

PeopleSoft®

World A7.3
Advanced Programming
Concepts & Skills PeopleBook

June 1996

J.D. Edwards World Source Company

7601 Technology Way

Denver, CO 80237

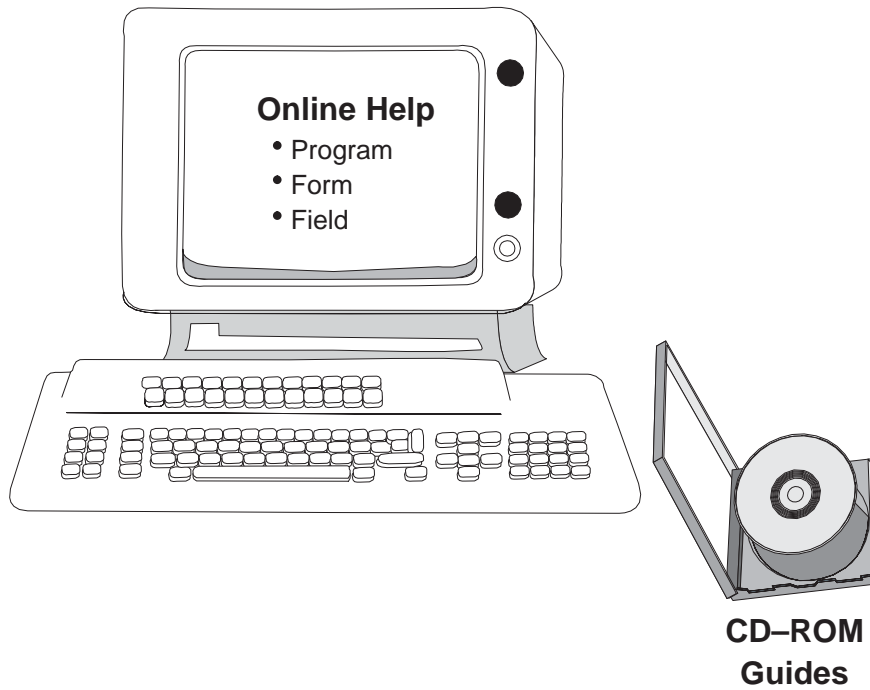
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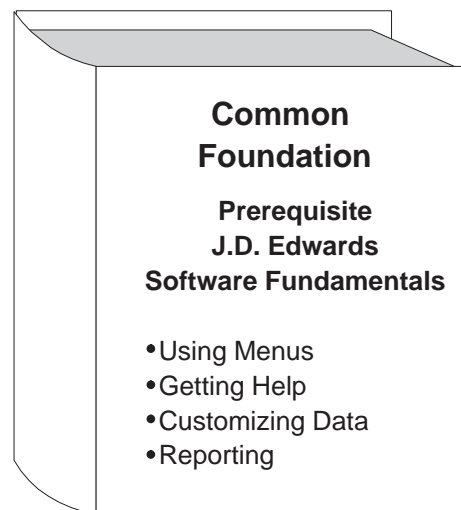
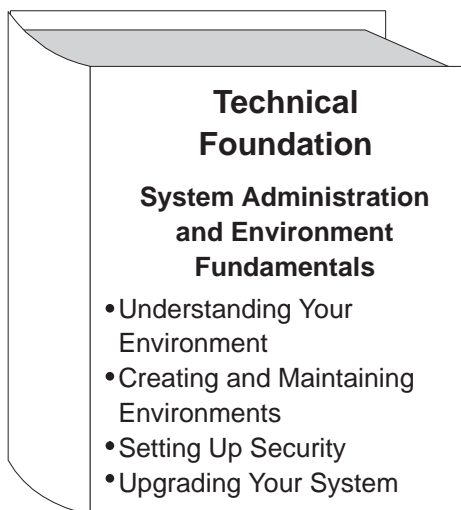
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Where Do I Look?



Guides



Important Note for Students in Training Classes

This guide is a source book for online helps, training classes, and user reference. Training classes may not cover all the topics contained here.

Welcome

About this Guide

This guide provides overviews, illustrations, procedures, and examples for release A7.3 of J.D. Edwards software. Forms (screens and windows) shown are only examples. If your company operates at a different software level, you might find discrepancies between what is shown in this guide and what you see on your screen.

This guide includes examples to help you understand how to use the system. You can access all of the information about a task using either the guide or the online help.

Before using this guide, you should have a fundamental understanding of the system, user defined codes, and category codes. You should also know how to:

- Use the menus
- Enter information in fields
- Add, change, and delete information
- Create and run report versions
- Access online documentation

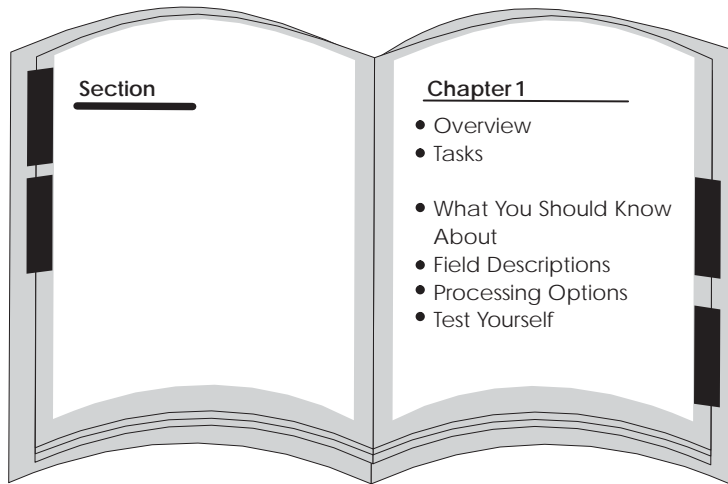
Audience

This guide is intended primarily for the following audiences:

- Users
- Classroom instructors
- Client Services personnel
- Consultants and implementation team members

Organization

This guide is divided into sections for each major function. Sections contain chapters for each task or group of related tasks. Each chapter contains the information you need to accomplish the task, run the program, or print the report. Chapters normally include an overview, form or report samples, and procedures.



When it is appropriate, chapters also might explain automatic accounting instructions, processing options, and warnings or error situations. Some chapters include self-tests for your use outside the classroom.

This guide has a detailed table of contents and an index to help you locate information quickly.

Conventions Used in this Guide

The following terms have specific meanings when used in this guide:

Form refers to a screen or a window.

Table generally means “file.”

We assume an “implied completion” at the end of a series of steps. That is, to complete the procedure described in the series of steps, either press Enter or click OK, except where noted.

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Glossary

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Exercises

J.D. Edwards Overview

Signing On and Off



```
Sign On
      System . . . . . :   JDED
      Subsystem . . . . :   Qinter
      Display . . . . . :   V5251JI01

User . . . . . : _____
Password . . . . . : _____
```

▶ **To sign on**

From the Sign On menu:



















1. Key your User ID in the User field
2. Key your Password in the Password field
3. Press Enter

▶ **To sign off**















On the *Selection* line:

1. Key a double period (. .) or a 90
2. Press Enter

Standard Menu Function Keys

AS/400 Keyboard	PC Keyboard	Function
		Command Entry Prompt
		Access Menu Word Search
		Retrieve previous command
		Return to previous menu
		Fast Path Commands
		Menu Selection Detail
		Display Menu List window
		Access processing options Type desired menu selection and press F18
		List available Function Keys

Standard Screen Function Keys

AS/400 Keyboard	PC Keyboard	Function
		Display JDE field level help
		Exit
		Display Fold Area (more detailed information)
		View error message text
	 	Clear screen
	 	Display available functions window

Additional Differences

AS/400	PC Keyboard
Field Exit	Enter
Enter	Ctrl
Reset	Alt
Roll Up	Page Down
Roll Down	Page Up
Help	Scroll Lock
Attn	Esc

Frequently Used Hidden Selections

To access, key the desired Hidden Selection number on the *Selection* or *Command* line and press Enter.

User Tools

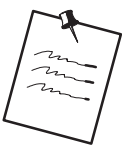
Selection	Description
33	Display Submitted Jobs
34	Display User Messages
42	Display User Job Q
43	Display User Print Q
39	Change User Print Q
82	Hold Submitted Jobs
85	Display User Defaults
90	Sign Off

Operator Tools

Selection	Description
27	Advanced Operations
29	Technical Operations
97	Install History Display

Programming Tools

Selection	Description
25	Menu Specifications
40	File Field Description



Type HS on a *Selection* or *Command* line to display a list of available Hidden Selections.

J.D. Edwards Product Line

The following is a list of products available from J.D. Edwards:

Financials

- General Accounting
- Accounts Payable
- Accounts Receivable
- Fixed Assets
- Financial Modeling and Budgeting
- Multi-Currency, Multi-Language, Multi-National Processing
- Flexible Reporting Tools
- Address Book/Electronic Mail
- Human Resources
- Payroll
- Time Accounting

Distribution/Logistics

- Sales Order Management
- Configuration Management
- Advanced Pricing
- Forecasting
- Requirements Planning
- Enterprise Facility Planning
- Purchase Management
- Inventory Management
- Advanced Warehouse Management
- Transportation Management
- Data Collection
- EDI/Electronic Commerce

Manufacturing

- Product Data Management
- Configuration Management
- Plant and Equipment Maintenance
- Shop Floor Control
- Forecasting
- Requirements Planning
- Enterprise Facility Planning
- Capacity Requirements Planning
- Finite Scheduler
- Environmental Management System
- Data Collection

Energy and Chemical

- Process Manufacturing/Lube Oil Blending
- Equipment Management
- Inventory Management
- Bulk Stock Control
- Distribution Contracts
- Sales Order Management and Pricing
- Load and Delivery Management
- Forecasting
- Enterprise Facility Planning
- Purchase Management

Architecture, Engineering, Construction, and Real Estate

- Job/Project Cost Accounting
- Work Order Management
- Project Change Management
- Contract Management
- Contract Billing
- Engineering and Service Billing
- Equipment Management

Homebuilder Management

Real Estate Management

Public Services: State and Local Governments, Education, and Utilities

Financial Administration and Reporting

Budget Administration

Fund and Encumbrance Accounting

Grant and Endowment Management

Purchasing and Material Management

Warehousing and Central Stores Management

Human Resources Management

Service and Word Order Management

Capital Project and Construction Management

Contract Management

Plant, Equipment, and Fleet Maintenance

Customer Information and Billing Administration

Assessment and Property Tax Administration

Other Integrated Solutions

Bar Coding/Data Collection

Connectivity/Network Solutions

Development Tools

Distributed Data Processing

EDI/Electronic Commerce

Enterprise Information Systems

Facsimile Management

PC Integration

J.D. Edwards Regional Offices and Worldwide Offices

The following is a list of all J.D. Edwards offices:

Office	Description
Headquarters	Denver, Colorado
Regional U.S. Offices	East Rutherford, New Jersey Herndon, Virginia Atlanta, Georgia Oak Brook, Illinois Denver, Colorado Costa Mesa, California Foster City, California Dallas, Texas Houston, Texas U.S. Satellite Offices Waltham, Massachusetts Beachwood, Ohio Trumbull, Connecticut Buffalo, New York Melville, New York New York, New York Fair Oaks, California Seattle, Washington West Conshohocken, Pennsylvania Bloomington, Minnesota Milwaukee, Wisconsin Lake Oswego, Oregon St. Louis, Missouri Tampa, Florida Fort Lauderdale, Florida Regional Canada Willowdale, Ontario
North and South American Affiliates	Canada Mexico Venezuela Argentina
European Offices	Frankfurt, Germany Bruxelles, Belgium Paris, France Milano, Italy United Kingdom Bourne End, U.K.

Office	Description
European Affiliates	United Kingdom Ireland Sweden Germany The Netherlands Belgium Austria Switzerland Spain Portugal Denmark
Australian Office	Chatswood, Australia
Middle East Affiliates	Israel Jordan Bahrain Egypt
Asia/Pacific Rim Affiliates	Japan China–Hong Kong City Philippines Malaysia Singapore Australia New Zealand

Application Development Cycle

World CASE covers the entire spectrum of the application development life cycle, including design tools, code generation, automatic documentation generation, prototyping, repositories and other productivity improvement tools for the development, operation and maintenance of flexible, business application software.

The Application Development Cycle (A/D Cycle) can be discussed in three levels as follows:

Level 1

The Application Platform which represents the *Technical Foundation* class.

Level 2

The Design Platform which represents the *Advanced Programming Concepts and Skills* class.

Level 3

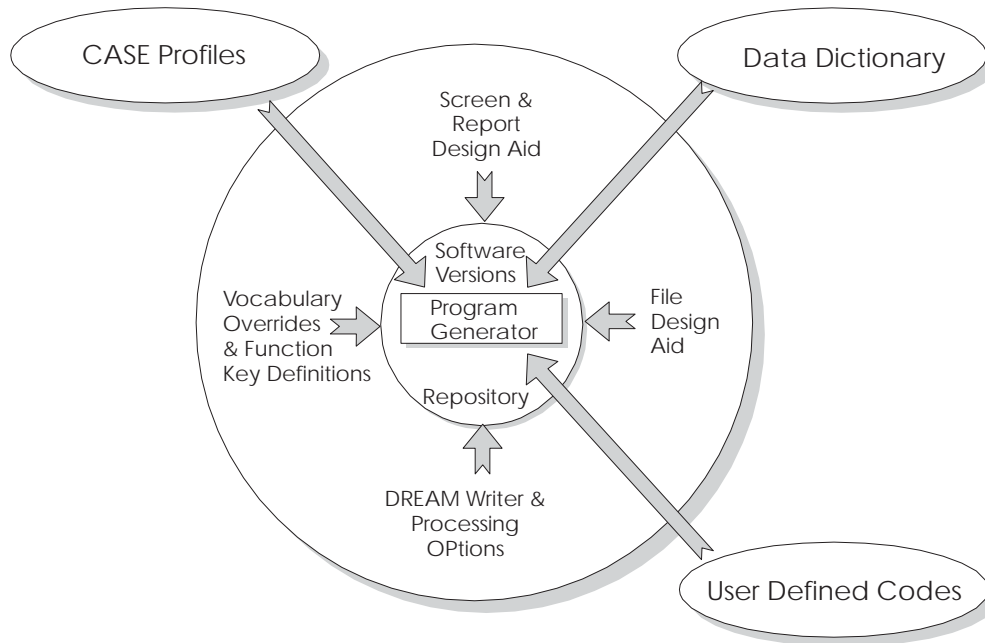
The Development Platform which represents the *CASE* class.

Universal Building Blocks of J.D. Edwards Software

World CASE covers the entire spectrum of the application development life cycle, including:

- Design tools
- Code generation
- Automatic documentation generation
- Prototyping
- Repositories
- Other productivity improvement tools

Separate Modules that Contribute to the Functioning of a J.D. Edwards Program



J.D. Edwards Training Environment

The Student Library Setup

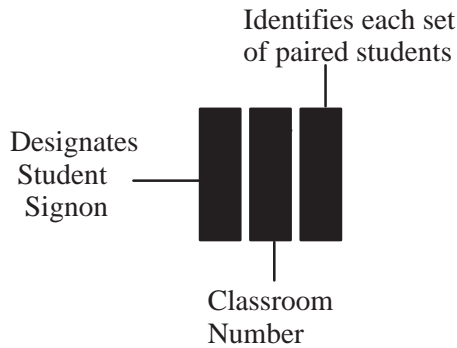
To help you to understand the Training Environment that has been setup for your learning experience. The following is a list of signon naming conventions, library naming conventions, what that library contains and what files are shared among you and your classmates.

Signon Naming Conventions

Your signon depends upon where you are located.

For example: In the Denver Headquarters Office, we have several classroom numbers, so the structure of signons are as follows:

Library Naming Conventions



Your library names depends upon where you are located.

For example: In the Denver Headquarters Office, we have several classroom numbers and those libraries are structured for that classroom. You will also have your own student library, that library will take on the naming conventions of your student number. Other libraries that are contained in your library list are libraries which are standard to all J.D. Edwards class environments.

