;
```

In the following example, AuthResult is True and ResultDocument is set as text to be displayed in an HTML tag.

```
SetAuthenticationResult( True, &USERID, "Result Doc Text", False, 0);
```

As part of this example, specify the following in the configuration properties:

```
singonresultdoc_page=signonresultdoctext.html
```

In signonresultdoctext.html, add a meta field as follows:

```
<%=resultDoc%>:

<html>
....
  <tr><td class="PSSRCHACTION" no wrap=true><%=resultDoc%></td></tr>
.....
</html>
```

Related Links

%ResultDocument

%AuthenticationToken

"PeopleSoft Sign In" (PeopleTools 8.54: Security Administration)

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SetChannelStatus

Syntax

SetChannelStatus(*ChannelName*, *Status*)

Description

Use the SetChannelStatus to set the status of the specified channel. You could use this function to restart a channel that had been paused, or pause a running channel.

Note: This function has been deprecated and remains for backward compatibility only. Use the IntBroker class SetQueueStatus method instead.

Related Links

"SetStatus" (PeopleTools 8.54: PeopleCode API Reference)

Parameters

ChannelName Specify the channel name.

Status Specify the status you want to set the channel to. The values are:

- 1 for Run
- 2 for Pause

Returns

A Boolean value: True if the channel status was changed successfully. False otherwise.

Example

```
/* User has clicked on a channel to change its status */

If CHNL_STATUS = "1" Then
   rem running, so pause;
   &status = 2;
Else
   rem paused. So run;
   &status = 1;
End-If;

If SetChannelStatus(AMM_CHNL_SECVW.CHNLNAME, &status) Then
   CHNL_STATUS = String(&status);
Else
   MessageBox(0, MsgGetText(117, 1, ""), 117, 22, "");
End-If;
```

Related Links

"Understanding Message Classes" (PeopleTools 8.54: PeopleCode API Reference)

"PeopleSoft Integration Broker Metadata" (PeopleTools 8.54: Integration Broker)

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SetComponentChanged

Syntax

```
SetComponentChanged()
```

Description

Use the SetComponentChanged function to set the changed flag for the component. This flag is used to determine if save processing is needed or not, when the user clicks Save, or save is triggered through DoSave PeopleCode. This flag is also used to determine if a save warning needs to be issued to the user when they leave the component.

Using SetComponentChanged causes full save processing to occur the next time a save is triggered. This includes the SaveEdit, SavePreChange, Workflow, and SavePostChange events. This function can be used to replace a workaround of changing a field to a different value then back to force save processing.

Using SetComponentChanged does *not* cause unchanged data to be saved. The Component Processor only saves changed data to the database. If nothing in the component has been changed, nothing is saved to the database.

After save processing has completed successfully, the flag is cleared.

Most components do not need to use this function. The changed flag is automatically set when the user changes any value in the component, as well as when PeopleCode changes a database field buffer value. This function is for certain pages that have a requirement to have save processing execute even if the user has *not* changed a value.

Note: Using this function causes a save warning to be issued to the user when they try to leave the component, assuming the save warning feature is enabled, and the end user has not saved the component since the function was called.

Using SetComponentChanged before DoSave forces save processing to occur.

Parameters

None.

Returns

None.

Related Links

DoSave
DoSaveNow

SetControlValue

Syntax

```
SetControlValue(Value, PageName, PageFieldName [, RowNumber] [, &Field])
```

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Description

Use the SetControlValue function to set an override string on the current field so that it simulates an end user entering data.

When a page is refreshed after a PeopleCode program completes, each field value gets set from the buffer. However, if you use this function to specify an override string for a field, the value you specify is used *instead* of the value in the buffer. This value is inserted directly into the control on the page, as if the end user typed it in. The field buffer remains unchanged. All validations, FieldEdit and FieldChange PeopleCode run immediately.

This function can be used in the following scenario: Suppose you have a text field that has a menu pop-up associated with it. The end user can use a secondary page to select an item to be used for the value. From the menu PeopleCode, you can verify that the value is valid, but the field doesn't turn red and the end user can leave the field. This could potential mean saving the page with bad data. You can use this function after the secondary page is dismissed. This causes the same edits to be run as if the end user had typed in the value.

This function doesn't work for radio button or check box controls.

Considerations With Field Verification

SetControlValue only sets the value of the field. If you specify an incorrect value, SetControlValue has an error at runtime.

For example, suppose you are setting a value like "1900-01-01" into a date field that is expecting the format 01/01/1900. If the end user entered 1900-01-01 they would get an error, so SetControlValue causes an error with this value also. You may want to use a value in the format the end user might enter. You can get this value by using the FormattedValue method on a field. For example:

```
&DATE_IN_EFFECT = SF_PRDN_AREA_IT.DATE_IN_EFFECT.FormattedValue;
...
SetControlValue(&DATE_IN_EFFECT, %Page, "DATE_IN_EFFECT", &OCCURSNUM);
```

The FormattedValue function converts the field value from the PeopleSoft representation to the representation the end user would see and enter.

Restrictions on Use With a Component Interface

This function is ignored (has no effect) when used by a PeopleCode program that's been called by a Component Interface.

Parameters

Value	Specify an override value on the current field. This parameter takes a string value.
pagename	Specify the name of page where the field exists.
pagefieldname	Specify the page field name. This is *not* the name of the field. This is the name that is assigned to the field in Application Designer, on the page field properties.
RowNumber	Specify the row number of the field. The default value is 1 if this parameter isn't set.

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&Field Specify an already instantiated field object referencing the field you want to override.

Note: If you want to set an override string for a field on the level 1 scroll for a page, you do not need to specify either a row number or a field object. However, if you want to set the override string for a field on either the second or third level scroll for a page, you must specify *both* a row number and a field object for SetControlValue to work.

Returns

None.

Example

```
Declare Function item_seach PeopleCode FUNCLIB_ITEM.INV_ITEM_ID FieldFormula;

&SEARCHREC = "PS_" | RECORD.MG_ITEM_OWN1_VW;
item_seach("", SF_PRDN_AREA.BUSINESS_UNIT, "ITEM", &SEARCHREC, "", &INV_ITEM_ID, ""⇒
);
SetControlValue(&INV_ITEM_ID);
```

The following example is used in the PeopleSoft Pure Internet Architecture:

```
Declare Function item_search PeopleCode FUNCLIB_ITEM.INV_ITEM_ID FieldFormula;

Component string &ITEM_ID_SEARCH;

&ITEMRECNAME = "PS_" | Record.MG_ITEM_PDO_VW;
item_serach("", EN_PDO_WRK.BUSINESS_UNIT, "ITEM", &ITEMRECNAME, "", &INV_ITEM_ID, "⇒
");
If All(&INV_ITEM_ID) Then
   Evaluate &ITEM_ID_SEARCH
   When "F"
      SetControlValue(&INV_ITEM_ID, Page.EN_PDO_COPY, "FROM_ITEMID")
   When "T" SetControlValue(&INV_ITEM_ID, Page.EN_PDO_COPY, "TO_ITEMID")
   End-Evaluate;
End-If;
```

SetCursorPos

Syntax

SetCursorPos(**Page.***pagename*, *scrollpath*, *target_row*, [*recordname*.]*fieldname*)

where *scrollpath* is:

[**RECORD.***level1_recname*, *level1_row*, [**RECORD.***level2_recname*, *level2_row*,]]
RECORD.*target_recname*

To prevent ambiguous references, you can use **SCROLL.** *scrollname*, where *scrollname* is the same as the scroll level's primary record name.

Description

Use the SetCursorPos to place the focus in a specific field anywhere in the current component. To transfer to a page outside the current component, use Transfer.

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Note: If you use SetCursorPos to change the focus to a field that is not on the current page, any PeopleCode associated with the Activate event for the page being transferred to runs.

You can use the SetCursorPos function in combination with an Error or Warning function in SaveEdit to place the focus on the field that caused the error or warning condition. You must call SetCursorPos *before* an Error statement, because Error in SaveEdit terminates all save processing, including the program from which it was called.

Related Links

Transfer, "Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

Pagename	The name of the page specified in the page definition, preceded by the keyword **Page**. The *pagename* page must be in the current component. You can also pass the %page system variable in this parameter (without the **Page** reserved word).
scrollpath	A construction that specifies a scroll level in the component buffer.
[*recordname* .]*fieldname*	Specify a field designating the record and field in the scroll where you want to place the cursor.
target_row	The row number of the row in which you want to place the cursor.

Returns

None.

Example

The following example places the cursor in the appropriate field if a SaveEdit validation fails. Note the use of the %page system variable to get the page name. Note also that SetCursorPos is called before Error.

```
If None(&ITEM_FOUND) Then
      SetCursorPos(%Page, INV_ITEM_ID, CurrentRowNumber());
      Error (MsgGet(11100, 162, "Item is not valid in the order business unit.", IN⇒
V_ITEM_ID, CART_ATTRIB_INV.ORDER_BU));
End-If;
```

The following example is similar, but uses the **Page** reserved word and page name:

```
If %Component = COMPONENT.BUS_UNIT_TBL_GL Then
      SetCursorPos(PAGE.BUS_UNIT_TBL_GL1, DEFAULT_SETID, CurrentRowNumber());
End-If;
Error MsgGet(9000, 165, "Default TableSet ID is a required field.");
```

Related Links

TransferPage

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SetDBFieldAuxFlag

Syntax

SetDBFieldAuxFlag(**Field.***FieldName*, *FlagNumber*, *Setting*)

Description

Use the SetDBFieldAuxFlag function to set the auxiliary flag mask (AuxFlagMask) property for the specified field. This field indicates properties about the field.

Currently, only one flag comes preset from PeopleSoft: a 1 indicates a ChartField. If you want to associate a property with a field, you must coordinate with other developers to make certain that no one else is setting a property using the same flag number.

Use the GetAuxFlag Field method to read the current setting of the property.

If you use this function, the change is made to the database field, but it doesn't require a rebuild of the database. However, the change is *not* reflected in the component buffer. You must reload the component for the new setting to take place.

Considerations Using this Function

This function is intended for use during configuration time *only*, before active runtime usage is initiated. Using this function during active runtime is not supported. Changes to data definitions are *not* recognized on currently loaded component. In general, changes aren't recognized until the component is reloaded.

Warning! These operations take place in a separate transaction from the page's save status: the initiation of any of these operations immediately changes the definitions, even if the page is subsequently cancelled.

Parameters

Fieldname Specify the name of the field that you want the AuxMaskFlag property changed. This name must be prefixed by the reserved word **Field**.

FlagNumber Specify the flag value, a number between 1 and 32. A 1 is a ChartField.

Setting Specify whether this flag should be on (True) or off (False).

Returns

A constant value. The values are:

Value	*Description*
%MDA_Success	Bulk operation completed successfully.
%MDA_Failure	Bulk operation did not complete successfully.
%MDA_FieldNotFound	The specified field was not found in the database.

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Example

```
&ret = SetDBFieldAuxFlag(Field.OrgId, 1, True);
If (&ret = %MDA_Success) Then
   MessageBox(0, "Metadata Fn Status", 0, 0, "SetDBFieldAuxFlag succeeded");
Else
   MessageBox(0, "Metadata Fn Status", 0, 0, "SetDBFieldAuxFlag failed");
End-If;
```

Related Links

"GetAuxFlag" (PeopleTools 8.54: PeopleCode API Reference)

SetDBFieldCharDefn

Syntax

SetDBFieldCharDefn(Field.*FieldName*, *Length* [, *FormatFamily*])

Description

Use the SetDBFieldCharDefn function to create a field definition of type character, with the indicated name, length, and format family.

Note: After using this function, you should use the SetDBFieldLabel function to define the label for the new field.

Considerations Using this Function

This function is intended for use during configuration time *only*, before active runtime usage is initiated. Using this function during active runtime is not supported. Changes to data definitions are *not* recognized on currently loaded component. In general, changes aren't recognized until the component is reloaded.

Warning! These operations take place in a separate transaction from the page's save status: the initiation of any of these operations immediately changes the definitions, even if the page is subsequently cancelled.

Parameters

Fieldname Specify the name of the new field that you want to create. This name must be prefixed by the reserved word **Field**.

Length Specify the length of the new field as a number.

FormatFamily Specify the format family of the new field. This parameter is optional: the default value is upper case. The valid values are:

- %FormatFamilyType_Upper (default)
- %FormatFamilyType_Name
- %FormatFamilyType_Phone
- %FormatFamilyType_Zip
- %FormatFamilyType_SSN

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- %FormatFamilyType_MixedCase
- %FormatFamilyType_NumOnly
- %FormatFamilyType_SIN
- %FormatFamilyType_PhoneIntl
- %FormatFamilyType_ZipIntl

Returns

A constant value. The values are:

Value	*Description*
%MDA_Success	Bulk operation completed successfully.
%MDA_Failure	Bulk operation did not complete successfully.
%MDA_Duplicate	The field specified by *FieldName* already exists.
%MDA_FieldFmtLength	The specified length conflicts with the specified format family and was overwritten when the field was created.

Example

```
&ret = SetDBFieldCharDefn(Field.OrgId, 10,
%FormatFamilyType_MixedCase);
If (&ret = %MDA_Success) Then
   MessageBox(0, "Metadata Fn Status", 0, 0, "SetDBFieldCharDefn succeeded");
Else
   MessageBox(0, "Metadata Fn Status", 0, 0, "SetDBFieldCharDefn failed");
End-If;
```

You can also use this function with de-referenced parameters, as follows:

```
&ret = SetDBFieldCharDefn(@("FIELD." | FS_CF_UPD_AET.FIELDNAME),
FS_CF_UPD_AET.NEW_CF_LENGTH, %FormatFamilyType_MixedCase);
```

The following example adds a new character field:

```
&cf = "CF1";
&len = 10;
&frmt = %FormatFamilyType_Upper;
&fld = "FIELD." | &cf;
&ret = SetDBFieldCharDefn(@(&fld), &len, &frmt);
If (&ret = 0) Then
   MessageBox(0, "SetDBFieldCharDefn", 0, 0, "Succeeded");
Else
   MessageBox(0, "SetDBFieldCharDefn", 0, 0, "Failed");
End-If;
```

Related Links

SetDBFieldLabel

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SetDBFieldFormat

Syntax

```
SetDBFieldFormat(Field.FieldName, FormatFamily [, FamilyName, DisplayName])
```

Description

Use the SetDBFieldFormat function to change the format family for a field.

Use the StoredFormat Field property to determine the existing format family for a field.

If you only want to change the display format of a single field at runtime, and not change the database field, use the DisplayFormat Field property.

Note: This function only works with character fields.

Considerations Using this Function

This function is intended for use during configuration time *only*, before active runtime usage is initiated. Using this function during active runtime is not supported. Changes to data definitions are *not* recognized on currently loaded component. In general, changes aren't recognized until the component is reloaded.

Warning! These operations take place in a separate transaction from the page's save status: the initiation of any of these operations immediately changes the definitions, even if the page is subsequently cancelled.

Parameters

FieldName Specify the name of the field that you want to modify. This name must be prefixed by the reserved word **Field**.

FormatFamily Specify the new format family of the field. The valid values are:

- %FormatFamilyType_Upper
- %FormatFamilyType_Name
- %FormatFamilyType_Phone
- %FormatFamilyType_Zip
- %FormatFamilyType_SSN
- %FormatFamilyType_MixedCase
- %FormatFamilyType_NumOnly
- %FormatFamilyType_SIN
- %FormatFamilyType_PhoneIntl
- %FormatFamilyType_ZipIntl
- %FomatFamilyType_Custom

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FamilyName Specify a new family name. This parameter is optional, and only valid if *FormatFamily* is specified as custom (%FormatFamilyType_Custom).

DisplayName Specify a new display name. This parameter is optional, and only valid if *FormatFamily* is specified as custom (%FormatFamilyType_Custom).

Returns

A constant value. The values are:

Value	*Description*
%MDA_Success	Function completed successfully.
%MDA_Failure	Function didn't complete successfully.

Example

```
&ret = SetDBFieldFormat(Field.OrgId, %FormatFamilyType_Custom, "Postal_Code", "Norm⇒
al");
If (&ret = %MDA_Success) Then
   MessageBox(0, "Metadata Fn Status", 0, 0, "SetDBFieldFormat succeeded");
Else
   MessageBox(0, "Metadata Fn Status", 0, 0, "SetDBFieldFormat failed");
End-If;
```

Related Links

SetDBFieldFormatLength

"StoredFormat" (PeopleTools 8.54: PeopleCode API Reference)

"DisplayFormat" (PeopleTools 8.54: PeopleCode API Reference)

SetDBFieldFormatLength

Syntax

SetDBFieldFormatLength(*FieldName*, *Length*)

Description

Use the SetDBFieldFormatLength function to change the format length for a field. This length controls the maximum number of characters an end user can type into an edit box for this character field. This can be used to limit the user without having to rebuild or alter the table.

Note: This function only works with character fields.

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Considerations Using this Function

This function is intended for use during configuration time *only*, before active runtime usage is initiated. Using this function during active runtime is not supported. Changes to data definitions are *not* recognized on currently loaded component. In general, changes aren't recognized until the component is reloaded.

Warning! These operations take place in a separate transaction from the page's save status: the initiation of any of these operations immediately changes the definitions, even if the page is subsequently cancelled.

Parameters

FieldName Specify the name of the field that you want to modify. This name must be prefixed by the reserved word **Field**.

Length Specify the new format length as a number. Valid values are between 1 and 254.

Returns

A constant value. The values are:

Value	*Description*
%MDA_Success	Function completed successfully.
%MDA_Failure	Function didn't complete successfully.
%MDA_FieldNotFound	The specified field wasn't found in the database.
%MDA_Unsupported	You tried to use this function on a non character field. This function is only supported on character fields.

Example

```
&ret =  SetDBFieldFormatLength(FIELD.OrgId, 10);
If (&ret = %MDA_success) Then
  MessageBox(0, "MetaData Fn Status", 0, 0, "SetDBFieldFormatLength succeeded");
Else
  MessageBox(0, "MetaData Fn Status", 0, 0, "SetDBFieldFormatLength failed");
End-If;
```

Related Links

SetDBFieldFormat

"FormatLength" (PeopleTools 8.54: PeopleCode API Reference)

SetDBFieldLabel

Syntax

SetDBFieldLabel(**Field.***FieldName*, *LabelID*, *Long*, *Short*, *Default* [, *LanguageID*])

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Description

Use the SetDBFieldLabel function to either modify an existing label, or add a new label to a field definition.

Considerations Using this Function

This function is intended for use during configuration time *only*, before active runtime usage is initiated. Using this function during active runtime is not supported. Changes to data definitions are *not* recognized on currently loaded component. In general, changes aren't recognized until the component is reloaded.

Warning! These operations take place in a separate transaction from the page's save status: the initiation of any of these operations immediately changes the definitions, even if the page is subsequently cancelled.

Parameters

FieldName Specify the name of the field that you want to modify. This name must be prefixed by the reserved word **Field**.

LabelID Specify the label ID of the field label that you want to modify as a string. If the specified label ID isn't found, a new label, with the specified label ID, is created for the field.

Long Specify the new long label for the field as a string.

Short Specify the new short label for the field as a string.

Default Specify whether the new label is the default label for the field. This parameter takes a Boolean value: True, set the label as the default, False, do not.

LanguageID Specify the three character language code to use with this field. This parameter is optional. If you do not specify a language code, the language of the current user is used.

Returns

A constant value. The values are:

Value	*Description*
%MDA_Success	Function completed successfully.
%MDA_Failure	Function didn't complete successfully.
%MDA_FieldNotFound	The specified field wasn't found.

Example

```
&ret = SetDBFieldLabel(Field.OrgId, "ORGID", "Organization ID", "OrgId", True);
If (&ret = %MDA_Success) Then
   MessageBox(0, "Metadata Fn Status", 0, 0, "SetDBFieldLabel succeeded");
Else
```

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```
   MessageBox(0, "Metadata Fn Status", 0, 0, "SetDBFieldLabel failed");
End-If;
```

Related Links

"Label" (PeopleTools 8.54: PeopleCode API Reference)

SetDBFieldLength

Syntax

SetDBFieldLength(**Field.***FieldName*, *Length*)

Description

Use the SetDBFieldLength function to modify an existing character field to have a new length.

Note: Because using this function changes records that are used to build application tables, you must rebuild (alter) the specified project before these changes can be used.

Use the Length Field class property to find the existing length of a field.

Note: This function only works with character fields.

Considerations Using this Function

This function is intended for use during configuration time *only*, before active runtime usage is initiated. Using this function during active runtime is not supported. Changes to data definitions are *not* recognized on currently loaded component. In general, changes aren't recognized until the component is reloaded.

Warning! These operations take place in a separate transaction from the page's save status: the initiation of any of these operations immediately changes the definitions, even if the page is subsequently cancelled.

Parameters

FieldName Specify the name of the field that you want to modify. This name must be prefixed by the reserved word **Field**.

Length Specify the new field length as a number between 1 and 254.

Note: If a default has been specified for this field in any record, and the size of the default is *greater* than the new size, you must modify the record field separately.

Returns

A constant value. The values are:

Value	*Description*
%MDA_Success	Function completed successfully.

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Value	*Description*
%MDA_Failure	Function didn't complete successfully.
%MDA_Unsupported	The specified field isn't a character field. This function is only supported for character fields.
%MDA_FieldNotFound	The specified field wasn't found.
%MDA_FieldFmtLength	The specified length isn't compatible with the current format family, or there are record field defaults greater than the specified size.

Note: If a default has been specified for this field in any record, and the size of the default is *greater* than the new size, you must modify the record field separately.

Example

```
&ret = SetDBFieldLength(Field.OrgId, 10);
If (&ret = %MDA_Success) Then
   MessageBox(0, "Metadata Fn Status", 0, 0, "SetDBFieldLength succeeded");
Else
   MessageBox(0, "Metadata Fn Status", 0, 0, "SetDBFieldLength failed");
End-If;
```

You can also use this function with de-referenced parameters, as follows:

```
&ret = SetDBFieldLength(@("FIELD." | FS_CF_UPD_AET.FIELDNAME), FS_CF_UPD_AET.NEW_CF⇒
_LENGTH);
```

Related Links

"FieldLength" (PeopleTools 8.54: PeopleCode API Reference)

SetDBFieldNotUsed

Syntax

SetDBFieldNotUsed(**Field.***FieldName*, *NotUsed*)

Description

Use the SetDBFieldNotUsed function to specify whether a database field is used as a chart field or not.

SetDBFieldNotUsed does the following for a field:

- Specifies whether the field is included in the index when indexes are built for records that contain this field. The column always remains in the table associated with the record.
- Specifies that the field is ignored in Query.
- Specifies that the field is ignored in nVision.

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In addition, fields marked as Search Keys or List Box Items in the Application Designer that are set as not used do not display in search dialogs and list boxes.

Considerations Using this Function

This function is primarily intended for use during configuration time *only*, before active runtime usage is initiated. Using this function during active runtime is not, in general, supported. Changes to data definitions are *not* recognized on currently loaded component. In general, changes aren't recognized until the component is reloaded. Using this function to modify records in components that have not been loaded, and then loading those components will, while not changing indices, prevent Query and nVision from using the field, and may be used to key display of the field in pages.

Warning! These operations take place in a separate transaction from the page's save status: the initiation of any of these operations immediately changes the definitions, even if the page is subsequently cancelled.

Parameters

FieldName Specify the name of the field that you want to modify. This name must be prefixed by the reserved word **Field**.

NotUsed Specify whether this field is to be used as a chart field. This parameter takes a Boolean value: True, this field is not used, False, this field is used.

Returns

A constant value. The values are:

Value	*Description*
%MDA_Success	Function completed successfully.
%MDA_Failure	Function didn't complete successfully.
%MDA_FieldNotFound	The specified field wasn't found.

Example

```
&ret = SetDBFieldNotUsed(Field.OrgId, True);
If (&ret = %MDA_Success) Then
   MessageBox(0, "Metadata Fn Status", 0, 0, "SetDBFieldNotUsed succeeded");
Else
   MessageBox(0, "Metadata Fn Status", 0, 0, "SetDBFieldNotUsed failed");
End-If;
```

Related Links

"Understanding Bulk Operations" (PeopleTools 8.54: Application Designer Developer's Guide)

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SetDefault

Syntax

SetDefault([*recordname*.]*fieldname*)

Description

Use the SetDefault function to set a field to a null value, so that the next time default processing occurs, it is set to its default value: either a default specified in its record field definition or one set programmatically by PeopleCode located in a FieldDefault event. If neither of these defaults exist, the Component Processor leaves the field blank.

Note: This function remains for backward compatibility only. Use the SetDefault field class property instead.

Blank numbers correspond to zero on the database. Blank characters correspond to a space on the database. Blank dates and long characters correspond to NULL on the database. SetDefault gives each field data type its proper value.

See "SetDefault" (PeopleTools 8.54: PeopleCode API Reference).

Where to Use SetDefault

If a PeopleCode program or function executes the SetDefault built-in on a field that does *not* exist in the component buffer, the remainder of the program or function is skipped. In the case of a function, execution of the calling program continues with the next statement after the call to the function. However, if the program containing the SetDefault call is at the "top level", meaning that it was called directly from the component processor or application engine runtime, it exits.

Therefore, if you want to control the behavior of SetDefault, you should encapsulate any calls to this built-in function inside your own functions. This enables your overall programs to continue, whether or not the SetDefault succeeds.

Parameters

[recordname.]fieldname	Specify a field designating the fields that you want to set to its default value.

Returns

Optionally returns a Boolean value indicating whether the function executed successfully.

Example

This example resets the PROVIDER to its null value. This field is reset to its default value when default processing is next performed:

```
If COVERAGE_ELECT = "W" Then
   SetDefault(PROVIDER);
End-if;
```

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Related Links

SetDefaultAll
SetDefaultNext
SetDefaultPrior
"Default Processing" (PeopleTools 8.54: PeopleCode Developer's Guide)
"Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide)

SetDefaultAll

Syntax

SetDefaultAll([*recordname*.]*fieldname*)

Description

Use the SetDefaultAll function to set all occurrences of the specified *recordname.fieldname* within a scroll to a blank value, so that the next time default processing is run these fields are set to their default value, as specified by the record definition, or one set programmatically by PeopleCode located in a FieldDefault event. If neither of these defaults exist, the Component Processor leaves the field blank.

Note: This function remains for backward compatibility only. Use the SetDefault rowset method instead.

Related Links

"SetDefault" (PeopleTools 8.54: PeopleCode API Reference), "SearchDefault" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide)

Example

The following example sets the fields TO_CUR and CUR_EXCHNG_RT to their default values on every row of the scroll area where the PeopleCode is run:

```
SetDefaultAll(TO_CUR);
SetDefaultAll(CUR_EXCHNG_RT);
```

Related Links

SetDefault
SetDefaultNext
SetDefaultNextRel
SetDefaultPrior
SetDefaultPriorRel

SetDefaultNext

Syntax

SetDefaultNext([*recordname*.]*fieldname*)

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Description

Use the SetDefaultNext function to locate the next occurrence of the *recordname.fieldname* with the next effective date (and effective-sequence number if specified) and set the field to a blank value, so that the next time default processing is run this field will be set to its default value, as specified by the record definition, or one set programmatically by PeopleCode located in a FieldDefault event. If neither of these defaults exist, the Component Processor leaves the field blank.

SetDefaultNext is typically used to reset values within a scroll which are calculated within default PeopleCode based on a next value.

This function is valid only for effective-dated records. If a next record does not exist, then the statement is skipped.

Related Links

SetDefaultAll, SetDefaultNextRel, SetDefaultNextRel, SetDefaultPriorRel

SetDefaultNextRel

Syntax

```
SetDefaultNextRel(search_field, default_field)
```

Description

Use the SetDefaultNextRel function to locate the next occurrence of the *search_field*with the next effective date (and effective-sequence number if the record contains an effective-sequence number), then set the value of the specified *default_field*corresponding to the *search_field* to a blank value, so that the next time default processing is run this field will be set to its default value, as specified by the record definition, or one set programmatically by PeopleCode located in a FieldDefault event. If neither of these defaults exist, the Component Processor leaves the field blank.

This function is valid only for effective-dated records. If a next record does not exist, then the statement is skipped.

Related Links

SetDefault, SetDefaultAll, SetDefaultPrior, SetDefaultPriorRel

SetDefaultPrior

Syntax

```
SetDefaultPrior([recordname.]fieldname)
```

Description

Use the SetDefaultPrior function to locate the prior occurrence of the *recordname.fieldname* with the prior effective date (and effective-sequence number if specified), then set the field to a blank value, so that the next time default processing is run this field will be set to its default value, as specified by the record definition, or one set programmatically by PeopleCode located in a FieldDefault event. If neither of these defaults exist, the Component Processor leaves the field blank.

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SetDefaultPrior is typically used to reset values within a scroll which are calculated within FieldDefault PeopleCode based on a next value.

This function is valid only for effective-dated records. If a prior record does not exist, then the statement is skipped.

Related Links

SetDefault, SetDefaultAll, SetDefaultNext, SetDefaultNextRel, SetDefaultPriorRel

SetDefaultPriorRel

Syntax

```
SetDefaultPriorRel(search_field, default_field)
```

Description

Use the SetDefaultPriorRel function to locate the prior occurrence of the *search_field* with the prior effective date (and effective sequence-number if the record contains an effective-equence number) and then sets the specified *default_field* to a blank value, so that the next time default processing is run this field will be set to its default value, as specified by the record definition, or one set programmatically by PeopleCode located in a FieldDefault event. If neither of these defaults exist, the Component Processor leaves the field blank.

This function is valid only for effective-dated records. If a next record does not exist, then the statement is skipped.

Related Links

SetDefaultPriorRel, SetDefaultAll, SetDefaultNext, SetDefaultNextRel, SetDefaultPrior

SetDisplayFormat

Syntax

```
SetDisplayFormat(scrollpath, target_row,            [recordname.]fieldname,
display_format_name)
```

where *scrollpath* is:

```
[RECORD.level1_recname, level1_row, [RECORD.level2_recname, level2_row, ]]
RECORD.target_recname
```

To prevent ambiguous references, you can use **SCROLL.** *scrollname*, where *scrollname* is the same as the scroll level's primary record name.

Description

Usethe SetDisplayFormat function to change the display format of Custom Defined Fields at runtime. For instance, you may want to update a custom numeric display to reveal more decimal points.

Note: This function remains for backward compatibility only. Use the DisplayFormat field property instead.

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Related Links

"DisplayFormat" (PeopleTools 8.54: PeopleCode API Reference), "Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide), "Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

scrollpath	A construction that specifies a scroll level in the component buffer.
target_row	The row number of the target row.
[*recordname* .]*fieldname*	The name of the field to change. The field can be on scroll level one, two, or three of the active page. The *recordname* prefix is required if the call to SetDisplayFormat is not on the record definition *recordname*.
display_format_name	The name of the custom display format specified in the field definition.

Returns

Returns a Boolean value indicating whether the function executed successfully. The return value is not optional.

Related Links

GetStoredFormat

SetLabel

Syntax

```
SetLabel(scrollpath, target_row, [recordname.]fieldname, new_label_text)
```

Where *scrollpath* is:

```
[RECORD.level1_recname, level1_row, [RECORD.level2_recname, level2_row, ]]
RECORD.target_recname
```

To prevent ambiguous references, you can use **SCROLL.** *scrollname*, where *scrollname* is the same as the scroll level's primary record name.

Description

Use the SetLabel function to change the label text of a page field or grid column heading.

Note: This function remains for backward compatibility only. Use the Label field property instead.

You can't use this function to set labels longer than 100 characters. If you try to set a label of more than 100 characters, the label is truncated to 100 characters.

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Related Links

"Label" (PeopleTools 8.54: PeopleCode API Reference), "GetLongLabel" (PeopleTools 8.54: PeopleCode API Reference), "GetShortLabel" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide), "Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

scrollpath	A construction that specifies a scroll level in the component buffer.
target_row	The row number of the target row.
[*recordname* .]*fieldname*	The name of the field with the associated label text. The field can be on scroll level one, two, or three of the active page. The *recordname* prefix is required if the function call is not on the record definition *recordname*.
new_label_text	A String value specifying the new value for the field or grid column label.

Returns

Optionally returns a Boolean value indicating whether the function completed successfully.

Example

```
If training_loc = "HAW" then
     SetLabel(voucher_tbl.training_loc, "Hawaii Training Center");
End-if;
```

SetLanguage

Syntax

SetLanguage(*language_code*)

Description

Use the SetLanguage function to set the end user's current language preference to the specified *language_code*. *language_code* must be a valid translate value for the field LANGUAGE_CD. SetLanguage returns True if it is successful, and it returns False if it fails or an invalid value was passed. The new language preference is temporary, remaining in effect only until the user logs off, or until another call is made to SetLanguage.

Note: SetLanguage does *not* work in Signon PeopleCode, or with asynchronous messages.

Considerations Using SetLanguage With %Language

The value of %Language depends on the type of application:

- For online applications, %Language is the language code that the current component is using.

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- For non-online applications (such as in an application engine program), %Language is the language code of the user based on their language preference in their User Profile.

SetLanguage changes the default language *for the current session only*. The language change does not take effect until the component buffer is flushed and repopulated. For example, transferring to a new component causes the buffer to be flushed.

%Language reflects the value using SetLanguage after the function is executed.

SetLanguage changes the current user interface and data language simultaneously. If the Multi Language Entry personalization option is enabled, users can change the data language independently from the user interface language. There is no way to change the data language from PeopleCode without also changing the user interface language using SetLanguage.

Parameters

language_code	A valid language code, stored in the Translate table for the LANGUAGE_CD field.

Returns

Optionally returns a Boolean value indicating whether the function executed successfully. Returns False if an invalid language code is passed.

Example

The following example switches the language code and displays a message informing the end user of the change:

```
  If SetLanguage(LANGUAGE_CD) Then
      WinMessage(MsgGet(102, 5, "Language preference changed to ", LANGUAGE_CD));
   Else
      WinMessage(MsgGet(102, 6, "Error in setting language.  Language is currently ⇒
%1", %Language));
  End-if;
```

Related Links

%Language

SetMessageStatus

Syntax

SetMessageStatus(**Message.***MessageName*, *Status*)

Description

Use the SetMessageStatus function to specify whether a message is active or inactive.

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Parameters

MessageName Specify the name of the message definition that you want to change the status for. Prefix this name with the reserved word **Message.**

Status Specify the status for the message. Valid values are:

- %IB_Status_Active
- %IB_Status_InActive

Returns

A Boolean value: true if the status is set correctly, false otherwise.

Related Links

SetChannelStatus

"Understanding Managing Service Operations" (PeopleTools 8.54: Integration Broker)

SetNextPanel

Syntax

SetNextPanel(*panelname*)

Description

Use the SetNextPanel to specify the panel name to which the user will be transferred when selecting the NextPanel (F6) function or specifying it with the PeopleCode TransferPage function.

Note: The SetNextPanel function is supported for compatibility with previous releases of PeopleTools. New applications should use the SetNextPage function instead.

Related Links

SetNextPage

SetNextPage

Syntax

SetNextPage(*pagename*)

Description

Use the SetNextPage function to specify the page name to which the user is transferred when selecting the NextPage (ALT+6 and ENTER) function or specifying it with the PeopleCode TransferPage function.

SetNextPage validates that *pagename* is listed on current menu. This selection is cleared when the user transfers to a new page.

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Parameters

pagename A String equal to the name of the page as specified in the page definition.

Returns

Optionally returns a Boolean value indicating whether the function executed successfully.

Example

See AddKeyListItem.

```
ClearKeyListItem( );
AddKeyListItem(OPRID, OPRID);
AddKeyListItem(REQUEST_ID, REQUEST_ID);
SetNextPage("PAGE_2");
DoSave( );
TransferPage( );
```

The following example sets up and transfers the user to page JOB_DATA.

```
If SetNextPage(PAGE.JOB_DATA) Then
     TransferPage( );
End-if;
```

Related Links

TransferPage

SetPageFieldPageFieldName

Syntax

SetPageFieldPageFieldName(**Page.***PageName*, **Record.***RecordName*, **Field.***FieldName*, *PageFieldName*)

Description

Use the SetPageFieldPageFieldName function to add or change a page field name for a field. The page field name is set on the General tab of the page field properties. Changing a name to itself is not supported.

The first field on the page with the specified record name and field name is the field that's changed.

Considerations Using this Function

This function is intended for use during configuration time *only*, before active runtime usage is initiated. Using this function during active runtime is not supported. Changes to data definitions are *not* recognized on currently loaded component. In general, changes aren't recognized until the component is reloaded.

Warning! These operations take place in a separate transaction from the page's save status: the initiation of any of these operations immediately changes the definitions, even if the page is subsequently cancelled.

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Parameters

PageName Specify the page containing the field you want to change. This name must be prefixed by the reserved word **Page**.

RecordName Specify the record containing the field you want to change. This name must be prefixed by the reserved word **Record**.

FieldName Specify the name of the field that you want to modify. This name must be prefixed by the reserved word **Field**.

PageFieldName Specify the page field name that you want associated with the page field as a string.

Returns

A constant value. The values are:

Value	*Description*
%MDA_Success	Function completed successfully.
%MDA_Failure	Function didn't complete successfully.
%MDA_PageNotFound	The specified page wasn't found.
%MDA_PageFieldNotFound	The specified field wasn't found on the specified page.
%MDA_Duplicate	A second field by the same name was found on the page. Only the first page field name was changed.

Example

The following example adds a page field name to a page field.

```
&ret = SetPageFieldPageFieldName(Page.ABSENCE_HIST, Record.ABSENCE_HIST, Field.EMPL⇒
ID, "EMPLID")
```

The following example adds a page field name to a page field using dereferenced parameters.

```
&Pnl = "Page." | "ABSENCE_HIST";
&Rec = "Record." | "ABSENCE_HIST";
&Field = "Field." | "EMPLID";
&Name = "EMPLID"
&ret = SetPageFieldPageFieldName(@(&Pnl), @(&Rec), @(&Field), &Name);
```

Related Links

"Understanding Field Definitions" (PeopleTools 8.54: Application Designer Developer's Guide)

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SetPasswordExpired

Syntax

SetPasswordExpired(*NewValue*)

Description

Use the SetPasswordExpired function to set the password expired status for the current user. When the user's password expired flag is set to True, they can only access the page that allows them to change their password. The function returns the old value, that is, the value that represented the status of the flag before it was set to *NewValue*.

Parameters

NewValue	Specify a new value for the user's password expired flag. This parameter takes a Boolean value

Returns

A Boolean value: True if you've set the password expire flag to False, False if you've set the password expire flag to True.

Example

```
If %PasswordExpired Then
   &NewValue = SetPasswordExpired(True);
End-If;
```

Related Links

SwitchUser

%PasswordExpired

"PeopleSoft Online Security" (PeopleTools 8.54: Security Administration)

SetPostReport

Syntax

SetPostReport()

Description

Use the SetPostReport function to create a reference to a PostReport object. After you've created this object, you can assign values to its properties, then use the Put method to initiate the posting of the files to the Report Repository.

Parameters

None.

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Returns

A reference to a PostReport object.

Related Links

"PostReport Class Overview" (PeopleTools 8.54: PeopleCode API Reference)

SetRecFieldEditTable

Syntax

```
SetRecFieldEditTable(Record.RecordName, Field.FieldName, EditTable [, TableEditType])
```

Description

Use the SetRecFieldEditTable function to set the edit table value for a record field. This overwrites the value for the edit table for the record field. Use the SetEditTable Record method to just set the edit table value at runtime.

If you specify a null value for *EditTable*, and no value is specified for *TableEditType*, the table edit flag is turned off, that is, no prompt table is set for the record field.

Considerations Using this Function

This function is intended for use during configuration time *only*, before active runtime usage is initiated. Using this function during active runtime is not supported. Changes to data definitions are *not* recognized on currently loaded component. In general, changes aren't recognized until the component is reloaded.

Warning! These operations take place in a separate transaction from the page's save status: the initiation of any of these operations immediately changes the definitions, even if the page is subsequently cancelled.

Parameters

RecordName Specify the record containing the field you want to change. This name must be prefixed by the reserved word **Record**.

FieldName Specify the name of the field that you want to modify. This name must be prefixed by the reserved word **Field**.

EditTable Specify the name of the edit table record. This name must be prefixed by the reserved word **Record**. If you do not want to specify a record name, specify **Record.""**.

TableEditType Specify the type of edit table record to be associated with the record field. If you specify a value for *EditTable* (and not a null value) this parameter is required. You can specify either a constant or numeric value for this parameter. Valid values are:

Constant Value	*Numeric Value*	*Used for which types of fields*
%EditTableType_NoEdit	0	Character, Number, Date, Time, Datetime

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Constant Value	*Numeric Value*	*Used for which types of fields*
%EditTableType_Prompt	1	Character, Number, Date, Time, Datetime
%EditTableType_YesNo	2	Character
%EditTableType_Translate	3	Character fields with length 4 or less only
%EditTableType_OneZero	4	Number fields only

Returns

A constant value. The values are:

Value	*Description*
%MDA_Success	Function completed successfully.
%MDA_Failure	Function didn't complete successfully.
%MDA_RecordNotFound	The specified record wasn't found.
%MDA_RecFieldNotFound	The specified field wasn't found on the record.

Example

```
&ret = SetRecFieldEditTable(RECORD.AbsHist, Field.OrgId, RECORD.EmplId_Tbl, %EditTa⇒
bleType_Prompt);
If (&ret = %MDA_Success) Then
   MessageBox(0, "Metadata Fn Status", 0, 0, "SetRecFieldEditTable succeeded");
Else
   MessageBox(0, "Metadata Fn Status", 0, 0, "SetRecFieldEditTable failed");
End-If;
```

SetRecFieldKey

Syntax

SetRecFieldKey(**Record.***RecordName*, **Field.***FieldName*, *Key*)

Description

Use the SetRecFieldKey function to specify whether a field on a record is a key field or not.

Use the IsKey field class property to determine whether or not the field is already a key.

Note: Because performing this operation changes records, you must subsequently rebuild the project (alter tables).

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Considerations Using this Function

This function is intended for use during configuration time *only*, before active runtime usage is initiated. Using this function during active runtime is not supported. Changes to data definitions are *not* recognized on currently loaded component. In general, changes aren't recognized until the component is reloaded.