The library list at a J.D. Edwards facility will appear as follows:

Name	Contents
QTEMP	IBM temporary library
COMMON	Common library for training. Used for all J.D. Edwards Training Environments. It contains files that all training classes can share. For example: Help Files, Message Files, Field Reference Files
ST xx yyOBJ (xx =classrm #) (yy =student #)	Students object library. Used for the student to compile custom objects into. It will only contain programs that a student may have had to modify in a class exercise.
JDFOBJ	Common object library for training. Contains all of J.D. Edwards execution programs. All J.D. Edwards training environments use this library.
ST xx yyDTA (xx =classrm #) (yy =student #)	Students data library. Used for the students custom data files. It will only contain files that a student may have had to modify in a class exercise.
xx SHARE (xx =classrm #)	Classroom shared library. Is shared for that particular classroom environment. It contains files that the students will all share. For example: Data Dictionary File
TRNSHARE	Shared library for all training. Used for all J.D. Edwards Training Environments. It contains files that all training classes can share. For example: Word Search Files
ST xx yySRC (xx =classrm #) (yy =student #)	Students Source Library. Used for the student to write custom source programs into. It will only contain programs that a student may have had to modify in a class exercise.
JDFSRC	Common Source Library for Training. Contains all of J.D. Edwards source code programs. All J.D. Edwards training environments use this library.
QGPL	IBM general purpose library

The library list at an on-site location will appear as follows:

Name	Contents
QTEMP	IBM temporary library
STUDSHARE	Contains files that will be shared for all students in class
STUDENTxD (x=student 1-6)	Contains files that will not be shared. Files are unique for each student.
STUDENTxO (x=student 1-6)	Contains any programs or objects that the student modifies in class (custom objects)
STUDENTxS (x=student 1-6)	Contains any source code that the student modifies in class (custom source)
JDETRAIN	Contains all J.D. Edwards execution programs
QGPL	IBM general purpose library

Classes

Classes consist of lecture and hands-on experiences. The hands-on experiences are in the form of exercises. While each exercise is a separate task, they ultimately build upon each other to create a new program. It is imperative, therefore, that each student fully understand each exercise before continuing. At the end of the class, there will be Case Studies which will further enforce what you have learned by having you, the student, apply the information from this class to specific programming situations.

APCS System Overview

Features

Advanced Programming Concepts & Skills (APCS) focuses on the following *World CASE* features:

- Data Dictionary Repository
- Project Management (Software Action Request System)
- CASE Profiles
- SAR Log Inquiry
- Creating a Development Environment
- Software Versions Repository
- Data Modeling
- File Design Aid
- Screen Design Aid
- Report Design Aid
- J.D. Edwards Programming Standards
- File Servers and Functional Servers
- User Spaces and User Indexes
- Group Jobs
- Programming Modifications
- Source Debugger
- Programming Impacts from Software Upgrades

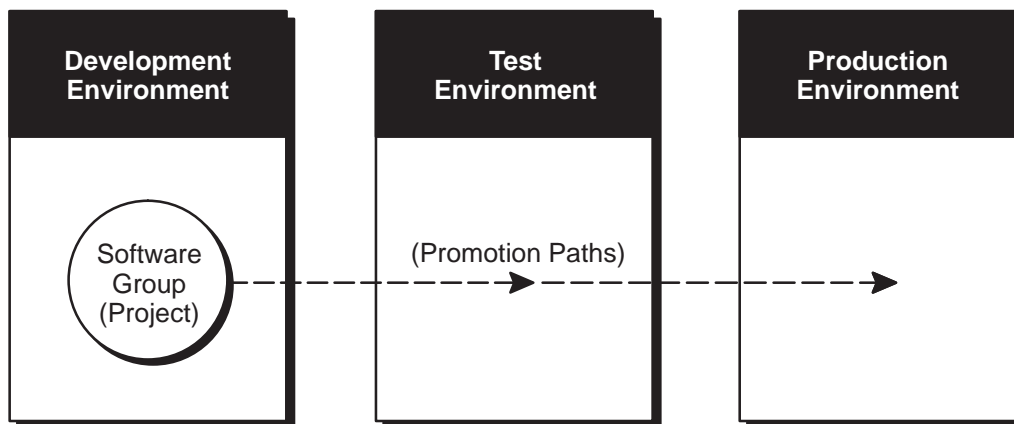
Version Control

Objectives

- To create a development environment
- To work with program management
- To create libraries
- To copy data files to the development environment

About Version Control

Use the J.D. Edwards Version Control system to manage the movement of software between various environments, such as ones you have set up for software development, testing, and production.



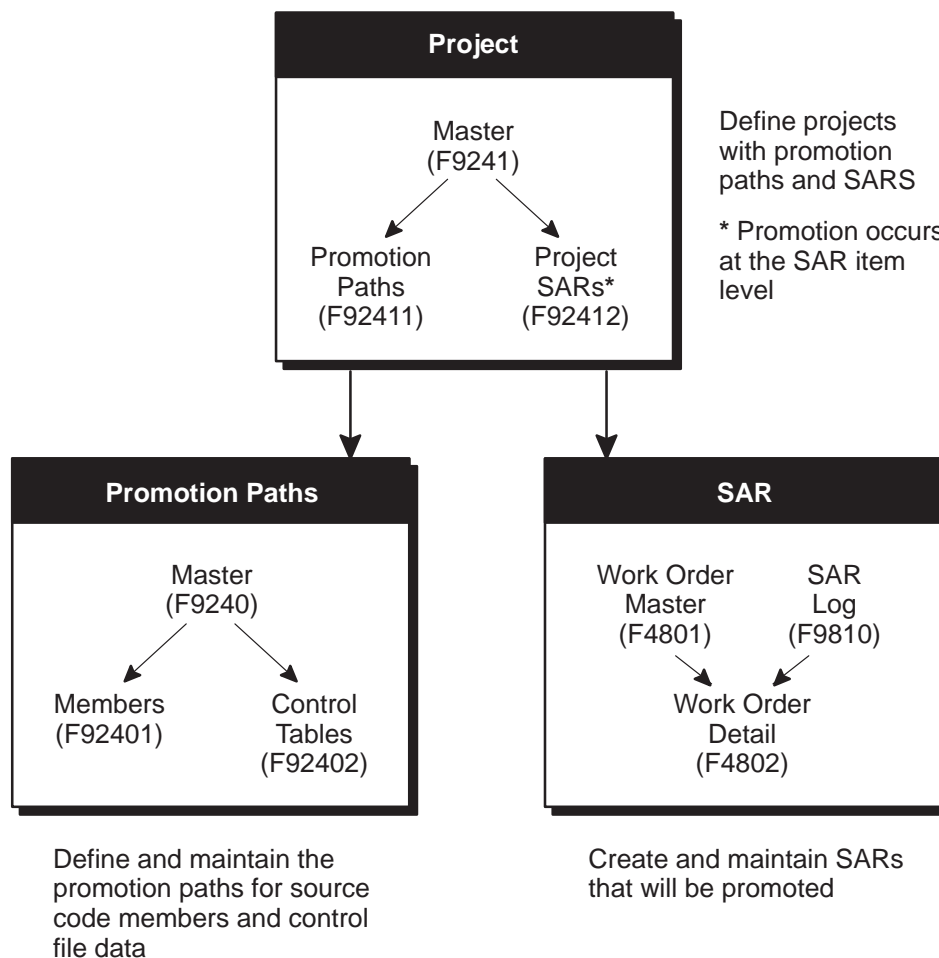
The Version Control system works with the Software Action Request (SAR) system and the SAR logging system. It performs three general functions:

Groups source code members (such as RPG and CL programs, and physical and logical tables) and control file data (such as data dictionary and menus) together as a project

Defines a promotion path, which specifies library information about the project's current environment and the environment to which it will be moved

Promotes the project from the current environment to the target environment as defined by the promotion path

The following diagram shows how the version control process divides the tasks.



To set up a software development project for development and promotion, you must:

Create the SARs that you want to promote, and define promotion paths

Link the project to the SARs that are associated with it, and assign a promotion path to it

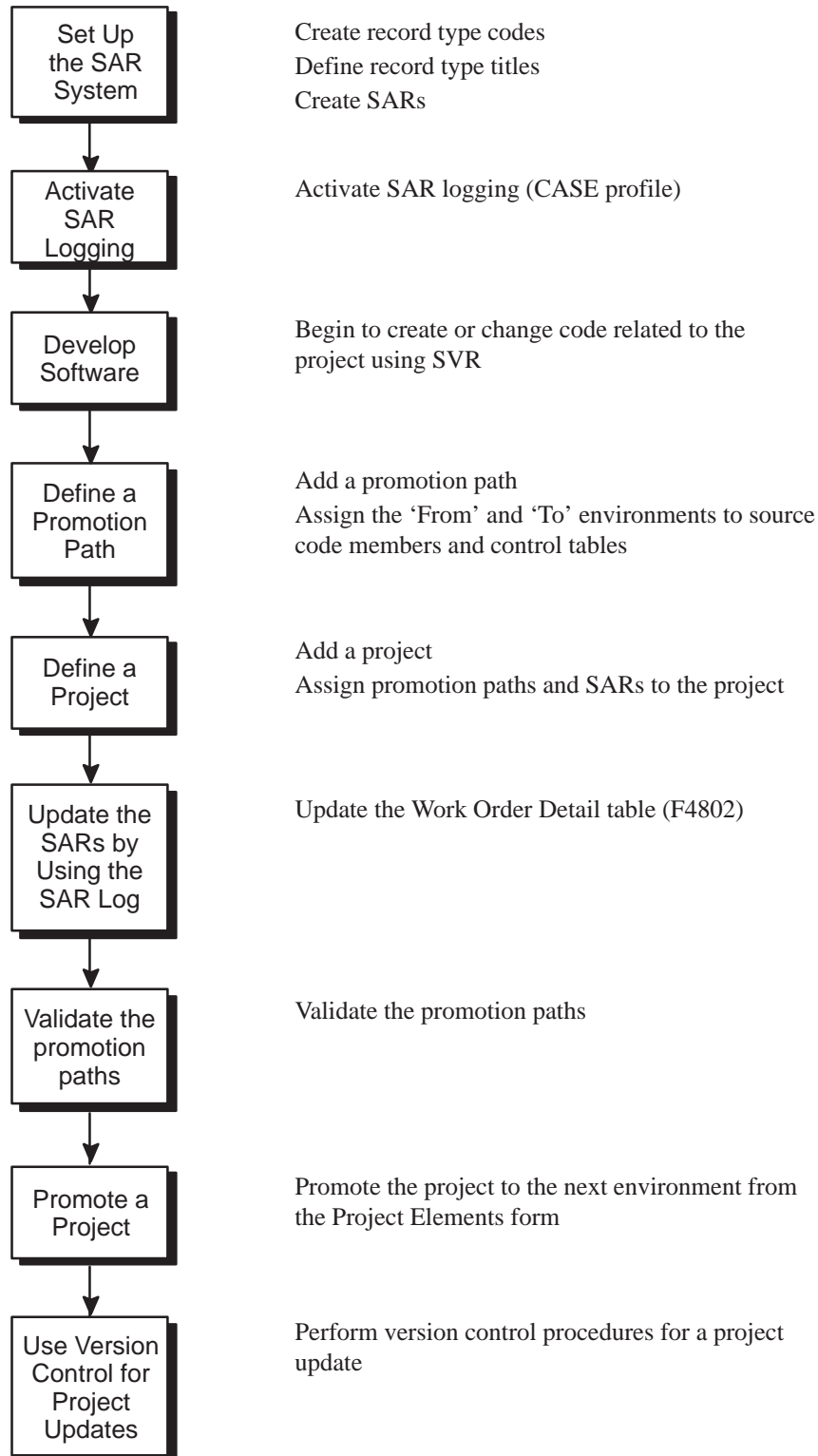
All additions or changes you make to programs and control file data are logged in the SAR Log (F9810). Use this log to update the SARs, which are in the Work Order Detail table (F4802).

After you finish developing the software, you promote the software from the Project Elements form to the next environment.

Work with the following areas:

- Version Control
- Programming Tools
- Programming Standards
- Group Jobs
- Universal File Converter

Version Control Process Flow



Version Control Menu Overview



Version Control Menu

```
G9261                      J.D. Edwards & Company                      JDED
Daily Operation           Version Control

... BASIC OPERATIONS      ... SETUP
 2. Software Versions Repository  14. Record Type Codes
 3. Manage Promotion Paths      15. Record Type Titles
 4. Manage Projects            16. CASE Profiles

... Double Byte Mandatory Options  ... INQUIRIES
 7. Analysis Process          19. SAR Inquiry by Reference
 8. C9822 Conversion         20. Inquiry by SAR, Proj and Path

... QA FUNCTIONS          ... PURGE DATA FILES
11. Edit and Promote        23. Purge SAR Log File
12. Super SAR

Selection or command
===>

Thur, Apr 18, 1996        A7.3 Development                      LA5595234
8:55:51am                (C) J.D.Edwards & Co 1985,1996        QPADEV0014
```


Development Environment

About Development Environments

A development environment contains objects and data being tested and edited. It is different from your production environment because it should not contain any of your live data files.

Rules for Creating Development Environments

When creating development libraries, J.D. Edwards has some rules to follow.

Do not begin library names with Q, JDF, or JDE because of the upgrade process.

Create custom libraries for custom modifications.

Library names should be a maximum of 9 characters in length because of the upgrade process.

Do not use JDFDATA for your own test data or for your live data because of the upgrade process.

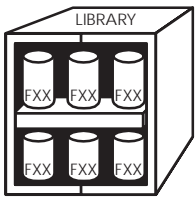
Do not include JDFDATA in a live user's library list.

To create a Development Environment complete the following tasks:

- Create Libraries
- Define Access for User Profiles
- Copy Data to Your Development Environment

About Creating Libraries

J.D. Edwards Libraries

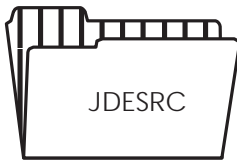


Five libraries are delivered with J.D. Edwards software. They are:

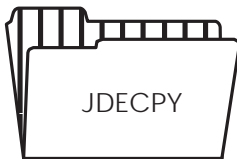
Source Library (JDFSRC)

The source library that contains source code. Within the JDFSRC library, J.D. Edwards has three multi-member source files.

Source code for:



- RPG Programs
- Printer files
- Display files
- CL Programs
- DDS for logical files
- DS for physical files



Source code for common subroutines



Pre-compiler commands

Used to compile J.D. Edwards programs

Object Library (JDFOBJ)

The object library that contains executable objects for your J.D. Edwards software

- RPG programs
- CL programs
- Display files
- Report files

Data Library (JDFDATA)

The data library that contains data files for your J.D. Edwards software (files in this library contain test data provided by J.D. Edwards).

Install Library (JDEINSTAL)

The install library used to install programs and software to upgrade J.D. Edwards software

Plans Library (JDFINS)

The library used to plan upgrading J.D. Edwards software

Security Library (CLTSEC)

You may create a Security library that will be shared across all environments. The benefit of having a security library is that a user profile will only have to be entered once to have access to any environment. The following files must exist in the security library:

- User library list (F0092)
- Library list control (F0093)
- Library list master (F0094)
- User Preference (F00921)

In addition, all logical files associated with the above files must also exist in the security library.

Production and Development Examples

There are many ways to set up a production and development environment. The following are some examples.

Basic Production Environment

Library	Description
QTEMP	IBM Temporary data files
CLTOBJ	Client's objects
JDFOBJ	J.D. Edwards objects
CLTCOM	Client's common files
CLTDTA	Client's data files
CLTSEC	Client's security files
QGPL	IBM general public library

Basic Development Environment

Library	Explanation
QTEMP	IBM Temporary data files
DEVOBJ	Development objects
CLTOBJ	Client's objects
JDFOBJ	J.D. Edwards objects
DEVCOM	Development common files
DEVDTA	Development data files
CLTSEC	Client's security files
DEVSRC	Development source files
CLTSRC	Client's source files
JDFSRC	J.D. Edwards source files
QGPL	IBM general public library

All modifications and tests are performed in the Development Environment with the program's object and source residing in DEVOBJ and DEVSRC. After the testing is completed the program's object is moved from DEVOBJ to CLTOBJ and source is moved from DEVSRC to CLTSRC. It is necessary to create a separate data and common library (DEVDTA & DEVCOM) in order to assure that any data changes during testing in the Development Environment does not affect live data in the Production Environment.

No Source in Production Environment and a Common Shared Library

Library	Explanation
QTEMP	IBM Temporary data files
CLTOBJ	Client's objects
JDFOBJ	J.D. Edwards objects
CLTCOM	Client's common files
COMMON	Common unchanged files
CLTDATA	Client's data files
CLTSEC	Client's security files
QGPL	IBM general public library

Basic Development Environment with a Shared Common

Library	Explanation
QTEMP	IBM Temporary data files
DEVOBJ	Development objects
CLTOBJ	Client's objects
JDFOBJ	J.D. Edwards objects
DEVCOM	Development common files
COMMON	Common unchanged files
DEVDATA	Development data files
CLTSEC	Client's security files
DEVSRC	Development source files
CLTSRC	Client's source files
JDFSRC	J.D. Edwards source files
QGPL	IBM general public library

No source libraries exist in the Production Environment since source is not necessary to run J.D. Edwards programs. This makes the Production Environment easier to maintain. The only consideration is that users in the Production Environment would not be able to view source code. Another difference is that a third shared common library (COMMON) has been added to the environments. This library contains common files whose data **will not** be changed during the testing process (Ex. F98HELP). By having this type of common library not only are the environments easy to maintain, but a considerable amount of machine resource will be saved.

One Development Source and Object Library

Library	Explanation
QTEMP	IBM Temporary data files
CLTMOD	Client's source and objects under modification
CLTOBJ	Client's objects
JDFOBJ	J.D. Edwards objects
DEVCOM	Development common files
COMMON	Common unchanged files
DEVDTA	Development data files
CLTSEC	Client's security files
CLTSRC	Client's source files
JDFSRC	J.D. Edwards source files
QGPL	IBM general public library

DEVOBJ and DEVSRC have been combined into one library called CLTMOD. This library will contain both source and objects for programs while they are being modified and tested. After testing, the program objects will be moved to CLTOBJ and source will be moved to CLTSRC. The purpose of having one object/source library like CLTMOD is to simplify the development library list by having one place where all modifications and testing takes place.

Creating Libraries

Create the following libraries:

Common libraries

Development object libraries

Development source libraries



If you created a common library (DEVCOM), be sure to specify it each time you create the other development libraries. If you do not specify the common library each time, the files will be created in your development library.

Your common library should contain files with data that does not change because of development activities (ex. Help Instructions Master). If there is a possibility of the data changing, the file should be placed into your test data library (DEVDTA). By doing this you are insulating the end users from the changes done in the development environment.

See Appendix A for a list of common files and production files.

Creating Common and Data Libraries

Create the libraries that are going to contain common data files (DEVCOM).

Create the libraries that are going to contain test data files (DEVDTA).

► **To create common and data libraries**

1. You can perform both of these steps from the Data Base Management menu by selecting Data Libraries.

```

98312                Create User Data Libraries  Form ID. . . . P98102
                                      Version. . . . ZJDE0001

Create Production Environment
This job has various options described below. Enter the desired values and
press ENTER to continue.
Enter the "FROM" Library where data is
to be copied from (e.g JDFDATA).                _____ JDFDATA
Enter the "TO" Production Library where
you are creating files (e.g. PRODLIB).          _____ DEVDTA
Enter the "TO" Common Library where you
are creating common files (e.g. COMMON)         _____ DEVCOM
If you do not enter a Common library
all common files will be created in the
Production Library.

                                         F5=Printer Overrides
    
```

Field	Explanation
FROM Library field	The library containing the data to be copied.
TO Production	Because you are creating development libraries, type the development library name.
TO Common Library	If you want to create a common library, you must specify the common library name. If you leave this field blank, the system creates the common files in the development Library you specified in the above step.

2. Complete the Create User Data Libraries form

Once you correctly complete the form and press enter, the job (J98102) is submitted to batch.

3. Repeat the above step for each of the development data libraries you have.

The program automatically:

Creates your libraries

Creates the physical and logical files that should be maintained in your common library

Creates the physical and logical files necessary for operations control in your development library

Creates the physical and logical files for various applications in your development library

Generates reports to identify all the physical, logical, and join files created and to identify where they were created

Generates a report to identify all the optional files. The report explains why the files are optional so that you can determine if they should be deleted

Creating Development Object Libraries

► To create your development object library (DEVOBJ)

Type the command Create Library (CRTLIB) and press F4.

```
                                Create Library (CRTLIB)
Type choices, press Enter.
Library . . . . . DEVOBJ      Name
Library type . . . . . *TEST   *PROD, *TEST
Text 'description' . . . . . *BLANK

F3=Exit   F4=Prompt   F5=Refresh   F10=Additional parameters   F12=Cancel
F13=How to use this display   F24=More keys

Bottom
```


Field	Explanation
Library	Your development object library name
Library Type	*PROD or *TEST
Text Description	The description of your library

Understanding Development Source Libraries

The development source library contains the Program Source File (JDESRC). All J.D. Edwards source programs are located in the JDESRC file.

To create the development source library:

- Create a source environment (library)

- Create a source physical file (JDESRC)

There are two possible methods to create the JDESRC file. You must determine if you have the J.D. Edwards Program Generator and then choose the appropriate method.

Creating a Development Source Library

► **To create a development source library (DEVSRCLIB)**

1. Type the command create library (CRTLIB) and press F4.

```
                                Create Library (CRTLIB)
Type choices, press Enter.
Library . . . . . DEVSRCLIB      Name
Library type . . . . . *TEST      *PROD, *TEST
Text 'description' . . . . . BLANK

F3=Exit   F4=Prompt   F5=Refresh   F10=Additional parameters   F12=Cancel
F13=How to use this display   F24=More keys
```

Field	Explanation
Library	Your development object library name
Library Type	*PROD or *TEST
Text Description	The description of your library

Creating JDESRC with J.D. Edwards Program Generator

When a program is moved into production at J.D. Edwards, the record length is 92 bytes. If you have J.D. Edward's Program Generator product, the program source file format must be 142 bytes long to allow for the Program Generator Serial Number and additional required data.

► To create JDESRC with J.D. Edwards Program Generator

1. Type the Copy File command (CPYF) and press F4 to copy an existing file with the correct format (F93002).

```

                                Copy File (CPYF)
Type choices, press Enter.
From file . . . . . F93002      Name
Library . . . . . *LIBL        Name, *LIBL, *CURLIB
To file . . . . . JDESRC       Name, *PRINT
Library . . . . . DEVSRC      Name, *LIBL, *CURLIB
From member . . . . . *FIRST   Name, generic*, *FIRST, *ALL
To member or label . . . . . *FIRST Name, *FIRST, *FROMMBR
Replace or add records . . . . . *NONE *NONE, *ADD, *REPLACE
Create file . . . . . *YES     *NO, *YES
Print format . . . . . *CHAR   *CHAR, *HEX

                                Bottom
F3=Exit   F4=Prompt   F5=Refresh   F10=Additional parameters   F12=Cancel
F13=How to use this display   F24=More keys
    
```

Field	Explanation
From file	The file and library containing the data to be copied. The file is F93002 and the library can default to *LIBL.
To file	The name of the source file and your development source library. Generally, the file is JDESRC and the library is DEVSRC.
From member	The member name that will be the beginning of the copy process. Generally, this value is *FIRST.
To member or label	The member name that will be the beginning of the receiving process. Generally, this value is *FIRST.

Field	Explanation
Replace or add records	Specifies whether the records copied should replace or be added to the records in the <i>To</i> file. In this case since the <i>To</i> file does not exist, this value is *NONE.
Create file	Specifies whether the <i>To</i> file does not exist and needs to be created. This value is *YES.
Print format	Specifies whether the characters are printed in character or character and hexadecimal format. This option only applies if the <i>To</i> file is *PRINT.

2. Type the Remove Member command (RMVM) and press F4 to remove the empty member copied from JDESRC.

```

Remove Member (RMVM)
Type choices, press Enter.
Data base file . . . . . JDESRC      Name
Library . . . . . DEVSRC      Name, *LIBL, *CURLIB
Member . . . . . F93002      Name, generic*, *ALL

F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
F24=More keys
Bottom
    
```

Field	Explanation
Data base file	Type the source file and your development source library that contains the record to be removed. Generally, this file is JDESRC and the library is DEVSRC.
Member	Type the name of the record that is to be removed. This is F93002.

Creating JDESRC Without the Program Generator

If you *do not* have J.D. Edward's Program Generator product, the program source file format may remain at 92 bytes long, as it is when a program is moved into production at J.D. Edwards. To create the JDESRC file with a 92 byte record format, you can execute the Create Source Physical File command (CRTSRCPF).

► **To create JDESRC without the Program Generator**

1. Type the Create Source Physical File command (CRTSRCPF) and press F4.

```

                                Create Source Physical File (CRTSRCPF)
Type choices, press Enter.
File . . . . . JDESRC      Name
Library . . . . . DEVSRC   Name, *CURLIB
Record length . . . . . 92   Number
Member, if desired . . . . . *NONE   Name, *NONE, *FILE
Text 'description' . . . . . *BLANK

                                Bottom
F3=Exit   F4=Prompt   F5=Refresh   F10=Additional parameters   F12=Cancel
F13=How to use this display   F24=More keys
    
```

Field	Explanation
File	The source file and your development source library that contains the record to be removed. Generally, this file is JDESRC and the library is DEVSRC.
Record Length	The number of bytes in the length of the records to be stored in the source file. This value is 92.
Member, if desired	The member to be added to the source file. Generally, this member is left to *NONE.
Text Description	The description of your source file.

About User Profiles

You must create profiles that allow users to have access to new environments.

There are two separate methods to defining access to an environment. The method you choose depends upon whether the User Profile accesses J.D. Edwards software using J98INITA or J98INIT.

Defining Access for a User Profile using J98INITA

If you are allowing access to your Development Environment for a User Profile that is using J98INITA, you must define a Development Environment Library List name. In addition, the User Signon List must contain the Development Environment Library List name.

► **To define access for a user profile using J98INITA**

1. From the Library List Control menu (G944), select Library List Revisions.

```
0094                                Library List Revisions
Action Code. . . . . I
Library List Name. . . TEST
Description. . . . . Technical Training Example
Menu Program ID. . . . P00MENU
Library List . . . . . QTEMP DEVOBJ CLTOBJ JDFOBJ DEVDTA DEVCOM DEVSRC CLTSRC
JDFSRC QGPL

```

```
F21=Print Library List      F9=Library Search
```


Defining Access for a User Profile Using J98INIT

If you are allowing access to your development environment for a User Profile that is using J98INIT, you must define a new library list.

► **To define access for a User Profile using J98INIT**

1. From the Security Officer menu (G94), select User Information (User Keys).

```

0092                User Information                Action Code. . . . . I
User ID. . . . . TEACH
Library List . . . . . QTEMP DEVOBJ CLTOBJ JDFOBJ DEVDTA DEVCOM
DEVSRC CLTSRC JDFSRC SECURITY OGPI
-
-
User Security:
  User Key . . . . . A J K DP F
  Initial Menu to Execute. . . . . A
  Initial Program to Execute . . . . .
Menu Level . . . . .
User Type. . . . .
User Class/Group . . . . .
Batch Job Queue. . . . . QBATCH
Job Scheduling Priority. . . . . 5 5
Logging(level/severity/messages) . . . . . 4 00 *NOLIST
Output Queue . . . . . QPRINT
Optional Printer File Library. . . . .
Current Library. . . . .
Employee Address Number (PPAT) . . . . .
Set Attention Program. . . . .
F6=Display/Lang Pref   F9=Library Inquiry   F21=Print Lib List   F24=More
    
```



Each user profile for the J.D. Edwards software must have an IBM profile. To define an IBM profile, use the command, Create User Profile (CRTUSRPRF).

Copying Data to Your Development Environment

There are several methods to copy data to your Development Environment. The method you choose should depend upon how much data you need to copy to your Development Environment. You may copy the following:

- Libraries
- Files
- Records
- JDE Record Types

Copying a Library

If you need to duplicate several files in your Development Environment you can copy one or more libraries.

▶ To copy a library

1. Type the Copy Library command (CPYLIB) and press F4 to display the parameters.

```

Copy Library (CPYLIB)

Type choices, press Enter.

Existing library . . . . . _____ Name
New library . . . . . _____ Name
Create library . . . . . *YES *NO, *YES
    
```



If you use CPYLIB your access paths will need to be rebuilt. Any files that are in use will not be copied.

Field	Explanation
Existing Library	The library to be copied in your Production Environment.
New Library	The new library that will be used in your Development Environment
Create Library	Specifies whether the New Library does not exist and needs to be created.

Copying a File

If you need to copy specific files from a library in your Production Environment to a library in your Development Environment, you use the J.D. Edwards copy file utility.

► To copy a file

1. From the Data Base Management menu (G9645), select Copy Data files.
2. Enter the system code, the library to copy the data from, and the library to copy the data to.
3. Then type a 1 next to the files you wish to copy.

```

98101                               Copy Data Files
Enter System Code. . . 01   Address Book
Library Name: From . . JDFDATA   To . . PROD

Sel File Name  File Type  Description
 1 F0070        PHYSICAL  Country Constants Master File
 1 F009101      PHYSICAL  Word Search Occurrence Master
 1 F0101        PHYSICAL  Address Book Master
 1 F0101A       PHYSICAL  Address Book Master File Audit Log
 1 F0101XX      PHYSICAL  Address Book Master
 1 F0101Z1      PHYSICAL  Address Book - Batch File
  F01090        PHYSICAL  Supplemental Data Base - CORE
  F01092        PHYSICAL  Supplemental Data Base - Code
  F01093        PHYSICAL  Supplemental Data Base - Narrative
  F01094        PHYSICAL  User Sequence Preference
  F0111         PHYSICAL  Address Book - Who's Who
  F0114         PHYSICAL  Address Book Memo/Text Information
  F0114W        PHYSICAL  WF - Memo Information Work File
  F0116         PHYSICAL  Address Book Locations
  F01800        PHYSICAL  Address Book Word Search Master

Opt:  1=Copy Data File
    
```

All records in those specified files will be copied.



When using this utility, be sure to copy all related files.

Copying a Record

If you wish to copy a file with only selected records, use the Copy File command (CPYF).

► **To copy a record**

1. Type the Copy File command (CPYF).

```

Copy File (CPYF)
Type choices, press Enter.
From file . . . . . F0101 Name
Library . . . . . CLTDTA Name, *LIBL, *CURLIB
To file . . . . . F0101 Name, *PRINT
Library . . . . . DEVDTA Name, *LIBL, *CURLIB
From member . . . . . *FIRST Name, generic*, *FIRST, *ALL
To member or label . . . . . *FROMMBR Name, *FIRST, *FROMMBR
Replace or add records . . . . . *ADD *NONE, *ADD, *REPLACE
Create file . . . . . *NO *NO, *YES
Print format . . . . . *CHAR *CHAR, *HEX
Additional Parameters
Which records to print . . . . . *NONE *NONE, *EXCLD, *COPIED
Record format of logical file . . . . . *ONLY Name, *ONLY, *ALL
Copy from record number . . . . . 365 Number, *START
More...
F3=Exit F4=Prompt F5=Refresh F10=Additional parameters F12=Cancel
F13=How to use this display F24=More keys
    
```

2. Press F10 to display additional parameters.

Field	Explanation
From file	The file and library containing the data to be copied.
To file	The name of the file and your development library the data will be copied to.
From member	The member name that will be the beginning of the copy process.
To member or label	The member name that will be the beginning of the receiving process.
Replace or add records	Specifies whether the records copied should replace or be added to the records in the <i>To</i> file.
Create file	Specifies whether the <i>To</i> file does not exist and needs to be created.

Field	Explanation
Print format	Specifies whether the characters are printed in character or character and hexadecimal format. This option only applies if the <i>To</i> file is *PRINT.
Copy from record number	Specifies the record number from which to start the copy.

3. Scroll up and enter the record number of the record you wish to copy to.

The Copy to record number is the field in which you specify the record number of the last record to be copied.

```

                                Copy File (CPYF)

Type choices, press Enter.

Copy to record number . . . . . 365          Number, *END
Copy from record key:
  Number of key fields . . . . . *NONE       Number, *NONE, *BLDKEY
  Key value . . . . .

                                + for more values

                                More...
F3=Exit  F4=Prompt  F5=Refresh  F12=Cancel  F13=How to use this display
F24=More keys
  
```

Field	Explanation
Copy to Record Number	Specifies the record number of the last record to be copied.
Copy from Record Key	Only applies when copying a file with keyed fields.