Warning! These operations take place in a separate transaction from the page's save status: the initiation of any of these operations immediately changes the definitions, even if the page is subsequently cancelled.

Parameters

RecordName Specify the record containing the field you want to change. This name must be prefixed by the reserved word **Record**.

FieldName Specify the name of the field that you want to modify. This name must be prefixed by the reserved word **Field**.

Key Specify whether the field is a key or not. This parameter takes a Boolean value: True, the field is a key field, False, it isn't.

Returns

A constant value. The values are:

Value	*Description*
%MDA_Success	Function completed successfully.
%MDA_Failure	Function didn't complete successfully.
%MDA_RecordNotFound	The specified record wasn't found.
%MDA_RecFieldNotFound	The specified field wasn't found on the record.

Example

```
&ret = SetRecFieldKey(RECORD.AbsHist, Field.OrgId, True);
If (&ret = %MDA_Success) Then
   MessageBox(0, "Metadata Fn Status", 0, 0, "SetRecFieldKey succeeded");
Else
   MessageBox(0, "Metadata Fn Status", 0, 0, "SetRecFieldKey failed");
End-If;
```

Related Links

"Understanding Field Definitions" (PeopleTools 8.54: Application Designer Developer's Guide)

SetReEdit

Syntax

SetReEdit(*reedit_on*)

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Description

Use the SetReEdit to switch re-edit mode on and off. When re-edit mode is on, definitional edits (such as translate table and prompt table edits), as well as FieldEdit PeopleCode, are run on each editable field in the component when the component is saved. If an error is found, the component data is not saved. SetReEdit can be called at any time during the life of the component before the SaveEdit event fires, and would typically be called in RowInit when other page settings are being initialized. When a component is started, re-edit mode is off by default.

SetReEdit is used primarily in financial applications, where transactions are sometimes brought into the database by non-online processes. When re-edit mode is on, the values read in during these transactions can be validated by simply bringing them up in the page and saving. Any errors are then reported, as if the end user had entered all of the data online.

Parameters

reedit_on	A Boolean value specifying whether to switch re-edit mode on or off. True turns re-edit mode on, False turns re-edit mode off.

Example

This example is used in RowInit PeopleCode to initialize component settings. After re-edit mode is on, field-level edits are re-applied when the component is saved.

```
SetReEdit(True);
```

SetSearchDefault

Syntax

SetSearchDefault([*recordname*.]*fieldname*)

Description

Use the SetSearchDefault function to set system defaults (default values set in record field definitions) for the specified field on search dialog boxes. It does not cause the FieldDefault event to fire.

Note: This function remains for backward compatibility only. Use the SearchDefault field property instead.

The system default occurs only once, when the search dialog box first starts, immediately after SearchInit PeopleCode. If the end user subsequently blanks out a field, the field is not reset to the default value. The related function ClearSearchDefault disables default processing for the specified field. SetSearchDefault is effective only when used in SearchInit PeopleCode programs.

Related Links

"SearchDefault" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide)

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Parameters

[*recordname* .]*fieldname*	The name of the target field, a search or alternate search key that is about to appear in the search dialog box. The *recordname* prefix is required if the call to SetSearchDefault is not on the record definition *recordname*.

Example

This example, from SearchInit PeopleCode turns on edits and defaults for the SETID field in the search dialog box:

```
SetSearchEdit(SETID);
SetSearchDefault(SETID);
```

Related Links

ClearSearchDefault

ClearSearchEdit

SetSearchDialogBehavior

SetSearchEdit

"Search Processing in Update Modes" (PeopleTools 8.54: PeopleCode Developer's Guide)

SetSearchDialogBehavior

Syntax

SetSearchDialogBehavior(*force_or_skip*)

Description

Use the SetSearchDialogBehavior function in SearchInit PeopleCode to set the behavior of search and add dialog boxes before a page is displayed, overriding the default behavior. There are two dialog behavior settings: skip if possible (0) and force display (1).

Skip if possible means that the dialog box is skipped if all of the following are true:

- All required keys have been provided (either by system defaults or by PeopleCode).
- If this an Add dialog box, then no duplicate key error results from the provided keys; if this error occurs, the processing resets to the default behavior.
- If this is a Search dialog box, then at least one row is returned based on the provided keys.

Force display means that the dialog box displays even if all required keys have been provided.

The default behavior of the search and add dialog boxes is force display.

Note: SetSearchDialogBehavior can only be used in SearchInit PeopleCode.

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Parameters

force_or_skip A Number equal to one of the following values:

- 0: sets the dialog behavior to skip if possible.
- 1: sets the dialog behavior to force display.

Returns

None.

Example

The following function call, which must occur in SearchInit PeopleCode, sets the dialog behavior to skip if possible.

```
SetSearchDialogBehavior(0);
```

Related Links

SetSearchDefault
SetSearchEdit
ClearSearchEdit
ClearSearchDefault
IsUserInRole
"Search Processing in Update Modes" (PeopleTools 8.54: PeopleCode Developer's Guide)

SetSearchEdit

Syntax

SetSearchEdit([*recordname*.]*fieldname*)

Description

Use the SetSearchEdit function to enable system edits (edits specified in the record field definition) for the specified [*recordname*.]*fieldname*, for the life of the search dialog box, or until the ClearSearchEdit function is called with that same field.

Note: This function remains for backward compatibility only. Use the SearchEdit field property instead.

See "SearchEdit" (PeopleTools 8.54: PeopleCode API Reference).

Using SetSearchEdit

In the Add mode search dialog, the following edits are performed when the end user clicks the Add button. In any other mode, the following edits are performed when the end user clicks the Search button:

- Formatting
- Required Field

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- Yes/No Table
- Translate Table
- Prompt Table

SetSearchEdit does not cause the FieldEdit, FieldChange, or SaveEdit PeopleCode events to fire during the search dialog.

You might use SetSearchEdit to control access to the system. For example, you can apply this function to the SETID field of a dialog box and require the end user to enter a valid SETID.

If you use this function in the SearchInit event, the search page options are limited to the "=" and "IN" operators.

Parameters

fieldname	The name of the search dialog field on which to enable field edits.

Returns

Returns a Boolean value indicating whether the function executed successfully.

Example

This example turns on edits and system defaults for the SETID field in the search dialog box:

```
SetSearchEdit(SETID);
SetSearchDefault(SETID);
```

Related Links

ClearSearchEdit
ClearSearchDefault
SetSearchDefault
SetSearchDialogBehavior
"Search Processing in Update Modes" (PeopleTools 8.54: PeopleCode Developer’s Guide)
"Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer’s Guide)

SetTempTableInstance

Syntax

SetTempTableInstance(*instance_number*)

Description

Use the SetTempTableInstance function to set the default temp table instance to the specified number for the processing of temporary tables. This default is used by all %Table meta-SQL references to temporary tables, and by all SQL operations. Generally, you use this function only when you’re trying to use any of the ScrollSelect functions, the Rowset class Select or SelectAll methods, the record class SQL methods (SelectByKey, Insert, and so on.), or any of the meta-SQL statements that use %Table (%InsertSelect,

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%InsertSelectWithLongs, %SelectAll, %Delete, and so on.) Generally, %Table should be used to override the default.

If you use this built-in within an Application Engine program, and the program uses a process-level instance on the request, the old instance value *must* be saved, then restored after you're finished using the new instance.

If you pass a zero for *instance_number*, the Fill method uses the physical table instance with no table append, for example, if the temporary table record is FI_INSTR_T, the physical table used is PS_FI_INSTR_T.

Parameters

instance_number Specify the instance number for the temporary tables.

Returns

Existing (or previous) instance number.

Example

To avoid interfering with other uses of temporary tables, you should only set the temporary table instance for your process, then set it back to the default. For example:

```
/* Set temp table instance */
&PrevInstNum = SetTempTableInstance(&NewInstNum);
/* use the temporary table */
.  .  .
/* Restore the temp table instance */
SetTempTableInstance(&PrevInstNum);
```

Related Links

"%Table" (PeopleTools 8.54: Application Engine)

SetThemeId

Syntax

SetThemeId(*theme_ID*)

Description

Use the SetThemeId function to set the theme ID for the page or component so that proper theme style sheets get loaded.

Important! Use this function within fluid applications only.

Parameters

theme_ID Specifies the theme ID as a string value.

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Returns

None.

Example

```
SetThemeId(DEFAULT_THEME_TANGERINE_ALT);
```

Related Links

"Assembling Branding Themes" (PeopleTools 8.54: Portal Technology)

SetTracePC

Syntax

SetTracePC(*n*)

Description

Use the SetTracePC function to control PeopleCode trace settings programmatically. This is useful if you want to isolate and debug a single program or part of a program.

Note: If you're using an API with the Session class, use the Trace Setting class properties instead of this function.

You can also set options prior to starting a PeopleSoft Application Designer session using the Trace tab of PeopleSoft Configuration Manager.

Tracing PeopleCode creates and writes data to a trace file that it shares with SQL tracing; SQL trace and PeopleCode trace information are both output to the file in the order of execution. The trace file uses a file name and location specified in the Trace page of PeopleSoft Configuration Manager. If no trace file is specified in PeopleSoft Configuration Manager, the file is set by default to DBG1.TMP in your Windows TEMP directory. If you specify only a file name, and no directory is specified, the file is written to the directory you're running PeopleSoft Application Designer from. This file is cleared each time you log on and can be opened in a text editor while you are in a PeopleSoft Application Designer session, so if you want to save it, you must print it or copy it from your text editor.

Trace timings are given in the elapsed time in seconds, but reported in microseconds and include CPU time and "cycles". The CPU time measurement, depending on platform, may not be very precise. The "cycles" is a measure of how much PeopleCode the program is executing. It counts loops around the PeopleCode interpreter. This cycle count is only updated when some tracing or debugging is going on. So, for example, turning the trace off then back on again will skip some cycles.

Note: Oracle recommends using a value of %TracePC_Statements (2048) instead of %TracePC_Functions (1) and %TracePC_List (2).

Related Links

"Trace Setting Class Properties" (PeopleTools 8.54: PeopleCode API Reference), "Specifying Trace Settings" (PeopleTools 8.54: System and Server Administration)

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Parameters

options Either a number or a constant value that sets trace options. Calculate *options* by either totaling the numbers associated with any of the following options or by adding constants together:

Numeric Value	***Constant Value***	***Description***
0	%TracePC_None	Set trace off.
1	%TracePC_Functions	Provide a trace of the program as it is executed. This implies options 64, 128, and 256 described in the following rows.
2	%TracePC_List	Provide a listing of the entire program.
4	%TracePC_Assigns	Show the results of all assignments made to variables.
8	%TracePC_Fetches	Show the values fetched for all variables.
16	%TracePC_Stack	Show the contents of the internal machine stack. This option is normally used for debugging the PeopleCode language and not PeopleCode programs.
64	%TracePC_Starts	Provide a trace showing when each program starts.
128	%TracePC_ExtFuncs	Provide a trace showing the calls made to each external PeopleCode routine.
256	%TracePC_IntFuncs	Provide a trace showing the calls made to each internal PeopleCode routine.
512	%TracePC_ParamsIn	Show the values of the parameters to a function.
1024	%TracePC_ParamsOut	Show the values of the parameters as they exist at the return from a function.
2048	%TracePC_Statements	Show each statement as it's executed (and do not show statements on branches not taken.)

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Numeric Value	*Constant Value*	*Description*
32768	%TracePC_Evaluations	Start the timing tracing of the start and end of top-level program evaluations. This is similar to the Trace Start of Programs, but only traced when the call isn't directly from PeopleCode. It traces recursive evaluations, like what happens when a ScrollSelect in a RowInit event causes another recursive RowInit to fire during the outer RowInit. If both Trace Evaluations (32768) and Trace Start of Programs (64) are on (32768+64 = 32832) then all routine calls (functions, methods, get, set for both internal and external PeopleCode to PeopleCode calls) are traced. The resulting trace file can be processed by a program to add up the timings for each routine and separate the in-routine timings from those for called routines.

Returns

None.

Example

The following example is part of a SavePreChange PeopleCode program that sets PeopleCode trace based on page field settings:

```
DEBUG_CODE = 0;
If DEBUG_TRACE_ALL = "Y" Then
   DEBUG_CODE = DEBUG_CODE + 1
End-if;
If DEBUG_LIST = "Y" Then
   DEBUG_CODE = DEBUG_CODE + 2
End-if;
If DEBUG_SHOW_ASSIGN = "Y" Then
   DEBUG_CODE = DEBUG_CODE + 4
End-if;
If DEBUG_SHOW_FETCH = "Y" Then
   DEBUG_CODE = DEBUG_CODE + 8
End-if;
If DEBUG_SHOW_STACK = "Y" Then
   DEBUG_CODE = DEBUG_CODE + 16
End-if;
If DEBUG_TRACE_START = "Y" Then
   DEBUG_CODE = DEBUG_CODE + 64
End-if;
If DEBUG_TRACE_EXT = "Y" Then
   DEBUG_CODE = DEBUG_CODE + 128
End-if;
If DEBUG_TRACE_INT = "Y" Then
   DEBUG_CODE = DEBUG_CODE + 256
End-if;
If DEBUG_SHOW_PARMS = "Y" Then
```

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```
   DEBUG_CODE = DEBUG_CODE + 512
End-if;
If DEBUG_SHOW_PARMSRT = "Y" Then
   DEBUG_CODE = DEBUG_CODE + 1024
End-if;
SetTracePC(DEBUG_CODE);
```

The following example sets Trace PC to show a listing of all the calls made to external routines as well as calls made to internal routines:

```
SetTracePC(384);
```

The following is identical to the previous example:

```
SetTracePC(%TracePC_ExtFuncs + %TracePC_IntFuncs);
```

If you need a thorough trace, you can use a value of 3596. That combines the following:

Value	*Description*
2048	Show each statement as it's executed
1024	Show the values of the parameters as they return
512	Show the values of the parameters to a function
8	Show the values fetched for all variables
4	Show the results of all assignments

Related Links

SetTraceSQL

"Understanding Database Level Auditing" (PeopleTools 8.54: Data Management)

SetTraceSQL

Syntax

SetTraceSQL(*options*)

Description

Use the SetTraceSQL function to programmatically control the Trace SQL utility, enabling you to control TraceSQL options during the course of program execution.

Note: If you're using an API with the Session class, use the Trace Setting class properties instead of this function.

When you interact with PeopleTools, SQL statements transparently perform actions such as page construction. The Trace SQL utility creates and updates a file showing the SQL statements generated by PeopleTools.

You can set options prior to starting a PeopleTools session using the Trace tab of PeopleSoft Configuration Manager.

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Trace SQL creates and writes data to a trace file that it shares with Trace PeopleCode; Trace SQL and Trace PeopleCode information are both output to the file in the order of execution. The trace file uses a file name and location specified in the Trace page of PeopleSoft Configuration Manager. If no trace file is specified in PeopleSoft Configuration Manager, the file is set by default to DBG1.TMP in your Temp directory. If you specify only a file name, and no directory is specified, the file is written to the directory you're running Tools from. This file is cleared each time you log on and can be opened in a text editor while you are in a PeopleTools session, so if you want to save it, you must print it or copy it from your text editor.

Related Links

"Trace Setting Class Properties" (PeopleTools 8.54: PeopleCode API Reference), "Understanding PeopleSoft Configuration Manager" (PeopleTools 8.54: System and Server Administration)

Parameters

options Either a Number value or a constant that sets trace options. Calculate *options* by either totaling the numbers associated with any of the following options, or adding constants together:

Numeric Value	*Constant Value*	*Description*
0	%TraceSQL_None	No output
1	%TraceSQL_Statements	SQL statements
2	%TraceSQL_Variables	SQL statement variables (binds)
4	%TraceSQL_Connect	SQL connect, disconnect, commit and rollback
8	%TraceSQL_Fetch	Row Fetch (indicates that it occurred and the return code - not the data fetched.)
16	%TraceSQL_MostOthers	All other API calls except Set Select Buffers
32	%TraceSQL_SSB	Set Select Buffers(identifies the attributes of the columns to be selected)
64	%TraceSQL_DBSpecific	Database API-specific calls
128	%TraceSQL_Cobol	COBOL Statement Timings
256	%TraceSQL_SybBind	Sybase Bind Information
512	%TraceSQL_SybFetch	Sybase Fetch Information
1024	%TraceSQL_DB2400Server	Manager information for DB2/400 only
4096	%TraceSQL_ManagerInfo	All manager information.

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Numeric Value	*Constant Value*	*Description*
8192	%TraceSQL_AppEngineInfo	Trace Application Engine information.

Note: PeopleSoft recommends setting options to 3 to provide most essential information without performance degradation. Options 8 and 32 greatly increase the volume of the trace and will noticeably degrade performance.

Returns

None.

Example

The following example switches off Trace SQL:

```
SetTraceSQL(0);
```

The following is identical to the previous example:

```
SetTraceSQL(%TraceSQL_None);
```

The following example sets Trace SQL to typical settings that won't degrade performance:

```
SetTraceSQL(3);
```

The following is identical to the previous example:

```
SetTraceSQL(%TraceSQL_Statements + %TraceSQL_Variables);
```

Related Links

SetTracePC

"Understanding Database Level Auditing" (PeopleTools 8.54: Data Management)

SetTransferAttributes

Syntax

SetTransferAttributes(*enable_animation*, [*add_to_history*], [*back_label*], [*user_data*], [*qry_string_array*])

Description

Use the SetTransferAttributes function to set certain fluid-related properties prior to executing a transfer to a different page or component.

Important! Use this function within fluid applications only.

Important! SetTransferAttributes does not work in accessibility mode.

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Parameters

enable_animation Specifies a Boolean value indicating whether to animate the transfer.

The default value is False.

add_to_history Specifies a Boolean value whether to track the transfer (for the Back button).

The default value is True.

back_label Specifies a custom label for the Back button as a string value.

user_data This parameter is currently not used. If it must be specified in the function call, use the empty string, "".

qry_string_array Specifies an array of array of string containing name/value pairs to be used as query string parameters constituting the history record.

Returns

None.

Example

The following example sets animation to true, keeps the current content in the history, sets the back button's label to "Search Results," and then invokes the Transfer built-in function to complete the transfer:

```
SetTransferAttributes( True, True, "Search Results");
Transfer( False, MenuName.QE_NUI, BarName.USE, ItemName.QE_NUI_ED_BOOK, Page.QE_BOO⇒
K, "U", QE_BOOK.QE_BOOK_NAME);
```

The following example sets and uses an array of array of string containing name/value pairs to be used as query string parameters constituting the history record and then invokes the ViewURL built-in function to complete the transfer:

```
import EP_FUNCTIONS:DocumentPageTitle;
import EP_NUI_FUNCTIONS:EEmasterlist;
...
Component EP_NUI_FUNCTIONS:EEmasterlist &Component_MasterList;
...
SQLExec(SQL.EP_SEL_ROLE_DESCR, &EP_GBLKEYS_WRK.EP_ROLE.Value, &RoleDescr);
&Gbl_PageTitle = GetText("APPR_MAIN1_TITLE", " ", " ", " ", &EP_GBLKEYS_WRK.EP_USER⇒
_ROLE.Value, " ", &RoleDescr, " ", " ", " ", " ");
&Cmp_PageTitle = &Gbl_PageTitle;

/*  Transfer to WorkCenter  */
Local array of array of string &qs = CreateArray(CreateArray("XFER_TAB_NUMBER", Str⇒
ing(&Component_MasterList.GetTabNumber())));
SetTransferAttributes( False, True, "", "", &qs);

&url = GenerateComponentPortalURL(%Portal, %Node, MenuName.ROLE_EMPLOYEE, "GBL", Co⇒
mponent.EP_APPR_MAIN, "", "");
&EndPos = Find("?", &url, 0);
If &EndPos = 0 Then
   &url = &url | "?replaceCurrentTopWindow=y&cmd=uninav";
Else
   &url = &url | "&replaceCurrentTopWindow=y&cmd=uninav";
```

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```
End-If;

rem %Response.RedirectURL(&url);
ViewURL(&url);
```

Related Links

Transfer
TransferExact
TransferPage
ViewContentURL
ViewURL

SetupScheduleDefnItem

Syntax

SetupScheduleDefnItem(*ScheduleName, JobName*)

Description

Use the SetupScheduleDefnItem function to create a ProcessRequest object. After you've created this object, you can assign values to its properties then specific methods created to either schedule or print info for a Scheduled Jobset.

Parameters

ScheduleName	Specify the process type as a string. Values depend on the Scheduled Jobset defined for your system.
JobsName	Specify the name of the job name as a string.

Returns

A reference to a ProcessRequest object.

Example

```
Local ProcessRequest &MYRQST;

&MYRQST = SetupScheduleDefnItem("SampleSchedule", &MyJobName);
```

Related Links

"Understanding Process Request Classes" (PeopleTools 8.54: PeopleCode API Reference)

SetUserOption

Syntax

SetUserOption(*Level, OPTN, Value*)

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Description

Use the SetUserOption to set the default value for the specified option.

Parameters

Level	Specify the option category level as a string.
OPTN	Specify the option as a string.
Value	Specify the value of the option.

Returns

A Boolean value: True, if the function completed successfully, False otherwise.

Related Links

GetUserOption

"Understanding Personalizations" (PeopleTools 8.54: Security Administration)

ShouldSuppressCREF

Syntax

ShouldSuppressCREF(*CREF_URL*)

Description

Use the ShouldSuppressCREF function to return a Boolean value indicating whether the URL should be displayed in the particular conditional navigation context. If the return value is True, the URL should not be shown in the current context; when the return value is False, the URL can be shown in the current context.

Parameters

CREF_URL	Specifies the URL for a content reference as a String value.

Returns

A Boolean value.

Example 1

```
If Not ShouldSuppressCREF(&My_Cref.AbsoluteContentURL) Then
   /* URL is allowed to be shown */

End-If;
```

Example 2

```
If (&CrefCollection.Find(&cref.Name) = 0 And
      Not ShouldSuppressCREF(&cref.AbsoluteContentURL)) Then
   &ch = &ch | %This.generateCrefHTML(&cref, &CREF_ID_PREFIX, "pthnavcref", &crefIm⇒
```

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```
gHTML, False);
   &CrefCollection.Push(&cref.Name);
End-If;
```

Related Links

"Understanding Conditional Navigation" (PeopleTools 8.54: Portal Technology)

Sign

Syntax

Sign(*n*)

Description

Use the Sign function to determine the sign of a number.

Parameters

n	A number value of which to determine the sign.

Returns

Returns a number value equal to:

- 1 if *n* is positive
- 0 if *n* is 0
- -1 if *n* is negative

Example

The example sets &NUMSIGN to 1:

```
&NUMSIGN = Sign(25);
```

Related Links

Abs

Sin

Syntax

Sin(*angle*)

Description

Use the Sin function to calculate the sine of the given angle (opposite / hypotenuse).

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Parameters

angle	A value in radians.

Returns

A real number between -1.00 and 1.00.

Example

The following example returns the sine of an angle measuring 1.2 radians:

```
&MY_RESULT = Sin(1.2);
```

Related Links

Acos
Asin
Atan
Cos
Cot
Degrees
Radians
Tan

SinglePaymentPV

Syntax

SinglePaymentPV(*int_rate*, *n_per*)

Description

Use the SinglePaymentPV function to calculate the future value of a single monetary unit after a specified number of periods at a specified interest rate.

Parameters

int_rate	A number representing the interest rate at which value is accrued per period.
n_per	A number specifying the number of periods on which to base the calculated value.

Returns

Returns a number value equal to the value of the unit after *n_per* periods at an interest rate of *int_rate* per period.

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Example

The example calculates &PMT as .857338820301783265:

```
&PMT = SinglePaymentPV(8, 2);
```

Related Links

UniformSeriesPV

SortScroll

Syntax

SortScroll(*level*, *scrollpath*, *sort_fields*)

Where *scrollpath* is:

[**Record.***level1_recname*, [**Record.***level2_recname*,] **Record.***target_recname*

and where *sort_fields* is a list of field specifiers in the form:

[*recordname*.]*field_1*, *order_1* [, [*recordname*.]*field_2*, *order_2*]. . .

Description

The SortScroll function programmatically sorts the rows in a scroll area on the active page. The rows can be sorted on one or more fields.

Note: This function remains for backward compatibility only. Use the Sort rowset method instead.

The type of sort done by this function, that is, whether it is a linguistic or binary sort, is determined by the Sort Order Option on the PeopleTools Options page.

Related Links

"Sort" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

level	Integer specifying the level of the scroll to sort. It can be 1, 2, or 3.
scrollpath	A construction that specifies a scroll area in the component buffer.
sort_fields	A list of field and order specifiers which act as sort keys. The rows in the scroll area are sorted by the first field in either ascending or descending order, then by the second field in either ascending or descending order, and so on.
[*recordname.*]*field_n*	Specifies a sort key field in *target_recname*. The recordname prefix is required if the call to SortScroll is in a record other than *target_recname*.

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order_n A single-character string. "A" specifies ascending order; "D" specifies descending order.

Returns

Optionally returns a Boolean value indicating whether the function executed successfully.

Example

The first example repopulates a scroll in a page programmatically by first flushing its contents, selecting new contents using ScrollSelect, then sorting the rows in ascending order by EXPORT_OBJECT_NAME:

```
Function populate_scrolls;
   ScrollFlush(Record.EXPORT_OBJECT);
   ScrollSelect(1, Record.EXPORT_OBJECT, Record.EXPORT_OBJECT,
               "where export_type = :EXPORT_TYPE_VW.EXPORT_TYPE");
   SortScroll(1, Record.EXPORT_OBJECT, EXPORT_OBJECT.EXPORT_OBJECT_NAME, "A");
End-function;
```

The second example sorts the rows on scroll level one by primary and secondary key fields:

```
SortScroll(1,Record.EN_BOM_COMPS,EN_BOM_COMPS.SETID,"A",
   EN_BOM_CMOPS.INV_ITEM_ID,"A");
```

Related Links

HideScroll
RowScrollSelect
RowScrollSelectNew
ScrollSelect
ScrollSelectNew
UnhideScroll
"PeopleTools Options" (PeopleTools 8.54: System and Server Administration)

Split

Syntax

Split(*string, separator*)

Description

Use the Split function to *convert* a string into an array of strings by looking for the string *separator* in the given string.

Note: Split does not split an array.

If *separator* is omitted, a blank is used.

If *separator* is a null string ("""), the string is split into single characters.

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If *separator* is the last character in the string, you will not get an empty string. For example, in the following code, &array only has a value of 2:

```
&test = "value1:value2:";

&array = Split(&test, ":");
```

Parameters

string	The string to be converted into an array
separator	The character used for dividing the string.

Returns

Returns a reference to the array.

Example

The following code produces in &AS the array ("This", "is", "a", "simple", "example.").

```
&STR = "This is a simple example.";

&AS = Split(&STR);
```

Related Links

CreateArray
CreateArrayRept
"Understanding Arrays" (PeopleTools 8.54: PeopleCode API Reference)

SQLExec

Syntax

SQLExec({*sqlcmd* | **SQL.***sqlname*}, [*bindexprs* [, *outputvars*]])

where *bindexprs* is a list of expressions, one for each *:n* reference within *sqlcmd* or the text found in the SQL defintion *sqlname,* in the form:

inexpr_1 [, *inexpr_2*]. . .

and where *outputvars* is a list of variables, record fields, or record object references, one for each column selected by the SQL command, in the form:

out_1 [, *out_2*]. . .

Description

Use the SQLExec function to execute a SQL command from within a PeopleCode program by passing a SQL command string. The SQL command bypasses the Component Processor and interacts with the database server directly. If you want to delete, insert, or update a single record, use the corresponding PeopleCode record object method.

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If you want to delete, insert, or update a series of records, all of the same type, use the CreateSQL or GetSQL functions, then the Execute SQL class method.

Note: SQLExec opens a new database cursor each time it executes.

Limitation of SQLExec SELECT Statement

SQLExec can only Select a single row of data. If your SQL statement (or your **SQL**.*sqlname* statement) retrieves more than one row of data, SQLExec sends only the first row to its output variables. Any subsequent rows are discarded. This means if you want to fetch only a single row, SQLExec can perform better than the other SQL functions, because only a single row is fetched. If you need to SELECT multiple rows of data, use the CreateSQL or GetSQL functions and the Fetch SQL class method. You can also use ScrollSelect or one of the Select methods on a rowset object to read rows into a (usually hidden) work scroll.

Note: The PeopleSoft record name specified in the SQL SELECT statement must be in uppercase.

Limitations of SQLExec UPDATE, DELETE, and INSERT Statements

SQLExec statements that result in a database update (specifically, UPDATE, INSERT, and DELETE) can only be issued in the following events:

- SavePreChange
- WorkFlow
- SavePostChange
- FieldChange

Remember that SQLExec UPDATEs, INSERTs, and DELETEs go directly to the database server, not to the Component Processor (although SQLExec can look at data in the buffer using bind variables included in the SQL string). If a SQLExec assumes that the database has been updated based on changes made in the component, that SQLExec can be issued only in the SavePostChange event, because before SavePostChange none of the changes made to page data has actually been written back to the database.

Setting Data Fields to Null

SQLExec does *not* set Component Processor data buffer fields to NULL after a row not found fetching error. However, it does set fields that aren't part of the Component Processor data buffers to NULL. Work record fields are also reset to NULL.

Using Meta-SQL in SQLExec

Different DBMS platforms have slightly different formats for dates, times, and date/times; and PeopleSoft has its own format for these data types as well. Normally the Component Processor performs any necessary conversions when platform-specific data types are read from the database into the buffer or written from the buffer back to the database.

When a SQLExec statement is executed, these automatic conversions do not take place. Instead, you need to use meta-SQL functions inside the SQL command string to perform the conversions. The basic types of meta-SQL functions are:

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- General functions that expand at runtime to give you lists of fields, key fields, record fields, and so on. %InsertSelect or %KeyEqual are typical examples.
- In functions that expand at runtime into platform-specific SQL within the WHERE clause of a SELECT or UPDATE statement or in an INSERT statement. %DateIn is a typical example.
- Out functions that expand at runtime into platform-specific SQL in the main clause of SELECT statement. %DateOut is a typical example.

Following is an example of a SQL SELECT using both and "in" and "out" metastring:

```
select emplid, %dateout(effdt) from PS_CAR_ALLOC a where car_id = '" | &REGISTRATIO⇒
N_NO | "' and plan_type = '" | &PLAN_TYPE | "' and a.effdt = (select max (b.effdt) ⇒
from PS_CAR_ALLOC b where a.emplid=b.emplid and b.effdt <= %currentdatein) and star⇒
t_dt <= %currentdatein and (end_dt is null or end_dt >= %currentdatein)";
```

See Understanding Meta-SQL.

Bind Variables in SQLExec

Bind variables are references within the *sqlcmd* string to record fields listed in *bindvars*. Within the string, the bind variables are integers preceded by colons:

```
 :1, :2,. . .
```

The integers need not in numerical order. Each of these :*n* integers represents a field specifier in the *bindvars* list, so that :1 refers to the first field reference in *bindvars*, :2 refers to the second field reference, and so on.

For example, in the following statement:

```
SQLExec("Select sum(posted_total_amt)
   from PS_LEDGER
   where deptid between  :1 and :2", DEPTID_FROM, DEPTID_TO, &SUM);
```

:1 is replaced by the value contained in the record field DEPTID_FROM; :2 is replaced by the value contained in the record field DEPTID_TO.

Note the following points:

- Bind variables can be used to refer to long character (longchar) fields. Long character fields are represented in PeopleCode as strings. You should use %TextIn() meta-SQL to ensure these fields are represented correctly on all database platforms.
- Bind variables can be passed as parameters to meta-SQL functions, for example:

  ```
  SQLExec(". . .%datein(:1). . .", START_DT, &RESULT)
  ```

- If a bind variable :*n* is a Date field that contains a null value, SQLExec replaces all occurrences of ":n" located before the first WHERE clause with "NULL" and all occurrences of "= :n" located after the first WHERE to "IS NULL".

Inline Bind Variables in SQLExec

Inline bind variables are included directly in the SQL string in the form:

```
:recordname.fieldname
```

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The following example shows the same SQLExec statement with standard bind variables, then with inline bind variables:

```
Rem without Inline Bind Variables;
SQLExec("Select sum(posted_total_amt)
   from PS_LEDGER
   where deptid between  :1 and :2", deptid_from, deptid_to, &sum);

Rem with Inline Bind Variables;
SQLExec("Select sum(posted_total_amt)
   from PS_LEDGER
   where deptid between  :LEDGER.DEPTID_FROM
   and :LEDGER.DEPTID_TO",  &sum);
```

Inline bind variables, like all field and record references enclosed in strings, are considered by PeopleTools as a "black box". If you rename records and fields, PeopleTools does not update record and field names that are enclosed in strings as inline bind variables. For this reason, you should use standard bind variable in preference to inline bind variables wherever standard bind variables are available (as they are in SQLExec).

Prior to PeopleTools 8.0, PeopleCode replaced runtime parameter markers in SQL strings with the associated literal values. For databases that offer SQL statement caching, a match was never found in the cache so the SQL had to be re-parsed and re-assigned a query path. However, with PeopleTools 8.0, PeopleCode passes in bind variable parameter markers. For databases with SQL caching, this can offer significant performance improvements.

If you use inline bind variables, they will still be passed as literals to the database. However, if you convert them to bind variables, you may see significant performance improvements.

Output Variables in SQLExec

If you use SQLExec to Select a row of data, you must place the data into variables or record fields so that it can be processed. You list these variables or fields, separated by commas in the *output* part of the statement following the *bindvars* list. Supply one variable or field for each column in the row of data retrieved by SQLExec. They must be listed in the same order in which the columns will be selected.

The number of output variables cannot exceed 64.

Selecting Columns with Leading Spaces

When you execute a select SQL statement that returns data from a column that has leading spaces, the leading spaces will be removed from the column in the resulting text.

Using Arrays for Bind Variables

You can now use a parameter of type Array of Any in place of a list of bind values or in place of a list of fetch result variables. This is generally used when you do not know how many values are needed until the code runs.

For example, suppose that you had some PeopleCode that dynamically (that is, at runtime) generated the following SQL statement:

```
&Stmt = "INSERT INTO PS_TESTREC (TESTF1, TESTF2, TESTF3, TESTF4, . . . N) VALUES (:
1, :2, %DateTimeIn(:3), %TextIn(:4), . . .N)";
```

Suppose you have placed the values to be inserted into an Array of Any, say &AAny:

```
&AAny = CreateArrayAny("a", 1, %DateTime, "abcdefg", . . .N);
```

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You can execute the insert by:

```
SQLExec(&Stmt, &AAny);
```

Because the Array of Any promotes to absorb any remaining select columns, it must be the last parameter for the SQL object Fetch method or (for results) SQLExec. For binding, it must be the only bind parameter, as it is expected to supply all the bind values needed.

SQLExec Maintenance Issues

SQLExec statements are powerful, but they can be difficult to upgrade and maintain. If you use a SQL string passed in the command, it's considered a "black box" by PeopleCode. If field names or table names change during an upgrade, table and field references within the SQL string are not updated automatically. For these reasons, you should use a SQL definition and the meta-SQL statements provided in PeopleTools 8.0, instead of typing in a SQL string.

Generally, you should use SQLExec only when you must interact directly with the database server and none of the ScrollSelect functions, or record class methods (which are somewhat easier to maintain) will serve your purpose effectively.

Be Careful How You Use It

SQLExec performs any SQL statement the current Access ID has database privileges to perform. This normally includes SELECT, INSERT, UPDATE, and DELETE statements against application data tables. However, you can set up users to use Access IDs with more privileges (typically, AccessIDs have full database administrator authority). In such cases, the user could alter the structure of tables using SQLExec, or even drop the database.

Warning! The PeopleSoft application will not stop the end user from doing anything that the Access ID has privileges to do on the database server, so be very careful what you write in a SQLExec statement.

Parameters

sqlcmd* | SQL.*sqlname

Specify either a String containing the SQL command to be executed or a reference to an existing SQL definition. This string can include bind variables, inline bind variables, and meta-SQL.

bindexprs

A list of expressions, each of which corresponds to a numeric (:*n*) bind variable reference in the SQL command string. It can also be a reference to a record object or an array of Any containing all the bind values. See Bind Variables in SQLEXEC for more details.

outputvars

A list of PeopleCode variables or record fields to hold the results of a SQL SELECT. There must be one variable for each column specified in the SELECT statement. It can also be a reference to a record object or an Array of Any that contains all the selected values.

Returns

Optionally returns a Boolean value indicating whether the function executed successfully.

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Note: Not returning a row is not considered an error. If this is a concern, consider using the %SqlRows system variable after your call to SQLExec.

Example

The following example, illustrates a SELECT statement in a SQLExec:

```
SQLExec("SELECT COUNT(*) FROM PS_AE_STMT_TBL WHERE AE_PRODUCT = :1 AND AE_APPL_ID =
 :2 AND AE_ADJUST_STATUS = 'A' ", AE_APPL_TBL.AE_PRODUCT, AE_APPL_TBL.AE_APPL_ID,
 AE_ADJ_AUTO_CNT);
```

Note the use of bind variables, where :1 and :2 correspond to AE_APPL_TBL.AE_PRODUCT and AE_APPL_TBL.AE_APPL_ID. AE_ADJ_AUTO_CNT is an output field to hold the result returned by the SELECT.

The next example is also a straightforward SELECT statement, but one which uses the %datein meta-SQL function, which expands to appropriate platform-specific SQL for the :5 bind variable:

```
 SQLExec("SELECT 'X', AE_STMT_SEG FROM PS_AE_STMT_B_TBL where AE_PRODUCT = :1 AND
 AE_APPL_ID = :2 AND AE_SECTION = :3 AND DB_PLATFORM = :4 AND EFFDT = %datein(:5)
 AND AE_STEP = :6 AND AE_STMT_TYPE = :7 AND AE_SEQ_NUM = :8", AE_STMT_TBL.AE_
PRODUCT, AE_STMT_TBL.AE_APPL_ID, AE_STMT_TBL.AE_SECTION, AE_STMT_TBL.DB_PLATFORM,
 AE_STMT_TBL.EFFDT, AE_STMT_TBL.AE_STEP, AE_STMT_TBL.AE_STMT_TYPE, &SEG, &EXIST,
 &STMT_SEG);
```

This last example (in SavePreChange PeopleCode) passes an INSERT INTO statement in the SQL command string. Note the use of a date string this time in the %datein meta-SQL, instead of a bind variable:

```
SQLExec("INSERT INTO PS_AE_SECTION_TBL ( AE_PRODUCT, AE_APPL_ID, AE_SECTION, DB_
PLATFORM, EFFDT, EFF_STATUS, DESCR, AE_STMT_CHUNK_SIZE, AE_AUTO_COMMIT, AE_
SECTION_TYPE ) VALUES ( :1, :2, :3, :4, %DATEIN('1900-01-01'), 'A', ' ', 200,
 'N', 'P' )", AE_APPL_TBL.AE_PRODUCT, AE_APPL_TBL.AE_APPL_ID, AE_SECTION, DB_
PLATFORM);
```

In the following example, a SQLExec statement is used to select into a record object.