Copying J.D. Edwards Record Types

You may copy any of the following record types:

- Vocabulary Overrides
- Data Dictionary
- Software Inventory Revisions
- User Defined Code
- DREAM Writer
- Menu
- Generic Rate/Msg

► **To copy a J.D. Edwards record type**

From the Developer's Workbench menu (G9362) or Repository Services select Copy DD,VO,DW,UDC,SVR,Menus.

99630 Copy DD,VO,DW,UDC,SVR,Menus

From Library CLTCOM To Library DEVCOM

Dictionary Item. . . . AN8 Language . __ Appl Ovr. _____
 Scrn/Rpt. _____

Vocabulary Overrides . _____ Language . __

DREAM Writer Form. . . _____ Language . __

User Def Codes Sys . . _____ Language . __
 Type. . . __

Software Versions Rep. _____

Menu Identification. . _____ Language . __

Generic Rate/Msg Sys _____
 Type _____

F24=More

Field	Explanation
From Library	The library containing the data to be copied.
To Library	The library in your Development Environment to receive the data.

Field	Explanation
Dictionary Item	The name of the Data Dictionary item to be copied.
Vocabulary Overrides	The name of the screen or report record to be copied. All records for soft coding will be copied.
DREAM Writer Form	The name of the DREAM Writer Form ID to be copied. All versions of the specified form will be copied.
User Defined Codes	The system code and type of the table to be copied. All values for the specified table will be copied.
Software Versions Rep.	The record of the Software Versions Repository member to be copied.
Menu Identification/ Language/Appl Ovr.	The menu ID and the display language of the record to be copied.



Only one item may be entered and copied at a time. If the item exists in the To Library, it will be replaced.

Project Management

About Project Management

To manage projects you may use Work Order Processing. Perform the following tasks:

- Understand Work Order Processing
- Create Work Orders
- Understand and access the Scheduling Workbench
- Add or change record types

Understanding Work Order Processing

The Software Action Request System (SAR) is shipped to clients under the name of Work Order Processing.

The Work Order system allows you to:

- Create and classify work orders with simple budgets or estimates
- Schedule and expedite work orders
- Perform cost accounting by specific work orders or family of work orders.

Unlike jobs which are often preplanned and thoroughly budgeted, work orders are often completed without the prior knowledge of the accounting department. Work orders are typically spontaneous and of short duration.



If clients have purchased system 48 (Work Order Processing), they will have all of the programs associated with Work Orders (SARs). If clients have not purchased the Work Order Processing system, they will only have the programs from the Work Order Processing system that are defined as being part of the General Back Office System (00).

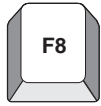
Field	Explanation
Parent W.O. No	Through parent work order number, you can group work orders together based on one parent work order, such as the installation of a computer and its associated electrical wiring, which may involve more than one customer or manager.
Action Code	One character field used to indicate the action that the user wants to take on the record requested. Inquire on a record before you attempt to change it.
Work Order Number (req)	The work order identification number.
Description (req)	A name or brief description.
Status Comment	This line allows status comments or further description of the work.
Charge to BU (req)	The business unit that is responsible for charges incurred. Must be a valid business unit setup in the Business Unit Master file (F0006).
Search X-Ref	Any number or characters that will be used to cross-reference work orders.
Cost Code	The subsidiary account responsible for incurred charges.
Est. Hours	Total number of hours estimated for the work order.
Est. Amount	The estimated cost of the work order.
Start Date	The initial date the work is scheduled to begin. Will default from system date or you can enter a date.
Planned Comp	The date the work is scheduled to be completed.
Phase	A user defined code describing a stage or category in the development of a project.
Completed	The date the work order was completed.
Type	User defined code describing the work order type.
Priority	A user defined code used to assign the priority of the work order: for example, high, medium, or low.
Status	A user defined code used to describe the current state of affair of the work order: for example, planned, started, or completed.
Customer No	The Address Number of the customer. Must be a valid number in the Address Book Master file (F0101).
Manager	The Address Number of the manager in charge of the work order. Must be a valid number in the Address Book Master File (F0101).

Field	Explanation
Transaction	The date the work order was entered. Defaults from system date or you can enter a date.
Date Assigned	Date the work was assigned to a person to begin work.
Tax Expl Code	A code attached to a customer/vendor that controls how tax is distributed to the GL revenue and expense accounts.
Tax Rate/Area	A code explaining the tax of a specific rate or an area. For example: state, county, city, luxury. Must be a valid code in the Tax Area Master file (F4008)
Subledger Inact.	A code indicating the status of a subledger, active or inactive. For example: jobs that are closed, assets that have been disposed of.



Processing Options

There are processing options associated with the Single Task Details program that allow you to default the value for the Type, Priority, Status, Phase, Category Code 2, Category Code 3, and Manager fields. To see the processing options, type the selection number for Single Task Details and press F18.



F8 – Category Codes

Allows user to update other work order values.

```

48016                               Work Order - Category Codes
Action Code . . . . . _
W.O. Number . . . . . _____ 289   Tech for Programmers Class
W.O. Flash Message . . . . . _

Phase . . . . . _____ 55         Reserved for Clients
Category 02 . . . . . _____
Category 03 . . . . . _____
Category 04 . . . . . _____
Category 05 . . . . . _____
Status . . . . . _____
Service Type . . . . . _____
Skill Type . . . . . _____
Experience Level . . . . . _____
Category 10 . . . . . _____

Originator . . . . . _____
Supervisor . . . . . _____

Std. Desc. . . . . _____
Search X-Ref . . . . . _____
F2=Standard Desc Text      F24=More Keys
    
```

Field	Explanation
W.O. Number	The work order identification number. This value defaults from the Single Task Details.
W.O. Flash Message	A highlighted message that will be attached to the work order.
Phase	A user-defined code describing a stage or category in the development of a project. This value defaults from the Single Task Details.
Category 02-10	Category Codes that are user defined values associated with the work order.
Originator	Address Number of the person who entered the work order. Must be valid in F0101.
Supervisor	Address Number of the work order supervisor. Must be in F0101.
Std. Desc.	A user defined code describing instructional information. Must be valid in F0101.
Search X-Ref	Any number or characters that will be used to cross-reference work orders. This value will default from the Single Task Defaults screen.



F9 – Name Search

Allows the user to search for a specific address book number.



F15 – Work Order Search Window

Allows user to search for work order descriptions. It will only return the description.

```

48014                               Single Task Details
Action Code . . . I                 Parent W.O. No
Description . . . APCS Class        W.O.Number . . . 289
Status Comment . Student SAR       Charge to BU . . . 1001
Search X-Ref . . .                 Cost Code . . .
Est. Hours . . . 40                Start Date . . . 03.01.94
Est. Amount . . . 1.500            Planned Comp . 31.12.94
Phase . . . . . 55                 Reserved for Clients  Completed . . .
Type . . . . . 2                   Priority . . . . H    Status . . . . 10
Tax Expl Code . . .                4802T1              Work Order Search
Subledger Inact. . -               Order Number 289    Type . . . . *
Customer No. . . . 1001            - 289 WO APCS Class
Manager . . . . . 6001            - 400 WO Rework Electrical
                                   - 490 WO BACK, DRAWER, 12x30, DESK
                                   - 511 WO AS/400 Chassis Frame Supports
                                   - 641 WO AS/400 CRT Chassis Frame
                                   - 764 WO Electrical
                                   - 772 WO Electrical Phase II
                                   - 781 WO Electrical Phase III
                                   - 799 WO Other Electrical
                                   - 801 WO Electrical
                                   Opt: 4=Select      F3=Return      F24=More Keys
Description
SAR setup for work to be
Programming Concepts and
Engine REQ125-796
Opt: 1=Insert  9=Del  F5=More Desc  F8=Cat Codes  F21=Print  F24=More Keys
    
```



F21 – Print Work Order

Allows user to print the work order, including all of the associated record types.

Understanding the Scheduling Workbench

The Scheduling Workbench program allows you to review and update work orders. You can retrieve information about work orders in multiple ways. After retrieving the work orders that meet your search criteria, you can update selected fields in those work orders directly from the Scheduling Workbench form.

Accessing the Scheduling Workbench

► **To access the Scheduling Workbench**

From the Simple Project Management menu select Scheduling Workbench

```

48201                      Scheduling Workbench                      Flr Rem Cat T P M
                               _____ _ _ _ _ _ _ _ _ _ _ _ Y
Action Code. . . . . I
Job or BU. . . . . _____ 1001 Work Orders in Progress
Originator . . . . . _____
Customer Number. . . _____
Manager. . . . . _____
Supervisor . . . . . _____ Parent W.O. No . . _____ Type . _ Model. _
Search X-Ref . . . . . _____ Cost Code. . . . . _____ Prior. _
Category Codes . . Phs. ___ CC2. ___ CC3. ___ CC4. ___ CC5. ___
                   Sta. ___ Srv. ___ Ski. ___ Exp. ___ CC0. ___

O Number Description X-Ref No. St Status Comment T P
- 1347 Subcontractors _____ 10 _____
- 289 APCS Class _____ 10 Student SAR _____ 2 H

Opt: 1=W.O Entry 4=Return w/# F4=Detail F10=Eq. Workbench F24=More Keys
    
```

Field	Explanation
Category Codes	User Defined Code fields. Can define whatever 10 categories are important to your business: for instance, the work order's phase, status, type, priority, and whether you want to display model work orders.
Job or BU	The Business Unit responsible for charges incurred
Originator	The Address Number of the originator of the work order must be a valid number in the Address Book Master File (F0101)
Customer	The Address Number of the customer must be a valid number in the Address Book Master File

Field	Explanation
Manager	The Address Number of the manager assigned to the work order must be a valid number in the Address Book Master File (F0101)
Supervisor	The Address Number of the supervisor assigned to the work order must be a valid number in the Address Book Master File (F0101)
Parent W.O. No	The parent work order number which groups work orders together in a "family"
Type	A User Defined Code describing Work Order/ECO Type
Model	Determines whether model work orders will be displayed on the screen
Search X-Ref	The cross reference or secondary reference number, typically the customer order or job number, used in selecting work orders
Cost Code	The subsidiary account responsible for incurred charges
Number	The work order identification number
Description	The name or brief description of the work order
X-Ref No	The cross reference or secondary reference number, typically the customer order or job number
ST	A user defined code describing the status of the work order
Status Comment	Allows for further description of the work or the addition of any comments
Type	A User Defined Code describing the work order type
Prior	A User Defined Code defining the priority of the work order: for example, high, medium, or low



F4 – More Detail

Displays additional information concerning each work order that is hidden in the Fold Area.

```

48201                               Scheduling Workbench                               Pha Cat Cat T P M
Action Code. . . . I
Job or BU. . . . . 1001 Work Orders in Progress
Originator . . . . .
Customer Number. . . . .
Manager. . . . .
Supervisor . . . . . Parent W.O. No . . . . .
Status . . . . . Thru . . . . . Search X-Ref . . . . .
W.O. Date Range. . . . . Thru. . . . .
Compl. Date Range. . . . . Thru. . . . .
Supervisor . . . . . Parent W.O. No . . . . . Type . . . . . Model. . . . .
Search X-Ref . . . . . Cost Code. . . . . Prior. . . . .
Category Codes . . . . . Phs. . . . . CC2. . . . . CC3. . . . . CC4. . . . . CC5. . . . .
Sta. . . . . Srv. . . . . Ski. . . . . Exp. . . . . CC0. . . . .

O Number Description X-Ref No. St Status Comment T P
- 1347 Subcontractors 10 -
Planned Comp Hours Scheduled. . . . . Est. Hours . . . . .
Start Date . 05/26/92 W.O. Flash Message. . . . . W.O. Date . . 05/26/93
- 289 APCS Class 10 Student SAR 2 H
Planned Comp 12/31/94 Hours Scheduled. . . . . Est. Hours. . . . . 40
Start Date . 01/03/94 W.O. Flash Message. . . . . W.O. Date . . 11/12/93

Opt: 1=W.O Entry 4=Return w/# F4=Detail F10=Eq. Workbench F24=More Keys
    
```

Field	Explanation
Planned Comp	The date the work is scheduled to be completed
Hours Scheduled	The hours of work that has been scheduled
Est. Hours	Total number of hours estimated for the work
Start Date	The initial date the work is scheduled to begin
W.O. Flash Message	Causes a flash message to appear on the Work Order Entry screen
W.O. Date	The date the work order was entered.

Selection Exits from the Scheduling Workbench

Selection 1 — Work Order Entry

Takes the user to the Work Order Entry screen and automatically inquires on the selected work order



Processing Options

There are some processing options associated with the Scheduling Workbench program that allow you to default a Work Order Status Range and a Work Order Type. In addition, you may choose to call either Project Task Details (P48014) or the Equipment Work Orders (P48011) when the W.O. Entry option is selected. Be aware that Equipment Work Orders (P48011) is part of the Work Order Processing system (48). To see the processing options, type the selection number for Scheduling Workbench and press F18.

Adding Record Types

► To add a record type

1. Select Detail Spec. Types from the Misc Additional Features menu (G4841).

```
00051                    Detail Spec. Types          Install System Code . . . . 00
                                          User Defined Codes . . . . RT
Action Code . . . . . I                      Skip To Code . . .
                                          Work Order Detail Specs.

01 Character
  Code          Description
  _____    _____
  A            Full Description of Request
  B            Final Disposition Remarks
  C            Tool and Equipment Instruct.
  D            Safety Provisions
  E            Plan and Drawing Reference
  F            Equipment Down Time
  _____
  _____
  _____
  _____
  _____
  _____
  _____
  _____
  _____
  _____

F5=Code Types  F14=Memo  F15=Where Used  F18=Language  F21=Print  F24=More Keys
```

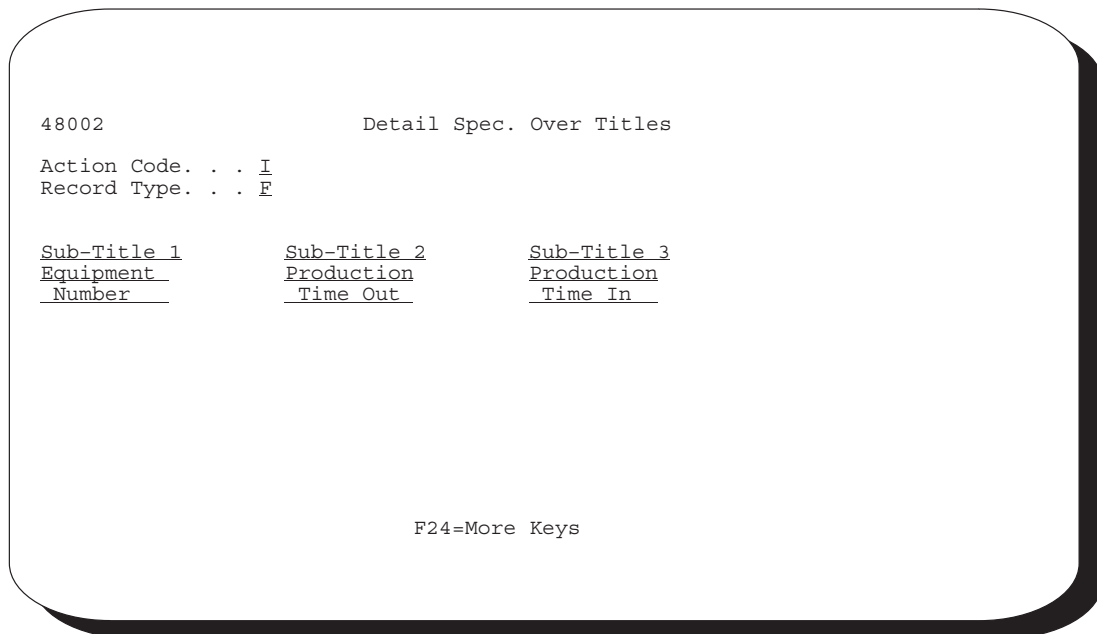
2. Add your specified record type and description to the table.

Changing Record Types

You may want to change the format of your record type.

▶ **To change a record type**

1. Select Detail Spec. Over Titles from the Misc Additional Features menu (G4841).



2. Enter the heading text of each column you wish to add to the format of your Record Type.

Work Order (SAR) file is F4801

Detail Record Type file is F4802

Method of tracking programming projects

This is a brief overview of the Work Order Processing system. For more information, consult the J.D. Edwards User Guide entitled *Work Orders*.



Exercises

See the exercises for this chapter.

Work with SAR

About SAR System Setup

To set up a project, you must assign SARs and promotion paths to it. You create the SARs and define promotion paths first because the version control process uses the definitions.

After you set up your SAR system, you can develop the software. The SAR logging program keeps track of your changes as you have specified. While you develop the software, you also can define promotion paths and projects, and attach SARs to projects.

After you finish developing the software, you must update the SARs by using the SAR log before you promote the SAR.

Complete the following tasks:

- Create record type codes
- Define record type titles

Before You Begin

- The SAR system uses the Work Order files (F4801 and F4802). If your production environment uses these files, and if the F4802 file has different record types than what version control needs, define a separate library that contains these files for version control purposes only.

See Also

Defining a Promotion Path

Creating Record Type Codes

The Work Order Instructions table (F4802) has an essential role in the version control process. It identifies and captures, for promotion purposes, all the source code members and control table data associated with a SAR. The Version Control system assigns a record type code to each source code member or control table data item, which classifies it for promotion. You must create record type codes that your Work Order Instructions table does not have currently.

► **To create record type codes**

1. From the Version Control menu (G9261), choose Record Type Codes.
2. On User Defined Code Revisions

```

00051                User Defined Code Revisions
                                     System Code. . . . . 00
                                     User Defined Codes . . . . RT
Action Code. . . . . I
                                     Skip To Code . . . . .
                                     Work Order Detail Specs.

  01 Character
   Code           Description
  A              Original Request
  _____
  _____
  _____
  _____
  _____
  _____
  _____
  _____
  _____
  _____
  _____
  _____
  _____

F5=Code Types  F14=Memo  F15=Where Used  F21=Print  F18=Translate  F24=More
    
```

Enter the following character codes and descriptions:

Character Code	Description
A	Original Request
C	Members Affected
D	Menu Modifications
E	Automatic Accounting Instructions
F	Software Inventory Record Updates
G	Processing Options/DREAM Writer
H	Vocabulary Override Changes

I	Database Changes
J	Constants Data File Changes
K	User Defined Code Changes
M	Connected SAR Numbers
N	Generic Rate/Message Type Changes
O	Connected SAR Numbers
Q	Generic Rate/Message Type Changes
S	Status History
U	Post-Installation Instructions
W	Pre-Compiler Commands
Z	First Included in PTF
3	Next Number Changes

Defining Record Type Titles

For each record type code you create, you also must define record type titles, which appear as column headings on the W.O. Detail Entry form.

Before You Begin

- Create record type codes before you define record type titles. See *Creating Record Type Codes*.

To define record type titles

From the Version Control menu (G9261), choose Record Type Titles.

On Record Type Titles

48002

Record Type Titles

Action Code. . . I
Record Type. . . D Menu Modifications

<u>Sub-Title 1</u>	<u>Sub-Title 2</u>	<u>Sub-Title 3</u>
<u>Menu</u>	<u>Option</u>	<u>Job To</u>
<u>Name</u>	<u>Number</u>	<u>Execute</u>

F24=More Keys

For each record type you created, complete the following fields with the information in the chart that follows:

TITLE	SUB-TITLE 1	SUB-TITLE 2	SUB-TITLE 3
A	_____	_____	_____
C	<u>Member</u> <u>Name</u>	<u>Source</u> <u>Library</u>	<u>Object</u> <u>Library</u>
D	<u>Menu</u> <u>Name</u>	<u>Option</u> <u>Number</u>	<u>Job To</u> <u>Execute</u>
E	<u>AAI</u>	<u>Company</u> <u>No</u>	_____
F	<u>CL Program</u>	<u>Program</u>	<u>Video/Rpt</u>
G	<u>Form</u> <u>ID</u>	<u>Version</u> <u>No</u>	_____
H	<u>Scr/Rpt</u> <u>Name</u>	_____	_____
I	_____	_____	_____
J	_____	_____	_____
K	<u>Help</u> <u>Start</u>	<u>Help</u> <u>Stop</u>	_____
M	<u>Sys</u> <u>Code</u>	<u>DTAI</u> <u>Name</u>	_____
N	<u>Sys</u> <u>Code</u>	<u>Rec</u> <u>Type</u>	_____
O	<u>SAR</u> <u>No</u>	<u>SAR</u> <u>No</u>	<u>SAR</u> <u>No</u>
Q	<u>Sys</u> <u>Code</u>	<u>Rec</u> <u>Type</u>	_____
S	_____	_____	_____
U	<u>Reference</u> <u>ID/Code</u>	<u>Attachment</u> <u>Needed-Y/N</u>	_____
W	<u>Program</u> <u>Name</u>	_____	_____
Z	<u>Release</u> <u>ID</u>	<u>PTF</u> <u>Number</u>	<u>Date</u> <u>Included</u>
3	<u>System</u> <u>Code</u>	<u>Line</u> <u>Number</u>	<u>Action</u> <u>Code</u>

What You Should Know About

Verifying the record type titles

After you define the record type titles, you can view them to verify their accuracy. On Single Task Details, choose More Description. On W.O. Detail Entry, locate a record type you want to view by using the Record Type field.

To access Single Task Details, see *Creating SARs*.

Work with Software Versions Repository



A master directory of all files, programs, screens, reports, and copy modules.



Stores the member locations for each member master record.

Working with Software Versions Repository (SVR)

One of the Software Versions Repository's primary purposes is to indicate what environments a requested member is located in and whether the environment is a production or development environment. The file is used extensively for documentation and plays an important role in J.D. Edwards Design and Development tools.

The Software Versions Repository is the natural starting point for all programming and software inquiry functions. It provides exits to the following features:

- SEU
- SAR (Software Action Request) Detail Entry
- Screen Design Aid
- Report Design Aid
- File Design Aid
- The Program Generator
- Precompiler Commands

Repository Services

Data Dictionary

Menus

Vocabulary Overrides

Function Key Definitions

DREAM Writer Versions

Processing Options

User Defined Codes

Edit System Helps

CASE Profiles

SAR Log Inquiry

Copy DD,VO,DW,UDC,SVR, Menus

Optional Files Feature

Programmer Checklists

Where Used Facility

Flowchart Programs/Illustrate File Models

Source Modifications Editor

In addition, it provides access to the following functions:

Copy Source

Print Source

Submit Creation of Object

Generate Program Source and Help

Edit Help Instructions

Delete Source

Print Help Instructions

Accessing the Software Versions Repository

The Software Versions Repository serves as the front-end for all J.D. Edwards design aids and programming utilities. You may also utilize this screen as your own inventory file.

► **To access the Software Versions Repository**

From the Computer Assisted Design menu, select Software Versions Repository.

```

9801                               Software Versions Repository

Action Code. . . -
Member ID. . . . _____
Description. . . _____
Function Code. . _____
Function Use . . _____
System Code. . . _____
Reporting System _____
Base Member Name _____
Maint/RSTDSP . . - Omit Option. . . - File Prefix. . . -
Copy Data (Y/N). - Optional File. . - Common File. . . -

O Source      Object      Source      SAR      Version      S D      User      Date
P Library    Library    File        Number   ID           C P      ID        Modified

____
____
____
____
____
____
____
____

Opt:  1=Browse 2=Edit 3=Copy 5=SAR 8=Print 9=Dlt 10=Design 14=Crt  F24=More
  
```

The top portion of the screen identifies the member and its attributes. This information is stored in the Software Versions Repository master file (F9801).

Member Identifiers

The first two fields identify the member.

Field	Explanation
Member ID	Unique ID for a particular member.
Description	<p>Identifying information of the member, such as Trial Balance by Business Unit. Associated programs, screens, and reports should share the same description.</p> <p>The description associated with each member is used to further identify the purpose of the member.</p> <p>Physical files should have a description that explains the purpose of the file.</p> <p>Screens, reports, and CL programs should have the same description as the associated RPG program.</p> <p>Logical files should be designated as follows: <i>LF – fldname, fldname, fldname</i>; where fldname is a key field.</p> <p>Join files should be designated as follows: <i>JF – filename/filename/filename – fldname, fldname</i>; where filename is a file over which the join is built and fldname is the key field joining the files.</p> <p>Work files should be designated as follows: <i>WF – filename</i>; where filename is the file that the work file accesses.</p> <p>Copy modules carry their own unique descriptions.</p> <p>File Server programs should be designated as follows: <i>File Server – filename</i>; where filename is the file being served.</p>

Type, Use, and Associated Systems

Field	Explanation
Function Code	Designates the object type such as display file, physical and logical file. Use F1 in the field to view available types.
Function Use	Indicates how the member is being used.
System Code	Designates the system number associated with the member. The configuration of installation media and the install process itself are driven by this install system code. Use F1 in the field to view valid codes.
Reporting System	Designates the system number for reporting purposes. This rarely differs from the Install System. Exceptions occur for data files used by more than one system.

Member Relationship and Compiling Information

Field	Explanation
Base Member Name	<p>This field simply allows for logical grouping of members.</p> <p>For screens, reports, RPG programs and CL jobs, this name is usually the RPG program name associated with a particular member.</p> <p>For logical files, this name is the physical file it is based on and is required.</p>
Omit Option	<p>Designates items in the Software Versions Repository file that would be bypassed for a new release. These codes are as follows</p> <p style="padding-left: 40px;">H — Held from all releases X — Omit from all releases S — Omit Source from all releases O — Omit Execution Object from all releases</p>
Generation Severity	<p>Allows the user to designate a severity level when compiling a member.</p> <p>Because some J.D. Edwards programs contain messages that appear in the compile listing as a severity level 10 error, it is suggested that you override the IBM default of a severity level 9 to a level 20 for all programs. To do this, enter the following on any command line:</p> <pre>CHGCMDDFT CMD(CRTRPGPGM) NEW DFT('GENLVL(20)')</pre> <p>For those specific programs that must override the new default severity level of 20, you can enter the override value in the <i>Generation Severity</i> field.</p>
Maint/RSTDSP	<p>Either designates the type of maintenance on a logical file or how a screen will be processed.</p>

Maintenance on a Logical File

Value	Description
0	No maintenance; or the logical is created dynamically
1	Logical will be immediately updated when physical is updated.
2	<p>Logical update will be delayed until the next time it is opened.</p> <p>— USE WITH CAUTION</p>

Processing a Screen

Value	Field Values	Description
1	RSTDSP = *NO (Restore Display) DFRWRT = *YES (Defer Write)	Use with OVERLAY. Do not use with PUTOVR/OVRDTA All writes to the video field file/formats will be collected and written at one time
A	RSTDSP = *NO DFRWRT = *NO	Overlay Each write statement will be written to the screen
B	RSTDST = *YES DFRWRT = *NO	Use with PUTOVER to clear and write screen at field level
S		Used when compiling SQL, RPG, and PL1 programs. For example, if SQL statements exist within an RPG program, the compiler: <ol style="list-style-type: none"> 1) Executes a create SQL program statement 2) Executes the SQL statements (converts them to calls) 3) Comments them out 4) Executes a create RPG program statement and continues as normal

File Information

Field	Explanation
File Prefix	This field indicates the prefix associated with a file. Use F1 to display all file prefixes in use. Each physical file should have a unique file prefix.
Copy Data (Y/N)	Used to indicate when a database file must be copied with or without data. The Create User Data Libraries (2/A9645) utility accesses this field to determine if the file copied will be copied with data.
Optional File	Indicates the file may be optional in your production environment. F8 provides a list of optional files.

Field	Explanation
Common File	Indicates when a file should exist in the common library or user production library. The Create User Data Libraries (2/A9645) utility accesses this field to determine if the file should be placed in the specified common library or production library.

O P	Source Library	Object Library	Source File	SAR Number	Version ID	S D C P	User ID	Date Modified
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—

Opt: 1=Browse 2=Edit 3=Copy 5=SAR 8=Print 9=Dlt 10=Design 14=Crt F24=More

Where Are Members Maintained?

The bottom half of the screen lists the libraries in which the member is maintained. This information is stored in the Software Versions Repository Detail file (F9802).

Field	Explanation
Source Library	<p>The source library where the source file for the object is maintained.</p> <p>This library is usually JDFSRC (for J.D. Edwards) or CLTSRC (for the client) for production and DEVSRC for development.</p>
Object Library	<p>The library where the compiled object resides.</p> <p>For program, display file, and printer file objects, the library location is the same (usually JDFOBJ for J.D. Edwards and, CLTOBJ, or DEVOBJ for the client).</p> <p>For all physical and logical files, the object library is the data file library (usually JDFDATA for J.D. Edwards and, CLTDTA or DEVDTA for the client).</p> <p>Leave the object library name blank for copy modules since they are not compiled objects.</p>

Field	Explanation
Source File	<p>The source file containing the source member. At J.D. Edwards, three source files reside inside of JDFSRC library.</p> <p>They are:</p> <ul style="list-style-type: none"> JDECPY for copy modules JDESRC for other source code F98CRTCMD for precompiler commands.
SAR Number	<p>The most recent Software Action Request (SAR)/Work Order number associated with the member. This number must be valid, and if the status of the SAR number is complete, you should enter a new SAR to perform additional development work on the member. A basic version of the Work Order system is sent to clients who have purchased the Computer Assisted Design (CAD) system and serves as a means for the client to keep track of their projects.</p> <p>If a PPAT number is specified on the User Information screen (F0092 file), that number will show as the default for the window that comes up when F1 is pressed on this field.</p> <p>The edit for this field is controlled by the SAR information entered in CASE Profiles.</p>
Version ID	<p>Identifies the release level of the member in the designated environment.</p> <p>Validated against User Defined Codes 98/RL.</p>
SC	<p>Status Code</p> <p>Indicates the status of the software, that is, whether it is in production or development. These codes are as follows:</p> <ul style="list-style-type: none"> 1 – Production/Pristine 2 – Development 3 – Test Version 4 – Custom
DP	<p>Development Progress Code.</p> <p>Indicates the progress of modifications done to the member.</p>
User ID	User ID that last modified the member (automatically updated).
Date–Modified	The date the member was last updated (automatically updated).



Each subfile line represents a record in the Software Versions Repository detail file (F9802).