```
Local Record &DST;

&DST = CreateRecord(RECORD.DST_CODE_TBL);
&DST.SETID.Value = GetSetId(FIELD.BUSINESS_UNIT, DRAFT_BU,
RECORD.DST_CODE_TYPE, "");
&DST.DST_ID.Value = DST_ID_AR;
SQLExec("%SelectByKeyEffDt(:1,:2)", &DST, %Date, &DST);
/* do further processing using record methods and properties */
```

Related Links

CreateSQL

FetchSQL

GetSQL

StoreSQL

ScrollSelect

"Understanding SQL Class" (PeopleTools 8.54: PeopleCode API Reference)

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Sqrt

Syntax

SQRT(*n*)

Description

Use the Sqrt function to calculate the square root of a number.

Parameters

n A number of which you want to find the square root.

Returns

Returns a number equal to the positive square root of *n*. If *n* is a negative number, Sqrt displays an error.

Example

The examples return 15, 4, and 8.42615, respectively:

```
&NUM = Sqrt(225);
&NUM = Sqrt(16);
&NUM = Sqrt(71);
```

StartWork

Syntax

StartWork()

Description

Use the StartWork function to mark the start of a unit of work.

Once this function is executed, no updates to the database are allowed until a *unit of work* is completed. A unit of work is completed by an event completing (such as a FieldChange event) in which case all the Updates are saved.

A unit of work can also be completed using the CommitWork built-in function.

If a SQL failure occurs anytime during the unit of work, after the StartWork function has been called and before the unit of work completes, all updates are rolled back, up to when the StartWork function was executed.

This function can be used for nested component interface calls, such that if the lower level component interface fails, any database changes made by the calling component interface can be rolled back.

Parameters

None.

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Returns

None.

Example

```
&oCI = &SESSION.GetCompIntfc(CompIntfc.CUSTOMER);

   If &oCI <> Null Then
      .
      .
      .
      For &i = 1 To &rsCustomer.RowCount
         &recCust = &rsCustomer(&Transaction).GetRecord(Record.CUSTOMER);
         StartWork();
         If &oCI.Create() Then
             rem ***** Set CI Properties *****;
      .
         .
         .
             If Not &oCI.Save() Then
                 rem ***** Error Handling *****;
                 .....
             End-If;
         End-If;

         rem ***** CommmitWork ensures that all transactions between     *****;
         rem ***** StartWork and CommitWork get committed to the database *****;

         CommitWork();

         &oCI.Cancel();
      .
      .
      .
      End-For;
   End-If
```

Related Links

"Understanding Component Interface Class" (PeopleTools 8.54: PeopleCode API Reference)

StopFetching

Syntax

StopFetching()

Description

The StopFetching function is called during Row Select processing, during which rows of data that have been selected down from the database can be filtered as they are added to the component. This function is valid only in RowSelect PeopleCode. If StopFetching is called without DiscardRow, it adds the current row to the component, then stops adding any more rows. If StopFetching is called with DiscardRow, the system skips the current row and stops adding rows to the component.

StopFetching has the same functionality as the Error function in the RowSelect event. The anomalous behavior of Error is supported for compatibility with previous releases of PeopleTools.

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Note: Row Select processing is used infrequently, because it is more efficient to filter out rows of data using a search view or an effective-dated record before the rows are selected down to the client from the database server.

In row select processing, the following actions occur:

1. The Component Processor checks for more rows to add to the component.
2. The Component Processor initiates the RowSelect event, which triggers any RowSelect PeopleCode associated with the record field or component record.

   This enables PeopleCode to filter rows using the StopFetching and DiscardRow functions. StopFetching causes the system to add the current row to the component, and then to stop adding rows to the component. DiscardRow filters out a current row, and then continues the row select process.
3. If neither the StopFetching nor DiscardRow function is called, the Component Processor adds the rows to the page and checks for the next row.

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The process continues until there are no more rows to add to the component buffers. If both StopFetching and DiscardRow are called, the current row is not added to the page, and no more rows are added to the page.

Image: Row Select Processing Logic

The following flowchart shows this row select processing logic:

Returns

None.

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Related Links

DiscardRow

Error

"Row Select Processing" (PeopleTools 8.54: PeopleCode Developer's Guide)

StoreSQL

Syntax

```
StoreSQL(sqlstring, [SQL.]sqlname[, dbtype[, effdt [, ownerid [, description]]]])
```

Description

Use the StoreSQL function to write the given *sqlstring* value to a SQL definition, storing it under the name *sqlname*, with the database type *dbtype* and the effective date *effdt*. If *sqlname* is a literal name, it must be in the form **SQL**.*sqlname* or in quotes ("*sqlname*").

To specify a generic statement, that is, one that is overridden by any other matching statement, specify *dbtype* as `Default` and *effdt* as the null date (or Date(19000101).

You must commit all database changes prior to using this function. This is to avoid locking critical Tools tables and hence freezing all other users. You receive a runtime error message if you try to use this function when there are pending database updates, and your PeopleCode program terminates. You need to commit any database updates prior to using this function. The CommitWork PeopleCode function has been enhanced to allow this.

Parameters

sqlstring

Specify the SQL string to be saved as the SQL definition. This parameter takes a string value.

sqlname

Specify the name of the SQL definition to be created. This is either in the form **SQL**.*sqlname* or a string value giving the *sqlname.*

dbtype

Specify the database type to be associated with the SQL definition. This parameter takes a string value. If *dbtype* isn't specified or is null ("""), it is set by default to the current database type (the value returned from the %DbName system variable.)

Values for *dbtype* are as follows. These values are not case-sensitive:

- APPSERVER
- DB2
- DB2UNIX
- INFORMIX
- MICROSOFT

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- ORACLE
- SYBASE

Note: Database platforms are subject to change.

effdt Specify the effective date to be associated with the SQL definition. If *effdt* isn't specified, it is set by default to the current as of date, that is, the value returned from the %AsOfDate system variable.

ownerid Specify the four character ownerId associated with this SQL statement. If not specified, no ownerId is associated.

description Specify the description text associated with this SQL statement.

Returns

None.

Example

The following code stores the select statement as a SQL definition under the name SELECT_BY_EMPLID, for the current database type and effective as of the current as of date:

```
StoreSQL("%Select(:1) where EMPLID = :2", SQL.SELECT_BY_EMPLID);
```

Related Links

CreateSQL
DeleteSQL
FetchSQL
GetSQL
SQLExec
CommitWork
%DbName
%AsOfDate
"Understanding SQL Class" (PeopleTools 8.54: PeopleCode API Reference)

String

Syntax

String(*value*)

Description

Use the String function to convert any non-string data type (except an object data type) to a string.

Normally the Component Processor automatically handles data type conversions. However, for some operations, such as comparisons, you want to specify the data type explicitly. Assume, for example, that you have two fields FIELD_I and FIELD_J containing number values 5000 and 10000. As character

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fields, 10000 is less than 5000 (because the first character in 10000 is less than the first character in 5000). As numbers, however, 10000 is of course greater than 5000.

Note: Due to the internal representation of numbers, sometimes String represents numbers differently. If you want to control exactly how a number is represented, use the NumberToString function.

Parameters

value A value of any data type other than an object data type, to be converted to its String representation.

Returns

Returns a String value representing *value*.

Example

To force the comparison of the two fields as strings, you could use:

```
if string(FIELD_1) > string(FIELD_2). . .
```

You can use the String function with a field object as follows:

```
&DATE = GetRecord(RECORD.DERIVED_HR).GetField(FIELD.EFFDT);
&STR = String(&DATE.Value);
```

Related Links

Char
Exact
Find
Left
Substring
Value
NumberToString

StripOffHTMLTags

Syntax

StripOffHTMLTags(*HTML_text*)

Description

Use the StripOffHTMLTags function to strip all HTML tags in an HTML-formatted string. The function removes all tags in the form of “<text>” and returns plain text.

If the HTML string was generated by a rich text editor, any “<” and “>” characters in the original text are not stripped because the rich text editor generates "<" as "<", and ">" as ">".

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Parameters

HTML_text	A String consisting of HTML-formatted text.

Returns

String

Substitute

Syntax

Substitute(*source_text*, *old_text*, *new_text*)

Description

Use the Substitute function to replace every occurrence of a substring found in a string with a new substring. To replace text that occurs in a specific location in a text string use the Replace function.

Parameters

source_text	A String in which you want to replace substrings.
old_text	A String equal to the substring of *source_text* you want to replace. A tilde character (~) used in the *old_text* parameter stands for an arbitrary number of white spaces. For example, the following substitution: `Substitute("2003* 0723* * * * ~", "* ~", "~")` produces the result `2003~0723~~~~~`, *not* the result `2003* 0723* * * ~`.
new_text	A String with which to replace occurrences of *old_text* in *source_text*.

Returns

Returns a String resulting from replacing every occurrence of *old_text* found in *source_text* with *new_text*.

Example

The following example changes "Second Annual Conference" to "Third Annual Conference":

```
&newstr = Substitute("Second Annual Conference","Second","Third");
```

The next example sets &newstr to "cdcdcd":

```
&newstr = Substitute("ababab", "ab", "cd");
```

Related Links

Replace

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Substring

Syntax

Substring(*source_str*, *start_pos*, *length*)

Description

Use the Substring function to extract a substring of a specified number of characters beginning at a specified location in a source string. If the string contains Unicode non-BMP characters, each code unit of the surrogate pair is counted as a separate character, care should be taken not to split a surrogate pair using Substring.

If you know the exact length of *source_str*, and that it is null terminated, you can set *length* to 1 plus the exact length of *source_str* to get everything from *start_pos* to the end.

Parameters

source_str	A String from which to extract a substring.
start_pos	A number representing the character position in *source_str* where the substring starts, starting at 1.
length	A number specifying the number of characters in the substring.

Returns

Returns a String equal to a substring *length* characters long beginning at character *start* of *source_str*.

Example

This example sets &PAGE_NAME to the first eight characters of the name of the current page:

```
&PAGE_NAME = Substring(%page,1,8);
```

Related Links

Char
Exact
Find
Left
Right
String
Substringb

Substringb

Syntax

Substringb(*source_str*, *start_pos*, *length*)

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Description

Note: This function has been deprecated and is no longer supported.

SwitchUser

Syntax

SwitchUser(*UserID, Password, AuthToken , ExtAuthInfo*)

Note: *Password* is *not* encrypted: it is passed as a string.

Description

Use the SwitchUser function to change the user ID of the current user logged onto the PeopleSoft system.

Note: SwitchUser changes the Portal user rather than the content specific user. This means it changes the user ID in *all* databases to which the user is connected.

Note: If you use SwitchUser with the *AuthToken* parameter, the local Integration Broker node must have a *Password* or *Certificate* Authentication option. If the local Integration Broker node authentication option is *None*, SwitchUser always fails and returns false.

The SwitchUser function might be used as follows. Suppose there is a special user ID in the system called REGIST. REGIST *only* has access to the self-registration component. The self-registration component has logic that asks the user a list of questions and information based on data in the database. Are you a customer, vendor, or employee? Enter your customer name. Enter other information related to this customer account (such as information only this customer knows or information this customer just received from a workflow email). After the program verifies the information, create a User ID for this customer. After the user ID is created, the program should take the user directly into their transaction without having to logoff, by using SwitchUser.

Considerations Using SwitchUser

You must never call SwitchUser from Signon PeopleCode. SwitchUser calls Signon PeopleCode, therefore creating an infinite loop.

Do not use SwitchUser in Application Engine or in asynchronous notification PeopleCode.

Do not use SwitchUser in a Component Interface. The user is only switched for the duration of the service call. During the next call, the user reverts to the original user.

Do not try to use the PeopleCode Debugger with the SwitchUser function. Only the first user is logged into the PeopleCode Debugger. Once the switch occurs, any breakpoints, logging, and so on, are no longer executed.

Parameters

UserID Specify the User ID to be started. This parameter takes a string value.

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Password Specify the Password for this User ID. This parameter takes a string value.

Note: *Password* is *not* encrypted: it is passed as a string.

AuthToken Specify a single signon authentication token used to authenticate the user. If you are authenticating the user by Userid and password, specify a NULL value for this parameter, that is, two quotation marks with no blank space between them ("""). If you specify a token, and the token is valid, SwitchUser switches to the User ID embedded in the token. All other parameters are ignored if a token is used. This parameter takes a string value.

ExtAuthInfo Specify binary data (encoded as a base64 string) used as additional input to authenticate the user. If your application doesn't use external authentication information, specify a NULL value for this parameter, that is, two quotation marks with no blank space between them ("""").

Returns

A Boolean value: True if user ID is switched successfully, False otherwise.

Example

The most common use of SwitchUser specifies only a Userid and Password. If the SwitchUser function executes successfully, you should check to see if the password for the new user id has expired.

```
If Not SwitchUser("MYUSERID", "MYPASSWORD", "", "") Then
   /* switch failed, do error processing */
Else
   If %PasswordExpired Then
      /* application specific processing for expired passwords */
   End-If;
End-If;
```

Related Links

SetPasswordExpired

%UserId

%PasswordExpired

"PeopleSoft Online Security" (PeopleTools 8.54: Security Administration)

SyncRequestXmlDoc

Syntax

SyncRequestXmlDoc(*&XmlDoc*, **Message.***MessageName* [, **Node.***NodeName*])

Description

Use the SyncRequestXmlDoc function to send a synchronous message that is based on an XmlDoc object.

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Note: This function has been deprecated and remains for backward compatibility only. Use the IntBroker class SyncRequest method instead.

See "SyncRequest" (PeopleTools 8.54: PeopleCode API Reference).

The XmlDoc object must already be instantiated and populated. The message included in the function call should be an *unstructured* message, that is, one that isn't based on a hierarchical record structure.

If you want to handle an XmlDoc as a Message object, you need to define a Message object with a hierarchical structure and migrate the data in the XmlDoc object into the Message object.

Parameters

&XmlDoc	Specify an already instantiated and populated XmlDoc object that you want to send as a synchronous message.
MessageName	Specify an already existing nonrowset-based message, prefixed with the reserved word **Message**.
NodeName	Specify a node. This is for Sender Specified Routing (SSR) prefixed with the reserved word **Node**. The node defines the target for the published message.

Returns

A reference to an XmlDoc object that is the response.

Example

```
Local XmlDoc &reqdoc, &respdoc;

. . .

&respdoc = SyncRequestXmlDoc(&reqdoc, Message.MY_MESSAGE, Node.MY_NODE);
```

Related Links

PublishXmlDoc

"SyncRequest" (PeopleTools 8.54: PeopleCode API Reference)

"Understanding Managing Messages" (PeopleTools 8.54: Integration Broker)

PeopleCode Built-in Functions and Language Constructs: T

The PeopleCode built-In functions and language constructs beginning with the letter T are listed in alphabetical order within this topic.

Related Links

Typographical Conventions

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Tan

Syntax

Tan(*angle*)

Description

Use the Tan function to calculate the tangent of the given angle (opposite / adjacent).

Parameters

angle	A value in radians.

Note: In theory, values of *angle* such that *angle* mod pi = pi/2 are not valid for this function, because inputs approaching such values produce results that tend toward infinity. In practice, however, no computer system can represent such values exactly. Thus, for example, the statement `Tan(Radians(90))` produces a number close to the largest value PeopleCode can represent, rather than an error.

Returns

A real number.

Example

The following example returns the tangent of an angle measuring 1.2 radians:

```
&MY_RESULT = Tan(1.2);
```

Related Links

Acos
Asin
Atan
Cos
Cot
Degrees
Radians
Sin

throw

Syntax

throw *expression*

Description

Use the **throw** statement to throw an exception. This can be used to create your own exceptions, instead of using ones generated by the system.

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Parameters

expression Specify the exception object that you want to throw. This can either be an already defined and created exception object, or one that you create with the Throw statement.

Returns

None.

Example

```
Local Exception &ex;

Function t1(&i As integer) Returns number

   Local number &res = &i / 0;

End-Function;

Function t2
   throw CreateException(2, 160, "'%1' doesn't support property or method '%2'", "S⇒
omeClass", "SomeMethod");
End-Function;

try

   /* This will cause a divide by 0 leading to an exception             */
   /* This code will never be caught since t1(2) will resume execution  */
   /* in the catch block below. It is here to show how an exception can */
   /* be thrown directly bythe PeopleCode itself.                       */

   t2();

   Local number &res = t1(2);
catch Exception &caught
   MessageBox(0, "", 0, 0, "Caught exception: " | &caught.ToString());
end-try;
```

Related Links

CreateException

try

"Understanding Managing Messages" (PeopleTools 8.54: Integration Broker)

Time

Syntax

Time(*n*)

Description

Use the Time function to derive a Time value from a Number value. Use it to assign values to Time fields and variables, since Time values cannot be directly represented as constants.

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Parameters

n	A Number in the form HHMMSS[.SSSSSS], representing a time to a precision of up to .000001 second, based on a 24-hour clock.

Returns

Returns a Time value based on the number *n*.

Example

The example sets &START_TIME to 12:34:56.123456:

```
&START_TIME = Time(123456.123456);
```

Related Links

Date
DateTimeValue
Time3
TimeValue

Time3

Syntax

Time3(*hours*, *mins*, *secs*)

Description

Use the Time3 function to derive a Time value from three supplied numbers. It can be used to assign values to Time fields and variables, since Time values cannot be directly represented as constants.

Parameters

hours	A Number in the form HH between 00 and 23, representing hours on a 24-hour clock.
mins	A Number in the form MM between 00 and 59, representing minutes of the hour.
secs	A Number in the form SS[.SSSSSS], between 00 and 59. 999999, representing seconds.

Returns

Returns a Time value based equal to the sum of the three input values representing hours, minutes, and seconds, to a precision of .000001 second.

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Example

The example sets &START_TIME to 11.14.09.300000:

```
&START_TIME = Time3(11,14,9.3);
```

Related Links

Date3
DateTime6
Time
TimeValue

TimePart

Syntax

TimePart(*datetime_val*)

Description

Use the TimePart function to derive the time component of a DateTime value.

Parameters

datetime_val	A DateTime value from which to extract the time component.

Returns

Returns a Time value.

Example

The example set &T to 15.34.35.000000:

```
&DT = DateTimeValue("12/13/1993 3:34:35 PM");
&T = TimePart(&DT);
```

Related Links

DatePart
Hour
Minute
Second

TimeToTimeZone

Syntax

TimeToTimeZone(*OldTime, SourceTimeZone, DestinationTimeZone*)

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Description

Use the TimeToTimeZone function to convert a time field from the time specified by *SourceTimeZone* to the time specified by *DestinationTimeZone*.

Considerations Using this Function

This function should generally be used in PeopleCode, *not* for displaying time. If you take a time value, convert it from base time to client time, then try to display this time, depending on the user settings, when the time is displayed the system might try to do a *second* conversion on an already converted time. This function could be used as follows: suppose a user wanted to check to make sure a time was in a range of times on a certain day, in a certain timezone. If the times were between 12 AM and 12PM in EST, these resolve to 9 PM and 9AM PST, respectively. The start value is *after* the end value, which makes it difficult to make a comparison. This function could be used to do the conversion for the comparison, in temporary fields, and not displayed at all.

Parameters

OldTime Specify the time value to be converted.

SourceTimeZone Specify the time zone that *OldTime* is in. Values are:

timezone - a time zone abbreviation or a field reference to be used for converting *OldTime*.

Local - use the local time zone for converting *OldTime.*

Base - use the base time zone for converting *OldTime*.

DestinationTimeZone Specify the time zone that you want to convert *OldTime* to. Values are:

timezone - a time zone abbreviation or a field reference to be used for converting *OldTime*.

Local - use the local time zone for converting *OldTime.*

Base - use the base time zone for converting *OldTime*.

Returns

A converted time value.

Example

The following example TESTTM is a time field with a value 01/01/99 10:00:00. This example converts TESTTM from Eastern Standard Time (EST) to Pacific Standard Time (PST).

```
&NEWTIME = TimeToTimeZone(TESTTM, "EST", "PST");
```

&NEWTIME is a time variable with a value of 7:00:00AM.

Related Links

ConvertDatetimeToBase

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ConvertTimeToBase
FormatDateTime
IsDaylightSavings
DateTimeToTimeZone
TimeZoneOffset
"PeopleTools Options" (PeopleTools 8.54: System and Server Administration)

TimeValue

Syntax

```
TimeValue(time_str)
```

Description

Use the TimeValue function to calculate a Time value based on an input string. This function can be used to assign a value to a Time variable or field using a string constant, since a Time value cannot be represented with a constant.

Parameters

time_str	A string representing the time. It can either be in the form HH:MM:SS.SSSSSS, based on a 24-hour clock, or in the form HH:MM:SS *indicator*, where *indicator*is either AM or PM.

Returns

Returns a Time value based on *time_str*.

Example

The example sets &START_TIME to 12.13.00.000000:

```
&START_TIME = TimeValue("12:13:00 PM");
```

Related Links

DateTimeValue
DateValue

TimeZoneOffset

Syntax

```
TimeZoneOffset(DateTime {[, timezone | "Base" | "Local"]})
```

Description

Use the TimeZoneOffset function to generate a time offset for *datetime*. The offset represents the relative time difference to GMT. If no other parameters are specified with *datetime*, the server's base time zone is used.

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Parameters

datetime	Specify the DateTime value to be used for generating the offset.
***timezone* | Local | Base**	Specify a value to be used with *datetime*. The values are: *timezone* - a time zone abbreviation or a field reference to be used with *datetime*. **Local** - use the local time zone with *datetime.* **Base** - use the base time zone with *datetime*.

Returns

An offset string of the following format:

```
Shh:mm
```

where

S	is + or -, with + meaning East of Greenwich
hh	is the hours of offset
mm	is the minutes of offset

Related Links

ConvertDatetimeToBase
ConvertTimeToBase
FormatDateTime
IsDaylightSavings
DateTimeToTimeZone
TimeToTimeZone

TotalRowCount

Syntax

```
TotalRowCount(scrollpath)
```

Where *scrollpath* is:

```
[RECORD.level1_recname, level1_row, [RECORD.level2_recname, level2_row, ]
RECORD.target_recname
```

To prevent ambiguous references, you can use **SCROLL.** *scrollname*, where *scrollname* is the same as the scroll level's primary record name.

Description

Use the TotalRowCount function to calculate the number of rows (including rows marked as deleted) in a specified scroll area of a page.

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Note: This function remains for backward compatibility only. Use the RowCount rowset property instead.

Rows that have been marked as deleted remain accessible to PeopleCode until the database has been updated; that is, all the way through SavePostChange.

TotalRowCount is used to calculate the upper limit of a For loop if you want the loop to go through rows in the scroll that have been marked as deleted. If the logic of the loop does not need to execute on deleted rows, use ActiveRowCount instead.

Related Links

ActiveRowCount, For, "RowCount" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide), "Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

scrollpath	A construction that specifies a scroll level in the component buffer.

Returns

Returns a Number equal to the total rows (including rows marked as deleted) in the target scroll.

Example

The example uses TotalRowCount to calculate the limiting value on a For loop, which loops through all the rows in the scroll area:

```
&ROW_COUNT = TotalRowCount(RECORD.BUS_EXPENSE_PER, CurrentRowNumber(1),
  RECORD.BUS_EXPENSE_DTL);
for &I = 1 to &ROW_COUNT
 /* do something with row &I that has to be done to deleted as well as active rows ⇒
*/
end-for;
```

Related Links

ActiveRowCount
CopyRow
CurrentRowNumber
FetchValue
For

Transfer

Syntax

```
Transfer(new_instance, MENUNAME.menuname, BARNAME.barname, ITEMNAME.menu_itemname,
PAGE.component_item_name, action [, keylist] [, AutoSearch])
```

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In which *keylist* is a list of field references in the form:

```
[recordname.]field1 [, [recordname.]field2].
. .
```

Or in which *keylist* is a list of field references in the form:

```
&RecordObject1 [, &RecordObject2].  .  .
```

Description

Use the Transfer function to close the current page and transfers the end user to another page, either within the current component or in another component. Transfer can either start a new instance of the application and transfer to the new page there, or close the old page and transfer to the new one in the same instance of PeopleTools.

Note: The Transfer function cannot be used with an Internet script or an Application Engine program.

Transfer is more powerful than the simpler TransferPage, which permits a transfer only within the current component in the current instance of PeopleTools. However, any variables declared as component do *not* remain defined after using the Transfer function, whether you're transferring within the same component or not.

You can use Transfer from a secondary page (either with or without using a pop-up menu) *only* if you're transferring to a separate instance of a component. You *cannot* use Transfer from a secondary page if you're not transferring to a separate instance of a component.

If you provide a valid search key for the new page in the optional *keylist*, the new page opens directly, using the values provided from *keylist* as search key values. A valid key means that enough information is provided to uniquely identify a row: not all of the key values need to be provided. If no key is provided, or if the key is invalid, or if not enough information is provided to identify a unique row, the search dialog box displays, enabling the end user to search for a row.

Note: If Force Search Processing is specified in Application Designer for the component, the search dialog box always displays, whether the keylist is provided or not.

If *barname*+*itemname*+*component_item_name* is an invalid combination, an error message displays explaining that there were invalid transfer parameters.

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In the *component_item_name* parameter, make sure to pass the component item name for the page, not the page name.

Image: Determining the component item name

The component item name is specified in the component definition, in the Item Name column on the row corresponding to the specific page, as shown here. In this example, the PERSONAL_DATA page name appears twice: once with an item name of PERSONAL_DATA_1, and once with the item name of PERSONAL_DATA_2.

Differences Between Transfer and TransferExact

When you do a transfer, the first thing the system checks is whether all the key field values for the target component are provided.

If all the keys aren't provided, the search page is displayed. In this scenerio, TransferExact and Transfer are the same.

If all the keys are provided, a Select is done against the search record for that component using those keys.

- If you use the Transfer function, a LIKE operator is used in the Where clause of that Select for each key.
- If you use the TransferExact fuction, the equals operator is used in the Where clause for each key. Using equals allows the database to take full advantage of key indexes for maximum performance.

See TransferExact.

Restrictions on Use With a Component Interface

This function is ignored (has no effect) when used by a PeopleCode program that’s been called by a Component Interface.

Restrictions on Use With SearchInit Event

You can't use this function in a SearchInit PeopleCode program.

Considerations for the Transfer Function and Catching Exceptions

Using the Transfer function inside a try-catch block does *not* catch PeopleCode exceptions thrown in the new component. Starting a new component starts a brand new PeopleCode evaluation context. Exceptions are only caught for exceptions thrown within the *current* component.

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In the following code example, the catch statement only catches exceptions thrown in the code *prior to* the DoModal, but not any exceptions that are thrown within the new component:

```
/* Set up transaction */
If %CompIntfcName = "" Then
   try
      &oTrans = &g_ERMS_TransactionCollection.GetTransactionByName(RB_EM_WRK.DESCR)⇒
;
      &sSearchPage = &oTrans.SearchPage;
      &sSearchRecord = &oTrans.SearchRecord;
      &sSearchTitle = &oTrans.GetSearchPageTitle();
      If Not All(&sSearchPage, &sSearchRecord, &sSearchTitle) Then
         Error (MsgGetText(17834, 8081, "Message Not Found"));
      End-If;
      &c_ERMS_SearchTransaction = &oTrans;

      /* Attempt to transfer to hidden search page with configurable filter */
      &nModalReturn = DoModal(@("Page." | &sSearchPage), &sSearchTitle, - 1, - 1);
   catch Exception &e
      Error (MsgGetText(17834, 8082, "Message Not Found"));
   end-try;
```

Related Links

TransferPage, "Understanding Menus" (PeopleTools 8.54: Application Designer Developer's Guide), "Understanding Component Definitions" (PeopleTools 8.54: Application Designer Developer's Guide)

Parameters

new_instance

Set this parameter to True to start a new application instance, or to False to use the current window and replace the page already displayed.

Menuname

The name of the menu where the page is located prefixed with the reserved word **MENUNAME**.

Barname

The name of the menu bar where the page is located, prefixed with the reserved word **BARNAME**.

menu_itemname

The name of the menu item where the page is located, prefixed with the reserved word **ITEMNAME**.

component_item_name

The component item name of the page to be displayed on top of the component when it displays. The component item name is specified in the component definition. This parameter must be prefixed with the keyword **PAGE**.

Action

Uses a single-character code as in %Action. Valid actions are "A" (add), "U" (update), "L" (update/display all), "C" (correction), and "E" (data entry).

Keylist

An optional list of field specifications used to select a unique row at level zero in the page you are transferring to, by matching keys in the page you are transferring from. It can also be an already instantiated record object.

If a record object is specified, any field of that record object *that is also a field of the search record* for the destination component is added to keylist. The keys in the *fieldlist* must uniquely

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identify a row in the "to" page search record. If a unique row is not identified, or if Force Search Processing is selected for the component, the search dialog box appears.

If the *keylist* parameter is not supplied then the destination component's search key must be found as part of the source components level 0 record buffer.

AutoSearch

Specify whether an automatic search on the target search page is executed after the transfer. This means the search results are already shown without the end user having to click the Search button. This parameter takes a Boolean value: True, do an automatic search. The default value is False (that is, the user has to click the Search button).

Returns

None.

Example

The example starts a new instance of PeopleTools and transfers to a new page in Update mode. The data in the new page is selected by matching the EMPLID field from the old page.

```
Transfer(true, MENUNAME.ADMINISTER_PERSONNEL, BARNAME.USE, ITEMNAME.  PERSONAL_DATA⇒
, PAGE.PERSONAL_DATA_1, "U");
```

The following example is used with workflow.

```
Local Record &WF_WL_DEFN_VW, &MYREC, &PSSTEPDEFN;

If All(WF_WORKLIST_VW.BUSPROCNAME) Then

   &BPNAME = FetchValue(WF_WORKLIST_VW.BUSPROCNAME, CurrentRowNumber());
   &WLNAME = FetchValue(WF_WORKLIST_VW.WORKLISTNAME, CurrentRowNumber());
   &INSTANCEID = FetchValue(WF_WORKLIST_VW.INSTANCEID, CurrentRowNumber());

   &WF_WL_DEFN_VW = CreateRecord(RECORD.WF_WL_DEFN_VW);
   &PSSTEPDEFN = CreateRecord(RECORD.PSSTEPDEFN);

   SQLExec("select %List(SELECT_LIST, :1) from %Table(:1) where Busprocname = :2 an⇒
d Worklistname = :3", &WF_WL_DEFN_VW, &BPNAME, &WLNAME, &WF_WL_DEFN_VW);

   SQLExec("select %List(SELECT_LIST, :1) from %Table(:1) where Activityname = :2 a⇒
nd Stepno = 1 and Pathno = 1", &PSSTEPDEFN, &WF_WL_DEFN_VW.ACTIVITYNAME.Value, &PSS⇒
TEPDEFN);

   Evaluate &PSSTEPDEFN.DFLTACTION.Value
   When = 0
      &ACTION = "A";
   When = 1
      &ACTION = "U";
   When-Other
      &ACTION = "U";
   End-Evaluate;

   &MYREC = CreateRecord(@("RECORD." | &WF_WL_DEFN_VW.WLRECNAME.Value));

   SQLExec("Select %List(SELECT_LIST, :1) from %Table(:1) where Busprocname = :2 an⇒
d Worklistname = :3 and Instanceid = :4", &MYREC, &BPNAME, &WLNAME, &INSTANCEID, &M⇒
YREC);
```

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```
   Transfer( True, @("MENUNAME." | &PSSTEPDEFN.MENUNAME.Value), @("BARNAME." | &PSS⇒
TEPDEFN.BARNAME.Value), @("ITEMNAME." | &PSSTEPDEFN.ITEMNAME.Value), @("PAGE." | &P⇒
SSTEPDEFN.PAGEITEMNAME.Value), &ACTION, &MYREC);

   End-if;
```

Related Links

TransferPage
DoModalComponent
TransferExact

TransferExact

Syntax

```
TransferExact(new_instance, MENUNAME.menuname, BARNAME.barname,
ITEMNAME.menu_itemname, PAGE.component_item_name, action [, keylist] [, AutoSearch])
```

where *keylist* is a list of field references in the form:

```
[recordname.]field1 [, [recordname.]field2].
. .
```

OR

```
&RecordObject1 [, &RecordObject2].  .  .
```

Description

Use the TransferExact function to close the current page and transfers the user to another page, either within the current component or in another component. TransferExact can either start a new instance of the application and transfer to the new page there, or close the old page and transfer to the new one in the same instance of PeopleTools.

Note: The TransferExact function cannot be used with an internet script or an application engine program.

TransferExact is more powerful than the simpler TransferPage, which permits a transfer only within the current component in the current instance of PeopleTools. However, any variables declared as Component do *not* remain defined after using the TransferExact function, whether you're transferring within the same component or not.

You can use TransferExact from a secondary page (either with or without using a pop-up menu) *only* if you're transferring to a separate instance of a component. You *cannot* use TransferExact from a secondary page if you're not transferring to a separate instance of a component.

If you provide a valid search key for the new page in the optional *keylist*, the new page opens directly, using the values provided from *keylist* as search key values. A valid key means that enough information is provided to uniquely identify a row: not all of the key values need to be provided. If no key is provided, or if the key is invalid, or if not enough information is provided to identify a unique row, the search dialog box displays, enabling the end user to search for a row.

Note: If Force Search Processing is specified in Application Designer for the component, the search dialog box always displays, whether the keylist is provided or not.

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If *barname+itemname+component_item_name* is an invalid combination, an error message displays explaining that there were invalid transfer parameters.

In the *component_item_name* parameter, make sure to pass the component item name for the page, not the page name.

Image: Determining the component item name

The component item name is specified in the component definition, in the Item Name column on the row corresponding to the specific page, as shown here. In this example, the PERSONAL_DATA page name appears twice: once with an item name of PERSONAL_DATA_1, and once with the item name of PERSONAL_DATA_2.

Differences Between Transfer and TransferExact

When you do a transfer, the first thing the system checks is whether all the key field values for the target component are provided.

If all the keys aren't provided, the search page is displayed. In this scenario, TransferExact and Transfer are the same.

If all the keys are provided, a Select is done against the search record for that component using those keys.

- If you use the Transfer function, a LIKE operator is used in the Where clause of that Select for each key.
- If you use the TransferExact fuction, the equals operator is used in the Where clause for each key. Using equals allows the database to take full advantage of key indexes for maximum performance.

See Transfer.

Restrictions on Use With a Component Interface

This function is ignored (has no effect) when used by a PeopleCode program that’s been called by a Component Interface.

Restrictions on Use With SearchInit Event

You can't use this function in a SearchInit PeopleCode program.

Considerations Using Exceptions and the TransferExact Function

Using the TransferExact function inside a try block to transfer a user to a page in another component does *not* catch PeopleCode exceptions thrown in the new component. Starting a new component starts a brand

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new PeopleCode evaluation context. Catches are only caught for exceptions thrown within the *current* component.

In the following code example, the catch statement only catches exceptions thrown in the code *prior to* using the DoModal function, but not any exceptions that are thrown within the new component.

```
/* Set up transaction */
If %CompIntfcName = "" Then
   try
      &oTrans = &g_ERMS_TransactionCollection.GetTransactionByName(RB_EM_WRK.DESCR)⇒
;
      &sSearchPage = &oTrans.SearchPage;
      &sSearchRecord = &oTrans.SearchRecord;
      &sSearchTitle = &oTrans.GetSearchPageTitle();
      If Not All(&sSearchPage, &sSearchRecord, &sSearchTitle) Then
         Error (MsgGetText(17834, 8081, "Message Not Found"));
      End-If;
      &c_ERMS_SearchTransaction = &oTrans;

      /* Attempt to transfer to hidden search page with configurable filter */
      &nModalReturn = DoModal(@("Page." | &sSearchPage), &sSearchTitle, - 1, - 1);
   catch Exception &e
      Error (MsgGetText(17834, 8082, "Message Not Found"));
   end-try;
```

Related Links

TransferPage, "Understanding Menus" (PeopleTools 8.54: Application Designer Developer's Guide), "Understanding Component Definitions" (PeopleTools 8.54: Application Designer Developer's Guide)

Parameters

new_instance
Set this parameter to True to start a new application instance, or to False to use the current window and replace the page already displayed.

Menuname
The name of the menu where the page is located prefixed with the reserved word **MENUNAME**.

Barname
The name of the menu bar where the page is located, prefixed with the reserved word **BARNAME**.

menu_itemname
The name of the menu item where the page is located, prefixed with the reserved word **ITEMNAME**.

component_item_name
The component item name of the page to be displayed on top of the component when it displays. The component item name is specified in the component definition. This parameter must be prefixed with the keyword **PAGE**.

Action
Uses a single-character code as in %Action. Valid actions are "A" (add), "U" (update), "L" (update/display all), "C" (correction), and "E" (data entry).

Keylist
An optional list of field specifications used to select a unique row at level zero in the page you are transferring to, by matching keys in the page you are transferring from. It can also be an already instantiated record object.

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If a record object is specified, any field of that record object *that is also a field of the search record* for the destination component is added to keylist. The keys in the *fieldlist* must uniquely identify a row in the "to" page search record. If a unique row is not identified, or if Force Search Processing is selected for the component, the search dialog box appears.

If the *keylist* parameter is not supplied then the destination component's search key must be found as part of the source components level 0 record buffer.

AutoSearch

Specify whether an automatic search on the target search page is executed after the transfer. This means the search results are already shown without the end user having to click the Search button. This parameter takes a Boolean value: True, do an automatic search. The default value is False (that is, the user has to click the Search button).

Returns

None.

Example

The example starts a new instance of PeopleTools and transfers to a new page in Update mode. The data in the new page is selected by matching the EMPLID field from the old page.

```
TransferExact(true, MENUNAME.ADMINISTER_PERSONNEL, BARNAME.USE, ITEMNAME.PERSONAL_D⇒
ATA, PAGE.PERSONAL_DATA_1, "U");
```

Using the following PeopleCode program:

```
&MYREC = CreateRecord(RECORD.QEOPC_9A2FIELDS);
&MYREC.QE_TITLE.Value = "KEY";

Transfer(False, MenuName.QE_PEOPLECODE_PAGES, BarName.USE, ItemName.QEPC9PROPSTESTS⇒
, Page.QEOPC_9A2FIELDS, "U", &MYREC);
```

The following SQL is produced:

```
SELECT DISTINCT TOP 301 QE_TITLE, QEPC_ALTSRCH FROM PS_QEOPC_9A2FIELDS
WHERE QE_TITLE LIKE 'KEY%' ORDER BY QE_TITLE
```

If you change the Transfer to TransferExact:

```
&MYREC = CreateRecord(RECORD.QEOPC_9A2FIELDS);
&MYREC.QE_TITLE.Value = "KEY";

TransferExact(False, MenuName.QE_PEOPLECODE_PAGES, BarName.USE, ItemName.QEPC9PROPS⇒
TESTS, Page.QEOPC_9A2FIELDS, "U", &MYREC);
```

The following SQL is produced:

```
SELECT DISTINCT TOP 301 QE_TITLE, QEPC_ALTSRCH FROM PS_QEOPC_9A2FIELDS
WHERE QE_TITLE=:1 ORDER BY QE_TITLE
```

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Related Links

TransferPage
DoModalComponent
Transfer

TransferModeless

Syntax

```
TransferModeless( MENUNAME.menuname, BARNAME.barname, ITEMNAME.menu_itemname,
PAGE.component_item_name, action [, keylist] [, AutoSearch])
```

In which *keylist* is a list of field references in the form:

```
[recordname.]field1 [, [recordname.]field2].
. .
```

Or in which *keylist* is a list of field references in the form:

```
&RecordObject1 [, &RecordObject2].  .  .
```

Description

Use the TransferModeless function to open a new page in a modeless window on top of the parent window. Only one modeless window can be opened per browser session.

The modeless window is different from a modal window launched by the DoModal and DoModalComponent functions. The modeless window does not grey out the parent window, which allows the user to update the modeless and parent window from the same browser session at the same time. Similar to the *new_instance* parameter of the Transfer function, TransferModeless instantiates a separate instance of the component processor so that the parent window and secondary window are completely independent PeopleCode contexts.

However, similar to modal, secondary windows opened by the DoModal and DoModalComponent functions, the modeless window does not include the browser title bar, browser menus, and the browser tool bars, status bar, and tool icons associated with most browser windows.

Important! Only one active child window can be opened from any parent. Therefore, after invoking a modeless child window from the parent, you cannot invoke a second modeless child window from that parent or invoke a modal child window from that parent. If you do so, the original modeless child window will be closed. In addition, calling TransferModeless from a DoModal or DoModalComponent window is not supported.

Note: The TransferModeless function cannot be used with an Internet script or an Application Engine program.

TransferModeless is more powerful than the simpler TransferPage, which permits a transfer only within the current component in the current instance of PeopleTools. However, any variables declared as component do *not* remain defined after using the TransferModeless function, whether you're transferring within the same component or not.

You can use TransferModeless from a secondary page (either with or without using a pop-up menu) *only* if you're transferring to a separate instance of a component. You *cannot* use TransferModeless from a secondary page if you're not transferring to a separate instance of a component.

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If you provide a valid search key for the new page in the optional *keylist*, the new page opens directly, using the values provided from *keylist* as search key values. A valid key means that enough information is provided to uniquely identify a row: not all of the key values need to be provided. If no key is provided, or if the key is invalid, or if not enough information is provided to identify a unique row, the search dialog box displays, enabling the end user to search for a row.

Note: If Force Search Processing is specified in Application Designer for the component, the search dialog box always displays, whether the keylist is provided or not.

If *barname+itemname+component_item_name* is an invalid combination, an error message displays explaining that there were invalid transfer parameters.

In the *component_item_name* parameter, make sure to pass the component item name for the page, not the page name.

Image: Determining the component item name

The component item name is specified in the component definition, in the Item Name column on the row corresponding to the specific page, as shown here. In this example, the PERSONAL_DATA page name appears twice: once with an item name of PERSONAL_DATA_1, and once with the item name of PERSONAL_DATA_2.

Differences Between TransferModeless and TransferExact

When you do a transfer, the first thing the system checks is whether all the key field values for the target component are provided.

If all the keys aren't provided, the search page is displayed. In this scenerio, TransferExact and TransferModeless are the same.

If all the keys are provided, a Select is done against the search record for that component using those keys.

- If you use the TransferModeless function, a LIKE operator is used in the Where clause of that Select for each key.
- If you use the TransferExact fuction, the equals operator is used in the Where clause for each key. Using equals allows the database to take full advantage of key indexes for maximum performance.

See TransferExact.

Restrictions on Use With a Component Interface

This function is ignored (has no effect) when used by a PeopleCode program that’s been called by a Component Interface.

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Restrictions on Use With SearchInit Event

You can't use this function in a SearchInit PeopleCode program.

Considerations for the TransferModeless Function and Catching Exceptions

Using the TransferModeless function inside a try-catch block does *not* catch PeopleCode exceptions thrown in the new component. Starting a new component starts a brand new PeopleCode evaluation context. Exceptions are only caught for exceptions thrown within the *current* component.

In the following code example, the catch statement only catches exceptions thrown in the code *prior to* the DoModal, but not any exceptions that are thrown within the new component:

```
/* Set up transaction */
If %CompIntfcName = "" Then
   try
      &oTrans = &g_ERMS_TransactionCollection.GetTransactionByName(RB_EM_WRK.DESCR)⇒
;
      &sSearchPage = &oTrans.SearchPage;
      &sSearchRecord = &oTrans.SearchRecord;
      &sSearchTitle = &oTrans.GetSearchPageTitle();
      If Not All(&sSearchPage, &sSearchRecord, &sSearchTitle) Then
         Error (MsgGetText(17834, 8081, "Message Not Found"));
      End-If;
      &c_ERMS_SearchTransaction = &oTrans;

      /* Attempt to transfer to hidden search page with configurable filter */
      &nModalReturn = DoModal(@("Page." | &sSearchPage), &sSearchTitle, - 1, - 1);
   catch Exception &e
      Error (MsgGetText(17834, 8082, "Message Not Found"));
   end-try;
```

Related Links

TransferPage, "Understanding Menus" (PeopleTools 8.54: Application Designer Developer's Guide), "Understanding Component Definitions" (PeopleTools 8.54: Application Designer Developer's Guide)

Parameters

Menuname — The name of the menu where the page is located prefixed with the reserved word **MENUNAME**.

Barname — The name of the menu bar where the page is located, prefixed with the reserved word **BARNAME**.

menu_itemname — The name of the menu item where the page is located, prefixed with the reserved word **ITEMNAME**.

component_item_name — The component item name of the page to be displayed on top of the component when it displays. The component item name is specified in the component definition. This parameter must be prefixed with the keyword **PAGE**.

Action — Uses a single-character code as in %Action. Valid actions are "A" (add), "U" (update), "L" (update/display all), "C" (correction), and "E" (data entry).

Keylist — An optional list of field specifications used to select a unique row at level zero in the page you are transferring to, by

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matching keys in the page you are transferring from. It can also be an already instantiated record object.

If a record object is specified, any field of that record object *that is also a field of the search record* for the destination component is added to keylist. The keys in the *fieldlist* must uniquely identify a row in the "to" page search record. If a unique row is not identified, or if Force Search Processing is selected for the component, the search dialog box appears.

If the *keylist* parameter is not supplied then the destination component's search key must be found as part of the source components level 0 record buffer.

AutoSearch

Specify whether an automatic search on the target search page is executed after the transfer. This means the search results are already shown without the end user having to click the Search button. This parameter takes a Boolean value: True, do an automatic search. The default value is False (that is, the user has to click the Search button).

Returns

None.