Keying 'D' in the Action Code will delete the member from:

- Software Versions Repository Master file (F9801)
- Software Versions Repository Detail file (F9802)
- Source and Object, if applicable
- Data Dictionary (F9200, F9203, F9816, F98163)
- Vocabulary Overrides (F9220)
- Function Key Definition (F9601,F9611)
- DREAM Writer forms (F98301, F9831, F98311, F98312)
- Cursor Sensitive Helps (F9620, F9621)
- Processing Options (F98302)
- Program Generator, if applicable

Naming Conventions

The following forms show how the report and CL program share the same Description and Base Member as the program name. The same convention is true for the CL program and the special form.

```

9801                               Software Versions Repository

Action Code. . . . I
Member ID. . . . . P42565
Description. . . . Sales Order Invoices Print
Function Code. . . RPG   RPG Programs
Function Use . . . 164   Special Forms
System Code. . . . 42   Sales Order Processing
Reporting System 42   Sales Order Processing
Base Member Name P42565   File Prefix. . .
Maint/RSTDSP . . _   Omit Option. . . _   Generation Sev . 21
Copy Data (Y/N). N   Optional File. . N   Common File. . . N
                                DREAM Writer Form Exists

O Source      Object      Source      SAR      Version    S D   User      Date
P Library     Library     File        Number   ID          C P   ID        Modified
_ JDFSRC     JDFOBJ     JDESRC     685935  A73         1 _   JDE       11/12/93
    
```

```

9801                               Software Versions Repository

Action Code. . . . I
Member ID. . . . . R42565
Description. . . . Sales Order Invoices Print
Function Code. . . PRTF  Printer Files
Function Use . . . 164   Special Forms
System Code. . . . 42   Sales Order Processing
Reporting System 42   Sales Order Processing
Base Member Name P42565   File Prefix. . .
Maint/RSTDSP . . _   Omit Option. . . _   Generation Sev .
Copy Data (Y/N). N   Optional File. . N   Common File. . . N

O Source      Object      Source      SAR      Version    S D   User      Date
P Library     Library     File        Number   ID          C P   ID        Modified
_ JDFSRC     JDFOBJ     JDESRC     672721  A73         1 _   JDE       11/08/93
    
```

```

9801                               Software Versions Repository

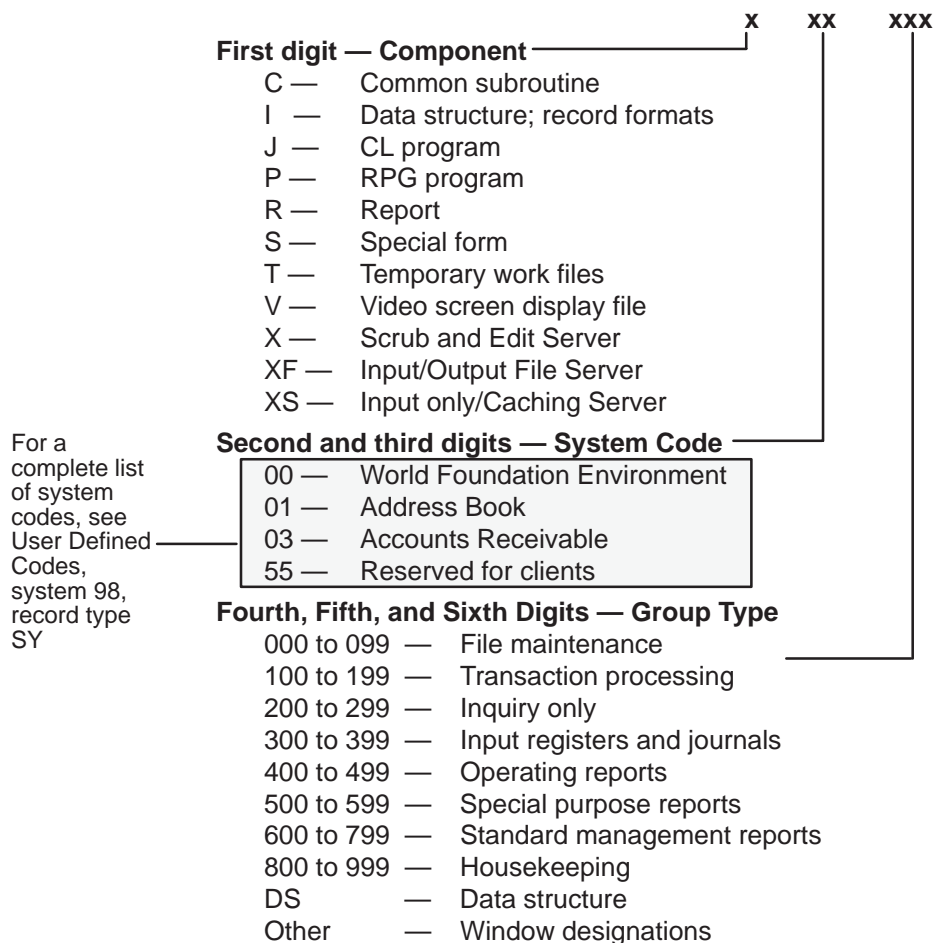
Action Code. . . I
Member ID. . . J42565
Description. . . Sales Order Invoices Print
Function Code. . CLP CL Programs
Function Use . . 164 Special Forms
System Code. . . 42 Sales Order Processing
Reporting System 42 Sales Order Processing
Base Member Name P42550 File Prefix. . .
Maint/RSTDSP . . _ Omit Option. . . _ Generation Sev .
Copy Data (Y/N). N Optional File. . N Common File. . . N

O Source      Object      Source      SAR      Version    S D      User      Date
P Library    Library    File        Number   ID         C P      ID        Modified
_ JDFSRC    JDFOBJ    JDESRC     644471  A73       1 _      JDE      08/09/93
    
```

A coded naming structure identifies and describes major components of J.D. Edwards & Company software. The first character of the name indicates the type of component, such as program or data file. The second and third characters denote the system and are referred to extensively throughout the software. The fourth, fifth, and sixth characters represent the component group type, such as the function to be performed by the indicated component. The seventh through the tenth characters identify component versions. File names vary from four to eight characters in length, while all other component names are at least six characters long. The following diagram illustrates this naming structure.

The Naming Conventions for Objects

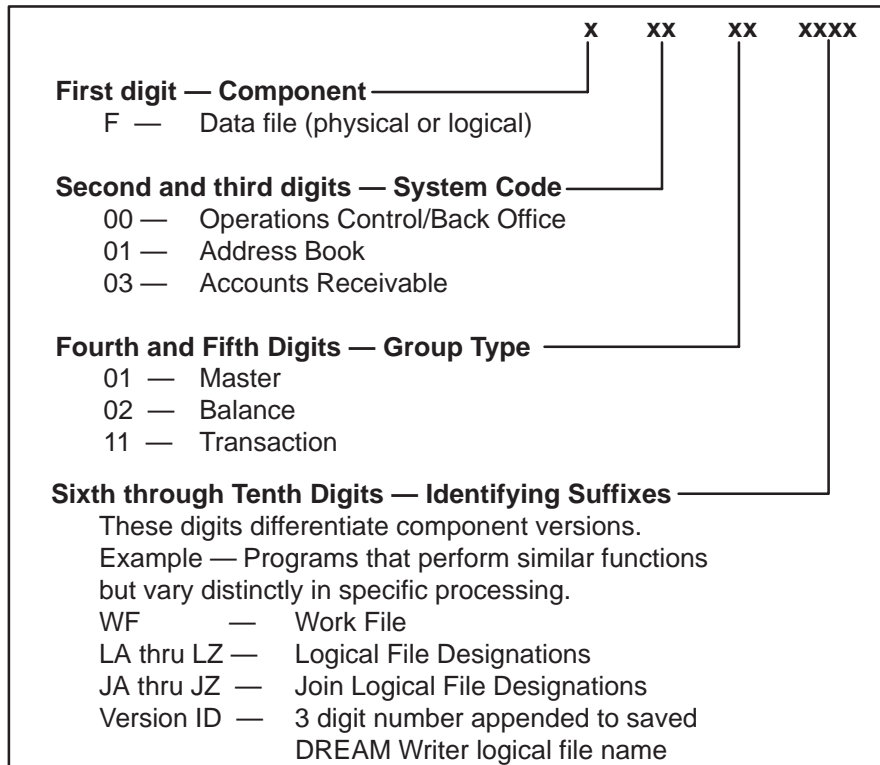
Use the following chart as your guide when naming objects.



The CL program, RPG program and Display / Printer file may have identical names with different prefixes.

For example: P01051, J01051, V01051 (Address Book Revisions)

The Naming Conventions for Files



The following shows the names for different types of programs and files.

Maintenance program	<p>The maintenance program for a file has the same name with a different prefix.</p> <p>For example, F9220 is P9220 or F9601 is P9601.</p>
Logical files	<p>For logical files over one physical, the logical file has the same name as the physical followed by an L, followed by A thru Z.</p> <p>For example, F0101 has logicals F0101LA, F0101LB, F0101LC, and F0101LD.</p>
Join logical files	<p>Join Logical files have the same name as the principal based-on file, a suffix of J followed by A thru Z.</p> <p>For example, the system names the join of F0006 and F0911 as F0006JA</p>
Temporary files	<p>Batch jobs use T files doing a CRTDUPOBJ. The job then removes the object after completion.</p> <p>Usually Physical Files Begin with T Found in JDFOBJ</p>
Dynamic work files	<p>Dynamic work files are usually FASTR processing requirements. Dynamic work files create and delete after the job is complete.</p> <p>Usually logical files Have same name as program</p>

The J.D. Edwards System Codes

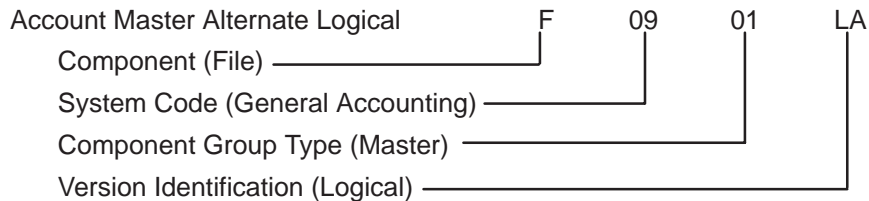
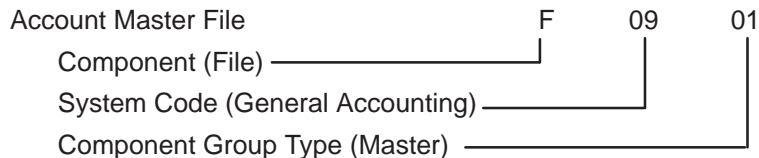
When used in menus, the system code follows the letter in the menu name. Shown below are the system codes for the standard AS/400 systems:

= Technical Foundation Systems

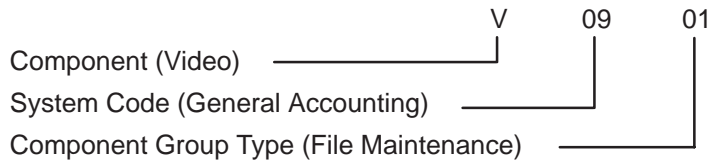
00 = World Foundation Environment	40 = Inventory/OP Base
01 = Address Book	41 = Inventory Management
02 = Electronic Mail	42 = Sales Order Processing
03 = Accounts Receivable	43 = Purchasing Order Processing
04 = Accounts Payable	44 = Contract Management
05 = Stand-Alone Time Accounting	45 = Advanced Price Adjustments
07 = Payroll "Enhanced"	46 = Warehouse Management
08 = Human Resources	47 = Electronic Data Interchange
09 = General Accounting	48 = Work Order Processing
10 = Financial Reporting	49 = Load and Delivery
11 = Multi Currency/Cash Basis	50 = Job Cost Base
12 = Fixed Assets	51 = Job Cost Accounting
13 = Equipment/Plant Management	52 = Job Cost Billing
14 = Modeling, Planning, & Budgeting	53 = Change Management
15 = Commercial Property Management	55-59 = Client Use
16 = Resident Property Management	60-69 = JDE Internal Custom Programming
17 = Property Management Base	70 = Multi-National Products
18 = Deal Management	71 = Client/Server Applications
20 = Energy Base	72 = World Vision
30 = Product Data Management	73 = CS — A/P Entry
31 = Shop Floor Control	74 = CS — Pay Time Entry
32 = Configuration Management	75 = CS — Sales Order Entry
33 = Capacity Requirements Planning	76 = CS — Training and Development
34 = DRP/MRP/MPS	77 = Canadian Payroll
35 = Enterprise Facility Planning	79 = CS — Translation
	80 = COBOL Translator
	81 = DREAM Writer
	82 = World Writer
	83 = Management Reporting — FASTR
	84 = Distributive Data Processing
	85 = Custom Programming
	86 = Electronic Document Interchange
	87-99 = Miscellaneous Tech

Examples of Program and File Names

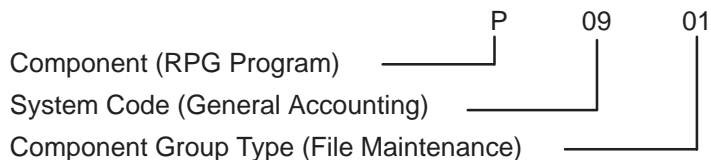
Data Files



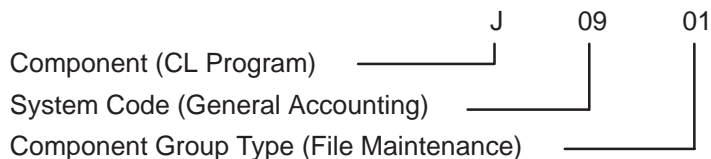
Videos (Screens)



RPG Programs



CL Programs



Optional Files Workbench

The Optional Files Workbench provides better access to optional files. When you delete optional files they are logged. If you reinstall, those files are not put back into the system. Each file has an explanation about the circumstances that make it optional.

If you need the deleted files you can remove them from the logged optional files and copy them from JDFDATA.

```
98290                               Optional Files Workbench   System Code. .  ____
                                         Reporting Sys.  ____

Library. . . . . PGFDTA73
Skip To File . . . _____

O   File
P   ID      Description
-   F00021  Next Numbers by Company/FY - Automatic
-   F00021LA Next Numbers by Company/FY - Automatic - Logical Key Co,Seq
-   F0006JA  JF - BILLING ONLY - F0006/F0911 - Cost Center
-   F0006JE  JF - Profit Recognition F0006/F5144 (Cost Center)
-   F0006LC  LF - JOB COST ONLY - Level of Detail, Cost Center
-   F0006LG  Business Unit Master
-   F0006LH  LF - JOB COST ONLY - Company, Desc Compressed, Cost Center
-   F0013    Currency Codes
-   F0018LD  LF - OneWorld - Document Typ, Document No, Key Co,
-   F0030LF  LF - OneWorld - Decending Unique ID
-   F0030LG  LF - OneWorld - Type, Account ID, Cost Center
-   F0031    Cross Over Rules
-   F0031LA  LF - domestic file, foreign file, foreign field
-   F0031LB  LF - domestic file, foreign file, dom reference field
-   F0040    PC Batch Entry - Error File

Opt: 1=Explanation  2=SVR  4=Delete   F2=Cmd Entry  F5=View Log  F24=More
```

Logical Files

The Member ID for logical files ends with Lx, where x is the next available letter in alpha sequence.

The Object Library is usually JDFDATA.

The Description should list the key fields for the view.

The Maint/RSTDSP is 1 for permanent system logicals.

The Base Member Name is the physical file the logical view is over.

```

9801                               Software Versions Repository
Action Code. . . . I
Member ID. . . . F0911LA
Description. . . . LF - Doc Type, Doc, Key Co, G/L Date(##YYMMDD), Line #, Ext
Function Code. . . LF Logical Files
Function Use . . . 230 Transaction Files
System Code. . . . 00 Technical Foundation
Reporting System 09 General Accounting
Base Member Name F0911 File Prefix. . . GL
Maint/RSTDSP . . . 1 Omit Option. . . _ Generation Sev .
Copy Data (Y/N). N Optional File. . N Common File. . . N

O Source      Object      Source      SAR      Version     S D      User      Date
P Library    Library    File      Number  ID        C P    ID      Modified
JDESRC    JDFDTA    JDESRC    591710 A61      1 -    JDE    03/22/93
    
```

Join Logical Files

The Description lists the files over which the join is built.

The Base Member Name is the primary file in the join.

Physical files must exist in the same library.

```

9801                               Software Versions Repository
Action Code. . . I
Member ID. . . F0006JA
Description. . . JF - BILLING ONLY - F0006/F0911 - Business Unit
Function Code. . LF Logical Files
Function Use . . 210 Master Files
System Code. . . 00 Technical Foundation
Reporting System 00 Technical Foundation
Base Member Name F0006 File Prefix. . . MC
Maint/RSTDSP . . 2 Omit Option. . . Generation Sev .
Copy Data (Y/N). N Optional File. . N Common File. . . N

O Source Object Source SAR Version S D User Date
P Library Library File Number ID C P ID Modified
-- JDFSRC JDFDTA JDESRC 493167 A61 1 - JDE 03/05/93
    
```

Copy Modules

The Member ID begins with C, I, E, D, G.

The Source File is JDECPY.

The Description describes the function of the module.

The Function Code is COPY.

```

9801                               Software Versions Repository      Release. . A61
Action Code. . . . I
Member ID. . . . C00SC
Description. . . . Copy Module - Retrieve Soft Coding
Function Code. . . COPY  RPG Copy Module
Function Use . . . 194   Common Subroutine
System Code. . . . 98   Technical Tools
Reporting System 98   Technical Tools
Base Member Name C00SC                               File Prefix. . .
Maint/RSTDSP . . . - Omit Option. . . - Generation Sev .
Copy Data (Y/N). N   Optional File. . N Common File. . . N

O Source   Object   Source   SAR   Version   S D   User   Date
P Library Library File   Number ID   C P ID   Modified
JDFSRC JDFOBJ JDECPY 603784 A61 1 - JDE 06/10/93
    
```

Windows

The Member ID begins with V, the system number, then an alphabetic identifier as shown in the example below.

The Description describes the function of the window.