TransferNode

Syntax

```
TransferNode(new_instance, NODE.nodename, MENUNAME.menuname,  MARKET.marketname,
COMPONENT.componentname,  PAGE.component_item_name, action [, keylist])
```

where *keylist* is a list of field references in the form:

```
[recordname.]field1 [, [recordname.]field2].
. .
```

OR

```
&RecordObject1 [, &RecordObject2].  .  .
```

Description

Use the TransferNode function to transfer the user to a page in another Node, but within the same portal.

TransferNode can either start a new instance of the application and transfer to the new page, or close the old page and transfer to the new one in the same instance of PeopleTools.

Component scoped and Global scoped variables are not available if the new page is in a different node.

Entering null values ("") for the node opens the new component within the current node or portal.

If you want to transfer the end user to another portal, use the TransferPortal function.

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If you provide a valid search key for the new page in the optional *fieldlist*, the new page opens directly, using the values provided from *fieldlist* as search key values. If no key is provided, or if the key is invalid, the search dialog displays, allowing the end user to search for a row.

Note: If Force Search Processing is specified in Application Designer for the component, the search dialog always displays, whether the keylist is provided or not.

If TransferNode is called in a RowInit PeopleCode program, the PeopleCode program is terminated. However, the component processor continues with its RowInit processing, calling RowInit on the other fields. The actual transfer won't happen until after that completes. You may want to place any TransferPage functions in the Activate event for the page, or later in the Component Processor event flow.

See "Understanding Component Definitions" (PeopleTools 8.54: Application Designer Developer's Guide).

Restrictions on Use with a Component Interface

This function is ignored (has no effect) when used by a PeopleCode program that's been called by a Component Interface.

Restrictions on Use with SearchInit Event

You can't use this function in a SearchInit PeopleCode program.

Considerations Using Exceptions and the TransferNode Function

Using the TransferNode function inside a try blockdoes *not* catch PeopleCode exceptions thrown in the new component. Starting a new component starts a brand new PeopleCode evaluation context. Catches are only caught for exceptions thrown within the *current* component.

In the following code example, the catch statement only catches exceptions thrown in the code *prior to* using the DoModal function, but not any exceptions that are thrown within the new component.

```
/* Set up transaction */
If %CompIntfcName = "" Then
   try
      &oTrans = &g_ERMS_TransactionCollection.GetTransactionByName(RB_EM_WRK.DESCR)⇒
;
      &sSearchPage = &oTrans.SearchPage;
      &sSearchRecord = &oTrans.SearchRecord;
      &sSearchTitle = &oTrans.GetSearchPageTitle();
      If Not All(&sSearchPage, &sSearchRecord, &sSearchTitle) Then
         Error (MsgGetText(17834, 8081, "Message Not Found"));
      End-If;
      &c_ERMS_SearchTransaction = &oTrans;

      /* Attempt to transfer to hidden search page with configurable filter */
      &nModalReturn = DoModal(@("Page." | &sSearchPage), &sSearchTitle, - 1, - 1);
   catch Exception &e
      Error (MsgGetText(17834, 8082, "Message Not Found"));
   end-try;
```

Parameters

new_instance Set this parameter to True to start a new application instance, or to False to use the current window and replace the page already displayed.

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nodename

Specify the name of the node that contains the content, prefixed with the reserved word **NODE**. You can also use a string, such as %Node, for this value.

menuname

Specify the name of the menu containing the content, prefixed with the reserved word **MENUNAME**. You can also use a string, such as %Menu, for this value.

marketname

Specify the name of the market of the component, prefixed with the reserved word **MARKET**. You can also use a string, such as %Market, for this value.

component_item_name

Specify the component item name of the page to be displayed on top of the component when it displays. The component item name is specified in the component definition. If you specify a page, it must be prefixed with the keyword **PAGE**. You can also specify a null ("") for this parameter.

action

Specify a single-character code. Valid actions are:

- "A" (add)
- "U" (update)
- "L" (update/display all)
- "C" (correction)
- "E" (data entry)

You can also specify a null ("") for this parameter.

keylist

An optional list of field specifications used to select a unique row at level zero in the page you are transferring to, by matching keys in the page you are transferring from. It can also be an already instantiated record object.

If a record object is specified, any field of that record object *that is also a field of the search record for the destination component* is added to keylist. The keys in the *fieldlist* must uniquely identify a row in the "to" page search record. If a unique row is not identified, of if Force Search Processing has been selected, the search dialog appears.

If the *keylist* parameter is not supplied then the destination component's search key must be found as part of the source components level 0 record buffer.

Returns

A Boolean value: True if function completed successfully, False otherwise.

Related Links

TransferPortal

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TransferPage
Transfer

TransferPanel

Syntax

```
TransferPanel([PANEL.panel_name])
```

Description

Use the TransferPanel function to transfer control to the panel indicated by **PANEL.** *panel_name*_name within, or to the panel set with the SetNextPage function.

Note: The TransferPanel function is supported for compatibility with previous releases of PeopleTools. New applications should use the TransferPage function instead.

Related Links

TransferPage

TransferPage

Syntax

```
TransferPage([PAGE.page_name_name])
```

Description

Use the TransferPage function to transfer control to the page indicated by **PAGE.***page__name* or to the page set with the SetNextPage function. The page that you transfer to *must* be in the current component or menu. To transfer to a page outside the current component or menu, or to start a separate instance of PeopleTools prior to transfer into, use the Transfer function.

Note: If the visibility of the current page is set to False in a PeopleCode program, then you must invoke the TransferPage function to transfer control to a visible page.

See SetNextPage, Transfer.

Note: You can't use TransferPage from a secondary page.

Any variable declared as a Component variable will still be defined after using a TransferPage function.

Considerations Using TransferPage

The following are important considerations when using the TransferPage function:

- TransferPage always terminates the current PeopleCode program.
- TransferPage is always processed after all events are completed.

Given these considerations, here are some scenarios for how TransferPage executes:

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- When called in RowInit: The current RowInit PeopleCode program is terminated, but RowInit processing continues. In addition, RowInit PeopleCode programs run for the rest of the fields in the row. Then TransferPage is processed.
- When called in FieldEdit: The FieldEdit PeopleCode program is terminated. The FieldChange program for that field still runs. Then TransferPage is processed.
- When called in SavePreChange: The SavePreChange program for that field is terminated. SavePreChange runs for the rest of the fields on that page. Then SavePostChange run for all the fields. Then TransferPage is processed.
- When called in FieldChange in deferred mode: In deferred mode, changed fields are processed in order. The FieldChange program is terminated. Then any subsequent fields in the page order are processed with the normal FieldEdit-Field Change logic. Once that has finished, the TransferPage is processed.

When TransferPage is processed, any PeopleCode associated with the Activate event for the page being transferred to runs. This always occurs at the end, after all field processing.

If TransferPage is called multiple times during field processing, all the calls are processed at the end, in the same order the calls were made. The Activate event executes each time. The final active page is the one that was transferred to by the last call.

Restrictions on Use With a Component Interface

This function is ignored (has no effect) when used by a PeopleCode program that's been called by a Component Interface.

Restrictions on Use With SearchInit Event

You can't use this function in a SearchInit PeopleCode program.

Parameters

page_name A String equal to the name of the page you are transferring to, as set in the page definition, prefixed with the reserved word **Page**. The page *must* be in the same component as the page you are transferring from.

Returns

Optionally returns a Boolean value indicating whether the function executed successfully.

Example

The following examples both perform the same function, which is to transfer to the JOB_DATA_4 page:

```
TransferPage(PAGE.JOB_DATA_4);
```

or

```
SetNextPage(PAGE.JOB_DATA_4);
TransferPage( );
```

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Related Links

DoModalComponent
SetNextPage
Transfer

TransferPortal

Syntax

```
TransferPortal(new_instance, PORTAL.portalname, NODE.nodename, MENUNAME.menuname,
MARKET.marketname, COMPONENT.componentname, PAGE.component_item_name, action [,
keylist])
```

where *keylist* is a list of field references in the form:

```
[recordname.]field1 [, [recordname.]field2].
. .
```

OR

```
&RecordObject1 [, &RecordObject2].  .  .
```

Description

Use the TransferPortal function to transfer the user to a page in another Node in a different portal.

TransferPortal can either start a new instance of the application and transfer to the new page, or close the old page and transfer to the new one in the same instance of PeopleTools.

Component scoped and Global scoped variables are not available after this function.

If you want to transfer the end user to another node within the same portal, use the TransferNode function.

If you provide a valid search key for the new page in the optional *fieldlist*, the new page opens directly, using the values provided from *fieldlist* as search key values. If no key is provided, or if the key is invalid, the search dialog displays, allowing the end user to search for a row.

Note: If Force Search Processing is specified in Application Designer for the component, the search dialog always displays, whether the keylist is provided or not.

If TransferPortal is called in a RowInit PeopleCode program, the PeopleCode program is terminated. However, the component processor continues with its RowInit processing, calling RowInit on the other fields. The actual transfer won't happen until after that completes. You may want to place any TransferPortal functions in the Activate event for the page, or later in the Component Processor flow.

See "Understanding Component Definitions" (PeopleTools 8.54: Application Designer Developer's Guide).

Restrictions on Use with a Component Interface

This function is ignored (has no effect) when used by a PeopleCode program that’s been called by a Component Interface.

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Restrictions on Use with SearchInit Event

You can't use this function in a SearchInit PeopleCode program.

Restrictions on Use with Different Releases

You cannot use this function to transfer a user from a PeopleTools 8.42 portal to any base PeopleTools 8.1x portal that overwrites the expired cookie value when login occurs.

The TransferPortal function is currently supported to transfer users to pages in other nodes to base PeopleTools 8.18 portals, including all PeopleTools 8.18 versions and patches.

Considerations Using Exceptions and the TransferPortal Function

Using the TransferPortal function inside a try block does *not* catch PeopleCode exceptions thrown in the new component. Starting a new component starts a brand new PeopleCode evaluation context. Catches are only caught for exceptions thrown within the *current* component.

In the following code example, the catch statement only catches exceptions thrown in the code *prior to* using the DoModal function, but not any exceptions that are thrown within the new component.

```
/* Set up transaction */
If %CompIntfcName = "" Then
   try
      &oTrans = &g_ERMS_TransactionCollection.GetTransactionByName(RB_EM_WRK.DESCR)⇒
;
      &sSearchPage = &oTrans.SearchPage;
      &sSearchRecord = &oTrans.SearchRecord;
      &sSearchTitle = &oTrans.GetSearchPageTitle();
      If Not All(&sSearchPage, &sSearchRecord, &sSearchTitle) Then
         Error (MsgGetText(17834, 8081, "Message Not Found"));
      End-If;
      &c_ERMS_SearchTransaction = &oTrans;

      /* Attempt to transfer to hidden search page with configurable filter */
      &nModalReturn = DoModal(@("Page." | &sSearchPage), &sSearchTitle, - 1, - 1);
   catch Exception &e
      Error (MsgGetText(17834, 8082, "Message Not Found"));
   end-try;
```

Parameters

new_instance Set this parameter to True to start a new application instance, or to False to use the current window and replace the page already displayed.

PortalName Specify the name of the portal that you want to transfer to, prefixed with the reserved word **Portal**.

nodename Specify the name of the node that contains the content, prefixed with the reserved word **NODE**. You can also use a string, such as %Node, for this value.

menuname Specify the name of the menu containing the content, prefixed with the reserved word **MENUNAME**. You can also use a string, such as %Menu, for this value.

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marketname

Specify the name of the market of the component, prefixed with the reserved word **MARKET**. You can also use a string, such as %Market, for this value.

component_item_name

Specify the component item name of the page to be displayed on top of the component when it displays. The component item name is specified in the component definition. If you specify a page, it must be prefixed with the keyword **PAGE**. You can also specify a null ("") for this parameter.

action

Specify a single-character code. Valid actions are:

- "A" (add)
- "U" (update)
- "L" (update/display all)
- "C" (correction)
- "E" (data entry)

You can also specify a null ("") for this parameter.

keylist

An optional list of field specifications used to select a unique row at level zero in the page you are transferring to, by matching keys in the page you are transferring from. It can also be an already instantiated record object.

If a record object is specified, any field of that record object *that is also a field of the search record for the destination component* is added to keylist. The keys in the *fieldlist* must uniquely identify a row in the "to" page search record. If a unique row is not identified, of if Force Search Processing has been selected, the search dialog appears.

If the *keylist* parameter is not supplied then the destination component's search key must be found as part of the source components level 0 record buffer.

Returns

A Boolean value: True if function completed successfully, False otherwise.

Related Links

TransferNode
TransferPage
Transfer

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Transform

Syntax

```
Transform({XmlString | &XmlDoc} AE_Program_Name, Initial_Node_Name,
Initial_Message__Name, Initial_Message_Version, Result_Node_Name, Result_Message_Name,
Result_Message_Version)
```

Description

Use the Transform function to modify one transaction, as specified by the *Initial* parameters, to another transaction, specified by the *Result* parameters, using an Application Engine program. This is used with Integration Broker.

Generally using this function implies that you're transforming a message that you're not actually sending or receiving at the current time. By using this method, and specifying the two transactions, it's as if you're defining a relationship, without having to use the relationship component.

Note: This function does not work on the OS/390 and z/OS batch servers.

Considerations Using the Transform Functions

The Transform function uses an existing Application Engine program to do transformations. This enables you to break up the flow of Integration Broker and do transformations when you need to. If you wish to reuse your Application Engine programs, you can invoke them by using this function.

The TransformEx function does not use an Application Engine program to do a transformation. Instead, it does an Extensible Stylesheet Language Transformation (XSLT.) This enables you to dynamically do transformations outside of Integration Broker, such as, performing transformations on pagelets in a portal every time a page is accessed.

The TransformExCache function also does XSLT transformations without using an Application Engine program, outside of Integration Broker. Use TransformExCache when you have a large volume of similar transformations to be done. Caching technology is used with this function. You may see an increase in performance, as well as an increase in memory consumption, using this function.

Parameters

XmlString* | *&XmlDoc	Specify an already populated XmlDoc object, an XML string, or other text that you want transformed.
AE_Program_Name	Specify the name of the Application Engine program that you want to use for the transformation.
Initial_Node_Name	Specify the name of the initial node as a string.
Initial_Message_Name	Specify the name of the initial message.
Initial_Message_Version	Specify the version of the initial message that you want to use.
Result_Node_Name	Specify the result, where you want the transformed message to go to.

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Result_Message_Name	Specify the name of the result message, the one to use for the output.
Result_Message_Version	Specify the version of the result message to be used.

Returns

An XmlDoc object containing the resulting XML from the transformation. Null is never returned. If you do not want to display an error to the user, place this function inside a try-catch statement.

Related Links

TransformEx

TransformExCache

"Understanding Filtering, Transformation, and Translation" (PeopleTools 8.54: Integration Broker)

TransformEx

Syntax

```
TransformEx(XmlString, XsltString)
```

Description

Use the TransformEx function to do an XSLT transformation of the specified XML string.

This function also strips off any encoding information located within the XML Declaration.

The input, output, and XSL string must all be well-formed XML. If the output is HTML, it is actually XHTML (which is well-formed XML.)

Note: This function does not work on the OS/390 and z/OS batch servers.

Considerations Using the Transform Functions

The Transform function uses an existing Application Engine program to do transformations. This enables you to break up the flow of Integration Broker and do transformations when you need to. If you wish to reuse your Application Engine programs, you can invoke them by using this function.

The TransformEx function does not use an Application Engine program to do a transformation. Instead, it does an Extensible Stylesheet Language Transformation (XSLT.) This enables you to dynamically do transformations outside of Integration Broker, such as, performing transformations on pagelets in a portal every time a page is accessed.

The TransformExCache function also does XSLT transformations without using an Application Engine program, outside of Integration Broker. Use TransformExCache when you have a large volume of similar transformations to be done. Caching technology is used with this function. You may see an increase in performance, as well as an increase in memory consumption, using this function.

Parameters

XmlString	Specify the XML string that you want transformed.

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XsltString Specify the XSLT string you wish to use to transform the XML string.

Returns

The output of the transformation as a string if successful, NULL otherwise.

Example

```
try
   &outStr = TransformEx(&inXML, &inXSLT);
catch Exception &E
   MessageBox(0, "", 0, 0, "Caught exception: " | &E.ToString());
end-try;
```

Related Links

Transform

TransformExCache

"Understanding Filtering, Transformation, and Translation" (PeopleTools 8.54: Integration Broker)

TransformExCache

Syntax

TransformExCache(*&XmlDoc*, *FilePath*, *XsltKey*)

Description

Use the TransformExCache function to do an Extensible Stylesheet Language Transformation (XSLT) transformation of the specified XmlDoc object.

The file specified by *FilePath* must be in well-formed XML.

Note: This function does not work on the OS/390 and z/OS batch servers.

Considerations Using the Transform Functions

The Transform function uses an existing Application Engine program to do transformations. This enables you to break up the flow of Integration Broker and do transformations when you need to. If you wish to reuse your Application Engine programs, you can invoke them by using this function.

The TransformEx function does not use an Application Engine program to do a transformation. Instead, it does an Extensible Stylesheet Language Transformation (XSLT.) This enables you to dynamically do transformations outside of Integration Broker, such as, performing transformations on pagelets in a portal every time a page is accessed.

The TransformExCache function also does XSLT transformations without using an Application Engine program, outside of Integration Broker. Use TransformExCache when you have a large volume of similar transformations to be done. Caching technology is used with this function. You may see an increase in performance, as well as an increase in memory consumption, using this function.

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Parameters

&XmlDoc	Specify an already instantiated and populated XmlDoc object that you want transformed.
FilePath	Specify an XSLT file. You must specify an absolute path to the file, including the file extension.
XsltKey	Specify a key to uniquely name the compiled and cached XSLT in the data buffers. This key is used both to create the item in memory as well as retrieve it. This parameter takes a string value, up to 30 characters.

Returns

An XmlDoc object containing the resulting XML from the transformation. Null is never returned. If you do not want to display an error to the user, place this function inside a try-catch statement.

Example

```
Local XmlDoc &inXMLdoc = CreateXmlDoc("");

Local Boolean &ret = &inXMLdoc.ParseXmlFromURL("c:\temp\in.xml");

Local XmlDoc &outDoc = TransformExCache(&inXMLdoc, "c:\temp\in.xsl", "INBOUND");
```

Related Links

Transform
TransformEx
"Understanding Filtering, Transformation, and Translation" (PeopleTools 8.54: Integration Broker)

TreeDetailInNode

Syntax

TreeDetailInNode(*setID*, *tree*, *effdt*, *detail_value*, *node*)

Description

Use the TreeDetailInNode function to determine whether a specific record field value is a descendant of a specified node in a specified tree.

Note: This function is not compatible with the PeopleSoft Pure Internet Architecture. However, this function is still available for use with the PeopleSoft Tree Manager Windows client, available in the 8.1 product line.
An equivalent PeopleCode tree class method or built-in function for PeopleSoft Pure Internet Architecture does not exist, however, you may achieve this same functionality using the tree classes.

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Parameters

setID	SetID for the appropriate business unit. This parameter is required. If there is no SetID, you can pass a NULL string ("", not a blank) and a blank will be used.
tree	The tree name that contains the *detail_value*.
effdt	Effective date to be used in the search. You must use a valid date.
detail_value	The *recordname.fieldname* containing the value you are looking for.
node	The "owning" tree node name.

Returns

Returns a Boolean value, True if *detail_value* is a descendant of *node* in *tree*.

Example

This example sets the value of &APPR_RULE_SET to the value at the APPR_RULE_LN record and APPR_RULE_SET fieldname, on the tree ACCOUNT.

```
&APPR_RULE_SET = TreeDetailInNode("SALES", "ACCOUNT", %Date, APPR_RULE_LN.APPR_RULE⇒
_SET, "test");
```

Related Links

"Maintaining Tree Structures" (PeopleTools 8.54: Tree Manager)

"PeopleSoft Tree Manager Overview" (PeopleTools 8.54: Tree Manager)

TriggerBusinessEvent

Syntax

```
TriggerBusinessEvent(BUSPROCESS.bus_proc_name,
BUSACTIVITY.activity_name,BUSEVENT.bus_event_name)
```

Description

Use the TriggerBusinessEvent funciton to trigger a business event and the workflow routings associated with that event. This function should only be used in Workflow PeopleCode. You can edit Workflow PeopleCode via the Event Definition dialog while you are defining a workflow event.

Parameters

bus_proc_name	A string consisting of the name of the business process, as defined in the Business Process Designer, prefixed with the reserved word **BUSPROCESS.**

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activity_name A string consisting of the name of the business activity, as defined in the Business Process Designer, prefixed with the reserved word BUSACTIVITY.

bus_event_name A string consisting of the name of the business event, as defined in the Business Process Designer, prefixed with the reserved word BUSEVENT.

Returns

Returns a Boolean value: True if successful, false otherwise. The return value is not optional.

Note: You must check the return from TriggerBusinessEvent to see if you have an error. If you have an error, all of the updates up to that TriggerBusinessEvent process are rolled back. However, if you don't halt execution, even if you have an error, all updates *after* the TriggerBusinessEvent process *are* committed. This could result in your database information being out of synch.

Example

The following example triggers the Deny Purchase Request event in the Manager Approval activity of the Purchase Requisition business process:

```
&SUCCESS = TriggerBusinessEvent(BUSPROCESS."Purchase Requisition", BUSACTIVITY."Man⇒
ager Approval", BUSEVENT."Deny Purchase Request");
```

Related Links

GetWLFieldValue

MarkWLItemWorked

"Understanding Events and Routings" (PeopleTools 8.54: Workflow Technology)

Truncate

Syntax

Truncate(*dec*, *digits*)

Description

Use the Truncate function to truncate a decimal number *dec* to a specified precision.

Parameters

digits A Number value that sets the precision of the truncation (that is, the number of digits to leave on the right side of the decimal point).

Returns

Returns a Number value equal to *dec* truncated to a *digits* precision.

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Example

The example sets the value of &NUM to 9, 9.99, -9, then 0.

```
&NUM = Truncate(9.9999, 0);
&NUM = Truncate(9.9999, 2);
&NUM = Truncate(-9.9999, 0);
&NUM = Truncate(0.001, 0);
```

Related Links

Int

Mod

Round

try

Syntax

```
try
Protected StatementList
catchQualifiedID &ID
StatementList
end-try
```

Description

Use the **try** statement as part of a try-catch block to trap exceptions thrown either by the system or by using the CreateException function.

Parameters

Protected StatementList	Specify the statements that are protected by the try-catch block.
catch *QualifiedID &ID*	Specify the **catch** statement at the end of the list of statements you want to protect.
QualifiedID	Specify what class of exception you are catching—that is, Exception or the name of a class extending the Exception class.
&ID	Specify a variable to be set with the caught exception.
StatementList	Specify the steps to be taken once the exception is caught.

Returns

None.

Example

```
try
   &res = 15.3 / 7 * 22.1;
catch Exception &c1
   MessageBox(0, "", 0, 0, "Caught exception: " | &c1.ToString());
end-try;
```

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Related Links

throw
CreateException
"Understanding Exception Class" (PeopleTools 8.54: PeopleCode API Reference)

PeopleCode Built-in Functions and Language Constructs: U

The PeopleCode built-In functions and language constructs beginning with the letter U are listed in alphabetical order within this topic.

Related Links

Typographical Conventions

UIDisplayMode

Syntax

```
UIDisplayMode()
```

Description

Use the UIDisplayMode function to return an Integer value indicating the user interface display mode of the current execution context (a combination of the active web profile configuration and the user's browser):

Numeric Value	*Description*
0	Error (undefined)
1	Classic mode
2	Fluid
3	Small form factor optimized

Parameters

None.

Returns

A Integer value.

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Example 1

In the following example, certain characteristics regarding the browser and web profile are obtained from the executing environment. In turn, these values are used to construct a cookie that is saved to the browser.

```
/* Read conditional navigation related parameters */
Local number &formfactor = %Request.BrowserDeviceFormFactor;
Local number &fluidCapable = UIDisplayMode();
/*Error - Default back to classic mode when undefined. */
If (&fluidCapable = 0) Then
   &fluidCapable = 1; /* Set to classic mode. */
End-If;

/* Set a browser cookie indicating these characteristics */
&cookieStr = "PS_CONDNAV" | "=" | &fluidCapable | "," | &formfactor | "; ";
&cookieStr = RTrim(&cookieStr, "; ");
&reqMsg.IBInfo.IBConnectorInfo.Cookies = &cookieStr;
&resMsg = %IntBroker.SyncRequest(&reqMsg, &targetNode);
```

Example 2

In the following example, the display mode is set as a property of the search object. Then, if the current mode is classic, certain characteristics are set for conditional navigation search mode:

```
...
   %This.nUIDisplayMode = UIDisplayMode();

   %This.SearchType = "S";
   %This.IsAdvancedSearch = False;
end-method;
...

method SetConditionalSearchNavMode
   /+ Returns Boolean +/
   If Not %This.bIsGlobalSearch Then
      Return False;
   End-If;

   Local string &name = "PTSF_NAV_MODE";
   If (%This.nUIDisplayMode = 1) Then
      %This.fg.MatchAny();
      %This.fg.EqualsString(&name, "1");
      %This.fg.NotEqualsString(&name, "2");
      %This.fg.EndMatchAny();
      Return True;
   End-If;
   Return False;
end-method;
```

Related Links

"Understanding Conditional Navigation" (PeopleTools 8.54: Portal Technology)

"Configuring Fluid Mode Web Profile Settings" (PeopleTools 8.54: Fluid User Interface Developer's Guide)

"BrowserFluidCapable" (PeopleTools 8.54: PeopleCode API Reference)

UnCheckMenuItem

Syntax

UnCheckMenuItem(**BARNAME.***menubar_name*, **ITEMNAME.***menuitem_name*)

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Description

Use the UnCheckMenuItem function to remove a check mark from the specified menu item.

Note: This function has been deprecated.

Unencode

Syntax

Unencode(*URLString*)

Description

Use the Unencode function to unencode *URLString*, converting all character codes of the form *%xx* where *xx* is a hex number, to the character represented by that number.

Parameters

URLString	Specify the string you want unencoded. This parameter takes a string value.

Returns

An unencoded URL string.

Example

For the following example, the URL is:

```
http://corp.office.com/human%20resources/benefits/401kchange_home.htm?FirstName=Gun⇒
ter&LastName=D%c3%9crst
```

The encoded values are those beginning with the percentage sign (%). If you wanted to know the value in the Target Content's URL for the parameter "LastName", then the following PeopleCode would return the string "Dürst":

```
&MENU = Unencode(%Request.GetParameter("LastName"));
```

This method works for any querystring in the Target Content's URL.

If the link is constructed in a PeopleSoft Pure Internet Architecture page, and the value of a link field, you should not call EncodeURL to encode the entire URL, as the PeopleSoft Pure Internet Architecture does this for you. You must still unencode the parameter value when you retrieve it, however.

Related Links

EncodeURL
EncodeURLForQueryString

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Ungray

Syntax

```
Ungray(scrollpath, target_row, [recordname.]fieldname)
```

where *scrollpath* is:

```
[RECORD.level1_recname, level1_row, [RECORD.level2_recname, level2_row, ]]
RECORD.target_recname
```

To prevent ambiguous references, you can also use **SCROLL.** *scrollname*, where *scrollname* is the same as the scroll level's primary record name.

Description

Use the Ungray function to make a gray (non-editable) page field editable, if the field was grayed with a call to the Gray function.

Note: This function remains for backward compatibility only. Use the Enabled field property instead.

If the page field is made display-only in the Page Field Properties dialog, then Ungray has no effect.

The Gray, Ungray, Hide, and Unhide functions usually appear in RowInit programs that set up the initial display of data, and FieldChange programs that change field display based on changes the end user makes to a field.

Generally, you want to put this function on the same scroll level as the field that is being changed in RowInit (which executes on every row) or FieldChange (which executes on the current row). This simplifies the function's syntax to:

```
Ungray(fieldname)
```

A typical use of the more complex syntax is when looping through rows on a scroll on a lower level than the program.

Note: This function shouldn't be used in any event prior to RowInit.

Related Links

Gray, Hide, Unhide, "Enabled" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide), "Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

Scrollpath	A construction that specifies a scroll level in the component buffer.
target_row	The row number of the target row. If this parameter is omitted, the function assumes the row on which the PeopleCode program is executing.
[*recordname* .]*fieldname*	The name of the field to ungray. The field can be on scroll level one, two, or three of the active page. The *recordname* prefix

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is required if the call to Ungray is not on the record definition *recordname*.

Returns

Optionally returns a Boolean value indicating whether the function executed successfully.

Example

The following example checks to see if a person's emergency contact is the same as their home address and phone, then grays or ungrays the fields accordingly. In a typical case, this program would be in the FieldChange event.

```
If SAME_ADDRESS_EMPL = "Y" Then
   Gray(STREET1);
   Gray(STREET2);
   Gray(CITY);
   Gray(STATE);
   Gray(ZIP);
   Gray(COUNTRY);
   Gray(HOME_PHONE);
   STREET1 = PERSONAL_DATA.STREET1;
   STREET2 = PERSONAL_DATA.STREET2;
   CITY = PERSONAL_DATA.CITY;
   STATE = PERSONAL_DATA.STATE;
   ZIP = PERSONAL_DATA.ZIP;
   COUNTRY = PERSONAL_DATA.COUNTRY;
   HOME_PHONE = PERSONAL_DATA.HOME_PHONE;
Else
   Ungray(STREET1);
   Ungray(STREET2);
   Ungray(CITY);
   Ungray(STATE);
   Ungray(ZIP);
   Ungray(COUNTRY);
   Ungray(HOME_PHONE);
End-if;
```

Related Links

Gray
Hide
Unhide

Unhide

Syntax

Unhide(*scrollpath*, *target_row*, [*recordname*.]*fieldname*)

where *scrollpath* is:

[**RECORD.***level1_recname*, *level1_row*, [**RECORD.***level2_recname*, *level2_row*,]]
RECORD.*target_recname*

To prevent ambiguous references, you can use **SCROLL.** *scrollname*, where *scrollname* is the same as the scroll level's primary record name.

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Description

Use the Unhide function to make a field visible that was previously hidden with Hide. If the field was hidden by setting its Invisible property in the Page Field Properties dialog box, then Unhide has no effect.

Note: This function remains for backward compatibility only. Use the Visible field property instead.

Generally, you want to put this function on the same scroll level as the field that is being changed in RowInit (which executes on every row) or FieldChange (which executes on the current row). This simplifies the function's syntax to:

```
unhide(fieldname)
```

A typical use of the more complex syntax is when looping through rows on a scroll on a lower level than the program.

Note: This function shouldn't be used in any event prior to RowInit.

Related Links

Hide, "Visible" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide), "Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

scrollpath	A construction that specifies a scroll level in the component buffer.
target_row	The row number of the target row. If this parameter is omitted, the function assumes the row on which the PeopleCode program is executing.
[*recordname* .]*fieldname*	The name of the field to unhide. The field can be on scroll level one, two, or three of the active page. The *recordname* prefix is required if the call to Unhide is not on the record definition *recordname*.

Returns

Optionally returns a Boolean value indicating whether the function executed successfully.

Example

The following example sets security for displaying a person's password:

```
If (&DISPLAY) Then
   Unhide(EMPLOYEE.PASSWORD);
Else
   Hide(EMPLOYEE.PASSWORD);
End-if;
```

Related Links

Gray

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Hide
Ungray

UnhideRow

Syntax

```
UnhideRow(scrollpath, target_row)
```

Where *scrollpath* is:

```
[RECORD.level1_recname, level1_row, [RECORD.level2_recname, level2_row, ]
RECORD.target_recname
```

To prevent ambiguous references, you can use **SCROLL.** *scrollname*, where *scrollname* is the same as the scroll level's primary record name.

Description

Use the UnhideRow function to programmatically unhide a row that has been hidden by HideRow. It unhides the specified row and any dependent rows at a lower scroll level.

Note: This function remains for backward compatibility only. Use the Visible row property instead.

UnhideRow works by putting the row that you unhide to the last non-hidden row in the list. When UnhideRow is used in a loop, you have to process rows from low to high to achieve the correct results.

Note: UnhideRow cannot be executed from the same scroll level where the insertion takes place, or from a lower scroll level. Place the PeopleCode in a higher scroll level record.

Related Links

"Visible" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide), "Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

scrollpath	A construction that specifies a scroll level in the component buffer.
target_row	An integer specifying which row in the scroll to unhide.

Returns

Optionally returns a Boolean value indicating whether the function executed successfully.

Example

```
AE_ROW_COUNT = ActiveRowCount(RECORD.AE_STMT_TBL);
for &ROW = ActiveRowCount(RECORD.AE_STMT_TBL) to 1 step - 1
   UnhideRow(RECORD.AE_STMT_TBL, &ROW);
   UpdateValue(RECORD.AE_STMT_TBL, &ROW, AE_ROW_NUM, &ROW);
end-for;
```

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Related Links

HideRow

UnhideScroll

Syntax

```
UnhideScroll(Scrollpath)
```

Where *scrollpath* is:

```
[RECORD.level1_recname, level1_row, [RECORD.level2_recname, level2_row, ]
RECORD.target_recname
```

To prevent ambiguous references, you can use **SCROLL.** *scrollname*, where *scrollname* is the same as the scroll level's primary record name.

Description

Use the UnhideScroll function to programmatically unhide a scroll area that has been hidden with HideScroll. It unhides the specified scroll and any associated scrolls at a lower level.

Note: This function remains for backward compatibility only. Use the ShowAllRows rowset method instead.

Related Links

HideScroll, "ShowAllRows" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide), "Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

scrollpath	A construction that specifies a scroll level in the component buffer.

Returns

Optionally returns a Boolean value indicating whether the function executed successfully.

Example

This example clears the contents of a level-one hidden scroll, then unhides it:

```
   ScrollFlush(RECORD.ORDER_INQ_INV);
   UnhideScroll(RECORD.ORDER_INQ_INV);
```

The following example hides or unhides a level-three scroll:

```
If APPR_QTY_SW = "N" Then
   HideScroll(RECORD.APPR_RULE_LN, CurrentRowNumber(1), RECORD.APPR_RULE_DETL, Curr⇒
entRowNumber(2), RECORD.APPR_RULE_QTY);
Else
   UnhideScroll(RECORD.APPR_RULE_LN, CurrentRowNumber(1), RECORD.APPR_RULE_DETL, Cu⇒
rrentRowNumber(2), RECORD.APPR_RULE_QTY);
```

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```
End-If;
```

Related Links

HideScroll
RowScrollSelect
RowScrollSelectNew
ScrollSelect
ScrollSelectNew
SortScroll

UniformSeriesPV

Syntax

UniformSeriesPV(*int_rate*,*n_per*)

Description

Use the UniformSeriesPV function to calculate the present value of a single monetary unit after a uniform series of payments at a specified interest rate.

Parameters

int_rate	A Number specifying the interest rate on the basis of which to calculate the return value.
n_per	A Number specifying the number of payments in the uniform series.

Returns

Returns a Number equal to the value of a single unit after *n_per* payments at an interest rate of *int_rate*.

Example

The example sets &NUM to 3.790786769408448256:

```
&NUM = UniformSeriesPV(10,5);
```

Related Links

SinglePaymentPV

UpdateSysVersion

Syntax

UpdateSysVersion()

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Description

Use the UpdateSysVersion function to coordinate system changes and changes to system objects maintained by pages, such as messages and Set Tables. This function is not normally used in standard applications and should only used in PeopleSoft-provided extensions of PeopleTools.

Returns

Returns the updated system version Number.

Example

The following example could be used to maintain the version number on MESSAGE_SET_TBL, which controls the refreshing of cache files for the message entries:

```
VERSION = UpdateSysVersion();
```

UpdateValue

Syntax

UpdateValue(*scrollpath*, [*recordname*.]*fieldname*, *target_row*, *value*)

where *scrollpath* is:

[**RECORD.***level1_recname*, *level1_row*, [**RECORD.***level2_recname*, *level2_row*,]]

To prevent ambiguous references, you can use **SCROLL.** *scrollname*, where *scrollname* is the same as the scroll level's primary record name.

Description

Use the UpdateValue function to update the value of a specified field with the *value* provided. The value must be of a data type compatible with the *field*.

Note: This function remains for backward compatibility only. Use the Value field property instead.

Related Links

"Value" (PeopleTools 8.54: PeopleCode API Reference), "Understanding Data Buffer Access" (PeopleTools 8.54: PeopleCode Developer's Guide), "Specifying Data with References Using Scroll Path Syntax and Dot Notation" (PeopleTools 8.54: PeopleCode Developer's Guide)

Parameters

Scrollpath	A construction that specifies a scroll level in the component buffer.
target_row	An integer specifying the row of the field to update.
[*recordname* .]*fieldname*	The name of the field that you want to update. The field can be on scroll level one, two, or three of the active page. The *recordname* prefix is required if the call to UpdateValue is not on the record definition *recordname*.

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Value The new value to put into the target field.

Returns

None.

Example

This example updates values in the level-one scroll:

```
For &I = 1 To &ROW_CNT
   UpdateValue(RECORD.ASGN_CMP_EFFDT, &I, ITEM_SELECTED, "Y");
End-For;
```

The next example loops through rows in the level-two scroll:

```
For &I = 1 To &CURRENT_L2
   UpdateValue(RECORD.ASGN_CMP_EFFDT, &CURRENT_L1, RECORED.SOME_L2_RECORD, &I, TO_C⇒
UR, &HOME_CUR);
End-For;
```

Related Links

FetchValue

PriorValue

UpdateXmlDoc

Syntax

```
UpdateXmlDoc(&XmlDoc, PubID, PubNode, ChannelName, VersionName [, Message Name [,
SubNode[, Segment]]])
```

Description

Use the UpdateXmlDoc function to update a message in the message queue with the specified message version.

Note: This function has been deprecated and remains for backward compatibility only. Use the IntBroker class UpdateXmlDoc method instead.

If *VersionName* isn't specified, the default message version is used. This method is commonly used in the OnRouteSend and OnRouteReceive PeopleCode events.

Note: This function can't be called from notification PeopleCode.

Related Links

"UpdateXmlDoc" (PeopleTools 8.54: PeopleCode API Reference)

Parameters

&XmlDoc Specify an already instantiated XmlDoc object.

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PubID	Specify the PubID as a string.
PubNode	Specify the PubNode as a sting.
ChannelName	Specify the Channel name as a string.
VersionName	Specify the version name as a string.
MessageName	Specify the message name as a string. This is only used for Pub and Sub contracts.
SubNode	Specify the sub node as a string. This is only used for Pub contracts.
Segment	Specify an integer representing which segment you want to access. The default value is one, which means that if you do not specify a segment, the first segment is accessed.

Returns

A Boolean value: True if function completed successfully, False otherwise.

Related Links

"Understanding XmlDoc Classes" (PeopleTools 8.54: PeopleCode API Reference)

Upper

Syntax

Upper(*str*)

Description

Use the Upper function to convert a text string to all uppercase. This function can be used to perform a case-insensitive string comparison. Upper does not change characters that are not letters or characters that do not have case sensitivity.

Parameters

str	A String to convert to uppercase.

Returns

Returns a String value equal to *str* converted to all uppercase.

Example

The following example converts the contents of two string variables to uppercase before determining if they are equal to simulate a case-insensitive comparison:

```
If Upper(&STR1) = Upper(&STR2) Then
   /* do something */
End-If;
```

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Related Links

Lower

Proper

PeopleCode Built-in Functions and Language Constructs: V

The PeopleCode built-In functions and language constructs beginning with the letter V are listed in alphabetical order within this topic.

Related Links

Typographical Conventions

Value

Syntax

Value(*string*)

Description

Use the Value function to convert a string representing a number to the number.

To convert a number using the user's local format for the number, use the ValueUser function.

Parameters

string	A String value representing a number.

Returns

Returns the Number value represented by *string*.

Example

The example sets &VAL1 to 5.25 and &VAL2 to 12500:

```
&VAL1 = Value("5.25");
&VAL2 = Value("12,500");
```

Related Links

String

ValueUser

ValueUser

Syntax

ValueUser(*str*)

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Description

Use the ValueUser function to convert a string representing a number to the number, using the locale-specific format for the current user to interpret the number. For example, if the locale or user level personalization settings specify to use a comma as the decimal separator, the number will be interpreted based on that setting, instead of the default for the database.

To convert a number without using the user's format for the number, use the Value function.

Parameters

str	Specify the string value representing a number that you want converted to a number.

Returns

Returns the number value represented by *str*.

Example

The example sets &VAL1 to 5.25 and &VAL2 to 12500:

```
&VAL1 = ValueUser("5.25");
&VAL2 = ValueUser("12,500");
```

Related Links

String
Value
IsUserNumber

VerifyHash

Syntax

VerifyHash(*cleartext_string*, *salt_string*, *hashed_string*)

Description

Use the VerifyHash function to verify that the combination of an input clear text string plus salt string generates a hashed value that is the same as a hashed string generated by the HashWithSalt function.

The VerifyHash function is general purpose, in that it can be used for any clear text string that has been hashed with the HashWithSalt function. Use the VerifyOprPassword function instead when the input clear text is a user's password that has been stored in the database as a hashed value.

Parameters

cleartext_string	Specifies the string to be verified as a string value.
salt_string	Specifies the salt value as a string value.

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Important! The salt value must be exactly the same as the randomly generated salt value used to hash the original string.

hashed_string Specifies the hashed value to be compared to the output of the hash algorithm.

Returns

A Boolean value: True if the input string plus salt value generate the hashed text, False otherwise.

Example

```
Local array of string &salt;

&salt = SecureRandomGen();
&hashedtext = HashWithSalt(&cleartext, &salt [1]);
MY_REC.MY_HTEXT = &hashedtext;
MY_REC.MY_SALT = &salt [1];

/*** other processing ***/

If Not VerifyHash(&cleartext, MY_REC.MY_SALT, MY_REC.MY_HTEXT) Then
   rem they don't match, throw error;
   Error MsgGet(10001, 1, "Message not found");
End-If;
```

Related Links

HashWithSalt

SecureRandomGen

VerifyOprPassword

VerifyOprPassword

Syntax

VerifyOprPassword(*O_or_U*, *user_ID*, *cleartext_pwd*)

Description

Use the VerifyOprPassword function to verify that an input clear text string matches the password hashed by either HashWithSalt or Hash and stored in the PSOPRDEFN table.

Parameters

O_or_U Indicates which PSOPRDEFN field to use when matching the user ID:

- *O* – Indicates the OPRID field.
- *U* – Indicates the USERIDALIAS field.

user_ID Specifies the user ID as a string value.

cleartext_pwd Specifies the input password as a clear text string.

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Returns

A Boolean value: True if the input password matches the hashed password stored in the database, False otherwise.

Example