Maint/RSTDSP is left blank to allow the window to appear in front of text from the calling screen.

```

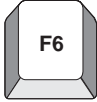
9801                               Software Versions Repository

Action Code. . . I
Member ID. . . V09ACCT
Description. . . Account Master Additions Window
Function Code. . DSPF Video Display Files
Function Use . . 111 File Maintenance
System Code. . . 09 General Accounting
Reporting System 09 General Accounting
Base Member Name P09ACCT File Prefix. . .
Maint/RSTDSP . . Omit Option. . . Generation Sev .
Copy Data (Y/N). N Optional File. . N Common File. . . N

O Source Object Source SAR Version S D User Date
P Library Library File Number ID C P ID Modified
_ JDFSRC JDFOBJ JDESRC 552868 A61 1 _ JDE 12/08/92
    
```

Navigation Functions

The following Function keys facilitate navigating within the Software Versions Repository.



F6 – Access Repository Services

You can access the Repository Services window using F6. This window provides access to the other repository services within J.D. Edwards.

```

9801                               Software Versions Repository

Action Code . . .   I
Member ID . . .    P01051
Description . . .   Address Book Information
Function Code . .  RPG   RPG Programs
Function Use . .   111   File Maintenance
System Code . . .  01   Address 985001   Repository Services
Reporting System  01   Address  "1" Available Services
Base Member Name  P01051
Maint/RSTDSP . .  -   Omit Opt
Copy Data (Y/N) . N   Optional
                                   - Data Dictionary
                                   - Menus
                                   - Vocabulary Overrides
                                   - Function Key Definitions
                                   - Processing Options
                                   - User Defined Codes
                                   - Edit System Helps
                                   - CASE Profiles
                                   - SAR Log Inquiry
                                   - Copy DD,VO,DW,UDC,SVR,Menus
O Source      Object      Sourc
P Library    Library    File
- JDFSRC61   JDFOBJ61   JDESR
- JDXSRC61   JDJOB61   JDESR
- PGXSRC61   PGXOBJ61   JDESR
-
-
-
-
Opt:  1=Select  F12=Previous
    
```

Opt: 1=Browse 2=Edit 3=Copy 5=SAR 8=Print 9=Dlt 10=Design 14=Crt F24=More

Use selection 1 to select the available services.



F9 – Automatic Reinquiry

Once the system has accepted the changes you made to a member and cleared the screen, you can automatically inquire on that member by pressing F9.



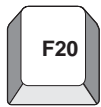
F17 – Position Cursor to Action Code

When you inquire on a member, the system positions the cursor in the subfile for the screen. To reposition your cursor in the *Action Code* field, press F17.



F19 – Previous Member

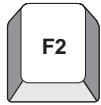
To access the member stored before the current member, press F19.



F20 – Next Member

To access the member stored after the currently displayed member, press F20.

Other Function Keys

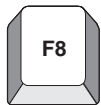


F2 – J.D. Edwards Command Line

To access a command line in order to enter a J.D. Edwards or IBM command without having to exit to Command Entry or a menu.

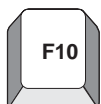
Calls a J.D. Edwards program and not the IBM Command Entry.

If you are secured out of Command Entry or Menu Traveling, you will still receive this command line but you will *not* be able to execute commands or menu travel.



F8 – Optional Files

The system displays the optional files.



F10 – Checklists

Displays a user defined checklist. Opt 1 – displays additional job information.



F13 – Member Category Codes

Displays additional category code information for each member. The category code values can be cross-referenced to the Software Versions Search program (23/G91).



F14 – Member Parameter/Key List

Identifies the access path for keyed files. For future use with the Everest CASE tool.



F15 – Where Used Facility

You can access the Where Used facility using Function key 15. Use this facility to determine every location that a particular member is used.

Below is an example form displaying every program that uses the Business Unit Master form:

```

980014                               Cross Reference

Object: Name . . . V0006             Business Unit Master Revisions - Single
        Type . . . E                 All programs using file
        To Display E
        Funct Cd . _____

O  Name                Description          Field Attr T Start Upd
P  _____          _____          Len  Dec  Y  Loc  Y/N
_ P0006                Business Unit Master Revisions - Single          Y

```

Opt: 1=SVR 2=Create Object 3=Field Explanation F21=Print F16=Regenerate



To use this facility, you must run the Cross Reference Rebuild.(6/G9642)



F23 – Flow Programs / Illustrate File Models

To display a flowchart if the member is a program or a Data Model if the member is a file.

Only functional for programs and files.

Selection Exits from the Software Versions Repository

Option	Description
1	Browse SEU member Displays the SEU Member in browse mode.
2	Edit using SEU Displays the SEU Member in update mode.
3	Copy/Add entry/source member Copies the source member to another member. Adds master and detail record for the member being copied to if they do not already exist. Copies pre-compiler commands and Vocabulary Overrides. Copies program generator specifications if requested.
5	Work with SAR detail Displays the SAR/Work Order Detail Entry screen, defaulting to the members affected portion of the SAR/Work Order.
8	Print source Prints a spooled file of the member.
9	Delete/ remove source Deletes the detail record and removes the source member from the source file. The same IBM authority that applies to the command RMVM applies to this function. Will delete the object if requested by the user. If you do not remove the source member, you will not be allowed to delete the object.
10	Exit to design aid Determines what type of member you are accessing and then exits to the correct J.D. Edwards design tool; that is, SDA/RDA/FDA/Program Generator.

Option	Description
11	<p>Precompiler commands for J.D. Edwards compiler.</p> <p>Accesses the source code for the precompiler commands associated with a program.</p> <p>A highlighted message, <i>Precompiler Commands Exist</i>, indicates when they exist for the member.</p> <p>Contains information for steps that need to be completed prior to compiling the program.</p> <p>Example: P09101.</p> <p>NOTE: Only one person can view the same pre-compiler commands.</p>
14	<p>Submit object creation</p> <p>Compiles the member and generates an object.</p>
15	<p>Generate program source and help</p> <p>Submits the member to the program generator in order to generate source and related helps.</p> <p>Only applicable to CASE users.</p>
17	<p>Edit help instructions</p> <p>Accesses the help instructions for a particular program in update mode utilizing SEU.</p>
18	<p>Generate & rebuild help instructions</p> <p>Submits the helps for generation and rebuilds them into their final form once they have been entered.</p>
20	<p>Browse SDA/RDA</p> <p>Accesses SDA or RDA in browse mode.</p>
21	<p>Print help</p> <p>Prints the help instructions for the member.</p>
25	<p>Print illustration</p> <p>Prints an illustration of printer files, display files, or data base files.</p>
30	<p>Source modifications editor</p> <p>Allows you to view the source modifications made to the member through SEU after source was generated. Stored in the F93002 file.</p> <p>Only applicable to CASE users.</p>



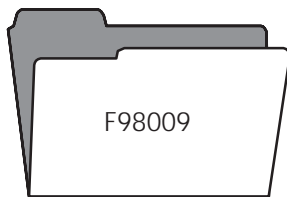
Exercises

See the exercises for this chapter.

CASE Profiles

About CASE Profiles

CASE profiles are user defined values that can pertain to individual users or to one *PUBLIC user profile.



Information is stored in the CASE profiles file (F98009).

These profiles are used to define the overall CASE operating environment.

Various processing control parameters are defined by the user including:

- Default development libraries
- Compile job queue
- Program Generator source generation job queue
- Compile print options
- SAR logging options



The user should immediately update the record for User ID *PUBLIC.

When entering information for *PUBLIC, all fields are required.

Default CASE Profile values are maintained in a record with the User ID *PUBLIC. CASE Profile values for individual users should be entered only if overrides to the *PUBLIC values are needed.

When entering values for individual users, all fields may be left blank except for the specific values being overridden.

Accessing CASE Profiles

▶ To access CASE Profiles

Select one of the following two methods to access CASE Profiles:

From menu G92 select CASE Profiles

```
G92                                J.D. Edwards & Company          JDED
Programmers                        Computer Assisted Design (CAD)

... SYSTEM DESIGN AIDS             ... PROGRAM DESIGN AIDS
2. Software Versions Repository    14. Processing Options
3. Menus                           15. Help Instructions
4. Data Dictionary                 16. Universal File Converter
5. Model Relations
6. CASE Profiles
7. Functions Key Definitions
8. Vocabulary Overrides

Selection or command
====> _____
_____
_____
```

From the Repository Services window select CASE Profiles.

```

9801                               Software Versions Repository

Action Code. . . . . -
Member ID. . . . . _____
Description. . . . . _____
Function Code. . . . . _____
Function Use . . . . . _____
System Code. . . . . _____
Reporting System _____
Base Member Name _____
Maint/RSTDSP . . . . . Omit Opt
Copy Data (Y/N). . . . . Optional

O Source   Object   Sourc
P Library  Library  File
____
____
____
____
____
____
____
____
____
____

985001-----Repository Services-----
"1" Available Services
  - Data Dictionary
  - Menus
  - Vocabulary Overrides
  - Function Key Definitions
  - Processing Options
  - User Defined Codes
  - Edit System Helps
  - CASE Profiles
  - SAR Log Inquiry
  - Copy DD,VO,DW,UDC,SVR,Menus
  -
-Sel:---1=Select-----F12=Previous-----

Opt:  1=Browse 2=Edit 3=Copy 5=SAR 8=Print 9=Dlt 10=Design 14=Crt  F24=More
    
```

The new CASE Profiles screen appears. The program will attempt to automatically inquire on your User ID. If your ID is not set up, an error will occur. You may inquire on *PUBLIC.

```

98009                               CASE Profiles

Action Code. . . . . I
User ID. . . . . *PUBLIC

Default Development Environment
Source File . . . . . JDESRC
Source Library. . . . . PGFSRC
Object Library. . . . . PGFOBJ
CL Source File. . . . . JDESRC
Data File Library . . . . . TEST
SAR Number. . . . .
Version ID. . . . . A7.3
Status Code . . . . . 4

Program Creation Options
Compile Job Queue . . . . . COMPILE
Prog Gen Job Queue. . . . . CLONE
Compile Target Release. *CURRENT
Print Option . . . . . 1
Cross-Reference Listing N

SAR Options
SAR File Library. . . . . TEST
SAR Delivery Type . . . . . *LOG   Log to SAR# 00000000

Miscellaneous
Source Gen Opt (Future) -
Helps Maint Opt(Future) -      SEU

F24 = More Keys
    
```

Default Development Environment

Field	Explanation
Source File	The default source file name where source is to be stored within the source library. Must reside within the source library specified.
Source Library	The default library where source will be stored. The source file specified above must reside within this library.
Object Library	The default library where compiled objects will be stored.
CL Source File	The default library where source for CL programs will be stored. The value specified must reside within the source library specified.
Data File Library	Used to specify the test (or development) library for physical and logical files. Used as the default object library for the Software Versions Repository when copying source code for physical or logical files.
SAR Number	An abbreviation for software action request (SAR). *NONE = the SAR number will not be validated in any of the CAD/CAP programs and can be left blank. If a SAR number is entered, it is used in conjunction with the SAR Delivery Type of *DFT (default).
Version ID	The software version number to be defaulted in the Software Versions Repository file.
Status Code	Determines the status of the software as well as where it resides in production. It will specify that the software is in production, in development, or in a release.



If you create anything custom put 2, 3, or 4 in user defined codes. If you have “1” (production) the system will think it is a J.D. Edwards file and write over it during the Software Version Repository Merge in an upgrade.

Program Creation Options

Field	Explanation
Compile Job Queue	<p>Specifies which job queue will be used when submitting programs to compile.</p> <p>Used for programs with a function code of RPG, CBL, PLI, C, and SYSC.</p>
Program Generator Job Queue	<p>Specifies which job queue will be used when submitting jobs for the Program Generator.</p> <p>These jobs include the source code generation and the source code monitor from SEU.</p>
Compile Target Release	<p>Used by various AS/400 compilers (RPG, CLP, COBOL, C) to compile an object compatible with a specified IBM target release.</p> <p>A value of *CURRENT compiles an object compatible to the release of the machine at compile time.</p> <p>A value of *PRV compiles an object compatible with both one release back and the current release.</p>
Print Option	<p>Used to designate whether or not a report will be generated when an object is compiled.</p> <p>0 = no print. 1 = print. 2 = print and hold spool file. 3 = print only – does not generate an execution object (applies to COBOL and RPG only). 4 = print when creation or compile fails.</p>
Cross-Reference Listing	<p>Specifies whether a cross-reference listing will be generated for variables and fields in a program's compile listing.</p>



Make sure you have a job queue called **COMPILE** for **COMPILE JOB QUEUE** to compile programs or use a valid job queue.

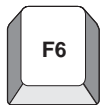
SAR Options

Field	Explanation
SAR File Library	Specifies the library where the Software Action Request (SAR) file for software development exists. If left blank, the user's library list will be used. You can specify *NONE in the SAR number field if you do not want any SAR number editing.
SAR Delivery Type	Associated with SAR logging. SAR logging is a feature which tracks all activities related to modifying J.D. Edwards' software. *NONE = no logging. *LOG = log to SAR #00000000 (no SAR number is used for logging). *DFT = log to a default SAR number (specified in the SAR Number field). *PROMPT = log and prompt the user for the SAR number to be used and allow the user to enter the revision notes.

Miscellaneous

Field	Explanation
Source Gen Opt	For future use.
Helps Maint Opt	For future use.

Function Key Exits From the CASE Profiles Program



F6 – Access Repository Services

This window provides access to the other repository services, except for CASE profiles.



F9 – Previous Profile

Allows the user to re-inquire on the last record updated.

Summary of CASE Profiles

The CASE Profiles file is F98009.

The user will need to update the *PUBLIC record as well as add any additional individual records desired.

The user cannot delete the *PUBLIC record.

When entering information for the *PUBLIC record, all fields are required.

The record for User ID *PUBLIC contains the values that will be used as the defaults for all users unless individual user profiles have been set up.

When entering values for individual profiles, all fields are left blank EXCEPT for the specific values being overridden on the *PUBLIC profile.

SAR Number and SAR Delivery type work together to determine what type of SAR logging should occur.

*NONE = no SAR logging at all.

*LOG = no SAR number will be included as part of the SAR logging.

*DFT = the SAR number specified will be used for the SAR logging.

*PROMPT = the user will be prompted for a SAR number and revision notes when an entry is about to be made to the SAR log.



Exercises

See the exercises for this chapter.

Work with SAR Log

About SAR Log

After you create the SARs, you must activate SAR logging, which automatically keeps track of the SARs as you develop the software.

The SAR Log Inquiry program allows you to review information in the SAR Log file (F9810).

You can also change the SAR Number and Revision Notes for individual log records.

Complete the following tasks:

- Set up user input options for SAR logging
- Select types of SAR information to log
- Access SAR Log Inquiry

Before You Begin

- Create SARs before you activate SAR logging.

From the Version Control menu (G9261), choose CASE Profiles.

Setting Up User Input Options for SAR Logging

► To set up user input options for SAR logging

On CASE Profiles

```

98009                                CASE Profiles

Action Code. . . . . I
User ID. . . . . MORRIS

Default Development Environment      Program Creation Options
Source File . . . . . JDESRC         Compile Job Queue . . . . . COMPILER
Source Library. . . . . PGFSRC61     Prog Gen Job Queue. . . . . CLONE
Object Library. . . . . PGFOBJ61     Compile Target Release. *CURRENT
CL Source File. . . . . JDECLSRC     Print Option . . . . . I
Data File Library . . . . . PGFDTA61  Cross-Reference Listing N
SAR Number. . . . . 774487
Version ID. . . . . A61             A6.1 Base
Status Code . . . . . 2             Development

SAR Options
SAR File Library. . . . . DDPDATA
SAR Delivery Type . . . . . *DFT     Default SAR Number

Miscellaneous
Source Gen Opt (Future) -
Helps Maint Opt (Future) -         SEU

F24=More Keys
    
```

1. Complete the following fields:

SAR File Library

SAR Delivery Type



The SAR file library contains the Work Order system files (F4801 and F4802). If you currently use these files, and if the F4802 file has different record types than what version control needs, you must create a library that contains new F4801 and F4802 files for version control purposes only. Specify this new library name in the SAR File Library field.

2. Complete the following optional field:

SAR Number

What You Should Know About

SAR number and delivery type combinations

The information you provide for the SAR Number and SAR Delivery Type fields affects how the system handles SAR logging.

If you do not provide a SAR number, and set the SAR Delivery Type field to *PROMPT, the Maintain User Default SAR Information form prompts you for the SAR number whenever you change a source code member or control table.

If you provide a SAR number, and set the SAR Delivery Type field to *DFT, the system creates SAR log entries automatically without your input.