```
If Not VerifyOprPassword("O", %UserId, "user_password") Then
   rem they don't match, throw error;
   Error MsgGet(48, 18, "Message not found");
End-If;
```

Related Links

Hash
HashWithSalt
SecureRandomGen
VerifyHash

ViewAttachment

Syntax

ViewAttachment(*URLSource*, *DirAndSysFileName*, *UserFileName* [, *NewWindow*[, *PreserveCase*]])

Description

Use the ViewAttachment function to download a file from its source storage location and open it locally on the end-user machine.

By using the *UserFileName* parameter, the copy of the file to be viewed may be given a different name than the file at the storage location.

Additional information that is important to the use of ViewAttachment can be found in the *PeopleTools: PeopleCode Developer's Guide*:

- PeopleTools supports multiple types of storage locations.

  See "Understanding File Attachment Storage Locations" (PeopleTools 8.54: PeopleCode Developer's Guide).

- Certain characters are illegal in file names; other characters in file names are converted during file transfer.

  See "Application Development Considerations" (PeopleTools 8.54: PeopleCode Developer's Guide).

- Non-ASCII file names are supported by the PeopleCode file attachment functions.

  See "Attachments with non-ASCII File Names" (PeopleTools 8.54: PeopleCode Developer's Guide).

- The PeopleCode file attachment functions do not provide text file conversions when files are attached or viewed.

  See "Considerations When Attaching Text Files" (PeopleTools 8.54: PeopleCode Developer's Guide).

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- Because ViewAttachment is interactive, it is known as a “think-time” function, and is restricted from use in certain PeopleCode events.

  See "Restrictions on Invoking Functions in Certain PeopleCode Events" (PeopleTools 8.54: PeopleCode Developer’s Guide).

Security Considerations

Viewing a file involves requesting that it be opened. The result of the open action depends upon the extension of the file name and the application associated with that extension. Keep in mind that the act of opening a file with certain extensions (for example, .exe or .bat) results in the file being executed when it is opened. If you do not want specific file type to be handled this way, you must prevent the end user from viewing the requested file.

When the end user views attachments using the ViewAttachment function, some browsers treat documents as HTML *regardless of file extension*, and thus execute embedded JavaScript. You may want to write a PeopleCode program to allow only specific file extensions to be viewed.

Alternatively, you can use a file extension list to restrict the file types that can be uploaded to or downloaded from your PeopleSoft system.

See "Restricting the File Types That Can Be Uploaded or Downloaded" (PeopleTools 8.54: PeopleCode Developer’s Guide).

Problems Downloading Files

The combination of the attachmentExtraWindow web profile property and some of Internet Explorer’s settings can silently interfere with downloading and opening of files with the ViewAttachment function. For more information, see the documentation on the attachmentExtraWindow web profile property.

See "Configuring Custom Properties" (PeopleTools 8.54: Portal Technology).

In addition, if you need to use the SetLanguage built-in function to change languages, invoke SetLanguage prior to invoking ViewAttachment or DetachAttachment. You *must* place the call to SetLanguage in a different PeopleCode program and event from the PeopleCode program and event that invokes ViewAttachment or DetachAttachment.

Parameters

URLSource

A reference to a URL. This can be either a URL identifier in the form **URL**.*URL_ID*, or a string. This, along with the *DirAndSysFileName* parameter, indicates the file's source location.

Note: When the *URLSource* parameter is specified as a string value, forward slashes (/) are required. Backward slashes (\) are not supported for a string value.

See "Understanding URL Strings Versus URL Objects" (PeopleTools 8.54: PeopleCode Developer’s Guide).

DirAndSysFileName

The relative path and file name of the file on the file server. This is appended to *URLSource* to make up the full URL where the file is transferred from. This parameter takes a string value

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Note: Because the *DirAndSysFileName* parameter is appended to the URL, it also requires forward slashes ("/"). Backward slashes ("\") are not supported for this parameter.

UserFileName

The name associated with the copy of the file to be viewed (may be different than the name of the file at the storage location).

NewWindow

Specify if the browser should try to use a new window to display the attachment. This parameter takes a Boolean value. The default is *True*.

PreserveCase

Specify a Boolean value to indicate whether when searching for the file specified by the *DirAndSysFileName* parameter, its file name extension is preserved or not; *True*, preserve the case of the file name extension, *False*, convert the file name extension to all lowercase letters.

The default value is *False*.

Warning! If you use the *PreserveCase* parameter, it is important that you use it in a consistent manner with all the relevant file-processing functions or you may encounter unexpected file-not-found errors.

Returns

You can check for either an integer or a constant value:

Numeric Value	*Constant Value*	*Description*
0	%Attachment_Success	File was transferred successfully. **Important!** If file type restrictions are changed so that access to a previously uploaded file is now blocked, a call to ViewAttachment will return %Attachment_Success, even though the file and its contents are not displayed.

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Numeric Value	*Constant Value*	*Description*
1	%Attachment_Failed	File transfer failed due to unspecified error. The following are some possible situations where %Attachment_Failed could be returned: • Failed to initialize the process due to some internal error. • Failed due to unexpected/bad reply from server. • Failed to allocate memory due to some internal error. • Failed due to timeout. • Failed due to non-availability of space on FTP server. • Failed to close SSL connection. • Failed due to an unspecified error on the HTTP repository. If the HTTP repository resides on a PeopleSoft web server, then you can configure tracing on the web server to report additional error details. See "Debugging File Attachment Problems" (PeopleTools 8.54: PeopleCode Developer's Guide).
2	%Attachment_Cancelled	File transfer didn't complete because the operation was canceled by the end user.

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Numeric Value	*Constant Value*	*Description*
3	%Attachment_FileTransferFailed	File transfer failed due to unspecified error during FTP attempt. The following are some possible situations where %Attachment_ FileTransferFailed could be returned: • Failed due to mismatch in file sizes. • Failed to write to local file. • Failed to store the file on remote server. • Failed to read local file to be uploaded • No response from server. • Failed to overwrite the file on remote server.
7	%Attachment_DestSystNotFound	Cannot locate destination system for FTP. The following are some possible situations where %Attachment_ DestSystNotFound could be returned: • Improper URL format. • Failed to connect to the server specified.

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Numeric Value	*Constant Value*	*Description*
8	%Attachment_DestSysFailedLogin	Unable to login to destination system for FTP. The following are some possible situations where %Attachment_ DestSysFailedLogin could be returned: • Unsupported protocol specified. • Access denied to server. • Failed to connect using SSL Failed to verify the certificates. • Failed due to problem in certificates used. • Could not authenticate the peer certificate. • Failed to login with specified SSL level. • Remote server denied logon. • Problem reading SSL certificate.
9	%Attachment_FileNotFound	Cannot locate file. The following are some possible situations where %Attachment_ FileNotFound could be returned: • Remote file not found. • Failed to read remote file.

Example

```
&retcode = ViewAttachment(URL.MYFTP, ATTACHSYSFILENAME, ATTACHUSERFILE);
```

An example of the ViewAttachment function is provided in the demonstration application delivered in the FILE_ATTACH_WRK derived/work record. This demonstration application is shown on the PeopleTools Test Utilities page.

See "Using the PeopleTools Test Utilities Page" (PeopleTools 8.54: PeopleCode Developer’s Guide).

Related Links

AddAttachment
CleanAttachments
CopyAttachments

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DeleteAttachment
DetachAttachment
GetAttachment
PutAttachment
MAddAttachment
"Understanding the File Attachment Functions" (PeopleTools 8.54: PeopleCode Developer's Guide)

ViewContentURL

Syntax

```
ViewContentURL(URL_str | URL.URL_ID)
```

Description

Use the ViewContentURL function to launch a new browser window and navigates to the location specified by *URL_str* or URL.*URL_ID*.

The content specified by the URL is *not* wrapped by the portal template. Use this function when you want to connect to third-party content. If you want to wrap the content in the portal template, use the ViewURL function.

This is a deferred execution command: the browser is launched after any executing PeopleCode has run to completion. This function automatically launches a new browser window.

Considerations Using JavaScript

Note: Due to restrictions inherent in certain browsers, you cannot use ViewContentURL to open a file on a local file system. See the PeopleTools Browser Compatibility Guide (Oracle Support Document 704492.1) on My Oracle Support for more information.

The JavaScript window open method uses the backslash (\) as a quote for the next character. You must use double backslashes for the ViewContentURL function to work in JavaScript. Note the four backslashes in the beginning of the following code example:

```
ViewContentURL("\\\\PT-NFS01\\PSUSERWS\\TEMP\\TVN\\81X-PATCHES.TXT");
```

Parameters

URL_str* | URL. *URL_ID	Specify the location to where you want to navigate. You can specify either a URL string or a URL saved in the URL table, by specifying the reserved word **URL** followed by a dot and the URL Identifier.

Returns

None.

Example

```
If &MyPage Then
   ViewURL(URL.MYPAGE);
```

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```
Else
   ViewContentURL("http://www.PeopleSoft.com");
End-If;
```

Related Links

GetURL

ViewURL

"URL Maintenance" (PeopleTools 8.54: System and Server Administration)

ViewURL

Syntax

ViewURL(*URL_str* | **URL.***URL_ID* [, *NewWindow*])

Description

Use the ViewURL function to launch the default browser and navigate to the location specified by *URL_str* or **URL**.*URL_ID*. This is a deferred execution command: the browser is launched after any executing PeopleCode has run to completion. You can also specify whether the new page launches a new browser, or replaces the current page in the browser.

Note: This function does not issue any kind of warning to the user about losing data. Your application should verify that all data is saved before launching a new page.

The content specified by the URL is automatically wrapped by the portal template. If you do *not* want to wrap the content in the portal template, use the ViewContentURL function.

See "RedirectURL" (PeopleTools 8.54: PeopleCode API Reference).

Parameters

URL_str* | URL. *URL_ID	Specify the location to where you want to navigate. You can specify either a URL string, or, a URL saved in the URL table, by specifying the reserved word **URL** followed by a dot and the URL Identifier.
NewWindow	Specify whether the new page be opened in a new in the browser, or launch a new browser. This parameter takes a Boolean value: True to launch a new browser, False to replace existing page. The default value is False.

Returns

None.

Example

```
If &MyPage Then
   ViewURL(URL.MYPAGE);
Else
   ViewContentURL("http://www.PeopleSoft.com");
End-If;
```

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Related Links

GetURL
ViewContentURL
"URL Maintenance" (PeopleTools 8.54: System and Server Administration)

PeopleCode Built-in Functions and Language Constructs: W-Z

The PeopleCode built-In functions and language constructs beginning with the letters W, X, Y, and Z are listed in alphabetical order within this topic.

Related Links

Typographical Conventions

Warning

Syntax

```
Warning str
```

Description

You typically use the Warning function in FieldEdit or SaveEdit PeopleCode to display a message alerting the end user about a potentially incorrect data entry or change. It differs from the Error function in that it does not prevent the end user from taking an action, and it does not stop processing in the PeopleCode program where it occurs.

Warning is also used in RowDelete and RowSelect PeopleCode, where its behavior is specialized. See the following sections Warnings in RowDelete and Warnings in RowSelect.

The text of the warning message (the *str* parameter), should always be stored in the Message Catalog and retrieved using the MsgGet or MsgGetText function. This makes it easier to translate the text, and it also enables you to include more detailed Explain text about the warning.

Note: If you pass a string to the Warning function instead of using a Message Catalog function, the explanation text from the last call to the Message Catalog may be appended to the message. This can cause unexpected results.

See WinMessage.

Warnings in FieldEdit and SaveEdit

The primary use of Warning is in FieldEdit and SaveEdit PeopleCode:

- In FieldEdit, Warning displays a message and highlights the relevant field.
- In SaveEdit, Warning displays a message, but does not highlight any field. You can move the cursor to a specific field using the SetCursorPos function.

See SetCursorPos.

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Warnings in RowDelete

When the end user attempts to delete a row of data, the system first prompts for confirmation. If the end user confirms, the RowDelete event fires. A Warning in the RowDelete event displays a warning message with OK and Cancel buttons. If the end user clicks OK, the row is deleted. If the end user clicks Cancel, the row is not deleted.

Warnings in RowSelect

The behavior of Warning in RowSelect is totally anomalous and maintained for backward compatibility only. Use it to filter rows being added to a page scroll after the rows have been selected and brought to the component buffer. Warning causes the Component Processor to skip the current row (so that it is not added to the page scroll), then continue processing. No message is displayed.

Note: Do not use Warning in this fashion. Use the DiscardRow function for replacement instead.

See DiscardRow.

Warnings in Other Events

Do *not* use the Warning function in any of the remaining events, which include:

- FieldDefault
- FieldFormula
- RowInit
- FieldChange
- RowInsert
- SavePreChange
- SavePostChange

Parameters

str A string containing the text of the warning message. This string should always be stored in the Message Catalog and retrieved using the MsgGet or MsgGetText function. This makes translation easier and also enables you to provide detailed Explain text about the warning.

Returns

None.

Example

The following example shows a warning that alerts an end user to a possible error, but allows the end user to accept the change:

```
if All(RETURN_DT, BEGIN_DT) and
      8 * (RETURN_DT - BEGIN_DT) < (DURATION_DAYS * 8 + DURATION_HOURS) then
```

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```
   warning MsgGet(1000, 1, "Duration of absence exceeds standard hours for number o⇒
f days absent.");
end-if;
```

Related Links

Error
MsgGet
MsgGetText
WinMessage

Weekday

Syntax

Weekday(*dt*)

Description

Use the Weekday function to calculate the day of the week based on a date value.

Parameters

dt	A Date value. Weekday determines the day of the week that *dt* falls on.

Returns

Returns a Number value representing the day of the week. 1 is Sunday, 7 is Saturday.

Example

If &Date_HIRED equals October 30, 1996, a Monday, then the following statement sets &DAY_HIRED to 2:

```
&DAY_HIRED = Weekday(&Date_HIRED);
```

Related Links

Date
Date3
DateValue
Day
Days360
Days365
Month
Year

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While

Syntax

While *logical_expressionstatement_list***End-while**

Description

The While loop causes the statements of the *statement_list* to be repeated until *logical_expression* is false. Statements of any kind are allowed in the loop, including other loops. A Break statement inside the loop causes execution to continue with whatever follows the end of the loop. If the Break is in a nested loop, the Break does not apply to the outside loop.

Example

The following example counts from 0 to 10:

```
&COUNTER = 1;
while &COUNTER <= 10
   WinMessage(MsgGet(21000, 1, "Count is %1", &COUNTER));
   &COUNTER = &COUNTER + 1;
end-while;
```

Related Links

Repeat

WinEscape

Syntax

WinEscape()

Description

Note: This function has been deprecated and is no longer supported.

WinExec

Syntax

WinExec(*command_line*, *window_option* [, *synch_exec*])

Description

Note: This function has been deprecated and is no longer supported.

WinMessage

Syntax

WinMessage(*message* [, *style*] [, *title*])

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Description

Note: The WinMessage function is supported for compatibility with previous releases of PeopleTools. New applications should use MessageBox instead.

See MessageBox.

Use the WinMessage function to display a message in a message box.

Use the WinMessage for simple informational display, where the end user reads the message, then clicks an OK button to dismiss the message box. WinMessage can also be used for branching based on end user choice, in which case the message box contains two or more buttons (such as OK and Cancel or Yes, No, and Cancel). The value returned by the function tells you which button the end user clicked, and your code can branch based on that value.

If WinMessage displays more than one button, it causes processing to stop while it waits for user response. This makes it a "user think-time" function, restricting its use in certain PeopleCode events.

The contents of the message displayed by WinMessage can be passed to the function as a string, but unless you are using the function for testing purposes you should always retrieve the message from the Message Catalog using the MsgGet or MsgGetText function. This has the advantage of making the messages much easier to localize and maintain.

Note that if you pass a string to the WinMessage function (or a Warning or Error function) instead of using a Message Catalog function, the explanation text from the last call to the Message Catalog may be appended to the message. This can cause unexpected results.

The Message Catalog functions MsgGet, MsgGetText, and MessageBox retrieve and store two text strings in memory: the message text and the explanation text. The MsgGetExplainText function retrieves and stores only the explanation text. When these strings are displayed by a WinMessage, MessageBox, Error or Warning dialog, the buffers are reinitialized.

If a Message Catalog function is called without displaying the text, for instance to populate a variable or record field, the message text and the explanation text remain in memory.

If a subsequent call passes a string to a WinMessage, Warning, or Error function before the buffers are reinitialized, the explanation text remains in memory and is appended to the message.

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The following example shows one way this could occur.

Image: Example of a Message Catalog entry with message text and explanation text

The Message Catalog might contain an entry such as this:

MsgGetText is used to assign the Message Catalog entry to a variable for further processing.

```
&PartDesc = MsgGetText(30000, 5, "Amana Radar Range");
/** Process order **/
WinMessage("Your Kitchen Upgrade Order has been processed");
```

Image: Example of a WinMessage dialog with explanation text appended

The WinMessage dialog displays the explanation text appended to the intended message:

This example shows a simple workaround to clear the buffers using MsgGet.

```
&PartDesc = MsgGetText(30000, 5, "Amana Radar Range");
/** Process order **/
&Dummy = MsgGet(0,0, " ");
WinMessage("Your Kitchen Upgrade Order has been processed");
```

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Restrictions on Use in PeopleCode Events

The *style* parameter is optional in WinMessage. If *style* is omitted WinMessage displays OK and Cancel buttons, which causes the function to behave as a think-time function. To avoid unnecessary restrictions, you should always pass an appropriate value in the WinMessage *style* parameter.

If the *style* parameter specifies a single button (that is, the OK button), the function can be called in any PeopleCode event.

If the *style* parameter specifies more than one button, or if the *style* parameter is omitted, WinMessage returns a value based on user response and interrupts processing until the user has clicked one of the buttons. This makes it a "user think-time" function, subject to the same restrictions as other think-time functions which means that it cannot be used in any of the following PeopleCode events:

- SavePreChange.
- Workflow.
- RowSelect.
- SavePostChange.
- Any PeopleCode event that fires as a result of a ScrollSelect (or one of its relatives) function calls, or a Select (or one of its relatives) Rowset class method.

See "Understanding Restrictions on Method and Function Use" (PeopleTools 8.54: PeopleCode Developer's Guide).

Restrictions on Use With a Component Interface

This function is ignored (has no effect) when used by a PeopleCode program that's been called by a Component Interface.

Message Box Icons

In the PeopleSoft Pure Internet Architecture, you can't change the icon of a message box. You can change the number and type of buttons, as well as the default button, but the message always displays with the warning icon (a triangle with an exclamation mark in it.)

Parameters

Message	Text displayed in message box. Normally you want to use the MsgGet or MsgGetText function to retrieve the message from the Message Catalog.
Title	Title of message box.
Style	Either a numerical value or a constant specifying the contents and behavior of the dialog box. This parameter is calculated by cumulatively adding either a value or a constant from each of the following categories:

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Category	*Value*	*Constant*	*Meaning*
Buttons	0	%MsgStyle_OK	The message box contains one pushbutton: OK.
	1	%MsgStyle_OKCancel	The message box contains two pushbuttons: OK and Cancel.
	2	%MsgStyle_ AbortRetryIgnore	The message box contains three pushbuttons: Abort, Retry, and Ignore.
	3	%MsgStyle_YesNoCancel	The message box contains three pushbuttons: Yes, No, and Cancel.
	4	%MsgStyle_YesNo	The message box contains two push buttons: Yes and No.
	5	%MsgStyle_RetryCancel	The message box contains two push buttons: Retry and Cancel.

Returns

If the *style* parameter is provided, WinMessage optionally returns a Number value. If the *style* parameter is omitted, WinMessage optionally returns a Boolean value: True if the OK button was clicked, otherwise it returns False.

The return value is zero if there is not enough memory to create the message box.

If the *style* parameter is provided, WinMessage returns one of the following Number values:

Value	*Constant*	*Meaning*
-1	%MsgResult_Warning	Warning was generated.
1	%MsgResult_OK	OK button was selected.
2	%MsgResult_Cancel	Cancel button was selected.
3	%MsgResult_Abort	Abort button was selected.
4	%MsgResult_Retry	Retry button was selected.
5	%MsgResult_Ignore	Ignore button was selected.
6	%MsgResult_Yes	Yes button was selected.
7	%MsgResult_No	No button was selected.

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Example

Image: Message with Yes/No buttons

The following example displays a message dialog box with Yes and No buttons. The message is taken from the Message Catalog. The message displayed looks like this:

When the end user clicks the Yes or No button, a result is passed back that the program uses to control branching.

```
/* Displays Yes/No buttons in message box.  */
&RESULT = WinMessage(MsgGetText(30000, 1, "Message not found."), 4, "Test Applicati⇒
on");
if &RESULT = %MsgResult_Yes then
   /* Yes button was pressed -- do Yes button stuff */
else
   /* No button was pressed -- do No button stuff */
end-if;
```

Related Links

Encrypt
MessageBox
MsgGet
MsgGetText
MsgGetExplainText

WriteToLog

Syntax

WriteToLog(*AppFenceSetting*, *String*)

Description

Use the WriteToLog function to write *String* to either the application server or the TraceSQL log file.

The WriteToLog function writes *String* to the TraceSQL log file if *AppFenceSetting* is less than or equal to the current application log fence (AppLogFence) setting in the application server configuration file (PSAPPSRV.CFG.)

Note: This is distinct from the PeopleTools LogFence capability which applies to PeopleTools level logging.

The WriteToLog function writes *String* to the TraceSQL log file in PSAPPSRV.CFG if any of the following trace options is turned on.

- TracePPR
- TraceSQL

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- TracePC
- TracePIA

If any change is made to the trace options in PSAPPSRV.CFG, you must restart both the application server and web server so that the change takes effect.

The debugging options for a Web Profile also affects the WriteToLog function. If any of the following page fields are selected (checked), the WriteToLog function writes *String* to the TraceSQL log file.

- Show Layout
- Show Overlapping Fields
- Show Stylesheet Inline HTML
- Show JavaScript Inline HTML
- Generate HTML for Testing
- Create File from PIA HTML Page

If the above conditions are not true, the WriteToLog function writes *String* to the application server log file.

Related Links

"Setting Up the PeopleCode Debugger" (PeopleTools 8.54: System and Server Administration)

Parameters

AppFenceSetting Specify the level at which logging should occur, if *AppFenceSetting* is less than or equal to the current application log fence. You can use either a number or a constant value. The values are:

Value	*Description*
%ApplicationLogFence_Error	Allow all levels of errors to be written to the log. This is the lowest setting.
%ApplicationLogFence_ Warning	Allowing only warnings or higher to be written to the log.
%ApplicationLogFence_ Level1	Allow only this level of errors or higher to be written to the log.
%ApplicationLogFence_ Level2	Allow only this level of errors or higher to be written to the log.
%ApplicationLogFence_ Level3	Allow only this level of errors to be written to the log.

String Specify the message text to be written to the log file.

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Returns

None.

Example

```
WriteToLog(%ApplicationLogFence_Level2, "MYAPP" | &Somestring);
```

Related Links

%ApplicationLogFence
"Using Application Logging" (PeopleTools 8.54: PeopleCode Developer's Guide)

Year

Syntax

Year(*dt*)

Description

Use the Year function to derive the year component of a Date value.

Parameters

dt	A Date value from which to derive the year component.

Returns

Returns a Number value between 1900 and 2078 equal to the year component in *dt*.

Example

The example sets &GRAD_YEAR to 1976:

```
&GRAD_DATE = DateValue("10/04/1976");
&GRAD_YEAR = Year(&GRAD_DATE);
```

Related Links

Date
Date3
DateValue
Day
Days360
Days365
Month
Weekday

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Directive PeopleCode Functions and Constructs

PeopleCode pre-compile directives enable developers to select which portions of the code will be compiled based on the PeopleTools release. Developers can write separate blocks of code that are pertinent to different PeopleTools releases and encapsulate these portions in different if-then-else-style blocks. Then, the directive PeopleCode can be compiled in one of two ways:

- In Application Designer. See "Compiling All PeopleCode Programs at Once" (PeopleTools 8.54: PeopleCode Developer's Guide).
- On the command line. See "Compiling and Saving Directive PeopleCode" (PeopleTools 8.54: Application Designer Lifecycle Management Guide).

Related Links

"Command Line Parameters" (PeopleTools 8.54: Application Designer Lifecycle Management Guide)

#If

Syntax

```
#If directive_expression #Then
statement_list
[#Else
statement_list]
#End-If
```

Description

Use the #If construct to compile PeopleCode statements conditionally, depending on the evaluation of the directive conditional expression. Similar to regular If-Then-Else structures, the #Then and #Else clauses of an #If structure consist of arbitrary lists of statements. The #Else clause is optional and may be omitted. If the directive condition evaluates to True, all statements in the #Then clause are compiled; otherwise, all statements in the #Else clause are compiled.

Parameters

directive_expression

Specifies a directive function (for example, #ToolsRel) in a standard comparison that evaluates to a Boolean value.

To combine multiple directive expressions, use **&&** (AND) or **||** (OR) as the Boolean operators.

Note: && and || cannot be used in parentheses.

Returns

None.

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Example

Note: Unlike regular If structures, a semicolon separator is not required after an #End-If.

In the following example, the #If block is compiled for an version of PeopleTools greater than or equal to 8.54.00. The #Else block is compiled for any other versions of PeopleTools.

```
#If #ToolsRel >= "8.54" #Then
   ...
   MessageBox(0, "", 0, 0, "PeopleTools version 8.54 and above");
#Else
...
Messagebox(0, "" , 0 , 0, "PeopleTools version less than 8.54");
#End-If
```

In the following example, the #If block is compiled for specific patch levels: 8.54.01 and 8.54.02. The #Else block is compiled for any other versions of PeopleTools.

```
#If #ToolsRel >= "8.54.01" && #ToolsRel < "8.54.03" #Then
   ...
#Else
...
#End-If
```

Related Links

"Comparison Operators" (PeopleTools 8.54: PeopleCode Developer's Guide)

#ToolsRel

#ToolsRel

Syntax

#ToolsRel

Description

Use the #ToolsRel function to return a string value representing the current PeopleTools release in the following format:

PT_major_rel.PT_minor_rel.patch_level

Use the #ToolsRel function in a directive expression to compare the return value to a literal string. Similar to the value returned by the #ToolsRel function, this literal string must be specified in the following format:

PT_major_rel.PT_minor_rel[*.patch_level*]

When the literal string contains the optional patch level, the comparison is performed to the patch level in the directive expression. However, if the literal string does not specify the optional patch level, the comparison is performed to the release level in the directive expression. Therefore, because the comparison is performed to the release level only, the following directive expression evaluates to True when the current PeopleTools release is 8.54.00, 8.54.01, 8.54.02, and so on:

```
#ToolsRel = "8.54"
```

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Considerations for Directive Expressions

Directive expressions are logical expressions evaluated before compile time. They are always provided between the **#If** and **#Then** directive keywords. Directive expressions use directive functions and regular PeopleCode comparison operators for evaluating the directive expressions.

Important! Directive functions can be used in conjunction with directives in directive expressions only. Using a directive function anywhere else will result in a compile time error.

Parameters

None.

Returns

A String value.

Related Links

"Comparison Operators" (PeopleTools 8.54: PeopleCode Developer's Guide)
#If

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Chapter 2

Meta-SQL Elements

Understanding Meta-SQL

This section discusses:

- Meta-SQL use.
- Meta-SQL element types.
- Parameter markers.

Related Links

SQLExec
ScrollSelect
"Understanding Record Class" (PeopleTools 8.54: PeopleCode API Reference)
"Understanding Row Class" (PeopleTools 8.54: PeopleCode API Reference)
"Understanding SQL Class" (PeopleTools 8.54: PeopleCode API Reference)

Meta-SQL Use

Meta-SQL expands to platform-specific SQL substrings, causes another function to be called, or substitutes a value. Meta-SQL constructs are used in functions that pass SQL strings, such as the following:

- SQLExec.
- Scroll buffer functions (ScrollSelect and its relatives).
- Application Designer dynamic views and SQL views.
- Some Rowset class methods (Select, SelectNew, Fill, and so on.).
- The SQL class.
- Application Engine programs.
- Some Record class methods (Insert, Update, and so on.).
- COBOL functions.

Meta-SQL Element Types

There are three types of meta-SQL elements:

- Constructs

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Constructs are a direct substitution of a value, and help to build or modify a SQL statement.

Examples include %Bind, %InsertSelect, and %List.

- Functions

  Functions perform actions or cause another function to be called.

  Examples include %ClearCursor, %Execute, and %ExecuteEdits.

- Meta-SQL variables

  Meta-SQL variables enable substitution of text within SQL statements.

  Examples include %AsOfDate, %Comma, and %JobInstance.

Parameter Markers

Parameter markers or bind variables are most commonly used in predicates, however some database platforms allow them in the SELECT list. However, since this is not supported across all platforms, you should not code your SQL to use bind variables in a SELECT list.

In addition, do not have bind variables as the operands of the same operator. This is not supported on all platforms. DB2/400 and DB2/OS390 cannot handle this type of operation.

Date Considerations

This section discusses:

- Basic date meta-SQL guidelines.
- Date, DateTime, or Time wrappers with Application Engine programs.
- Date, DateTime, or Time wrappers for SQL views and dynamic views.
- {DateTimein-prefix} in Structured Query Language (SQR).

Basic Date Meta-SQL Guidelines

You can avoid confusion when using meta-SQL such as %Datein and %Dateout if you remember to use "in" functions in the Where subclause of a SQL query and to use "out" functions in the Select (main) clause of the query. For example:

```
select emplid, %dateout(effdt) from ps_car_alloc  a where car_id = '" | &REGISTRATI⇒
ON_NO | "' and plan_type = '" | &PLAN_TYPE | "' and a.effdt = (select max (b.effdt)⇒
 from ps_car_alloc b where a.emplid=b.emplid and b.effdt <= %currentdatein) and sta⇒
rt_dt <= %currentdatein and (end_dt is null or end_dt >= %currentdatein)";
```

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Date, DateTime, and Time Wrappers with Application Engine Programs

Use date or time wrappers (%Datein, %TimeOut, and so on) when selecting date or time columns into memory. Different database platforms use different internal formats for these data types. Those different formats range from 1900-01-01 to 01-JAN-1900. DateTime (timestamp) formats are even more complex.

In PeopleCode (SQLExecs and the like), use both an "out" wrapper when selecting a DateTime value into memory, as well as an "in" wrapper when referencing the value as a bind variable.

In an Application Engine program, when you populate a DateTime state field in a %Select, you still must use an "out" wrapper to get the value into the standard format. But when you reference this state field in a %Bind, Application Engine automatically provides the "in" wrapper around the substituted literal or bind marker (the latter if reuse is in effect).

Actually, if you use the code `%Bind(date)` in the select list of another %Select statement, to load the value into another date field, Application Engine doesn't provide a wrapper (since you are selecting a value that is already in the standard format, you do not need to use a wrapper).

Date, DateTime, and Time Out Wrappers for SQL Views and Dynamic Views

Dynamic views containing Date, Time, or DateTime fields must be wrapped with the appropriate meta-SQL. PeopleTools uses the SQL directly from the view definition (view text) and doesn't generate anything, so no meta-SQL wrapping is done.

SQL views should not contain meta-SQL that wraps Date, Time, or DateTime fields.

{DateTimein-prefix} in SQR

In SQR, if you are using {DateTimein-prefix}, and so on, you need to do the following:

- For string or let statements when using dynamic SQL, you need to use the following:

  ```
  {DYN-Date***in/out-prefix/suffix}
  ```

- For SQL statements, you need to use the regular SQL, as follows:

  ```
  {Date*** in/out-prefix/suffix}
  ```

Meta-SQL Placement Considerations

Not all meta-SQL can be used by all programs. Some meta-SQL can be used only in Application Engine programs. Other meta-SQL can only be used as part of a SQL statement in a SQL view or dynamic view. The following table lists available meta-SQL elements and where each element can be used.

If a meta-SQL construct, function, or meta-variable is supported in PeopleCode, it is supported in all types of PeopleCode programs—that is, in Application Engine PeopleCode programs (actions), component interface PeopleCode programs, and so on.

Note: Even if a meta-SQL element is used in PeopleCode, you cannot use meta-SQL like a built-in function. You can use meta-SQL in the SQLExec function, the Select method, the Fill method, and so on.

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Note: Meta-SQL is not available in SQR.

Meta-SQL elements that are available for Application Engine only are described in Application Engine documentation.

Meta-SQL Element Name	*Used in All Types of PeopleCode Programs*	*Used in Application Engine SQL Actions*	*Used in COBOL*	*Used in Dynamic Views and SQL Views*
%Abs	X	X		X
%AEProgram		X		
%AESection		X		
%AEStep		X		
%AsOfDate		X		
%AsOfDateOvr		X		
%BINARYSORT	X	X	X	X
%Bind		X		
%Cast	X	X	X	X
%ClearCursor		X		
%COALESCE	X	X		X
%Comma		X		
%Concat	X	X		X
%CurrentDateIn	X	X	X	X
%CurrentDateOut	X	X	X	X
%CurrentDateTimeIn	X	X	X	X
%CurrentDateTimeOut	X	X	X	X
%CurrentTimeIn	X	X	X	X
%CurrentTimeOut	X	X	X	X
%DateAdd	X	X	X	X
%DatabaseRelease	X	X	X	X
%DateDiff	X	X	X	X
%DateIn	X	X	X	X

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Meta-SQL Element Name	*Used in All Types of PeopleCode Programs*	*Used in Application Engine SQL Actions*	*Used in COBOL*	*Used in Dynamic Views and SQL Views*
%DateNull	X	X		X
%DateOut	X	X	X	X
%DatePart	X	X		X
%DateTimeDiff	X	X	X	X
%DateTimeIn	X	X	X	X
%DateTimeNull	X	X		X
%DateTimeOut	X	X	X	X
%DecDiv	X	X	X	X
%DecMult	X	X	X	X
%Delete	X			
%DTTM	X	X		X
%EffDtCheck	X	X		
%Execute		X		
%ExecuteEdits		X		
%FirstRows	X	X		
%GetProgText		X		
%Insert	X			
%InsertSelect	X	X		X
%InsertSelectWithLongs	X	X		X
%InsertValues	X			X
%JobInstance		X		
%Join	X	X		X
%KeyEqual	X			X
%KeyEqualNoEffDt	X			X
%LeftParen		X		
%Like	X	X		X

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Meta-SQL Element Name	*Used in All Types of PeopleCode Programs*	*Used in Application Engine SQL Actions*	*Used in COBOL*	*Used in Dynamic Views and SQL Views*
%LikeExact	X	X		X
%List		X		
%ListBind		X		
%ListEqual		X		
%Mod	X	X		X
%Next and %Previous		X		
%NoUppercase	X	X		X
%NumToChar	X	X		X
%OldKeyEqual	X			X
%OPRCLAUSE				X
%ProcessInstance		X		
%ResolveMetaSQL		X		
%ReturnCode		X		
%RightParen		X		
%Round	X	X	X	X
%RoundCurrency		X		
%RunControl		X		
%Select		X		
%SelectAll	X			
%SelectByKey	X			
%SelectByKeyEffDt	X			
%SelectDistinct	X			
%SelectDummyTable	X	X		
%SelectInit		X		
%Space		X		
%SQL	X	X		X

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Meta-SQL Element Name	*Used in All Types of PeopleCode Programs*	*Used in Application Engine SQL Actions*	*Used in COBOL*	*Used in Dynamic Views and SQL Views*
%SqlHint	X	X	X	
%SQLRows		X		
%Substring	X	X	X	X
%SUBREC				X
%Table	X	X		X
%Test	X	X		
%TextIn **Note:** %TextIn is not supported on Informix.	X	X		X
%TimeAdd	X	X		
%TimeIn	X	X	X	X
%TimeNull	X	X		X
%TimeOut	X	X	X	X
%TimePart	X	X		X
%TrimSubstr	X	X	X	X
%Truncate	X	X	X	X
%TruncateTable	X	X	X	X
%Update	X			
%UpdatePairs	X			X
%UpdateStats		X	X	
%Upper	X	X		X
%UuidGen	X	X		
%UuidGenBase64	X	X		

Related Links

"Understanding Application Engine Meta-SQL" (PeopleTools 8.54: Application Engine)

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Meta-SQL Reference

This section discusses meta-SQL elements in alphabetical order.

Note: The parameter *recname* refers to a record name, not a table name. If you specify a table name (for example, PS_ST_OPTION_PARMS) you receive a SQL error. Use the record name (for example, ST_OPTION_PARMS) instead. Also, do not use quotation marks around a record name.

%Abs

Syntax

%Abs(*x*)

Description

Use the %Abs meta-SQL construct to return a decimal value equal to the absolute value of a number *x*.

Note: This meta-SQL construct is not implemented for COBOL.

Example

```
SELECT INVENTORY_CODE FROM INVENTORY_TABLE WHERE %ABS(NEW_AMOUNT - OLD_AMOUNT) > SO⇒
ME_ALLOWED_VALUE
```

%BINARYSORT

Syntax

%BINARYSORT(*Recname*)

Description

Any in-memory sorting performed using COBOL language functions is performed as a binary sort in the current character set used for COBOL processing, and may not necessarily match the sort order returned by the database in response to an Order By clause. Should you require the database to return data sorted using a binary sort of its encoding rather than the default linguistically-correct sort, you must use the %BINARYSORT meta-SQL function around each column in the Where or Order By clause where binary ordering is important.

However, for z/OS implementations, keep in mind that this binary sorting is only equivalent when the COBOL program is run z/OS server. For example, the binary sort produced in COBOL differs from the binary sort produced by the database, as the database is encoded in extended binary-coded decimal interchange code (EBCDIC) and the client is in an ASCII-based encoding. Therefore, %BINARYSORT should only be used in COBOL programs that are not run using the RemoteCall function, where the z/OS platform is not supported as a RemoteCall server.

When running against non-z/OS systems, %BINARYSORT can be used in both RemoteCall and non-RemoteCall programs.

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Note: Using %BINARYSORT in Where and Order By clauses negates the use of any indexes, as most databases can't use indexes for functional comparisons. (For example, `WHERE %BINARYSORT(column) > 'X'`). Use this syntax only when sorting equivalence of SQL statement results and COBOL memory order is required.

Parameters

Recname Specify the record name to use with the sorting.

Example

```
SELECT RECNAME FROM PSRECDEFN  WHERE %BINARYSORT(RECNAME) < %BINARYSORT('xxx')

SELECT RECNAME FROM PSRECDEFN  ORDER BY %BINARYSORT(RECNAME)
```

Related Links

RemoteCall

"Understanding COBOL in a Unicode Environment" (PeopleTools 8.54: Global Technology)

%Cast

Syntax

%Cast(*source_expr*, *source_type*, *target_type*[, *precision*[.*scale*]])

Description

Use the %Cast meta-SQL function to convert a PeopleSoft data type to a Character data type. A database-generated error is returned if the function attempts to make an invalid conversion. %Cast can be used wherever %DateOut, %TimeOut, %DateTimeOut, %CurrentDateOut, %CurrentTimeOut, %CurrentDateTimeOut, and %NumToChar functions can be used.

Note: %NumToChar will preserve all trailing zeroes. Therefore, use the *scale* parameter of %Cast to specify the number of trailing zeroes.

On some platforms the meta-SQL functions %DateOut, %TimeOut, %DateTimeOut, %CurrentDateOut, %CurrentTimeOut and %CurrentDateTimeOut don’t return a Character value. On other platforms, these functions return a Character string only in certain cases. %Cast returns a Character value on all supported platforms.

Use %Cast only in the Select portion of query. Do not use it in a Where clause or in Insert or Update statements.

Parameters

source_expr Specify the input expression in the form of a Number, Long Character, Date, Time, or DateTime column name or as a %CurrentDateOut, %CurrentTimeOut, or %CurrentDateTimeOut meta-SQL variable.

This parameter is not case sensitive.

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source_type

Specify the source data type. Valid data types are Number, Long, Date, Time, and DateTime.

This parameter is not case sensitive.

target_type

Currently the only target type supported is Character.

precision.scale

The *precision.scale* parameter is currently supported on DB2 UDB for z/OS only and with a source type of Number. While this parameter can be supplied on other platforms, it is ignored.

This parameter is optional.

The *scale* parameter is an optional part of this parameter. Therefore, the expression `precision.0` is equivalent to `precision`.

%COALESCE

Syntax

```
%COALESCE(expr1, expr2, ...)
```

Description

Use the %COALESCE function to return the first non-null argument provided to the function.

Note: This meta-SQL function is not implemented for COBOL.

Parameters

expr1. . .exprn

Specify the expressions to check.

Note: You cannot specify bind parameters using these expressions.

Example

The following example uses the PRODUCT_INFO table to organize a clearance sale of products. It gives a 10 percent discount to all products with a list price. If there is no list price, the sale price is the minimum price. If there is no minimum price, the sale price is 10.

```
SELECT product_id, list_price, min_price, %COALESCE(0.9*list_price, min_price, 10) ⇒
"Sale"
from PRODUCT_INFO
where SUPPLIER_ID = 6009;
```

%Concat

Syntax

```
string1 %Concat string2
```

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Description

At runtime, the %Concat meta-SQL variable is replaced by the string concatenation operator appropriate for the relational database management system (RDBMS) being used. For example, on DB2, the %Concat meta-SQL variable is replaced with CONCAT, while on Sybase it's replaced with a +.

This meta-SQL variable is supported with the same limitations as the native concatenation operator for the RDBMS where the meta-SQL is being executed. For example, some platforms enable you to concatenate a string with a numeric value; others flag this as an error. PeopleTools makes no attempt to check or convert the data types of either of the operands.

Note: Concat is not available in COBOL, but the DYN-STMT-CONCAT field can be strung into dynamic COBOL strings to resolve into a platform-specific concatenation operator.

Example

Example 1:

```
SELECT LAST_NAME %Concat ',' %Concat FIRST_NAME FROM PS_EMPLOYEE
```

Example 2:

```
SELECT PORTAL_NAME
 , PORTAL_LABEL
 , %TrimSubstr(PORTAL_OBJNAME,1,30) %Concat ':' %Concat %TrimSubstr(PORTAL_NAME,1,3⇒
0)
  FROM PSPRSMDEFN
 WHERE PORTAL_PRNTOBJNAME = 'CO_NAVIGATION_COLLECTIONS'
   AND PORTAL_REFTYPE = 'F'
```

%CurrentDateIn

Description

The %CurrentDateIn meta-SQL variable expands to a platform-specific SQL substring representing the current date in the Where clause of a SQL Select or Update statement, or when the current date is passed in an Insert statement.

%CurrentDateOut

Description

The %CurrentDateOut meta-SQL variable expands to platform-specific SQL for the current date in the Select clause of a SQL query.

%CurrentDateTimeIn

Description

The %CurrentDateTimeIn meta-SQL variable expands to a platform-specific SQL substring representing the current datetime in the Where clause of a SQL Select or Update statement, or when the current date time is passed in an Insert statement.

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%CurrentDateTimeOut

Description

The %CurrentDateTimeOut meta-SQL variable expands to platform-specific SQL for the current datetime in the Select clause of a SQL query.

%CurrentTimeIn

Description

The %CurrentTimeIn meta-SQL variable expands to a platform-specific SQL substring representing the current time in the Where clause of a SQL Select or Update statement, or when the current time is passed in an Insert statement.

%CurrentTimeOut

Description

The %CurrentTimeOut meta-SQL variable expands to platform-specific SQL for the current time in the Select clause of a SQL query.

%DatabaseRelease

Syntax

%DatabaseRelease([*descr_level*])

Description

The %DatabaseRelease meta-SQL variable returns the database version of the current database connection. The return value is a number or a string depending on *descr_level*. Optionally specify the description level as MAJOR, FULL, or DESCR.

If MAJOR is specified, %DatabaseRelease returns the major release number as a number value.

If FULL is specified, %DatabaseRelease returns the full release and version as a string value.

If DESCR is specified, %DatabaseRelease returns the full release and version with description as a string value.

Parameters

descr_level

Specify the level of description to be returned. Valid values are MAJOR, FULL, and DESCR.

This parameter is optional. The default is MAJOR.

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Example

If the current database is *Oracle Database 10g Enterprise Edition Release 10.2.0.3.0- 64-bit Production With the Partitioning and Data Mining option*:

```
SQLExec("SELECT %DatabaseRelease(MAJOR) from %SelectDummyTable", &DBRel);
```

Returns `10`.

```
SQLExec("SELECT %DatabaseRelease(FULL) from %SelectDummyTable", &DBRel);
```

Returns `'10.2.0.3.0'`,

```
SQLExec("SELECT %DatabaseRelease(DESCR) from %SelectDummyTable", &DBRel);
```

Returns `'Oracle Database 10g Enterprise Edition Release 10.2.0.3.0-64bit Production With the Partitioning and Data Mining options'`.

%DateAdd

Syntax

%DateAdd(*date_from*, *add_days*)

Description

The %DateAdd meta-SQL function returns a date by adding *add_days* to *date_from*. The *add_days* variable can be negative.

Example

```
SQLExec("SELECT %DateAdd(%DateIn('2002-02-02'), 12) from %SelectDummyTable", &add);
WinMessage(&add);
```

%DateDiff

Syntax

%DateDiff(*date_from*, *date_to*)

Description

The %DateDiff meta-SQL function returns an integer representing the difference between two dates in number of days.

Example

```
%DateDiff(%DateIn('1997-01-01'), %DateIn("1966-06-30'))
```

```
%DateDiff( date1_column, date2_column)
```

```
%DateDiff ( %DateAdd(date1_column, 30), date2_column)
```

The following usage is *illegal* (always use %Datein for inputting date literals):

```
%DateDiff('1997-01-01', '1996-06-30') (should use %DateIn for inputting date litera⇒
ls)
```

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%DateIn

Syntax

%DateIn(*dt*)

Description

The %DateIn meta-SQL variable expands into platform-specific SQL syntax for the date. Use %DateIn whenever a date literal or Date bind variable is used in a comparison in the Where clause of a Select or Update statement, or when a Date value is passed in an Insert statement.

Restrictions Using COBOL

You can only use string literals when using this construct in COBOL. You cannot use it with bind parameters in COBOL. For example, the following works in COBOL:

```
UPDATE PS_PERSONAL_DATA SET LASTUPDT = %DATEIN('2002-12-11')
```

The following SQL fails:

```
UPDATE PS_PERSONAL_DATA SET LASTUPDT = %DATEIN(:1)
```

Parameters

dt Specify either a Date value or a date literal in YYYY-MM-DD format.

%DateNull

Syntax

%DateNull

Description

Use the %DateNull meta-SQL variable to specify a null value for a Date field. Only use this meta-SQL in Insert or Update clauses. Do not use this meta-SQL in a Where clause.

Note: This meta-SQL variable is not implemented for COBOL.

This meta-SQL resolves into a database-specific SQL substring, as shown in the following table:

Database	***Resolved Substring***
Informix	empty string (')
DB2	NULLIF(CURRENT DATE, CURRENT DATE)
All others	NULL

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Parameters

None.

%DateOut

Syntax

%DateOut(*dt*)

Description

The %DateOut meta-SQL variable expands to either a platform-specific SQL substring or datetime value, depending on the database platform, representing a datetime column in the Select clause of a SQL query

Parameters

dt Specify *dt* as a date column.

Note: You cannot specify a literal value for *dt.* Code such as `%DateOut('1900-01-01')` is not allowed.

%DatePart

Syntax

%DatePart(*DTTM_Column*)

Description

The %DatePart meta-SQL variable returns the date portion of the specified DateTime column.

Note: This meta-SQL variable is not implemented for COBOL.

Considerations using %DatePart

Use %DateOut meta-SQL when fetching values, as in the following example:

```
%DateOut(%DatePart(DTTM_COLUMN)) from some_table
```

If a literal is used as the parameter to %DatePart, it must be wrapped in %DateTimeIn:

```
insert into some_table values(%DatePart(%DateTimeIn('2001-01-01-12.34.56.789012')))
```

Parameters

DTTM_Column Specify the datetime column from which you want to return the date.

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%DateTimeDiff

Syntax

%DateTimeDiff(*datetime_from*, *datetime_to*)

Description

The %DateTimeDiff meta-SQL function returns a time value, representing the difference between two datetimes in minutes.

Example

The following example returns the difference in hours between the current datetime and the requested datetime:

```
%DateTimeDiff(%CurrentDateIn, RQSTDTTM) < " | RECORD.FIELDNAME * 60;
```

The following example returns the difference in minutes:

```
%DateTimeDiff(%CurrentDateIn, RQSTDTTM) < " | RECORD.FIELDNAME;
```

%DateTimeIn

Syntax

%DateTimeIn(*dtt*)

Description

The %DateTimeIn meta-SQL variable expands to platform-specific SQL for a DateTime value in the Where clause of a SQL Select or Update statement, or when a DateTime value is passed in an Insert statement.

Restrictions Using COBOL

You can only use string literals when using this construct in COBOL. You cannot use it with bind parameters in COBOL. For example, the following works in COBOL:

```
UPDATE PS_PERSONAL_DATA SET LASTUPDTTM = %DATETIMEIN('2002-12-11-11.59.00.000000')
```

The following SQL fails:

```
UPDATE PS_PERSONAL_DATA SET LASTUPDTTM = %DATETIMEIN(:1)
```

Parameters

dtt Specify either a DateTime bind variable or a string literal in the form YYYY-MM-DD-hh.mm.ss.ssssss.

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%DateTimeNull

Syntax

%DateTimeNull

Description

Use the %DateTimeNull meta-SQL variable to specify a null valuefor a DateTime field. Only use this meta-SQL in Insert or Update clauses. Do not use this meta-SQL in a Where clause.

Note: This meta-SQL is not implemented for COBOL.

This meta-SQL resolves into a database-specific SQL substring, as shown in the following table:

Database	***Resolved Substring***
Informix	empty string (')
DB2	NULLIF(CURRENT TIMESTAMP, CURRENT TIMESTAMP)
All others	NULL

Parameters

None.

Example

```
%InsertSelect(LEDGER_KK_WK2,LEDGER_KK_WRK, CURRENCY_CD = %Bind(TO_CURRENCY) ,POSTED⇒
_TOTAL_AMT = SUM(POSTED_BASE_AMT),POSTED_TRAN_AMT = 0,POSTED_BASE_AMT = 0,BASE_CURR⇒
ENCY = %Bind(TO_CURRENCY),PROCESS_INSTANCE = %Bind(PROCESS_INSTANCE),DTTM_STAMP_SEC⇒
 = %DateTimeNull)

FROM PS_LEDGER_KK_WRK

WHERE PROCESS_INST_STG = %Bind(PROCESS_INSTANCE)

AND CURRENCY_CD <> %Bind(TO_CURRENCY)

GROUP BY PROCESS_INST_STG, BUSINESS_UNIT,LEDGER, ACCOUNT, %List(FIELD_LIST, CFCC1_A⇒
K_SBR) ,STATISTICS_CODE, FISCAL_YEAR,ACCOUNTING_PERIOD
```

%DateTimeOut

Syntax

%DateTimeOut(*datetime_col*)

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Description

The %DateTimeOut meta-SQL variable expands to either a platform-specific SQL substring or datetime value, depending on the database platform, representing a datetime column in the Select clause of a SQL query

Parameters

datetime_col	Specify a datetime column.

%DecDiv

Syntax

%DecDiv(*a*,*b*)

Description

The %DecDiv meta-SQL function returns a number representing the value of *a* divided by *b,* where *a* and *b* are numeric expressions.

If the result needs to be picked up by a bind variable, pick it up using the Character type or PIC X(50).

Parameters

a	Specify the dividend as a number.
b	Specify the divisor as a number.

Example

```
%DecDiv(1000.0, :1)
```

In the example, :1 is a bind variable in SQLExec PeopleCode.

Related Links

%Mod

%DecMult

Syntax

%DecMult(*a*,*b*)

Description

The %DecMult meta-SQL function returns a number representing *a* multiplied by *b,* where *a* and *b* are numeric expressions.

If the result needs to be picked up by a bind variable, pick it up using the Character type or PIC X(50).

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Note: %DecMult is replaced with a simple multiplication function on all platforms except for the DB2 UDB for OS/390 and z/OS platform. On this platform, it is converted to MULTIPLY_ALT. The MULTIPLY_ALT scalar function returns the product of the two arguments as a decimal value. It is provided as an alternative to the multiplication operator, especially when the sum of the precisions of the arguments exceeds 31.

Note: If you receive an overflow error using this meta-SQL, you may need to use the CAST function on the MSSQL, ORACLE, DB2UNIX and DB2 UDB for OS/390 platforms, or the CONVERT function for SYBASE platforms, on your input first.

Parameters

a	Specify a number to be multiplied.
b	Specify a number to use for multiplying.

Example

```
%DecMult(12.3, 34.67)
```

```
%DecMult(c1 + c2, c3)
```

In the example, c1, c2, and c3 are fields of the Number data type.

%DTTM

Syntax

%DTTM(*date, time*)

Description

The %DTTM meta-SQL function combines the database date in the *date* value with the database time in the *time* value and returns a database timestamp value.

Note: This meta-SQL function is not implemented for COBOL.

Example

```
INSERT INTO TABLE1 (TIMESTAMP) SELECT %DTTM(DATE,TIME) FROM TABLE2
```

%EffDtCheck

Syntax

%EffDtCheck(*recordname* [*correlation_id1*], *correlation_id2, as_of_date*)

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Description

The %EffDtCheck construct expands into an effective date subquery suitable for a Where clause. The value for *as_of_date* is automatically wrapped in %DateIn unless *as_of_date* is already wrapped in %DateIn or refers to other database columns.

Note: This meta-SQL construct is not implemented for COBOL.

%EffDtCheck only works with effective dates. It does not take effective sequence numbers (EFFSEQ) into account. It also does not do effective-status (EFF_STATUS) checking.

Parameters

recordname

Specify the record name to use as the record in the effective-date checking. This can be a bind variable, a record object, or a record name in the form *recname.* You cannot specify a **RECORD.** *recname,* a record name in quotation marks, or a table name.

Note: If you specify a bind variable, it should refer to a record object, not a string variable.

---

correlation_id1

(Optional) Specify the letter used inside the effective-dating subselect. If this parameter isn't specified, *recordname* is used.

correlation_id2

Specify the letter already assigned to the main record in the From clause of the SQL statement.

as_of_date

Specify the date to use in the effective date. This can be a bind variable, a variable, or a hard-coded date. The value for *as_of_date* is automatically wrapped in %DateIn unless *as_of_date* is already wrapped in %DateIn or refers to other database columns.

Example

The following is a generic code sample:

```
SELECT. . .
   FROM. . .
      WHERE %EffDtCheck(recordname correlation_id, as_of_date)
```

The example code resolves into the following:

```
SELECT . . .
   FROM. . .
   WHERE correlation_id.EFFDT = (SELECT MAX(EFFDT) FROM recordname
      WHERE recordname.KEYFIELD1 = correlation_id.KEYFIELD1
      AND recordname.KEYFIELD2 = correlation_id.KEYFIELD2
      AND. . .
      AND recordname.EFFDT <= %DATEIN(as_of_date))
```

In the following example, &Date has the value of 01/02/1998. The example &Rec object has an EFFDT key field.

```
SQLExec("SELECT FNUM FROM PS_REC A WHERE %EffDtCheck(:1, A, :2)", &Rec, &Date);
```

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This example code resolves into the following:

```
"Select FNUM from PS_REC A where EFFDT = (select MAX(EFFDT)
from PS_REC
   where PS_REC.FNUM = A.FNUM
   and PS_REC.EFFDT <= %DateIn('1998-01-02') )"
```

The following example uses correlation IDs:

```
SELECT A.DEPTID
FROM %Table(DEPT_TBL) A
WHERE
%EffDtCheck(DEPT_TBL B, A, %CurrentDateIn)
AND A.EFF_STATUS = 'A'
```

This example code resolves into the following:

```
SELECT A.DEPTID
FROM %Table(DEPT_TBL) A
WHERE
A.EFFDT =
(SELECT MAX(B.EFFDT)
FROM DEPT_TBL B
WHERE
A.SETID = B.SETID
AND A.DEPTID = B.DEPTID
AND B.EFFDT <=%CurrentDateIn)
AND A.EFF_STATUS = 'A'
```

%FirstRows

Syntax

%FirstRows(*n*)

Description

The %FirstRows meta-SQL variable is replaced by database-specific SQL syntax to optimize retrieval of *n* rows. Depending on the database, this variable optimizes:

- The query path.
- The number of rows returned.
- The number of rows returned per fetch buffer.

Considerations Using %FirstRows

Consider the following when using %FirstRows:

- Using %FirstRows does *not* mean only the first *n* rows are returned.

  It means that the SQL is optimized for the first *n* rows where the platform supports it. More rows might be returned, depending on the platform.
- It is the application's responsibility to stop fetching when enough rows have been returned.
- This meta-SQL variable is not implemented for COBOL or dynamic view SQL.
- Do not use this meta-SQL variable if the application might require more than *n* rows fetched.

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The results of fetching more than *n* rows varies by platform. Some return the extra rows, but performance may be suboptimal. Others return the message "ROW NOT FOUND".

- Place this meta-SQL variable between the Select statement that begins the SQL statement and the Select List statement.

  Do not use it in subqueries, views, Insert/Select statements, and so on. Do not use a wildcard (*) with the Select List statement.

- Do not use this meta-SQL variable with Distinct statements, because the code `SELECT TOP 1 DISTINCT` fails on Microsoft SQL Server and Sybase.

- This meta-SQL variable is implicitly embedded in all Select statements for SQLExecs for all platforms except Oracle.

Parameters

n	Specify the number of rows to optimize retrieval for.

Example

The following code checks for the existence of a row:

```
&SQL = CreateSQL("select %firstrows(1) 'x' from PS_EXAMPLE where COL1 = :1", &temp)⇒
;
```

The following populates a 10-element array:

```
&SQL = CreateSQL("select %firstrows(10) COL2, COL3 from PS_EXAMPLE_VW where COL1 = ⇒
:1", &temp);
```

%InsertSelect

Syntax

%InsertSelect([DISTINCT,]*insert_recname*, *select_recname* [*correlation_id*][, *select_recname_n* [*correlation_id_n*]] [, *override_field* = *value*]. . .)

Description

The %InsertSelect meta-SQL construct generates an Insert statement with a Select statement. It does not generate a From statement. You must specify the select records before you specify override fields.

Note: %InsertSelect has a limit of 99 override fields.

The Insert column list is composed of all the fields in the specified *insert_recname,* with the exception of LongChar or Image fields.

Note: Because of the way long values (LongChar and Image fields) are handled in the various database platforms for Insert statements, all long values in *insert_recname* are skipped in the generated Insert statement. This implies that these fields should be defined in such a manner as to allow null values.
If you need to include long values in *insert_recname* use %InsertSelectWithLongs.

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The corresponding value in the Select list is generated based on the following precedence:

1. If the Insert fieldname appears as an *override_field,* the corresponding *value* is used in the Select list.
2. If the Insert field name matches a field name in one of the *select_recname* variables specified, the corresponding Select field is used in the Select list.
3. The search order of the *select_recname* records is the order that they are specified in the %InsertSelect function.
4. If the Insert field name has a constant default value defined in Application Designer, that value is used in the Select list.
5. A default value appropriate for the data type of the Insert field is used (blank for characters, zero for numbers, NULL for Date, Time, and DateTime values, and so on.)

Use the optional *override_field* variable to specify values for a particular field.

Note: You cannot use bind variables with the *override_field*.

For each field you specify, the matching logic described in the preceding list is not performed. Instead, the value that you specify after the equal sign is used for that field in the actual Select list. Use this technique to let PeopleTools or Application Engine handle most of the fields in the record, while specifying some of them explicitly. Also, you can use *override_field* to specify aggregate functions like Sum, Max, and so on.

Note: This meta-SQL is not implemented for COBOL.

Parameters

DISTINCT

Specify if the Select statement being generated should contain a Distinct clause.

insert_recname

Specify the name of record being inserted into. You must specify a record name, not **RECORD.** *recname,* a record name in quotation marks, a bind variable, or a table name.

Note: If the record for *insert_recname* is a temporary table, %InsertSelect automatically substitutes the corresponding table instance (PS_TARGET*nn* instead of PS_TARGET).

---

select_recname

Specify the name of record being selected from. You can specify more than one record. You must specify a record name, not a **RECORD.** *recname*, a record name in quotation marks, or a table name.

correlation_id

Identify the correlation ID to be used for the *select_recname* records and fields.

override_field

Specify the name of a field on *insert_recname* that you want to supply a value for (instead of using the value supplied from the *select_recname.)*

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Value Specify the value that should be used for the *override_field* instead of the value from *select_recname.*

Example

Here is a basic example:

```
%InsertSelect(AE_SECTION_TBL, AE_STEP_TBL S, AE_SECTION_TYPE = ' ')
   FROM PS_AE_STEP_TBL S, PS_AS_STMT_TBL T
WHERE. . .
```

The example code resolves into the following:

```
INSERT INTO PS_AE_SECTION_TBL (AE_APPLID, AE_SECTION,. . ., AE_SECTION_TYPE)
SELECT S.AE_APPL_ID, S.AE_SECTION, . . . ' '
FROM PS_AE_STEP_TBL S, PS_AS_STMT_TBL T
   WHERE. . .
```

In the following example, you have a temporary table, PS_MY_TEMP, which is based on a join between two other tables, PS_MY_TABLE1 and PS_MY_TABLE2:

```
%InsertSelect(MY_TEMP, MY_TABLE1, MY_TABLE2 T2)
   FROM PS_MY_TABLE1 T1, PS_MY_TABLE2 T2
WHERE %Join(COMMON_KEYS, MY_TABLE1 T1, MY_TABLE2 T2) . . .
```

This code resolves into:

```
INSERT INTO PS_MY_TEMP (FIELD1, FIELD2 . . .)
   SELECT T2.FIELD1, T2.FIELD2, . . .
FROM PS_MY_TABLE1 T1, PS_MYTABLE2 T2
WHERE T1.FIELD1 = T2.FIELD1
AND T1.FIELD2 = T2.FIELD2 . . .
```

The following example creates a distinct Select statement.

```
%InsertSelect(DISTINCT, MY_TABLE, TABLE1, TABLE2 T2)
   FROM PS_TABLE1 T1, PS_TABLE2 T2
WHERE %Join(COMMON_KEYS, TABLE1 T1, TABLE2 T2) . . .
```

This code resolves into:

```
INSERT INTO PS_MYTABLE (FIELD1, FIELD2 . . .)
   SELECT DISTINCT T2.FIELD1, T2.FIELD2, . . .
FROM PS_TABLE1 T1, PS_TABLE2 T2
WHERE T1.FIELD1 = T2.FIELD1
AND T1.FIELD2 = T2.FIELD2 . . .
```

Related Links

%InsertSelectWithLongs

%InsertSelectWithLongs

Syntax

%InsertSelectWithLongs([DISTINCT,]*insert_recname*, *select_recname* [*correlation_id*][, *select_recname_n* [*correlation_id_n*]] [, *override_field = value*]. . .)

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Description

The %InsertSelectWithLongs meta-SQL construct generates an Insert statement with a Select statement. It does not generate a From statement. You must specify the select records before you specify override fields.

Use %InsertSelectWithLongs instead of %InsertSelect when the fields in *insert_recname* include long values (LongChar and Image fields).

Note: %InsertSelectWithLongs has a limit of 99 override fields.

The Insert column list is composed of all the fields in the specified *insert_recname*.

The corresponding value in the Select list is generated based on the following precedence:

1. If the Insert fieldname appears as an *override_field,* the corresponding *value* is used in the Select list.
2. If the Insert field name matches a field name in one of the *select_recname* variables specified, the corresponding Select field is used in the Select list.
3. The search order of the *select_recname* records is the order that they are specified in the %InsertSelectWithLongs function.
4. If the Insert field name has a constant default value defined in Application Designer, that value is used in the Select list.
5. A default value appropriate for the data type of the Insert field is used (blank for characters, zero for numbers, NULL for Date, Time, and DateTime values, and so on.)

Use the optional *override_field* variable to specify values for a particular field.

Note: You cannot use bind variables with the *override_field*.

For each field you specify, the matching logic described in the preceding list is not performed. Instead, the value that you specify after the equal sign is used for that field in the actual Select list. Use this technique to let PeopleTools or Application Engine handle most of the fields in the record, while specifying some of them explicitly. Also, you can use *override_field* to specify aggregate functions like Sum, Max, and so on.

Note: This meta-SQL is not implemented for COBOL.

Parameters

DISTINCT

Specify if the Select statement being generated should contain a Distinct clause.

insert_recname

Specify the name of record being inserted into. You must specify a record name, not **RECORD.** *recname,* a record name in quotation marks, a bind variable, or a table name.

Note: If the record for *insert_recname* is a temporary table, %InsertSelectWithLongs automatically substitutes the corresponding table instance (PS_TARGET*nn* instead of PS_TARGET).

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select_recname Specify the name of record being selected from. You can specify more than one record. You must specify a record name, not a **RECORD.** *recname*, a record name in quotation marks, or a table name.

correlation_id Identify the correlation ID to be used for the *select_recname* records and fields.

override_field Specify the name of a field on *insert_recname* that you want to supply a value for (instead of using the value supplied from the *select_recname.)*

Value Specify the value that should be used for the *override_field* instead of the value from *select_recname.*

Example

Here is a basic example:

```
%InsertSelectWithLongs(AE_SECTION_TBL, AE_STEP_TBL S, AE_SECTION_TYPE = ' ')
   FROM PS_AE_STEP_TBL S, PS_AS_STMT_TBL T
WHERE. . .
```

The example code resolves into the following:

```
INSERT INTO PS_AE_SECTION_TBL (AE_APPLID, AE_SECTION,. . ., AE_SECTION_TYPE)
SELECT S.AE_APPL_ID, S.AE_SECTION, . . . ' '
FROM PS_AE_STEP_TBL S, PS_AS_STMT_TBL T
   WHERE. . .
```

In the following example, you have a temporary table, PS_MY_TEMP, which is based on a join between two other tables, PS_MY_TABLE1 and PS_MY_TABLE2:

```
%InsertSelectWithLongs(MY_TEMP, MY_TABLE1, MY_TABLE2 T2)
   FROM PS_MY_TABLE1 T1, PS_MY_TABLE2 T2
WHERE %Join(COMMON_KEYS, MY_TABLE1 T1, MY_TABLE2 T2) . . .
```

This code resolves into:

```
INSERT INTO PS_MY_TEMP (FIELD1, FIELD2 . . .)
   SELECT T2.FIELD1, T2.FIELD2, . . .
FROM PS_MY_TABLE1 T1, PS_MYTABLE2 T2
WHERE T1.FIELD1 = T2.FIELD1
AND T1.FIELD2 = T2.FIELD2 . . .
```

The following example creates a distinct Select statement.

```
%InsertSelectWithLongs(DISTINCT, MY_TABLE, TABLE1, TABLE2 T2)
   FROM PS_TABLE1 T1, PS_TABLE2 T2
WHERE %Join(COMMON_KEYS, TABLE1 T1, TABLE2 T2) . . .
```

This code resolves into:

```
INSERT INTO PS_MYTABLE (FIELD1, FIELD2 . . .)
   SELECT DISTINCT T2.FIELD1, T2.FIELD2, . . .
FROM PS_TABLE1 T1, PS_TABLE2 T2
WHERE T1.FIELD1 = T2.FIELD1
AND T1.FIELD2 = T2.FIELD2 . . .
```

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Related Links

%InsertSelect

%InsertValues

Syntax

%InsertValues(*recname*)

Description

The %InsertValues meta-SQL construct produces a comma-separated list of the record's non-null field values. Input processing is applied to the fields in the following ways:

- If the field is a Date, a Time, or a DateTime data type, its value is automatically wrapped in %Datein, %TimeIn, or %DateTimeIn, respectively.
- If the field is a string, its value is automatically wrapped in quotation marks.
- If the field has a null value, it is not included in the list.

Note: This meta-SQL construct can only be used in PeopleCode programs, not in Application Engine SQL actions. Also, this meta-SQL construct is not implemented for COBOL.

Parameters

recname Specify the name of the record to be used for inserting. This can be a bind variable, a record object, or a record name in the form *recname.* You can't specify a **RECORD.** *recname,* a record name in quotation marks, or a table name.

Example

Here's an example:

```
SQLExec("Insert into TABLE (%List(NonNull_Fields, :1)) values (%InsertValues(:1))",⇒
 &Rec);
```

This example code is expanded into:

```
"Insert into TABLE (FNUM, FCHAR, FDATE) values (27, 'Y', %datein('1989-11-27'))"
```

%Join

Syntax

%Join({COMMON_KEYS | COMMON_FIELDS}, *join_recname* [*correlation_id1*], *to_recname* [*correlation_id2*] [, *override_field_list*])

where *override_field_list* is an arbitrary-length list of fields to be substituted in the resulting text string, in the form:

field1 [, *field2*]. . .

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Description

Use the %Join meta-SQL construct to dynamically build a Where clause joining one table to another. At runtime, the entire construct is replaced with a character string.

Note: This meta-SQL construct is not implemented for COBOL. If date key fields are not marked as required in the record definition for either of the referenced tables in the %Join clause, a Null clause check is added to the date field comparison. This additional clause can have a significant impact on the execution time for the generated SQL statement.

Parameters

{COMMON_KEYS | COMMON_FIELDS}	Use COMMON_KEYS to specify that all common primary key fields are used in constructing a Where clause; use COMMON _FIELDS to specify all common fields, not just key fields. You can select either COMMON_KEYS or COMMON_FIELDS.
join_recname	Specify the name of the record to be joined. This can be a bind variable, a record object, or a record name in the form *recname.* You can't specify a **RECORD.** *recname,* a record name in quotation marks, or a table name.
correlation_id1	Identify the correlation ID used to relate the record specified by *join_recname* and its fields.
to_recname	Specify the name of the record to be joined to. This can be a bind variable, a record object, or a record name in the form *recname.* You can't specify a **RECORD.** *recname,* a record name in quotation marks, or a table name.
correlation_id2	Identify the correlation ID used to relate the record specified by *to_recname* and its fields.
override_field_list	Specify a list of fields that you do not want used in the join. For example, if fields A, B, and C were common to two records, and you didn't want to join on C, list C as an *override_field.*

Example

Here is an example:

```
%Join(COMMON_KEYS, PSAESECTDEFN ABC,  PSAESTEPDEFN XYZ)
```

The example code results in the following being generated:

```
ABC.AE_APPLID = XYZ.AE_APPLID
AND ABC.AE_SECTION = XYZ.AE_SECTION
AND ABC.DBTYPE = XYZ.DBTYPE
AND ABC.EFFDT = XYZ.EFFDT
```

Here's another example:

```
%Join(COMMON_FIELDS, PSAEAPPLDEFN ABC,  PSAESECTDEFN XYZ)
```

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The second example results in the following being generated:

```
ABC.AE_APPLID = XYZ.AE_APPLID
AND ABC.DESCR = XYZ.DESCR
```

However, you do not want to perform the join using the DESCR field because it's a long field. Instead use *override_field,* as shown in the following code:

```
%Join(COMMON_FIELDS, PSAEAPPLDEFN ABC,  PSAESECTDEFN XYZ, DESCR)
```

This example results in the following being generated:

```
ABC.AE_APPLID = XYZ.AE_APPLID
```

You can also specify a value for a field. Suppose you want to join two tables, but not on the field C3. In addition, you would like to specify a value for C3. Your code could look like the following:

```
%Join(COMMON_FIELDS, MY_TABLE1 A, MY_TABLE2 B, C3) AND C3 = 'XX'
```

%KeyEqual

Syntax

%KeyEqual(*recname* [*correlation_id*])

Description

The %KeyEqual meta-SQL construct expands into a conditional phrase suitable for use in a Where clause.

The conditional phrase consists of a conjunction (AND) of *[correlation_id.]keyfieldname* = '*keyfieldvalue*' phrases for each key field of the given record.

No auto-update processing is done, but other input processing is applied to the values, according to the following:

- If the field is a Date, a Time, or a DateTime data type, its value is automatically wrapped in %Datein, %TimeIn, or %DateTimeIn, respectively.
- If a value is a string, its value is automatically wrapped in quotation marks.
- If a value is NULL, the "=*value*" part is replaced with "IS NULL".

Note: This meta-SQL can only be used in PeopleCode programs, not in Application Engine SQL actions. Also, this meta-SQL is not implemented for COBOL.

Parameters

recname Specify the name of the record to use for inserting. This can be a bind variable, a record object, or a record name in the form *recname.* You cannot specify **RECORD.** *recname,* a record name in quotation marks, or a table name.

correlation_id Identify the single-letter correlation ID to relate the record specified by *recname* and its fields.

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Example

Suppose that the record &REC has three keys: FNUM, FDATE, and FSMART. Here is a code example:

```
Local record &REC;

&REC = CreateRecord(RECORD.MYRECORD);
&REC.FNUM.Value = 27;
&REC.FDATE.Value = %Date;
SQLExec("Delete from MYRECORD A where %KeyEqual(:1, A)", &REC);
```

This example expands to:

```
"Delete from TABLE A
   where A.FNUM = 27
   AND A.FDATE = %Date('1989-11-27')
   AND A.FSMART IS NULL"
```

%KeyEqualNoEffDt

Syntax

%KeyEqualNoEffDt(*recname* [*correlation_id*])

Description

The %KeyEqualNoEffDt meta-SQL construct expands into a conditional phrase suitable for use in a Where clause.

The conditional phrase consists of a conjunction (AND) of *[correlation_id.]keyfieldname* = '*keyfieldvalue*' phrases for all key fields of the given record, except that it omits any key field named EFFDT.

No auto-update processing is done, but other input processing is applied to the values as follows:

- If the field is a Date, a Time, or a DateTime data type, its value is automatically wrapped in %Datein, %TimeIn, or %DateTimeIn, respectively.
- If a value is a string, its value is automatically wrapped in quotation marks.
- If a value is NULL, the "=*value*" part is replaced with "IS NULL."

Note: This meta-SQL can only be used in PeopleCode programs, not in Application Engine SQL actions. Also, this meta-SQL is not implemented for COBOL.

Parameters

recname Specify the name of the record to be used for inserting. This can be a bind variable, a record object, or a record name in the form *recname.* You can't specify **RECORD.** *recname,* a record name in quotation marks, or a table name.

correlation_id Identify the single-letter correlation ID to relate the record specified by *recname* and its fields.

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Example

The EMPL_CHECKLIST record has three keys: EMPLID, CHECK_SEQ, and EFFDT. Here is a code example:

```
&REC = CreateRecord(EMPL_CHECKLIST);

SQLExec("Delete from TABLE A where %KeyEqualNoEffdt(:1, A)", &REC)
```

The example expands to:

```
"Delete from TABLE A
   where A.EMPLID = 8001
   AND A.CHECK_SEQ = 00001"
```

%Like

Syntax

%Like("*Literal*")

Description

The %Like construct expands to look for literal values. This meta-SQL should be used when looking for like values. A percent sign character (%) is appended to *literal.*

Note: This meta-SQL is not implemented for COBOL.

If you're using a bind marker (such as ":1") for the literal argument in a SQLExec, you must wrap the SQL string with the ExpandSqlBinds function. ExpandSqlBinds replaces bind markers with the actual input values.

%Like generates the following:

```
like 'literal%'
```

If the literal value contains a backslash character (\) or percent sign (%), then %Like generates the following:

```
like 'literal%' escape '\'
```

See ExpandSqlBinds.

Using %Like and Eliminating Blanks

Some platforms require that you use RTRIM to get the correct value. The following characters are wildcards even when preceded with the backslash (\) escape character:

- %
- _

Therefore, on some platforms, the literal must end with a percent sign (%) wildcard that isn't preceded by a backslash (\). Here are some examples:

- `literal = 'ABC%'`

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There is no need for RTRIM on any platform.

- `literal = 'ABC\%'`

  You need RTRIM on Microsoft SQL Server and DB2.

Using %Like and Trailing Blanks

Not all executions of %Like perform the same. When dealing with trailing blanks, some platforms behave as if there is an implicit percent sign (%) at the end of the comparison string, while most do not.

In the following example, if the selected column contains the string "ABCD " (with three trailing blanks. The statement may or may not return any rows:

```
select  *  from  t1 Where c like 'ABCD'
```

Therefore, it is always important to explicitly code the percent sign (%) the end of matching strings for columns where you want to include trailing blanks. The following table shows the use of implicit percent signs with specific databases:

Database	***Includes Implicit Percent Sign (%)***
PeopleSoft Standard Usage	Yes
DB2/400	No
DB2/MVS	No
DB2/Unix	No
Informix	No
Microsoft SQL Server	Yes
Oracle	No
SQLBase	No
Sybase	Yes

Using %Like and Wildcards

SQL specifies two wildcards that can be used when specifying pattern matching strings for use with the SQL Like predicate. The underscore is used as a substitution for a single character within a string, and the percent sign represents any number of character spaces within a string. All supported databases use these characters as wildcards.

Parameters

literal Specify the value to search for.

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%LikeExact

Syntax

%LikeExact(*fieldname*, "*Literal*")

Description

The %LikeExact meta-SQL variable expands to look for literal values. Use this variable when exact matches are necessary, taking into account wildcards in the literal values.

Note: This meta-SQL is not implemented for COBOL.

%LikeExact generates one of the following:

- If the literal contains no wildcards:

  ```
  fieldname = 'literal'
  ```

- If the literal ends with the '%' wildcard:

  ```
  fieldname like 'literal' [escape '\']
  ```

Some platforms require that you use RTRIM to get the correct value. The following characters are wildcards even when preceded with the backslash (\) escape character.

- %
- _

Therefore, on some platforms, the literal must end with a percent sign (%) wildcard that isn't preceded by a backslash (\). Here are some examples:

- `literal = 'ABC%'`

  You do not need RTRIM on any platform.

- `literal = 'ABC\%'`

  You need RTRIM on Microsoft SQL Server and DB2.

Considerations Using Bind Markers

If you're using a bind marker (such as ":1") for the literal argument in a SQLExec, you must wrap the SQL string with ExpandSqlBinds. ExpandSqlBinds replaces bind markers with the actual input values.

The following forms work:

- Application Engine SQL action (with or without the ReUse property enabled).

  ```
  UPDATE PS_AE_APPL_TMP SET AE_PRODUCT = 'X' WHERE %LIKEEXACT(AE_APPL_ID, %Bind(⇒
  AE_APPL_ID, STATIC))
  ```

  The STATIC modifier is only required if the ReUse property is enabled, but you can always use it.

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- PeopleCode.

```
AE_TESTAPPL_AET.AE_APPL_ID = "AB\_C";

SQLExec("UPDATE PS_AE_APPL_TMP SET AE_PRODUCT = 'X' WHERE %LIKEEXACT(AE_APPL_I⇒
D, :AE_TESTAPPL_AET.AE_APPL_ID)");
```

  Here is another acceptable form:

```
SQLExec(ExpandSqlBinds("UPDATE PS_AE_APPL_TMP SET AE_PRODUCT = 'X' WHERE %Like⇒
Exact(AE_APPL_ID, :1)", "AB\_C"));
```

This form does not work:

```
SQLExec("UPDATE PS_AE_APPL_TMP SET AE_PRODUCT = 'X' WHERE %LIKEEXACT(AE_APPL_ID, :1⇒
)", "AB\_C");
```

Related Links

ExpandSqlBinds

Parameters

fieldname	Specify a field to be used in the first part of the Like comparison.
literal	Specify the value to search for.

Example

Here is an example:

```
UPDATE PS_AE_APPL_TMP SET AE_PRODUCT = 'X' WHERE %LIKEEXACT(AE_APPL_ID, 'ABC')
```

The example resolves into the following:

```
UPDATE PS_AE_APPL_TMP SET AE_PRODUCT = 'X' WHERE AE_APPL_ID = 'ABC'
```

Here is an example:

```
UPDATE PS_AE_APPL_TMP SET AE_PRODUCT = 'X' WHERE %LIKEEXACT(AE_APPL_ID, 'AB%C')
```

The example resolves into the following:

```
UPDATE PS_AE_APPL_TMP SET AE_PRODUCT = 'X' WHERE RTRIM(AE_APPL_ID) LIKE 'AB%C'
```

Here is an example:

```
UPDATE PS_AE_APPL_TMP SET AE_PRODUCT = 'X' WHERE LIKEEXACT(AE_APPL_ID, 'AB%C%')
```

The example resolves into the following:

```
UPDATE PS_AE_APPL_TMP SET AE_PRODUCT = 'X' WHERE AE_APPL_ID LIKE 'AB%C%'
```

Here is an example:

```
UPDATE PS_AE_APPL_TMP SET AE_PRODUCT = 'X' WHERE %LIKEEXACT(AE_APPL_ID, 'AB%C% ')
```

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The example resolves into the following:

```
UPDATE PS_AE_APPL_TMP SET AE_PRODUCT = 'X' WHERE AE_APPL_ID LIKE 'AB%C% '
```

The following example shows using ExpandSqlBinds:

```
SQLExec(ExpandSqlBinds("SELECT COUNT(*) FROM PS_ITEM WHERE %LIKEEXACT(BUSINESS_UNIT⇒
, :1)", "M04"), %COUNT);
```

%Mod

Syntax

%Mod(*a*, *b*)

Description

Use the %Mod meta-SQL function to return the remainder (or modulo) of division of one number by another number. %Mod uses the integer portion of both the dividend and the divisor. If the divisor is 0, %Mod returns the dividend value.

Parameters

a	Specifies the dividend as a number.
b	Specifies the divisor as a number.

Example

Each of the following examples shows the computed result of the %Mod function:

```
%Mod(10, 3) = 1
%Mod(9, 3) = 0
%Mod(10.1, 3) = 1
%Mod(-10, 3) = -1
%Mod(10, 0)= 10
```

Related Links

%DecDiv

%NoUppercase

Syntax

%NoUppercase

Description

When processing a SQL statement, the system automatically casts all field names and possibly record names to uppercase when processing a SQL statement. When processing records from a third party, fields that are lowercase are cast into uppercase, which can create a runtime issue on case-sensitive platforms.

To prevent this, use the %NoUppercase meta-SQL statement at the beginning of the SQL statement.

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Parameters

None.

Note there are not parameters, as well as no parenthesis, for this meta-SQL.

Returns

None.

Example

```
%NoUppercase
INSERT INTO PS_RM_APP_ENG_LOG (MAP_ID
, RECNAME
, FIELDNAME
, MESSAGE_SET_NBR
, MESSAGE_NBR
, LANGUAGE_CD)
SELECT %Bind(MAP_ID)
, %Bind(RECNAME)
, ' '
,17834
, 1116
, %Bind(LANGUAGE_CD)
FROM %SelectDummyTable
WHERE EXISTS (
SELECT 'X'
FROM SW_OPPORTUNITY SW_OPPORTUNITY
, SW_PERSON SW_PERSON
, SW_CUSTOMER SW_CUSTOMER
, SW_SALES_TEAM_VW SW_SALES_TEAM_VW
WHERE SW_OPPORTUNITY.SWCUSTOMERID = SW_CUSTOMER.SWCUSTOMERID
AND SW_OPPORTUNITY.SWSALESTEAMID = SW_SALES_TEAM_VW.SWPROVIDERGRPID
AND SW_SALES_TEAM_VW.SWPERSONID = SW_PERSON.SWPERSONID
GROUP BY SW_OPPORTUNITY.SwOpportunityId
HAVING COUNT(*) > 1)
```

%NumToChar

Syntax

%NumToChar(*Number*)

Description

Use the %NumToChar construct to transform a numeric value into a character value. Spaces are trimmed from *Number*.

Note: %NumToChar will preserve all trailing zeroes. Therefore, use the *scale* parameter of %Cast to specify the number of trailing zeroes.

Parameters

Number	Specify the number to convert to a character value. Signed numbers, as well as decimals, are acceptable.

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Related Links

%Cast

%OldKeyEqual

Syntax

%OldKeyEqual(*recname [correlation_id]*)

Description

The %OldKeyEqual meta-SQL construct is similar to the %KeyEqual construct, except that it uses the original values of the record fields, rather than the current values. Since the rules for which values are original and which are current are not very clear, especially for standalone record objects, avoid using this meta-SQL construct. You should use separate records to hold previous values. This can make your code clearer and more maintainable.

Note: This meta-SQL construct can only be used in PeopleCode programs, not in Application Engine SQL actions. Also, this meta-SQL is not implemented for COBOL.

Related Links

%KeyEqual

%OPRCLAUSE

Description

The %OPRCLAUSE metavariable is used in the view text of dynamic views.

To support the concept of a specific row-level security class, this metavariable fills in the WHERE clause with the value from PSOPRDEFN.OPRID, PSOPRDEFN.OPRCLASS, or PSOPRDEFN.ROWSECCLASS depending which is present in the SELECT clause.

%OPRCLAUSE must be either all uppercase or all lowercase.

%OPRCLAUSE translates to OprId, OprClass or RowSecClass, following the same rules used for security on search dialog boxes. If OPRID is in the view, %OPRCLAUSE expands to OPRID = 'current operator'. If OPRCLASS is in the view, %OPRCLAUSE expands to OPRCLASS = 'primary permission list'. If ROWSECCLASS is in the view, %OPRCLAUSE expands to ROWSECCLASS = 'row security permission list'.

Example

Here is an example:

```
SELECT EMPLID, ABSENCE_TYPE, OPRID FROM PS_ABSENCE_HIST WHERE %OPRCLAUSE
AND (EMPLID='8001' AND ABSENCE_TYPE='CNF')
```

This code expands to:

```
SELECT EMPLID, ABSENCE_TYPE, OPRID FROM PS_ABSENCE_HIST WHERE ( OPRID 'PTDMO')
AND (EMPLID='8001' AND ABSENCE_TYPE='CNF')
```

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Here's another example:

```
SELECT EMPLID, ABSENCE_TYPE, OPRCLASS FROM PS_ABSENCE_HIST WHERE %OPRCLAUSE AND
(EMPLID='8001' AND ABSENCE_TYPE='CNF')
```

This code expands to:

```
SELECT EMPLID, ABSENCE_TYPE, OPRID FROM PS_ABSENCE_HIST WHERE ( OPRCLASS ='ALLPANLS⇒
')
AND (EMPLID='8001' AND ABSENCE_TYPE='CNF')
```

%Round

Syntax

%Round(*expression*, *factor*)

Description

%Round rounds an expression to a specified scale before or after the decimal point. If *factor* is a literal, it can be rounded to a negative number.

Parameters

expression	Specify an arbitrary numeric expression involving numeric constants and database columns.
factor	Specify an integer or bind variable in SQLExec PeopleCode. The range of a factor is from -31 to +31 for literals. Non-literals can only be positive.

Example

Here is an example:

```
%Round(10.337, 2) = 10.34

%Round(13.67, 0) = 14

SQLExec("SELECT %Round(field_c1, :1) from RECORD_T", field_c2, &Result);
```

In the example, field_c1 and field_c2 are two fields in the record.

The following cases are illegal, and may cause incorrect results or runtime SQL errors:

```
%Round(10.337, 2 + 1)  (factor can not be an expression)

%Round(field_c1, field_c2) (factor can not be database columns)
```

%SelectDummyTable

Description

Use the %SelectDummyTable variable to perform a SELECT without specifying a specific table. The database platform-specific “dummy table” is substituted in the SELECT.

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Example

Before: In the following example, the SELECT was performed on the one-row PeopleTools installation table.

```
SELECT 'x'
  FROM PS_INSTALLATION WHERE ...
```

After: Using the %SelectNoTable variable ensures that the SQL will not fail if the table does not exist or if the table contains more than one row.

```
SELECT 'x'
  FROM %SelectDummyTable WHERE ...
```

Before: In the following example, %SelectInit is used to initialize files in an Application Engine state record.

```
%SelectInit(GL_JP_AET.PROCESS_STATUS, GL_JP_AET.PROCESS_ORIG, GL_LOG_MSG_AET.MESSAG⇒
E_SET_NBR, GL_LOG_MSG_AET.MESSAGE_NBR, GL_LOG_MSG_AET.MESSAGE_PARM1, GL_LOG_MSG_AET⇒
.MESSAGE_PARM2, GL_LOG_MSG_AET.MESSAGE_PARM3)
 SELECT 'P'
 , 'P'
 , 5830
 , 4
 , TO_CHAR(1)
 , 'DVP1'
 , 'EK'
  FROM PS_INSTALLATION
```

After: Using the %SelectNoTable variable ensures that the SQL will not fail if the table does not exist or if the table contains more than one row.

```
%SelectInit(GL_JP_AET.PROCESS_STATUS, GL_JP_AET.PROCESS_ORIG, GL_LOG_MSG_AET.MESSAG⇒
E_SET_NBR, GL_LOG_MSG_AET.MESSAGE_NBR, GL_LOG_MSG_AET.MESSAGE_PARM1, GL_LOG_MSG_AET⇒
.MESSAGE_PARM2, GL_LOG_MSG_AET.MESSAGE_PARM3)
 SELECT 'P'
 , 'P'
 , 5830
 , 4
 , TO_CHAR(1)
 , 'DVP1'
 , 'EK'
  FROM %SelectDummyTable
```

%SQL

Syntax

%SQL(*SQLid* [, *paramlist*])

where *paramlist* is a list of arguments that are used for dynamic substitutions at runtime, in the form:

arg1 [, *arg2*]. . .

Description

Use the %SQL construct for common SQL fragments that you have already defined and want to reuse, substituting additional values dynamically. *SQLid* is the name of a SQL definition created using either Application Designer or the StoreSQL function.

You can only nest up to 10 %SQL statements at a time.

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Note: This meta-SQL construct is not implemented for COBOL. A SQL definition is not the same as the SQL object that is instantiated from the SQL class at runtime. A SQL definition is created either using Application Designer at design time, or using the StoreSQL function. A SQL object is instantiated at runtime from the SQL class, and has methods and properties associated with it like any other object.

When a specified SQL definition has more than one version, the database type always takes precedence.

If one or more versions of a SQL definition are found for the database type of the current database connection, and if any of the versions have an effective date less than or equal to the value returned for %AsOfDate, the most recent version is used.

If no versions are found for the current database type, or if all of the versions have effective dates greater than the value returned for %AsOfDate, the system looks for an effective version of the SQL definition under the database type Generic.

If no version is found, an error occurs.

See "Using the SQL Editor" (PeopleTools 8.54: PeopleCode Developer's Guide).

Application Engine Considerations

Application Engine programs use the current date to compare with the effective date, not the date returned by %AsOfDate.

Special SQL Characters

The following meta-SQL variables can be used as part of the %SQL construct to represent special characters as SQL parameters.

Meta-SQL Variable	*Description*
%Comma	Represents a single comma.
%LeftParen	Allows you to pass a left parenthesis character to a %P() variable, without closing the SQL object.
%RightParen	Allows you to pass a right parenthesis character to a %P() variable, without closing the SQL object.
%Space	Represents a space.

Parameters

SQLid Specify the name of an existing SQL definition.

paramlist Specify a list of arguments for dynamic substitutions at runtime. The first argument replaces all occurrences of %P(1) in the referenced SQL definition, the second argument replaces %P(2), and so forth. You can specify up to 99 arguments.

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Note: For PeopleCode, the %P should not be contained in quotation marks. `'%P(2)'` is considered to be a literal, and so isn't replaced at runtime.

Example

In the following example, the SQL definition MY_SQL was created in Application Designer to be the following:

```
%P(1).EFFDT = (SELECT MAX(EFFDT) FROM ...)
```

In the following example, the %SQL statement is dynamically generated:

```
UPDATE PS_TEMP
SET ...
WHERE ...
AND %SQL(MY_SQL, PS_TEMP)
```

The previous example resolves to the following:

```
UPDATE PS_TEMP
SET ...
WHERE ...
AND PS_TEMP.EFFDT = (SELECT MAX(EFFDT) FROM ...)
```

Related Links

"Understanding SQL Class" (PeopleTools 8.54: PeopleCode API Reference)

%SqlHint

Syntax

%SqlHint(*SQL_cmd*, *index*, *hint_text*, *DB_platform* [, {**ENABLE** | **DISABLE**}])

Description

Use the %SqlHint function to insert a database platform-specific SQL hint into the specified SQL statement. The hint is inserted immediately after the SQL command specified by the *SQL_cmd* parameter.

This meta-SQL function is ignored in any of the following circumstances:

- The current database connection does not match the *DB_platform* parameter.
- The *DB_platform* parameter is not specified as ORACLE. (This is a limitation of the current release.)
- The *n*th occurrence of the SQL command specified by *SQL_cmd* and *index* does not exist in the current SQL statement.

Parameters

SQL_cmd

Specifies the SQL command that will use the hint as one of the following literal constants:

- SELECT

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- INSERT
- UPDATE
- DELETE
- MERGE

index Specifies which occurrence of the SQL command will use the hint as an Integer value from 1 to 99.

hint_text Specifies the SQL hint as a String value enclosed in single quotes. The hint can include other meta-SQL, such as %Table.

DB_platform Specifies the database platform for which the hint is valid as one of the following literal constants:

- ORACLE
- DB2
- DB2UNIX
- SQLSERVER
- SYBASE
- INFORMIX

Note: Currently, ORACLE is the only supported platform. This meta-SQL function is ignored for all other platforms.

ENABLE | DISABLE Specifies whether to enable or disable the hint as a literal constant.

Note: ENABLE is the default value for this optional parameter.

Example 1

Before: The following example includes an Oracle-specific SQL hint to be inserted after the first SELECT of the SQL statement:

```
%SqlHint(SELECT, 1, '/*+ FIRST_ROWS(10) */', ORACLE)
 SELECT EMPLID
  FROM PS_JOB
```

After: For an Oracle connection, this meta-SQL would expand to:

```
 SELECT '/*+ FIRST_ROWS(10) */' EMPLID
  FROM PS_JOB
```

After: On all other connections, this meta-SQL would expand to:

```
 SELECT EMPLID
  FROM PS_JOB
```

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Example 2

Before: In the following example, %SqlHint functions will be expanded and applied after all other meta-SQL expansion has occurred. In this example, the APPEND hint will be applied to the first INSERT found in this SQL statement. The LEADING hint will be applied to the first SELECT found in this SQL statement.

```
%SqlHint(INSERT, 1, '/*+ APPEND*/', ORACLE, ENABLE ),%SqlHint(SELECT, 1, '/*+ LEADI⇒
NG(H) INDEX(L, PSFJRNL_LN) */', ORACLE, ENABLE) %InsertSelect(JRNL_LIU_TAO, JRNL_LN⇒
 L, BUSINESS_UNIT_IU=H.BUSINESS_UNIT_IU, LEDGER_GROUP=H.LEDGER_GROUP, IU_SYS_TRAN_C⇒
D=H.IU_SYS_TRAN_CD, IU_TRAN_CD=H.IU_TRAN_CD, PROCESS_INSTANCE=%Bind(PROCESS_INSTANC⇒
E))
  FROM %Table(JRNL_HIU_TAO) H, PS_%Bind(GL_JEDIT_WK_AET.RECNAME_JRNL_LN,NOQUOTES) L⇒

 WHERE H.PROCESS_INSTANCE=%Bind(PROCESS_INSTANCE)
   AND H.BUSINESS_UNIT=L.BUSINESS_UNIT
   AND H.JOURNAL_ID=L.JOURNAL_ID
   AND H.JOURNAL_DATE=L.JOURNAL_DATE
   AND H.UNPOST_SEQ=L.UNPOST_SEQ;
```

After: The SQL statement after all meta-SQL expansion and hint insertion:

```
 INSERT /*+ APPEND */ INTO PS_JRNL_LIU_TAO5 (BUSINESS_UNIT , JOURNAL_ID , JOURNAL_D⇒
ATE

/* For the purposes of clarity, many columns in this column list have been omitted ⇒
from this example. */

 , DEPTID , SCENARIO , BUSINESS_UNIT_IU)
 SELECT /*+ LEADING(H) INDEX(L, PSFJRNL_LN) */ L.BUSINESS_UNIT
 , L.JOURNAL_ID
 , L.JOURNAL_DATE

/* For the purposes of clarity, many columns in this column list have been omitted ⇒
from this example. */

 ,L.DEPTID
 ,L.SCENARIO
 , H.BUSINESS_UNIT_IU
  FROM PS_JRNL_HIU_TAO5 H
  , PS_%Bind(GL_JEDIT_WK_AET.RECNAME_JRNL_LN,NOQUOTES) L
 WHERE H.PROCESS_INSTANCE=%Bind(PROCESS_INSTANCE)
   AND H.BUSINESS_UNIT=L.BUSINESS_UNIT
   AND H.JOURNAL_ID=L.JOURNAL_ID
   AND H.JOURNAL_DATE=L.JOURNAL_DATE
   AND H.UNPOST_SEQ=L.UNPOST_SEQ ;
```

%Substring

Syntax

%Substring(*source_str*, *start*, *length*)

Description

%Substring expands to a substring of *source_str*.

Note: For the DB2 LUW database, you must ensure that the *source_str* parameter doesn't resolve to an expression greater than 1000 characters.

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Parameters

source_str	Specify the source string.
start	Specify the substring's beginning position. The first character of *source_str* is position 1.
length	Specify the length of the substring.

%SUBREC

Syntax

%SUBREC(*subrec_name*, *corel_name*)

Description

%SUBREC is used only in dynamic view SQL, where it expands to the columns of a subrecord. You can't use this statement in SQLExec or any other SQL statement.

Note: %SUBREC must be either all uppercase or all lowercase.

Parameters

subrec_name	Specify the name of the subrecord.
corel_name	Specify the correlation name.

Example

Suppose you have a record definition AAA_VW that is a dynamic view, with fields CHR, SUB, and NUM. The field SUB is a subrecord with fields CHR_SUB, NUM_SUB, and IMG_SUB. The view text for AAA_VW could be:

```
"select a.chr, %subrec(sub,a), a.num from ps_aaa a"
```

The Create View SQL generated by this view text would be:

```
"CREATE VIEW SYSADM.PS_AAA_VW (CHR, CHR_SUB, NUM_SUB, IMG_SUB, NUM) AS SELECT A.CHR⇒
, A.CHR_SUB, A.NUM_SUB, A.IMG_SUB, A.NUM FROM PS_AAA A"
```

%Table

Syntax

%Table(*recname* [, *instance*])

Description

The %Table construct returns the SQL table name for the record specified with *recname.*

For example, %Table(ABSENCE_HIST) returns PS_ABSENCE_HIST.

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Note: This meta-SQL is not implemented for COBOL.

If the record is a temporary table and the current process has a temporary table instance number assigned, %Table resolves to that instance of the temporary table (that is, PS_ABSENCE_HIST*Instance Number)*.

You can override this value with the *instance* parameter. For example, if you know you want the third instance of a temporary table, you could specify it with `%Table(&MYREC, 3)`. You can use the SetTempTableInstance function to set the instance of a temporary table that is used with %Table.

This construct can be used to specify temporary tables for running parallel Application Engine processes.

Parameters

recname Identify the record that the table name is drawn from. This can be a bind variable, a record object, or a record name in the form *recname.* You cannot specify **RECORD.** *recname*, a record name in quotation marks, or a table name.

instance Specify the instance of the temporary table to be used.

Example

The following function deletes records based on two other fields:

```
Function delete_draft_type(&RECNAME)

&SQL = "Delete from %Table(:1) where " | FIELD.SETID | " =
 :2 and " | FIELD.DRAFT_TYPE | " = :3";

SQLExec(&SQL, @("RECORD." | &RECNAME), SETID, DRAFT_TYPE);

End-Function;
```

Related Links

SetTempTableInstance

"%Table" (PeopleTools 8.54: Application Engine)

%Test

Syntax

%Test(*Prefix*, *Test*, *Suffix*)

Description

The %Test construct can be used with records that have no key values.

Parameters

Prefix Specify a string that is conditionally added before the expansion of the test string. You cannot use meta-SQL in this parameter.

Test Specify a meta-SQL string to be expanded.

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Suffix Specify a string that is conditionally added at the end of the test string. You can use meta-SQL in this parameter.

Returns

If the expansion of *Test* produces only a blank (or empty) string, the entire %Test meta-SQL construct is replaced with an empty string. Otherwise, the %Test meta-SQL construct is replaced by the prefix, then the expansion of *Test,*and then the suffix.

Example

The following meta-SQL generates valid SQL even when the given record has no keys:

```
%SelectAll(:1) %Test(WHERE ,%KeyEqual(:1));
```

%TextIn

Syntax

%TextIn(*BindVariable*)

Description

%TextIn construct, when used with a bind variable, allows the insertion and updating of a text string into a LongChar field (column).

This construct is mandatory for any LongChar field insertion or update to be compatible on all database platforms on which it is supported. If you do not use this meta-SQL wrapper, this type of operation fails on Sybase.

Important! %TextIn is not supported on Informix. In addition, this meta-SQL construct is not implemented for COBOL.

Parameters

BindVariable Specify a bind variable.

Example

In the following example, :1 is a bind variable in PeopleCode:

```
&String1 = "This is a test."

SqlExec("INSERT INTO PS_TABLE1 (STMTID, SQLSTMT) VALUES (1, %TextIn(:1))", &String1⇒
)
```

%TimeAdd

Syntax

%TimeAdd(*datetime*, *add-minutes*)

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Description

This construct generates the SQL that adds *add-minutes* (a positive or negative integer literal or expression, provided that the expression resolves to a data type that can be used in datetime arithmetic for the given RDBMS) to the provided *datetime* (which can be a datetime literal or expression).

Note: On some platforms, you can use *time-value* in place of *datetime.* However, this can give a SQL error on other platforms (for example, Informix) if the result of the %TimeAdd construct would result in a new date (for example, 11:59PM + 2 minutes). This meta-SQL construct is not implemented for COBOL.

Parameters

time	Specify a Time or DateTime value to add more time to.
add-minutes	Specify the number of minutes to add to *time.* This must be a numeric value or an expression that resolves to a numeric value.

Example

```
SELECT %TimeAdd(%CurrentTimeIn, 60) FROM %SelectNoTable
```

%TimeIn

Syntax

%TimeIn(*tm*)

Description

%TimeIn expands to platform-specific SQL for a Time value in the Where clause of a SQL Select or Update statement, or when a time value is passed in an Insert statement.

Restrictions Using COBOL

You can only use string literals when using this construct in COBOL. You cannot use it with bind parameters in COBOL. For example, the following works in COBOL:

```
UPDATE PS_PERSONAL_DATA SET LASTUPTM = %TIMEIN('11:59:00:000000')
```

The following SQL fails:

```
UPDATE PS_PERSONAL_DATA SET LASTUPTM = %TIMEIN(:1)
```

Parameters

tm	Specify a Time bind variable or a string literal in the form hh.mm.ss.ssssss.

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%TimeNull

Syntax

%TimeNull

Description

Use this meta-SQL to specify a null value for a time field. Only use this meta-SQL in Insert or Update statements. Do not use this meta-SQL in a Where clause.

Note: This meta-SQL is not implemented for COBOL.

This meta-SQL resolves into a database-specific SQL substring, as shown in the following table:

Database	***Resolved Substring***
Informix	empty string (')
DB2	NULLIF(CURRENT TIME, CURRENT TIME)
All others	NULL

Parameters

None.

%TimeOut

Syntax

%TimeOut(*time_col*)

Description

The %TimeOut meta-SQL variable expands to either a platform-specific SQL substring or datetime value, depending on the database platform, representing the *time_col* column in the Select clause of a SQL query.

Parameters

time_col Specify a time column.

%TimePart

Syntax

%TimePart(*DTTM_Column*)

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Description

%TimePart returns the time portion of the specified datetime column.

Note: This meta-SQL is not implemented for COBOL.

Considerations Using %TimePart

Use %TimeOut meta-SQL when fetching from the database:

```
%TimeOut(%TimePart(DTTM_COLUMN)) from some_table
```

If a literal is used as the parameter to %TimePart, it must be wrapped in %DateTimeIn,as shown in the following:

```
insert into some_table values(%TimePart(%DateTimeIn('2001-01-01-12.34.56.789012')))
```

Parameters

DTTM_Column	Specify the datetime column to return the time for.

%TrimSubstr

Syntax

%TrimSubstr(*source_str*, *start*, *length*)

Description

%TrimSubstr, like %Substring, expands to a substring of *source_str,* except that trailing blanks are removed from the substring.

Note: If you trim a string of blanks, an empty string is returned on all database platforms except Oracle, when a Null is returned. If a Null result is not acceptable, such as when using the result as a value to insert into a non-nullable column, you can turn the Null into a single blank using the %COALESCE meta-SQL with %TrimSubstr, for example: `%COALESCE( %TrimSubstr( <expression>), ' ')`

Parameters

source_str	Specify the source string.
start	Specify the substring's beginning position. The first character of *source_str* is position 1.
length	Specify the length of the substring.

Related Links

%Substring

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%Truncate

Syntax

%Truncate(*expression*, *factor*)

Description

%Truncate truncates an expression to a specified scale before or after the decimal point.

Considerations Using %Truncate

You may get incorrect results or runtime SQL errors if you try to use an expression for *factor*. The following code example produces incorrect results:

```
%Truncate(10.337, 2 + 1)
```

Parameters

Expression	Specify an expression involving numeric constants and database columns.
Factor	Specify an integer or bind variable in SQLExec PeopleCode. The range of a factor is -30 to +31. A negative number truncates to left of the decimal point.

Example

Here is an example:

```
%Truncate(10.337, 2) = 10.33

%Truncate(13.37, 0) = 13

%Truncate(19.337, -1) = 10

SQLExec("SELECT %Truncate(field_c1, :1) from RECORD_T", field_c2, &Result);
```

In the example, field_c1 and field_c2 are two fields in the record.

%TruncateTable

Syntax

%TruncateTable(*table_name*)

Description

%TruncateTable deletes all the rows in a table.

Note: You must use a table name, not a record name, with this statement.

On all databases, the use of %TruncateTable causes an implicit commit. The rows deleted by this command, and any other pending database updates, are all committed. To postpone the commit until subsequent database updates have been successfully completed, use the SQL statement

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`DELETE FROM table_name` or the statement `IMPORT REPLACE WITH NULL` instead of %TruncateTable(*table_name)*. The advantage of using %TruncateTable is that its execution is faster than either of the SQL statements. %TruncateTable is often used for removing rows from a work table or a temporary table.

If you're calling %TruncateTable from an Application Engine program step, you should commit after the step that immediately precedes the step containing the %TruncateTable statement. Also, do not use %TruncateTable on a step that is executed multiple times within a loop. In general, it's best to use this construct early in your Application Engine program as an initialization task. In addition, avoid using this meta-SQL when your Application Engine program is started from the CallAppEngine function.

If a commit is not possible, Application Engine replaces the meta-SQL with a Delete From string. This ensures restart integrity when your program runs against a database where there is an implicit commit associated with Truncate Table or where rollback data is not logged.

For databases that either execute an implicit commit for %TruncateTable or require a commit before or after this meta-SQL, replace %TruncateTable with an unconditional delete in certain circumstances.

Example

If you use %TruncateTable with %Table, you must specify the full name of the table. For example:

```
%TruncateTable(%Table(BAS_ELIG_DBGFLD))
```

The following is a code example:

```
%TruncateTable(PS_TEMP_TABLE)
```

Related Links

"%TruncateTable" (PeopleTools 8.54: Application Engine)

%UpdatePairs

Syntax

%UpdatePairs(*recname [correlation_id]*)

Description

The %UpdatePairs construct produces a comma-separated list of *fieldname* = '*fieldvalue*' phrases for each changed field of the given record. Input processing is applied to the values in the following ways:

- If the field is a Date, a Time, or a DateTime value, its value is automatically wrapped in %Datein, %TimeIn, or %DateTimeIn, respectively.
- If the field is a string, its value is automatically wrapped in quotes.
- If the field has a null value, NULL is the given value.

Note: This meta-SQL construct can only be used in PeopleCode programs, not in Application Engine SQL actions. Also, this meta-SQL construct is not implemented for COBOL.

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Parameters

recname	Specify the name of the record to use for updating. This can be a bind variable, a record object, or a record name in the form *recname.* You can't specify **RECORD.** *recname,* a record name in quotation marks, or a table name.
correlation_id	Identify the single-letter correlation ID to relate the record specified by *recname* and its fields.

Example

Suppose that the record &REC has one key: FNUM, and the FCHAR field has changed. Here is an example:

```
Local record &REC;

&REC = CreateRecord(RECORD.MYRECORD);
&REC.FNUM.Value = 27;
&REC.FCHAR.Value = 'Y';
SQLExec("Update TABLE set %UpdatePairs(:1) where %KeyEqual(:1)", &REC)
```

The example expands to:

```
"Update TABLE set FCHAR = 'Y' where FNUM = 27"
```

The following example updates all the fields on a base record (&REC) that are not also fields on the related language record (&REC_RELATED_LANG). It creates a holding record (&REC_TEMP), copies the fields to update from the base record to the holding record, and then uses the holding record for the update.

```
&UPDATE = CreateSQL("Update %Table(:1) set %UpdatePairs(:1) Where %KeyEqual(:2)");
&REC_TEMP = CreateRecord(@("RECORD." | &REC.Name));
&FIELD_LIST_ARRAY = CreateArray();
For &I = 1 to &REC_RELATED_LANG.FieldCount
   &FIELD_LIST_ARRAY.Push(&REC_RELATED_LANG.GetField(&I).Name);
End-For;

For &I = 1 to &REC.FieldCount
   If &FIELD_LIST_ARRAY.Find(&REC.GetField(&I).Name) = 0 then
      &REC_TEMP.GetField(&I).Value = &REC.GetField(&I).Value;
   End-If;
End-For;

&UPDATE.Execute(&REC_TEMP, &REC);
```

%Upper

Syntax

%Upper(*charstring*)

Description

The %Upper construct converts the string *charstring* to uppercase. You can use wildcards with *charstring,* such as the percent sign (%).

Note: This meta-SQL construct is not implemented for COBOL.

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Considerations with COBOL and Unicode

COBOL's uppercase function is not Unicode-aware, and corrupts Unicode data. To use an uppercase function with COBOL, use the function supplied with PeopleTools called PTPUPPER.

The syntax to call PTPUPPER is:

```
CALL 'PTPUPPER' USING SQLRT

   <any PIC S9(4) COMP field that contains the fields
defined length (non-unicode)>

   <the String field - max PIC X(8192).>
```

The following is an example from Unicode-expanded source code:

```
01  W-WORK.

   02   W-DESCR      PIC X(90)   VALUE SPACES.
    02   W-SIZE       PIC S9(4)   COMP VALUE +30.
      CALL 'PTPUPPER' USING SQLRT
         W-SIZE OF W-WORK
         W-DESCR OF W-WORK
```

Parameters

charstring	Specify the string to convert to uppercase.

Example

```
SELECT EMPLID, NAME FROM PS_EMPLOYEES WHERE %UPPER(NAME) LIKE %UPPER(sch%)
```

%UuidGen

Syntax

%UuidGen()

Description

Use the %UuidGen function in a SQL Insert or Update statement to generate a universally unique identifier (UUID) as a globally unique 36-character string.

%UuidGen can only be used in an Insert or Update statement. You will get an error if you use the function in any other type of SQL.

%UuidGenBase64

Syntax

%UuidGenBase64()

Description

Use the %UuidGenBase64 function in a SQL Insert or Update statement to generate a universally unique identifier (UUID) as a globally unique 24-character base64 string.

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%UuidGenBase64 can only be used in an Insert or Update statement. You will get an error if you use the function in any other type of SQL.

Meta-SQL Shortcuts

Take advantage of the following shortcuts to use the entire list of key fields for a record.

Note: The meta-SQL shortcuts can only be used in PeopleCode programs, not in Application Engine SQL actions. Also, none of the meta-SQL shortcuts are implemented for COBOL.

%Delete

Syntax

%Delete(:*num*)

Description

This is a shorthand for:

```
Delete from %Table(:num) where %KeyEqual(:num)
```

%Insert

Syntax

%Insert(:*num*)

Description

This is a shorthand for:

```
Insert into %Table(:num) (%List(Nonnull_Fields :num)) values (%InsertValues(:num))
```

%SelectAll

Syntax

%SelectAll(:*num* [*correlation _id*])

Description

%SelectAll is shorthand for selecting all fields in the specified record, wrapping DateTime fields with %DateOut, %TimeOut, and so on.

The pseudocode looks like this:

```
Select(AllFields, :num correlation_id) from %Table(:num) prefix
```

This shortcut is only appropriate if the statement is being used in PeopleCode or Application Engine to read data into memory. Dynamic views should retain the internal database formats for DateTime fields.

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Using %SelectAll with CreateSQL

You can use %SelectAll with the CreateSQL function without a record object. It must subsequently be executed with the record object with which you want to do the Select statement. Here is an example:

```
    &REC_PROJ_FUNDING = CreateRecord(Record.PROJ_FUNDING); /* free standing record
 object */
    /* Create SQL objects */
    &SQL_PROJ_FUNDING_SEL = CreateSQL("%SelectAll(:1)" /* bind this later */);
        /* bind the %SelectAll */
        &SQL_PROJ_FUNDING_SEL.Execute(&REC_PROJ_FUNDING);
    While &SQL_PROJ_FUNDING_SEL.Fetch(&REC_PROJ_FUNDING);
  /* Process row content ... /*
  End-While;
```

You could also move the CreateRecord SQL statements out of the loop (and then move the close statements out of the loop too).

%SelectDistinct

Syntax

%SelectDistinct(*:num* [*prefix*])

Description

%SelectDistinct is shorthand for selecting all fields in the specified record, wrapping DateTime fields with %DateOut, %TimeOut, and so on.

The pseudocode looks like this:

```
Select DISTINCT(AllFields, :num correlation_id) from %Table(:num) prefix
```

This shortcut is only appropriate if the statement is being used in PeopleCode or Application Engine to read data into memory. Dynamic views should retain the internal database formats for DateTime fields.

%SelectByKey

Syntax

%SelectByKey(*:num* [*correlation_id*])

Description

This is a shorthand for:

```
Select %List(Select_List, :num correlation_id) from %Table(:num) correlation_id whe⇒
re %KeyEqual(:num, correlation_id)
```

%SelectByKeyEffDt

Syntax

%SelectByKeyEffDt(*:num1*, *:num2*)

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Description

This is a shorthand for:

```
Select %List(Select_List, :num1) from %Table(:num1) A where %KeyEqualNoEffDt(:num1 ⇒
A) and %EffDtCheck(:num1 B, A, :num2)
```

%Update

Syntax

```
%Update(:num [ , :num2 ])
```

Description

This is a shorthand for:

```
Update %Table(:num) set %UpdatePairs(:num) where %KeyEqual(:num2)
```

If *num2* is omitted, the value defaults to *num*.

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Chapter 3

System Variables

Understanding System Variables

PeopleTools provides a number of system variables that provide access to system information. System variables are prefixed with the '%' character, rather than the '&' character. You can use these system variables wherever you can use a constant, passing them as parameters to functions or assigning their values to fields or to temporary variables.

System Variables Reference

In this section, each system variable is discussed in alphabetical order.

%AllowNotification

Description

Indicates whether the Allow Notification check box for the current role's workflow routing options is selected. This system variable returns a Boolean value: True if the check box is selected (notifications allowed), False otherwise.

Related Links

"Security Basics" (PeopleTools 8.54: Security Administration)

%AllowRecipientLookup

Description

Indicates whether the Allow Recipient Lookup check box for the current role's workflow routing options is selected. This system variable returns a Boolean value: True if the check box is selected (recipient lookup allowed), False otherwise.

Related Links

"Security Basics" (PeopleTools 8.54: Security Administration)

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%ApplicationLogFence

Description

Returns the current setting of the application log fence (AppLogFence) setting in the application server configuration file (PSAPPSRV.CFG.)

Note: This is distinct from the PeopleTools LogFence capability which applies to PeopleTools level logging.

You can use this system variable to conditionally determine whether you want to do certain logging from your application. You generally use it with the following predefined PeopleCode constants.

Numeric Value	*Constant Value*	*Description*
1	%ApplicationLogFence_Error	Allow all levels of errors to be written to the log. This is the lowest setting.
2	%ApplicationLogFence_Warning	Allowing only warnings or higher to be written to the log.
3	%ApplicationLogFence_Level1	Allow only this level of errors or higher to be written to the log.
4	%ApplicationLogFence_Level2	Allow only this level of errors or higher to be written to the log.
5	%ApplicationLogFence_Level3	Allow only this level of errors to be written to the log.

Example

```
If %ApplicationLogFence > %ApplicationLogFence_Warning then
      /* do some logging */
End-if;
```

Related Links

WriteToLog

"Using Application Logging" (PeopleTools 8.54: PeopleCode Developer’s Guide)

%AsOfDate

Description

Returns the as-of-date of the environment that the PeopleCode is running in. In most cases, this is the current date, but for Application Engine environments, it is the processing date of the Application Engine program.

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%AuthenticationToken

Description

This system variable returns a single sign on authentication token for the user after SwitchUser is executed. For example, you can use this system variable to write a single sign on cookie to the http response after a new user is authenticated.

Note: This system variable returns a valid value only after SwitchUser executes successfully. The value of this system variable is the authentication token itself. The value of the AuthTokenDomain Request object property is the domain across which the authentication token is valid, set in the AuthTokenDomain configuration property in the configuration properties file.

Related Links

SwitchUser, "Request Class Properties" (PeopleTools 8.54: PeopleCode API Reference)

%BPName

Description

%BPName is relevant when the user has accessed a page from a worklist entry. It returns a string containing the name of the Business Process for the worklist entry. It returns an empty string if the user didn’t access the current page group from a worklist.

%ClientDate

Description

%ClientDate returns the current date for the current user, adjusted for the user’s time zone. This is the date as specified with the current user's personalizations.

You can use this system variable as the default constant for a date field, a time field, or a datetime field.

Note: This is potentially one day different than the server date, which is returned with %Date.

Related Links

%Date, "Understanding Personalizations" (PeopleTools 8.54: Security Administration)

%ClientTimeZone

Description

%ClientTimeZone returns the current time zone for the current user as a three-character string. This is potentially different than the server time zone. This is the timezone as specified with the current user's personalizations.

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Related Links

"Understanding Personalizations" (PeopleTools 8.54: Security Administration)

%Component

Description

%Component returns an uppercase character string containing the name of the current component, as set in the component definition.

%CompIntfcName

Description

%CompIntfcName returns the name of the Component Interface, if the currently executing PeopleCode program is being run from a Component Interface. If the currently executing PeopleCode program is *not* being run from a Component Interface, this variable returns NULL (if the program is running from PeopleCode) or "Nothing" (if running from Visual Basic.)

Note: This system variable is not valid in an iScript.

%ContentID

Description

%ContentID returns the identification of the content for the current context as a string. The format of the value depends on the type of content.

PeopleSoft Pure Internet Architecture Content Type	*Content ID Format*
Component	*Menu.Component.Market*/**?Page**=*Page* **&Action**=*Action* *&Key ID = Key Value …*
Script	*Record.Event.Function*/?*&Parm ID = Parm Value …*
External	URL
Homepage	tab name
Template	template name
Query	query name
Worklist	worklist name
Navigation	Business Process Map name
File	file name

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%ContentType

Description

%ContentType returns the type of content for the current content as a string.

For example, suppose your PeopleCode is part of the page USERMAIN_SELF, in this URL:

```
http://serverx/servlets/psp/eprocurement/hrms/c/MAINTAINT_SECURITY.USERMAIN_SEF.GBL
```

This system variable returns the following:

```
c
```

The content types are:

PeopleSoft Pure Internet Architecture Content Type	*Value*
Component	c
Script	s
External	e
Homepage	h
Template	t
Query	q
Worklist	w
Navigation	n
File	f

%Copyright

Description

This system variable returns a string suitable for use as a standard PeopleSoft copyright notice.

%Currency

Description

This system variable returns the preferred currency for the current user.

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%Date

Description

%Date returns a Date value equal to the current server date. This is potentially different than the client date, returned by %ClientDate. You can use this system variable as the default value for a date field.

Related Links

%ClientDate

%DateTime

Description

%DateTime returns the current server date and time as a Datetime value.

Note: This variable does not return actual milliseconds. It always returns zeros for the millisecond value.

%DbName

Description

%DbName returns the name of the current database as a String value.

%DbServerName

Description

%DbServerName returns the name of the current Sybase or Informix database server as a string. This is not valid for other database types.

%DbType

Description

%DbType returns a string representing the type of the current database. The valid values are:

- APPSERVER
- DB2
- DB2UNIX
- INFORMIX
- MICROSFT
- ORACLE
- SYBASE

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Note: Supported database platforms are subject to change.

%EmailAddress

Description

This system variable returns the email address of the current user.

%EmployeeId

Description

%EmployeeId returns an uppercase character string containing the Employee ID of the user currently logged on. This is typically used to restrict access to an employee's own records.

%ExternalAuthInfo

Description

This system variable returns external connect information. Programmers can customize the authentication process by passing in binary data. This data is encoded with base64 encoding and passed to sign on PeopleCode as a string using this system variable.

Note: This system variable can be used only in Signon PeopleCode. This system variable isn't applicable with the PeopleSoft Pure Internet Architecture.

%FilePath

Description

This meta-variable returns the current file path as a string.

Note: This is *not* a system variable. This is a meta-variable only available in a Application Engine program.

Related Links

"Using the Command Line to Invoke Application Engine Programs" (PeopleTools 8.54: Application Engine)

%HPTabName

Description

This system variable returns the name of the last homepage tab visited by the user as a string.

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%Import

Description

%Import returns True if an import is being performed by PeopleSoft Import Manager and False if not.

%IntBroker

Description

Use the %IntBroker system variable to return a reference to a web services gateway object.

Related Links

"IntBroker Class" (PeopleTools 8.54: PeopleCode API Reference)

%IsMultiLanguageEnabled

Description

This system variable returns True if the current user is multi-language enabled.

Related Links

"Understanding Data Editing in Related Language Tables and Base Tables" (PeopleTools 8.54: Global Technology)

%Language

Description

%Language returns a string value representing the current session's language as selected from the signon page.

Note: This function remains for backward compatibility only. Use the %Language_User system variable instead.

Related Links

%Language_User, SetLanguage

%Language_Base

Description

%Language_Base returns the base language for the current database, as set with the PeopleTools Options page.

Related Links

"PeopleTools Options" (PeopleTools 8.54: System and Server Administration)

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%Language_Data

Description

If multi-language entry is enabled, %Language_Data returns a string value representing the current data language selected by the user.

If multi-language entry is *not* enabled, %Language_Data returns the current session language.

Use %Language_Data if your application must know the language any entered application data is stored as in the component's related language records. Do not use this variable to control the user interface, such as messages or page text. For determining the language of the user interface, use the %Language_User variable.

Related Links

%Language_User

%Language_User

Description

%Language_User returns a string value representing the current session's language as selected from the signon page. This value can be changed for the current session with the SetLanguage function.

Note: The value of this system variable may not reflect the current data language if the user has multi-language entry enabled.

Related Links

SetLanguage

%LocalNode

Description

%LocalNode returns the name of the local node for the current database as a string.

For example, suppose your PeopleCode is part of the page USERMAIN_SELF, in this URL:

```
http://serverx/servlets/psp/eprocurement/hrms/c/MAINTAINT_SECURITY.USERMAIN_SEF.GBL
```

This system variable returns the following:

```
hrms
```

Related Links

"Understanding Nodes" (PeopleTools 8.54: Integration Broker Administration)

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%MAP_Market

Description

The %MAP_Market system variable returns a three-character String value representing the default-market. While Mobile Application Platform (MAP) applications are not categorized by market as PeopleSoft components are, certain PeopleCode built-in functions, such as GenerateComponentPortalURL, that may be used in MAP applications require the market as an input parameter. Use this %MAP_Market system variable to supply the default market to these functions.

%Market

Description

The %Market system variable returns a three-character String value for the Market property of the current component. This is useful if you want to add market-specific PeopleCode functionality to a component. For example:

```
if %Component = COMPONENT.PERSONAL_DATA then
   /* do some stuff that applies to all localized version */
   :
   :
   /* do some stuff that differs by market */
   evaluate %Market
      when = "USA"
       /* do usa stuff */
         break;
      when = "GER"
         /* do german stuff */
   end-evaluate;
end-if;
```

The Market property of a component specifies a component's target market. This property is set when a component is initially saved or cloned.

Components that are used on a global basis have a market setting of "GBL". Variations of components targeted at a specific market can have a local Market setting, for example "FRA". This enables developers to avoid cloning, renaming, and coding distinct PeopleCode in market-specific components. Instead, they can create a single component with market-specific PeopleCode, then clone the component, applying different Market property settings.

Because the %Market string is a three-character string like Country Code, Country Codes can be used as market settings where appropriate.

Considerations Using %Market in Application Engine Programs

Whenever %Market resolves to no value, it is processing in global ('GBL'). The absence of a value should be treated the same as if the value is 'GBL'.

To process a non-GBL market, a row must be created in PS_AEREQUESTTBL with the desired market value placed in the MARKET field of that row.

Note: You must make this change to the table for every application engine program PeopleCode that refers to %Market.

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Related Links

"Understanding Component Definitions" (PeopleTools 8.54: Application Designer Developer's Guide)

%MaxMessageSize

Description

%MaxMessageSize returns the current size limit of messages as set on the PeopleTools Options page.

Related Links

"PeopleTools Options" (PeopleTools 8.54: System and Server Administration)

%MaxNbrSegments

Description

%MaxNbrSegments returns an Integer value representing the maximum number of message segments as defined on the PeopleTools Options page. The default value is 10.

Related Links

"PeopleTools Options" (PeopleTools 8.54: System and Server Administration)

%Menu

Description

%Menu returns an uppercase string containing the current menu name. It can be used to restrict edits or processing to a specific menu.

Note: Do not use the %Menu variable in the SearchSave event. You may get unexpected results.

%Mode

Description

%Mode returns a String value consisting of an uppercase character specifying the action a user selected when starting the current component. The following values can be returned. You can check either for the string value ("A", "U", and so on.) or for the constant:

Numeric Value	*Constant Value*	*Description*
A	%Action_Add	Add
U	%Action_UpdateDisplay	Update/Display
L	%Action_UpdateDisplayAll	Update/Display All

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Numeric Value	*Constant Value*	*Description*
C	%Action_Correction	Correction
E	%Action_DataEntry	Data Entry
P	%Action_Prompt	Prompt

%NavigatorHomePermissionList

Description

This system variable returns the navigator homepage permission list for the current user.

%Node

Description

%Node returns the name of the node from the current request object. This variable can only be used within a request (%Request). If you need to get the node name for a message, use the PubNodeName message property instead.

Related Links

"Understanding Nodes" (PeopleTools 8.54: Integration Broker Administration), "PubNodeName" (PeopleTools 8.54: PeopleCode API Reference)

%OperatorClass

Description

This system variable returns a string representing the primary or base class of the current operator.

Note: This system variable is supported for compatibility with previous releases of PeopleTools. New applications should use %PermissionLists instead.

Related Links

%PermissionLists

%OperatorId

Description

%OperatorId returns an uppercase character string containing the operator currently logged on. This is typically used to restrict access to records or fields to specific operators.

Note: This system variable is supported for compatibility with previous releases of PeopleTools. New applications should use %UserId instead.

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Related Links

%UserId

%OperatorRowLevelSecurityClass

Description

This system variable returns a string representing the row-level security class of the current operator. The row-level security class is now distinct from the operator's primary class.

Note: This system variable is supported for compatibility with previous releases of PeopleTools. New applications should use %RowSecurityPermissionList instead.

Related Links

%RowSecurityPermissionList

%OutDestFormat

Description

This meta-variable returns the current output destination format as a string.

Note: This is *not* a system variable. This is a meta-variable only available in a Application Engine program.

Related Links

"Using the Command Line to Invoke Application Engine Programs" (PeopleTools 8.54: Application Engine)

%OutDestType

Description

This meta-variable returns the current output destination type as a string.

Note: This is *not* a system variable. This is a meta-variable only available in a Application Engine program.

Related Links

"Using the Command Line to Invoke Application Engine Programs" (PeopleTools 8.54: Application Engine)

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%Page

Description

%Page returns an uppercase character string containing the current page name. It is typically used to restrict processing to a specific page, which is often necessary, because PeopleCode programs are associated with record definitions that can be shared by multiple pages.

%Panel

Description

%Panel returns an uppercase character string containing the current panel name.

Note: This system variable is supported for compatibility with previous releases of PeopleTools. New applications should use %Page instead.

Related Links

%Page

%PanelGroup

Description

%PanelGroup returns an uppercase character string containing the name of the current component, as set in the component definition.

Note: This system variable is supported for compatibility with previous releases of PeopleTools. New applications should use %Component instead.

Related Links

%Component

%PasswordExpired

Description

This system variable returns a Boolean indicating if the current user's password has expired. This system variable should be used after using SwitchUser, to verify if the password of the user that the user has just switched to is expired.

Related Links

SwitchUser

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%PerfTime

Description

Use the %PerfTime system variable to return the application server's local system time.

This variable returns only the local system time. This is different from the %Time system variable, which returns the system time from the database server, which may or may not be the same physical system as the application server.

PeopleSoft recommends using %PerfTime when measuring performance time for a specific PeopleCode program. This can enable developers to evaluate which coding logic has better performance time.

Note: Do not assume that %PerfTime returns the same time as the database server. Use %Time if you need to use a time value for your application transaction.

Example

The following is an example of how to use %PerfTime to check performance of a PeopleCode program:

```
&startTime = %PerfTime;

Local number &nbr;
Local Rowset &Table1_rs, &Table2_rs, &Table1_cpy_rs, &Table2_cpy_rs;
Local Rowset &Table1_vw_rs;


&Table1_rs = CreateRowset(Record.PTP_TABLE1);
&Table1_cpy_rs = CreateRowset(Record.PTP_TABLE1);
&Table1_rs.Fill("WHERE PTP_SEQ_NBR <= 10001");

REM
REM  Copy using Rowset function from one RowSet to Another
REM;

&Table1_rs.CopyTo(&Table1_cpy_rs);

REM
REM USE ROWSET TO READ RESULTS FROM A JOIN WITH BIND VARIABLE
REM;

&nbr = 10001;
&Table1_vw_rs = CreateRowset(Record.PTP_TABLE1_VW);
&Table1_vw_rs.Fill("WHERE PTP_SEQ_NBR >= :1", &nbr);

REM
REM  END OF EXERCISE CODE FOR PERFORMANCE COLLECTOR
REM;


&Rs = GetRowset(Scroll.PTP_TABLE1);

&Rs.Flush();
&Rs.Select(Record.PTP_TABLE1, "WHERE PTP_SEQ_NBR <= 10005");


&timeTaken = %PerfTime - &startTime;
```

Related Links

%Time

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%PermissionLists

Description

This system variable returns an array object containing entries for all the permission lists to which the current user belongs.

%PID

Description

This system variable returns the process ID of the process that issues it as a number. For example, if an application server has a process ID of 445656 (as seen on task manager), this system variable would return 445656 for any PeopleCode that ran on that application server (that is, from a component.) Application Engine PeopleCode run on the Application Engine server, and so on.

%Portal

Description

%Portal returns the name of the portal the current service is being accessed through, as a string. For example, suppose your PeopleCode is part of the page USERMAIN_SELF, in this URL:

```
http://serverx/servlets/psp/eprocurement/hrms/c/MAINTAINT_SECURITY.USERMAIN_SEF.GBL
```

This system variable returns the following:

```
eprocurement
```

Related Links

"Understanding Nodes" (PeopleTools 8.54: Integration Broker Administration)

%PrimaryPermissionList

Description

This system variable returns a string representing the primary permission list of the current user.

%ProcessProfilePermissionList

Description

This system variable returns the process profile Permission List for the current user.

%PSAuthResult

Description

This system variable returns the result (True of False) of PeopleSoft ID and password authentication for the user signing on.

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%Request

Description

%Request returns a reference to the request object. This reference can be used like an object, that is, you can use this as part of a dot notation string. For example:

```
&LOGOUT = %Request.LogoutURL;
```

This system variable is applicable only in an internet script.

Related Links

"Understanding Internet Script Classes" (PeopleTools 8.54: PeopleCode API Reference)

%Response

Description

%Response returns a reference to the response object. This reference can be used like an object, that is, you can use this as part of a dot notation string. For example:

```
&CookieArray = %Response.CookieNames();
```

This system variable is applicable only in an internet script.

Related Links

"Understanding Internet Script Classes" (PeopleTools 8.54: PeopleCode API Reference)

%ResultDocument

Description

This system variable returns a string containing an HTML document displayed to a user. This system variable is used with SwitchUser to pass any messages from the sign on process (or Signon PeopleCode) to the user.

Note: This system variable can be used only in Signon PeopleCode.

Related Links

SwitchUser

%Roles

Description

This system variable returns an array object containing entries for all the roles to which the current user belongs.

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%RowSecurityPermissionList

Description

This system variable returns a string representing the row-level PermissionList of the current user. The row-level security PermissionList is distinct from the user's primary PermissionList.

%RunningInPortal

Description

This system variable returns a Boolean value, letting you know if you're in the portal or not. This variable works in both frame templates and HTML templates.

%ServerTimeZone

Description

%ServerTimeZone returns the current time zone on the server as a three-character string.

%Session

Description

%Session returns a reference to the current, existing session. If you use %Session successfully, you do not have to use the GetSession function and Connect method. If you do not have a current session, %Session returns NULL.

Example

```
Local ApiObject &MySession

&MySession = %Session;
If Not (&MySession) Then
   /* Application level error handling */
End-If;
```

%SignonUserId

Description

%SignonUserId returns the value the user typed in at the sign on page.

Note: This system variable can be used only in Signon PeopleCode.

%SignOnUserPswd

Description

%SignOnUserPswd returns the value the user typed in at the sign on page. This value is encrypted. This ensures end-user passwords can't be "captured" by a Signon PeopleCode program.

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Note: This system variable can be used only in Signon PeopleCode.

%SMTPBlackberryReplyTo

Description

This system variable returns the email address used by Blackberry to reply to, as a string, based on value in the application server configuration file for SMTPBlackberryReplyTo. This value is used in the Blackberry Response processing when Notification Templates are used.

Related Links

"Understanding RIM BlackBerry Email Responses" (PeopleTools 8.54: Workflow Technology)

%SMTPGuaranteed

Description

This system variable returns a Boolean value, based on the value in the application server configuration file for SMTPGuaranteed. The values are:

Value in Configuration File	*Value Returned by System Variable*
0	False
1	True

When this value is set to True, the Notification Send method sends emails asynchronously by publishing an Application Message (EMAIL_MSG).

When this value is set to False, the Notification Send method sends emails synchronously by calling the SMTP server directly.

Related Links

SendMail, "Notification Class Method" (PeopleTools 8.54: PeopleCode API Reference), "Understanding RIM BlackBerry Email Responses" (PeopleTools 8.54: Workflow Technology)

%SMTPSender

Description

This system variable returns an email address as a string. The value is based on the value in the application server configuration file for SMTPSender. This value is used as the default sender email address for the following emails:

- TriggerBusinessEvent function
- SendMail function

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- Notification class Send method

When using Notification Templates, if the Sender value is set to "System", this is the email address that is used for the Sender.

Related Links

"Understanding RIM BlackBerry Email Responses" (PeopleTools 8.54: Workflow Technology)

%SQLRows

Description

%SQLRows returns the number of rows affected by the most recent UPDATE, DELETE, or INSERT executed through the **SQLExec** function.

%SQLRows can also be used after SELECT. It returns 0 if no rows are returned, a non-zero value if one or more rows are returned. In this case, the non-zero value does not indicate the total number of rows returned.

%Time

Description

%Time retrieves the current database server time.

If your application deals with time-sensitive data, use this value. If you want to measure the performance of a PeopleCode program, use the %PerfTime system variable instead.

Related Links

%PerfTime

%TransformData

Description

This system variable returns a reference to the TransformData object. If you do not have a current TransformData object, %TransformData returns Null.

Related Links

"Understanding Filtering, Transformation, and Translation" (PeopleTools 8.54: Integration Broker), "Understanding the TransformData Class" (PeopleTools 8.54: PeopleCode API Reference)

%UserDescription

Description

This system variable returns the description (if any) listed for the current user.

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%UserId

Description

%UserId returns a character string containing the user currently logged on. This is typically used to restrict access to records or fields to specific users.

%WLInstanceID

Description

%WLInstanceID returns a string containing the name of the Worklist Instance ID for the current worklist entry. It returns a blank string if the current page was not accessed using a worklist.

%WLName

Description

%WLName returns a string containing the name of the Worklist for the current worklist entry. It returns a blank string if the current page was not accessed using a worklist.

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Chapter 4

Meta-HTML

Understanding Meta-HTML

PeopleSoft page processing includes functionality to perform certain substitutions in the generated HTML. These substitutions are known as meta-HTML. These meta-HTML elements enable access to some of the runtime environment, and in some cases, to perform browser-dependent substitutions.

The meta-HTML processing is performed on the entire page, including the contents of any HTML areas in the page. Meta-HTML can be used in the following items:

- An HTML area of a page definition.
- iScript output – An iScript can generate HTML, which could also contain JavaScript code.
- HTML layout objects – That is, HTML objects used for homepage tab or pagelet layout.
- Style sheet definitions – Typically, free form style sheets. These are attached as an “auxiliary file” with a .css extension.
- JavaScript definitions – That is, an HTML definition that consists of JavaScript code. These are attached as an “auxiliary file” with a .js extension.

A limited subset of the meta-HTML processing is performed on any auxiliary JavaScript or style sheet files attached and downloaded to the web server. Each meta-HTML element that may be used in auxiliary files is noted in its description. This meta-HTML processing occurs both for files attached to PeopleSoft pages and for files attached to iScript output:

- Attaching JavaScript as an auxiliary file:
  - Use the %JavaScript meta-HTML function to attach JavaScript as an auxiliary file to an HTML area. See %JavaScript.
  - Use the GetJavaScriptURL method of the Response class to attach JavaScript as an auxiliary file to iScript output or a PeopleSoft page. See "GetJavaScriptURL" (PeopleTools 8.54: PeopleCode API Reference).
- Attaching a style sheet as an auxiliary file:
  - Use the %StyleSheet meta-HTML function to attach a style sheet as an auxiliary file to an HTML area. See %StyleSheet.
  - Use the GetStyleSheetURL method of the Response class to attach a style sheet as an auxiliary file to iScript output or a PeopleSoft page. See "GetStyleSheetURL" (PeopleTools 8.54: PeopleCode API Reference).

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Related Links

"Working With Free Form Sub Style Sheets" (PeopleTools 8.54: Application Designer Developer's Guide)

"Understanding HTML Definitions" (PeopleTools 8.54: Application Designer Developer's Guide)

"Working with JavaScript in HTML Definitions" (PeopleTools 8.54: Application Designer Developer's Guide)

"Internet Script Classes" (PeopleTools 8.54: PeopleCode API Reference)

Meta-HTML Variables

A meta-HTML variable has the form %name, similar to the PeopleCode system variables. It's replaced by the substituted value wherever it appears. The following example shows the use of meta-HTML variables:

```
&html = "<html dir='" | %Direction | "' lang='" | %LanguageISO | "'>";
```

Meta-HTML Functions

A meta-HTML function has the following form:

```
%name(parameter, parameter...)
```

The entire expression is replaced by a substituted value, where the parameters are used in determining the value to be substituted. The parameters are arbitrary sequences of characters separated by commas. Do *not* place quotes around the parameters unless they form part of the value to be used.

In the following example, the entire text is replaced by the contents of the message 126, 45 from the message catalog, or the phrase "Unable to load images" if that message isn't found.

```
%Message(126, 45, Unable to load images)
```

Comments in HTML

The meta-HTML processor recognizes two forms of comments. These comments are deleted from the generated HTML or JavaScript. They enable the application developer to comment the HTML objects in the database without increasing the size of the HTML passed to the browser.

The recognized comments are as follows:

Two slashes followed by a percent sign at the start of a line designates everything to the end of the line containing the slashes as a comment.

```
//%  anything
```

A less-than sign, followed by an exclamation mark and a percentage sign designates everything from those marks to the mark --> as a comment, which may be on another line.

```
<!%  anything   -->
```

These meta-HTML comments may be used both in HTML areas and attached auxiliary files.

Considerations When Using Find Definition References

When you specify a definition name in an HTML area, it is *not* found using the Find Definition References menu item in Application Designer. It also won't be automatically renamed when a definition is renamed. All text within an HTML area is treated like a quoted string, a literal.

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For example, Find Definition References won't find references to the PSLOGO image or the PT_EDITSCRIPTS HTML definition .

```
<img src='%Image(PSLOGO)'>
```

```
<script src='%JavaScript(PT_EDITSCRIPTS)'></script>
```

Meta-HTML Reference

In this section, each meta-HTML element is discussed in alphabetical order.

%Appserver

Description

At runtime %Appserver is replaced with the name of the application server.

This meta-HTML variable is valid for use in attached auxiliary files.

%AppsRel

Description

At runtime %AppsRel is replaced with the application release string.

This meta-HTML variable is valid for use in attached auxiliary files.

%Browser

Description

At runtime %Browser is replaced with the browser name as specified by the browser loading the current page.

%BrowserPlatform

Description

At runtime %BrowserPlatform is replaced with the operating system name as specified by the browser loading the current page.

%BrowserVersion

Description

At runtime %BrowserVersion is replaced by the version string as specified by the browser loading the current page.

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%Cols

Syntax

%Cols(*n*)

Description

At runtime %Cols(*n*) is replaced with COLS=*n*.

Parameters

n	Specify the number of columns.

This meta-HTML function is valid for use in attached auxiliary files, but always generates COLS=n, that is, it isn't Browser-aware when used in attached files.

%Component

Description

At runtime %Component is replaced with the component name of the current component.

%BB

Syntax

%BB(*css_property*)

Description

Use the %BB function to expand the generic style into the browser-specific style and add the browser prefix to the both the CSS property name and the property value. Use this function in free form style sheet definitions only.

Note: Use this function in style sheet definitions only.

Parameters

css_property	Specifies the CSS property as a String value.

Example

```
%BB(transition:transform 1s ease-in-out 0.3s);
```

In the case of Firefox, the expanded browser-specific style would be as follows:

```
-moz-transition:-moz-transform 1s ease-in-out 0.3s
```


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%BP

Syntax

%BP(*css_property*)

Description

Use the %BP function to expand the generic style into the browser-specific style and add the browser prefix to the CSS property name. Use this function in free form style sheet definitions only.

Note: Use this function in style sheet definitions only.

Parameters

css_property	Specifies the CSS property as a String value.

Example

The following %BP function expands the generic style:

```
%BP(box-orient: vertical);
```

In the case of a WebKit browser (Safari or Chrome), the expanded browser-specific style would be as follows:

```
-webkit-box-orient: vertical
```

%BV

Syntax

%BV(*css_property*)

Description

Use the %BV function to expand the generic style into the browser-specific style and add the browser prefix to the CSS property value. Use this function in free form style sheet definitions only.

Note: Use this function in style sheet definitions only.

Parameters

css_property	Specifies the CSS property as a String value.

Example

The following %BV function expands the generic style:

```
%BV(display:box);
```

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In the case of Internet Explorer, the expanded browser-specific style would be as follows:

```
display:-ms-box
```

%ContentReference

Syntax

%ContentReference(*PORTAL_NAME*, *CREF_object*, [*URL_type*])

Description

At runtime, %ContentReference is replaced with the absolute URL to the specified content reference.

Note: If the specified content reference object does not exist or the current user does not have access to it, an error message is returned instead of the URL.

Parameters

PORTAL_NAME Specifies the portal.

CREF_object Specifies the name of the content reference definition.

URL_type Specifies the URL type:

- *psp* — Specifies the absolute portal URL.
- *psc* — Specifies the absolute content URL.

Note: *psp* is the default value.

Example

The following example demonstrates a usage of %ContentReference:

```
%ContentReference(EMPLOYEE, PT_PTFP_VIEW_GBL, psp)
```

The resulting absolute URL would be similar to the following:

```
http://myserver.example.com:8080/psp/QEDMO/EMPLOYEE/PT_LOCAL/c/PTFP_FEED_PUBLISHING⇒
.PTFP_VIEW.GBL
```

%Copyright

Description

At runtime %Copyright is replaced with a string suitable for use as a standard PeopleSoft copyright notice.

This meta-HTML variable is valid for use in attached auxiliary files.

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%DBName

Description

At runtime %DBName is replaced with the name of the application database.

This meta-HTML variable is valid for use in attached auxiliary files.

%DBType

Description

At runtime %DBType is replaced with the type of the application database.

This meta-HTML variable is valid for use in attached auxiliary files.

%Encode

Syntax

%Encode(*anything*)

Description

At runtime %Encode plus *anything* is replaced with the encoded string. Encoding is done according to normal URL encoding rules.

Parameters

anything	Specify the string to be encoded.

This meta-HTML function is valid for use in attached auxiliary files.

%ExplainMessage

Syntax

%ExplainMessage(*message_set*, *message_num* [, *alt_msg_text*])

Description

Use the %ExplainMessage function to retrieve the Description field (that is, the explain, or detailed text) for a message from the message catalog.

Note: Use this function in HTML definitions only.

Parameters

message_set	Specifies the message set as an Integer value.
message_num	Specifies the message number as an Integer value.

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alt_msg_text

Specifies a String value representing an alternate message to be used if the message set and number are not found in the message catalog.

Note: The alternate message is used as is. Any quotation marks used to enclose the alternate message will be output as part of the message instead. In addition, because a comma is used as a separator between parameters, a comma will truncate the alternate message.

Example 1

The following example demonstrates usage of the %ExplainMessage function:

```
%ExplainMessage(124, 528, Message Not Found: Click Yes to go back and save; No to d⇒
iscard your changes)
```

The resulting description is returned from the message catalog:

```
Click Yes to go back and save, No to discard your changes
```

Example 2

The following example specifies a message set and number that is undefined in the message catalog:

```
%ExplainMessage(124, 999, "Message Not Found: Click Yes to go back and save, No to ⇒
discard your changes")
```

Because the alternate message includes a comma, it would be truncated as follows:

```
"Message Not Found: Click Yes to go back and save
```

Related Links

%Message

%FORMFACTOREXTRALARGE

Description

Use the %FORMFACTOREXTRALARGE variable to return the ceiling (the maximum device width in physical pixels) defined in the web server's configuration files for the extra large form factor as an Integer.

Note: Use this variable in media queries in free form style sheet definitions only.

Example

```
@media only screen
and (max-width:%FORMFACTORMEDIUM)
{
 .psc_columnitem-1of2,
 .psc_columnitem-2of2,
 .psc_columnitem-1of3,
 .psc_columnitem-2of3,
 .psc_columnitem-3of3
 {
```

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```
 float:none;
 width:auto;
 display:block;
 }
}
```

%FORMFACTORLARGE

Description

Use the %FORMFACTORLARGE variable to return the ceiling (the maximum device width in physical pixels) defined in the web server's configuration files for the large form factor as an Integer.

Note: Use this variable in media queries in free form style sheet definitions only.

%FORMFACTORMEDIUM

Description

Use the %FORMFACTORMEDIUM variable to return the ceiling (the maximum device width in physical pixels) defined in the web server's browscap file for the medium form factor as an Integer.

Note: Use this variable in media queries in free form style sheet definitions only.

%FORMFACTORSMALL

Description

Use the %FORMFACTORSMALL variable to return the ceiling (the maximum device width in physical pixels) defined in the web server's configurations files for the small form factor as an Integer.

Note: Use this variable in media queries in free form style sheet definitions only.

%Formname

Description

At runtime %Formname is replaced with the name of the HTML FORM generated for the current page.

This meta-HTML variable is valid for use in attached auxiliary files.

%HtmlContent

Syntax

%HtmlContent(*ContentName*)

Description

At runtime %HtmlContent and *ContentName* are replaced by the URL suitable for referencing the content on the web server. In addition, the content is loaded into the web server's cache directory.

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Parameters

ContentName	Specify the content you want to access, as a string.

%Image

Syntax

%Image(*imagename*)

Description

At runtime %Image and *imagename* are replaced by the URL suitable for referencing the image on the web server. In addition, the image is loaded into the web server's cache directory.

Parameters

imagename	Specify the name of an image saved as an image definition in Application Designer.

Example

```
<img src='%Image(PSLOGO)'>
```

%JavaScript

Syntax

%JavaScript(*HTMLDefinition*)

Description

At runtime %JavaScript and the *HTMLDefinition* are replaced by the URL suitable for referencing the .js file on the web server. In addition, the JavaScript is loaded into the web server's cache directory.

Parameters

HTMLDefinition	Specify the name of an HTML definition that contains a JavaScript program.

Example

```
<script src='%JavaScript(PT_EDITSCRIPTS)'></script>
```

%LabelTag

Description

At runtime %LableTag is replaced with the text LABEL.

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This meta-HTML variable is valid for use in attached auxiliary files, but always generates LABEL, that is, it isn't Browser-aware when used in attached files.

%LanguageISO

Description

At runtime %LanguageISO is replaced with a string value representing the current session's language code or language code and country code if a country code exists.

Use %LanguageISO to declare the language of a Web page using the HTML lang attribute.

For instance, if the language for the current language is English, then `<html lang="%LanguageISO">` resolves to `<html lang="en">` at runtime. If the current language is Canadian French then it would resolve to `<html lang="fr-ca">` .

Example

```
&html = "<html dir='" | %Direction | "' lang='" | %LanguageISO | "'>";
```

%Menu

Description

At runtime %Menu is replaced by the menu name for the currently loaded component.

%Message

Syntax

%Message(*message_set*, *message_num*, *default_msg_txt* [, *paramlist*])

where *paramlist* is an arbitrary-length list of parameters to be substituted in the resulting text string, in the form:

param1 [, *param2*]. . .

Description

%Message retrieves a message from the PeopleCode Message Catalog and substitutes in the values of the parameters into the message.

The *message_set* and *message_num* parameters specify the message to retrieve from the catalog. If the message is not found in the Message Catalog, the default message provided in *default_msg_txt* is used. Message sets 1 through 19,999 are reserved for use by PeopleSoft applications. Message sets 20,000 through 32,767 can be used by PeopleSoft users.

The parameters listed in the optional *paramlist* are referenced in the message using the % character followed by an integer referencing the position of the parameter in the function call. For example, if the first and second parameters in *paramlist* were MONDAY and 12/5/2001, they would be inserted into the message string as %1 and %2. To include a literal percent sign in the string, use %%; %\ is used to indicate an end-of-string and terminates the string at that point, this is generally used to specify fixed-length strings with trailing blanks.

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The message is obtained using the current user language code.

Parameters

message_set	Specify the message set to be retrieved from the catalog. This parameter takes a number value.
message_num	Specify the message number to be retrieved from the catalog. This parameter takes a number value.
default_msg_txt	Specify the text to be displayed if the message isn't found. This parameter takes a string value.
paramlist	Specify values to be substituted into the message.

This is valid for use in attached auxiliary files.

Note: If the message is changed (or a new language version is added) after the auxiliary file has been loaded to the web server, the auxiliary file still contains the old version of the message. It is necessary to manually delete the file from the web server cache directory to get it to re-retrieve the (unmodified) auxiliary component with the (modified) message bindings.

Related Links

%ExplainMessage

%Page

Description

At runtime %Page is replaced by the name of the current page.

%ServicePack

Description

At runtime %ServicePack is replaced with the application service pack string.

This meta-HTML variable is valid for use in attached auxiliary files.

%StyleSheet

Syntax

%StyleSheet(*STYLE_SHEET_NAME*)

Description

At runtime, %StyleSheet and the *STYLE_SHEET_NAME* parameter are replaced by the absolute URL suitable for referencing the .css file on the web server. In addition, the style sheet is loaded into the web server's cache directory.

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Parameters

STYLE_SHEET_NAME	Specify the name of a style sheet definition stored in the database.

Example

The following example demonstrates a usage of %StyleSheet:

```
%StyleSheet(PSSTYLEDEF_FMODE)
```

The resulting absolute URL would be similar to the following:

```
http://myserver.example.com:8080/cs/QEDMO/cache/PSSTYLEDEF_FMODE_133.css
```

%SubmitScriptName

Description

At runtime %SubmitScriptName is replaced with the name of the JavaScript function that the current page uses to submit the form when a server action is required.

This meta-HTML variable is valid for use in attached auxiliary files.

%tabindex

Description

At runtime, for each field inside an HTML area that is defined with the %tabindex meta-variable, %tabindex will be replaced with the tab index of the HTML area itself.

This meta-variable is valid for fields inside an HTML area only; if the field is not inside HTML area, then this meta-variable will remain unresolved at runtime.

Example

In the following example, two fields have been defined with the %tabindex meta-HTML variable, while one has not:

```
<a href="http://www.w3schools.com" tabindex=%tabindex>Visit W3Schools.com!</a>
<a id="HELP" name="HELP" href="javascript:some_function1();" tabindex=%tabindex>Hel⇒
p</a>
<a id="NEWWIN" name="NEWWIN" href="javascript:some_function2();">New Window</a>
```

At runtime, if the tab index for the HTML area is 20, then this HTML fragment resolves to:

```
<a href="http://www.w3schools.com" tabindex="20">Visit W3Schools.com!</a>
<a id="HELP" name="HELP" href="javascript:some_function1();" tabindex="20">Help</a>
<a id="NEWWIN" name="NEWWIN" href="javascript:some_function2();">New Window</a>
```

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%ToolsRel

Description

At runtime %ToolsRel is replaced with the tools release string.

This meta-HTML variable is valid for use in attached auxiliary files.

%URL

Syntax

%URL(*URLIdentifier* [, **NOENCODE** | **ENCODE** | **DESCR**])

Description

The %URL meta-HTML function finds the URL specified by *URLIdentifier* and substitutes its value. The *URLIdentifier* must already exist and have been created using URL Maintenance.

Parameters

URLIdentifier	Specify a URL Identifier for a URL that already exists and was created using the URL Maintenance page.
NOENCODE | ENCODE | DESCR	Specify any encoding or other processing to be done with the URL. ENCODE is the default value. If you specify ENCODE, special characters in the URL are encoded using standard URL encoding rules, that is, blanks are replaced with %20, and so on. If you specify NOENCODE, no encoding is done with the URL. If you specify DESCR, the description from the URL definition is used instead of the URL itself.

This meta-HTML function is valid for use in attached auxiliary files.

Example

```
<a href='%URL(homepage)'>%URL(homepage, DESCR)</a>
```

Related Links

"URL Maintenance" (PeopleTools 8.54: System and Server Administration)

%UserId

Description

At runtime %UserID is replaced with the current user ID.

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Appendix A

Viewing Trees From Application Pages

Understanding View Trees

These topics are for developers of PeopleSoft applications who want to display a tree from an application page, and enable users to select a node or leaf from the tree. It provides an overview of View Trees and discusses how to invoke View Trees from application pages.

Use a secondary 'Tree Viewer' page, (PSTREEVIEWER), to display an existing PeopleSoft tree from an application using the same HTML format as PeopleSoft Tree Manager. It enables the user to select a node or a leaf from a tree and return the selected node or leaf back to the application.

The following PeopleTools definitions are used:

- Secondary Page: PSTREEVIEWER
- Work Page: PSTREEVIEWERWRK
- Work Record: PSTREEVIEWWRK

The work record and work page are used as a way to transfer data between an application page and the secondary page. The PSTREEVIEWWRK record contains fields that define which tree to display, whether the user has selected a node or leaf, and control fields that give the application some control over the display options of the tree.

The following fields identify the specific tree to be displayed. These values should be populated by the calling application as discussed in the following table.

Field	***Description***
SetID	SetID of the Tree to be displayed. Required if the tree is keyed by a setID.
SetCntrlValue	Business unit or SetCntrlValue of the Tree to be displayed. Required if the tree is keyed by a business unit or SetCntrlValue.
Tree_Name	Name of the tree to be displayed. Required.
EffDt	Specify either the Tree's Effective Date, or the date to be used for finding the most current effective-dated version of the tree. Tree Viewer performs a maximum effective date test and displays the most current tree whose effective date is less than or equal to the EffDt value passed in the PSTREEVIEWWRK record.

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Note: If a tree contains branches, they are ignored and shown as regular nodes. However, the root node displays with the branch icon to indicate that the tree does contain branches.

There are two methods of opening the PSTREEVIEWER secondary page from an application:

- Without ‘MultiNode’ Selection (Method A): Enables user to select, and application to receive a single node with level information, or a leaf with parent node information.
- With ‘MultiNode’ Selection (Method B): Enables user to select, and application to receive multiple nodes without level information. If user selects a leaf the parent node is returned.

The following fields indicate whether specific nodes or a leaf has been selected by the application. These fields can be populated by the calling application if it wants the position of a specific node or leaf, identifying it as the currently selected. The fields are also updated or populated on the Tree Viewer secondary page (PSTRREVIEWER), when the user selects a specific node or leaf and clicks the Select button.

If the application specifies the node value and the leaf value, the search tries to find the leaf under the specified node. This is important when a tree contains duplicate leaves. If a tree does have duplicate leaves and no node is specified, the first leaf occurrence is returned.

Field Name	***Description***	***Remarks***
Tree_Node	The Node_Id selected. Must be an exact match to the Node_Id stored in the PSTREENODE table.	Input and/or Output
Tree_Level_Num	Level number associated with the selected node.	Output
Tree_Level	Level name associated with the selected node.	Output
Tree_Level_Descr	Level description associated with the selected node.	Output
Leaf_Selected	Y/N flag. Indicates whether the application specified a leaf.	Input
Range_From	Range from value of the selected leaf.	Input and/or Output
Range_To	Range to value of the selected leaf.	Input and/or Output
Dynamic_Flag	Indicates whether the selected leaf is dynamic.	Output
Message_Set_Nbr	Populated in PSTREEVIEWERWRK if error occurs. For example, selected node or leaf is not found. Collapsed tree is displayed.	Output

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Field Name	Description	Remarks
Message_Nbr	Populated in PSTREEVIEWERWRK if error occurs. For example, specifed node or leaf is not found. Collapsed tree is displayed.	Output
Multinode	Holds list of selected nodes as a comma-separated string. Populated if Multinodeselection is set to "Y".	Output

The following fields (input) can be used to control the appearance and formatting of the Tree Viewer secondary page:

Field Name	Description
Page_Size	Determines the number of lines to be displayed on a given page. If no value is specified the default value is 60 lines per page.
Show_Leaves	Y/N flag. Controls whether the Tree Viewer displays Detail Values.
Show_Levels	Y/N flag. Controls whether the Tree Viewer should display the Level Description next to the node description.
Multinodeselection	Y/N Flag. Default = "N"

Related Links

"PeopleSoft Tree Manager Overview" (PeopleTools 8.54: Tree Manager)

Invoking View Trees From Application Pages

This section outlines the development steps and provides some sample code to view trees from an application page. It provides two methods of how to view trees from application pages:

- Without multi-node selection.
- With multi-node selection.

To view a tree from an application page:

1. Add the PSTREEVIEWERWRK page to your component as a hidden page.

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2. Add a field to a work record that will then be used as a Command Button or Hyperlink to your secondary page.

   The user selects this button or link to invoke the Tree Viewer page. You also need to add the following sample code to the FieldChange event for this field.

3. Add the Command Button or Hyperlink to the application page.

4. Add a Secondary Page control to the application page, and set the secondary page to PSTREEVIEWER.

   The Secondary Page control *must* be placed on the page at a level higher than level 3.

   In addition, the Command button or Hyperlink to invoke the PSTREEVIEWER secondary page must be placed on the same level as a secondary page control.

5. Add the application PeopleCode, which should do the following:

   a. Set the values of the Tree's key fields on the PSTREEVIEWWRK record.

   b. Determine whether a node has been previously selected, and if so, setting the *Tree_Node* field to be the ID of the selected node:

      If a leaf has been previously selected, your code should do the following:

      — Populate the *Range_From* and *Range_To* fields with the selected leaf values

      — Set the *Tree_Node* field to the parent node

      — Set the *Leaf_Selected* field to "*Y*"

   c. Set any of the display options that you want to use.

   d. Display the Tree Viewer secondary page (PSTREEVIEWER) by calling the DoModal PeopleCode function.

   e. Optionally, check the return code value and storing the ID of the selected node if the user selected a node and clicked the OK or Select button.

```
/* Note: Keys of Tree are stored in &SetId,&TreeName variables.
Assume that application has Leaf selected with values stored in variables &RangeFro⇒
m; &RangeTo and has parent node name stored in &TreeNode variable. QE_TREETEST_WRK ⇒
Record holds input and received output values. */

/*Tree to open specification */
PSTREEVIEWWRK.SETID = &SETID;
PSTREEVIEWWRK.SETCNTRLVALUE = " ";
PSTREEVIEWWRK.TREE_NAME = &TREENAME;
PSTREEVIEWWRK.TREE_BRANCH = " ";
PSTREEVIEWWRK.EFFDT = %DATE; /* Get Latest Tree as of Today */

/* Tree appearance specification */
PSTREEVIEWWRK.PAGE_SIZE = 60;
PSTREEVIEWWRK.SHOW_LEAVES = "Y";
PSTREEVIEWWRK.SHOW_LEVELS = "Y";
PSTREEVIEWWRK.MULTINODESELECTION = "N";

/* Leaf input specification */
/* (Assuming QE_TREETEST_WK.LEAF_SELECTED ="Y"; */
PSTREEVIEWWRK.LEAF_SELECTED = QE_TREETEST_WRK.LEAF_SELECTED;
```

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```
PSTREEVIEWWRK.TREE_NODE = &TreeNode;
PSTREEVIEWWRK.RANGE_FROM = &RangeFrom;
PSTREEVIEWWRK.RANGE_TO = &RangeTo;

/* Opening the PSTREEVIEWER secondary page */
&rslt = DoModal(Page.PSTREEVIEWER, " ", - 1, - 1);

/* populating the application Record (QE_TREETEST_WRK) with output values from user⇒
 selection in Tree */
If &rslt = 1 Then
   QE_TREETEST_WRK.TREE_NODE = PSTREEVIEWWRK.TREE_NODE;
   QE_TREETEST_WRK.TREE_LEVEL_NUM = PSTREEVIEWWRK.TREE_LEVEL_NUM;
   QE_TREETEST_WRK.TREE_LEVEL = PSTREEVIEWWRK.TREE_LEVEL;
   QE_TREETEST_WRK.TREE_LEVEL_DESCR = PSTREEVIEWWRK.TREE_LEVEL_DESCR;
   QE_TREETEST_WRK.RANGE_FROM = PSTREEVIEWWRK.RANGE_FROM;
   QE_TREETEST_WRK.RANGE_TO = PSTREEVIEWWRK.RANGE_TO;
   QE_TREETEST_WRK.DYNAMIC_FLAG = PSTREEVIEWWRK.DYNAMIC_FLAG;
   QE_TREETEST_WRK.MESSAGE_SET_NBR = PSTREEVIEWWRK.MESSAGE_SET_NBR;
   QE_TREETEST_WRK.MESSAGE_NBR = PSTREEVIEWWRK.MESSAGE_NBR;
End-If;
```

The following is the sample PeopleCode (Method A), which would be part of the FieldChange event triggered from a Command Button or Hyperlink command on the application page:

In some cases, you may need to use the Component Level Record variable *&cPSTREEVIEWWRK* to set values for the tree. For example, if the application added the Tree Viewer secondary page to the application's secondary page and cannot reach the record from the component buffer. The following is the sample PeopleCode illustrating the use of the variable:

```
Component Record &cPSTREEVIEWWRK;
Component boolean &gbShowTreeLeaves;
Local number &rslt;

/* opening the Tree Viewer secondary page */

&cPSTREEVIEWWRK = CreateRecord(Record.PSTREEVIEWWRK);

&cPSTREEVIEWWRK.SETID.Value = &SETID;
&cPSTREEVIEWWRK.SETCNTRLVALUE.Value = " ";
&cPSTREEVIEWWRK.TREE_NAME.Value = &TREENAME;
&cPSTREEVIEWWRK.TREE_BRANCH.Value = " ";
&cPSTREEVIEWWRK.EFFDT.Value = %DATE; /* Get Latest Tree as of Today */;
&cPSTREEVIEWWRK.PAGE_SIZE.Value = 60;
&cPSTREEVIEWWRK.SHOW_LEVELS.Value = "Y";
&cPSTREEVIEWWRK.MULTINODESELECTION.Value = "N";

If &gbShowTreeLeaves Then
   &cPSTREEVIEWWRK.SHOW_LEAVES.Value = "Y";
Else
   &cPSTREEVIEWWRK.SHOW_LEAVES.Value = "N";
End-If;

&rslt = DoModal(Page.PSTREEVIEWER, "", - 1, - 1);

/* reading output value in a case when Component Level Record variable &cPSTREEVIEW⇒
ERWRK is used. */

If &rslt = 1 Then
   QE_TREETEST_WRK.TREE_NODE = &cPSTREEVIEWWRK.TREE_NODE.value;
   QE_TREETEST_WRK.TREE_LEVEL_NUM = &cPSTREEVIEWWRK.TREE_LEVEL_NUM.value;
   QE_TREETEST_WRK.TREE_LEVEL = &cPSTREEVIEWWRK.TREE_LEVEL.value;
   QE_TREETEST_WRK.TREE_LEVEL_DESCR = &cPSTREEVIEWWRK.TREE_LEVEL_DESCR.value;
   QE_TREETEST_WRK.RANGE_FROM = &cPSTREEVIEWWRK.RANGE_FROM.value;
   QE_TREETEST_WRK.RANGE_TO = &cPSTREEVIEWWRK.RANGE_TO.value;
   QE_TREETEST_WRK.DYNAMIC_FLAG = &cPSTREEVIEWWRK.DYNAMIC_FLAG.value;
   QE_TREETEST_WRK.MESSAGE_SET_NBR = &cPSTREEVIEWWRK.MESSAGE_SET_NBR.value;
   QE_TREETEST_WRK.MESSAGE_NBR = &cPSTREEVIEWWRK.MESSAGE_NBR.value;
```

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```
   EndModal(1);

Else
   EndModal(0);

End-If;
```

Note: The name of the variable *&cPSTREEVIEWWRK* is hard-coded and should not be changed.

The segment of code in *italics* reads the results that came from the tree. (Node or leaf selected).

Example of Method A: Viewing Trees Without Multi-Node Selection

An example of an application that uses the Tree Viewer secondary page (PSTREEVIEWER) with the Multinodeselection flag set to "**N**" is the Copy/Delete Tree (PSTREEMAINT) component.

To view the Tree Viewer secondary page from the Copy/Delete Tree page:

1. Select Tree Manager, Tree Utilities, Copy/Delete Tree.
2. Select a tree.

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3. Click the View button.

Image: Tree Viewer secondary page without multi-node selection

The following example shows the QE_PERS_DATA tree as viewed on the Tree Viewer secondary page without multi-node selection:

Example of Method B: Viewing Trees With Multi-Node Selection

An example of an application that uses the PSTREEVIEWER secondary page with the Multinodeselection flag set to "**Y**" is the Query Manager component.

To view the Tree Viewer secondary page from Query Manager:

1. Select Reporting Tools, Query, Query Manager.
2. Click the Edit link for any query.
3. Click the Add Criteria icon button.
4. Select *Field* as the first expression.
5. Select *in tree* as the condition type.

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6. Click the New Node List link.
7. Select a tree to display.
8. Use the page fields and tree widgets to select multiple tree nodes.
9. Once all tree nodes have been selected, click the OK button.

Image: Tree Viewer secondary page with multi-node selection

The following example shows the QE_PERS_DATA tree as viewed on the Tree Viewer secondary page with multi-node selection:

The Tree Viewer secondary page (PSTREEVIEWER) in Method B has a frame that holds the Selected Nodes List with action buttons associated with each selected node. This page is used to select the set of nodes, return them to the calling application (Query Manager), and use the list of nodes as Query criteria.

Once all nodes have been selected, the selected tree setID, tree name, effective date, and selected nodes display in the Select Tree Node List group box. The list of selected nodes can also be read from the Multinode field of the PSTREEVIEWWRK work record as a comma-separated string. The string can be parsed to get the node names.

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