If you provide a SAR number, and set the SAR Delivery Type field to *PROMPT, the Maintain User Default SAR Information form prompts you to change the SAR number, if necessary, whenever you change a source code member or control table.

Invalid SAR delivery types

*LOG and *NONE are not valid for the SAR Delivery Type field when you use the Version Control system.



If you set the SAR Delivery Type field to *PROMPT, the Maintain User Default SAR Information form appears whenever you change a source code member or control table.

```

9812  Maintain User Default SAR Info
Action. . . . . C
Repository Rec. P9242
SAR Number. . . _____ Transfer. . . 0
Revision Note . _____
                Enter=Continue      F24=More
    
```

If you provided a SAR number on CASE Profiles, it appears on this form. If you did not provide a SAR number, provide one on this form.

If the Transfer field on Maintain User Default SAR Information is set to 1, the Version Control system can promote the change. If it is set to 0, the system cannot promote the change.

Selecting Types of SAR Information to Log

► **To select types of SAR information to log**

In addition to setting up user input options for SAR logging, select the types of SAR information you want to log.

1. From the Version Control menu (G9261), access the processing options for Edit and Promote.
2. Make the following changes:

SAR Logging (1)

Specify Y if you want to track SARs that are associated with J.D. Edwards source code and control file development only. Specify N if you want to track SARs that are associated with all software development. Leave this processing option blank to disable SAR logging and, therefore, version control.

If you specify Y, the SAR log keeps track of development automatically. It tracks changes to menus that start with 'A' or 'G' only. For DREAM Writer, it tracks changes to XJDE or ZJDE versions only. When you transfer these versions, the user ID associated with them changes to DEMO.

In addition, the SAR logging program runs a double-byte analysis against your RPG programs if you set this processing option to Y.

If you specify Y, you also must indicate the name of the library that contains your SAR files. The default library name is JDCOMDATA.

DREAM Writer Copy (2)

Specify Y to track changes to DREAM Writer versions (XJDE and ZJDE versions only). Specify N to not track these changes. If you track changes, the user ID changes to DEMO automatically when you transfer the versions.

Accessing SAR Log Inquiry

The SAR Log Inquiry includes several functions:

- Inquiry by user ID or SAR number with date range
- Exit to a maintenance program for the record type
- Exit to SAR detail
- Print option that allows for DREAM Writer selection

There are two ways to access the SAR Log Inquiry.

► To access the SAR Log Inquiry

1. Select one of the following methods to access the SAR Log Inquiry.

Select SAR Inquiry from Menu G9362

Select SAR Log Inquiry from the Repository Services window

```

G9362                J.D. Edwards & Company                JDED
Sr Programmers      Developer's Workbench
 1.  Generic Record Copy          13. Pre-compiler Commands
 2.  Software Scan & Replace      14. Compile Multiple Objects
 3.  Single JDE Message Update    15. Optimize Programs (CL & RPG)
 4.  Global Update of File Text   16. Print Source
 5.  Message Tester              17. Copy ADW Files to Production
 6.  Copy DD,VO,DW,UDC,SVR,Menus  18. Generate Pgm Specs from ADW
 7.  File Field Description
 8.  SAR Log Inquiry

Selection or command
====> _____
_____
_____

```

```

9801                               Software Versions Repository

Action Code. . . -
Member ID. . . . _____
Description. . . _____
Function Code. . . _____
Function Use . . . _____
System Code. . . _____
Reporting System _____
Base Member Name _____
Maint/RSTDSP . . - Omit Opt _____
Copy Data (Y/N). - Optional _____

O Source      Object      Sourc
P Library     Library     File

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

985001-----Repository Services-----
"1" Available Services
- Data Dictionary
- Menus
- Vocabulary Overrides
- Function Key Definitions
- Processing Options
- User Defined Codes
- Edit System Helps
- CASE Profiles
- SAR Log Inquiry
- Copy DD,VO,DW,UDC,SVR,Menus
-
-Sel:---1=Select-----F12=Previous-----

Opt: 1=Browse 2=Edit 3=Copy 5=SAR 8=Print 9=Dlt 10=Design 14=Crt  F24=More
    
```

The new SAR Log Inquiry Screen appears.

```

9810                               SAR Log Inquiry

Action Code. . . I
User ID. . . . FRAZZINI
SAR Number . . .
From Date. . .
To Date. . . .

O A
P C Ty Item      SAR
   DG AN8      Number  Revision Note      Time      Date      User
- C DG AN8      5
- D SV F0101JA  12
- D SV F0101LH  12
- D SV F0911LD  12
- D SV F0911LH  12
- D SV F92801   12
- D SV F92801LA 12
- C HT I00FS@@  12
- C ES PDAN     5 Added Member to SVR
- D SV PDAN     5 Deleted Member
- C SV PINDEX   12
- C ES PINDEX   12
- C PG P928200  12
- C DD P928200  12
   pt: 2=Edit  5=Work SAR  9=Delete  F21=Print  F24=More
    
```

2. Complete one or more of the following:

- User ID
- SAR number
- Date range

Records matching the search criteria will then be displayed.

Field	Explanation
AC (Action)	The action that was taken on this record. The standard action code values apply.
Ty (Record Type)	The type of record that was updated. Use F1 to display all valid record types stored in User Defined Code 98/RT.
Item	The identification number (program number, file number, report number) assigned to any element of the software. These items are the members that reside in the Software Versions Repository or other repositories such as the Data Dictionary, Vocabulary Overrides etc.
SAR Number	The SAR number under which this change was made. This field can be updated on this video.
Revision Note	A user defined description field to further clarify the change made. This field can be updated on this video.
Time	The time at which the change was made.
Date	The date on which the change was made.
User	The user who made the change.

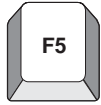
Selection Exits from the SAR Log Inquiry

Exit	Explanation
2- Edit	Allows for maintenance of the record type. What program is accessed is based on the record type. For example, if the record type is 'DD', this exit will take the user to the Data Dictionary program.
5 - Work SAR	Exits to the SAR associated with the SAR log entry.
9 -Delete	Allows the user to delete entries from the SAR log.



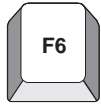
If the user entered this program from the Repository Services window from the Software Versions Repository program, a selection exit 2 will not function with record types 'SV' or 'PG' as these record types attempt to call the Software Versions Repository which causes a recursive call error.

Function Key Exits from the SAR Log Inquiry



F5 – ASI Entry

Exits to Application Specific Instructions for use during a software upgrade. You need the F0098 file to do this.



F6 – Access Repository Services

This window provides access to the other repository services, except for SAR Log Inquiry.



F21 – Print

Allows the user to print a SAR log report.

Exits to a DREAM Writer versions list.

Summary of the SAR Log Inquiry

Uses the file F9810.

If the user does not want to use the SAR Logging feature at all, they need to specify *NONE in the *SAR Delivery Type* field for all CASE Profile records.

To use the SAR Logging feature, the user must specify a value of *LOG, *DFT, or *PROMPT in the *SAR Delivery Type* field for all CASE Profile records.

The SAR Logging feature will record any changes that the user makes to the Data Dictionary, Vocabulary Overrides, User Defined Codes, etc.

The SAR Log Inquiry program allows the user to see what changes they made to any of the above.

The SAR Log Inquiry program has Function Keys and Selection Exits which allow the user to change the SAR Log records in the SAR Log file (F9810) or to exit to the maintenance program for the change they made.

For example: Exit to the Data Dictionary program if the record indicates a Data Dictionary item was added/updated.



Exercises

See the exercises for this chapter.

Work with Promotion Paths and Projects

Working with Promotion Paths and Projects

A promotion path defines how a project's source code members and control file data will move from one environment to another. An environment consists of source code members and control file data. For source code members, the environment consists of:

- A source file
- A source library
- An object library

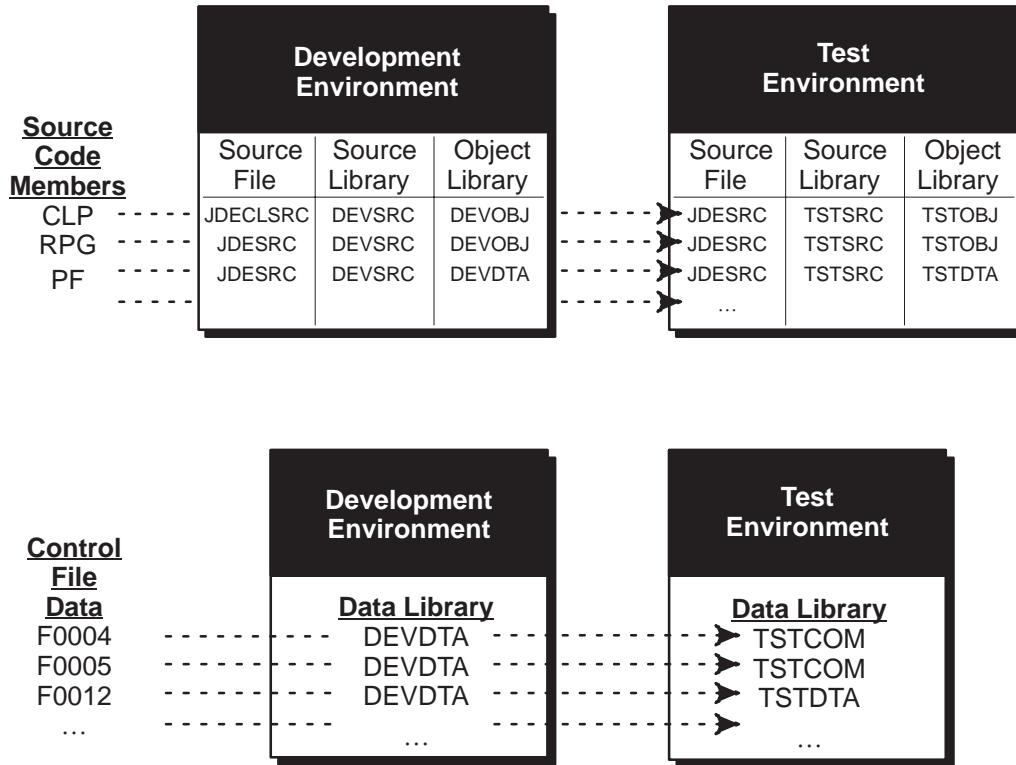
For control file data, the environment consists of a data library.

Perform the following tasks:

- Understand promotion paths
- Define a promotion path
- Define a project
- Assign promotion paths
- Assign project SARs
- Promote a project

Understanding Promotion Paths

A promotion path specifies the current locations of source code members and control file data and where they will be moved. For example, promoting a project's source code members and control file data from a development environment to a test environment could look similar to the following illustrations.



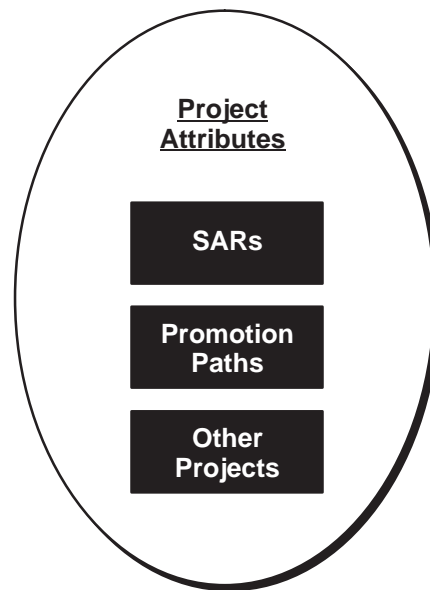
Each move between two environments requires that you define a unique promotion path.

A project, is a collection of software and data you want to group together for promotion. A project is defined by the following characteristics:

SARs that are associated with the project

Promotion paths that determine the movement of the project software and data between environments

Other projects that are attached to the project



Before You Begin

- Verify that the SARs and promotion paths you want to associate with a project have been set up.
- The SAR system uses the Work Order files (F4801 and F4802). If your production environment uses these files, and if the F4802 file has different record types than what version control needs, define a separate library that contains these files for version control purposes only.

Defining a Promotion Path

Several steps are involved in defining promotion paths. Complete the following tasks:

- Locate a promotion path
- Add a promotion path
- Define a promotion path for source code members
- Define a promotion path for control tables

From the Version Control menu (G9261), select Manage Promotion Paths.

```

92403                                Manage Promotion Paths      Code 1 . . . . . ___
Promotion Path . JDF73 _____   Code 2 . . . . . ___
                                     Code 3 . . . . . ___
O Promotion      Description          Release      Code 4 . . . . . ___
P  Path          Description          Number      Code 5 . . . . . ___
- JDF73          Transfer to JDF73      A73
- JDF73T         'T' file transfer to JDF73    A73
- JDF73TEC       Transfer to JDF73 SECURE    A73
- JDU71          Transfer to JDU71      A71X
- JDX71          Transfer to JDX71      A71X
T130892PC2      Utility CIS - PCCPY      A71X
T130892PC3      Utility CIS - PCCPY      A71X
T130892PC4      Utility CIS - PCCPY      A71X
T130892PC5      Utility CIS - PCCPY      A71X
T130892PC6      Utility CIS - PCCPY      A71X
T130892PC7      Utility CIS - PCCPY      A71X
T130892PC8      Utility CIS - PCCPY      A71X
T130892PC9      Utility CIS - PCCPY      A71X
UQF62           UQF build for A6.2        A62
UQF71           UQF build                A71
VCT             Version control training  A71

Opt: 1=Change   2=Members   3=Ctl Files   F5=Add Path   F24=More Keys
    
```

```

92403                                Manage Promotion Paths      Code 1 . . . . . ___
Promotion Path . JDF73 _____   Code 2 . . . . . ___
                                     Code 3 . . . . . ___
O Promotion      Description          Release      Code 4 . . . . . ___
P  Path          Description          Number      Code 5 . . . . . ___
- JDF73          Transfer to JDF73      A73
  Code 1 . ___   Code 2 . ___   Code 3 . ___   Code 4 . CUR   Code 5 . JDF
    
```


► **To locate a promotion path**

Select one of the following methods to locate a promotion path:

On a blank Manage Promotion Paths form, press Enter.

The screen displays a complete list of promotion paths.

On Manage Promotion Paths enter the path name in the Promotion Path field.

The screen displays the path name. If the promotion path does not exist, the screen displays the path name that is closest alphabetically.

► **To add a promotion path**

1. Press F5 (Add Path) on the Manage Promotion Paths form.

```
9240                                     Promotion Path
Action Code. . . I
Promotion Path . _____
Description. . . _____
Release. . . . . _____

Code 1 . . . . . ___
Code 2 . . . . . ___
Code 3 . . . . . ___
Code 4 . . . . . ___
Code 5 . . . . . ___

F9=Redisplay   F10=Members   F11=Ctl Files   F24=More Keys
```

2. Complete the Promotion Path form.

- Add a new path name, a path description, and a release level.
- Use the Code 1–5 fields for additional classifications.
 - Code 1–5 fields are user defined in system 92, types E1, E2, E3, E4, and E5.
- Specify the status of the promotion path in the Code 4 field.
 - Field-sensitive help (function key F1) provides valid values for the Code 4 and 5 fields.
- Specify the type of promotion environment in the Code 5 field.

► **To define a promotion path for source code members**

1. Locate Promotion Path Members using one of the following methods:

- From the Manage Promotion Paths form, locate the promotion path you want to define.
 - Then enter 2 (Members) in the OP (Option) field next to the promotion path name.
- From the Promotion Path form, press F10 (Members).

```

92401                                Promotion Path Members

Action Code . . . I
Promotion Path . JDF73      Transfer to JDF73

O Mbr
P Type      From Environment      To Environment
  _Src File  _Src Libr  _Obj Libr  _Src File  _Src Libr  _Obj Libr
- ASM       SECURE     JDFSRC71  JDFOBJ71  JDESRC     JDFSRC73  JDFOBJ73
- CLP       JDECLSRC  PGFSRC73  PGFOBJ73  JDESRC     JDFSRC73  JDFOBJ73
- CMD       JDESRC    PGFSRC73  PGFOBJ73  JDESRC     JDFSRC73  JDFOBJ73
- COPY      JDECPY    PGFSRC73  PGFOBJ73  JDECPY     JDFSRC73  JDFOBJ73
- DSPF      JDESRC    PGFSRC73  PGFOBJ73  JDESRC     JDFSRC73  JDFOBJ73
- LF        JDESRC    PGFSRC73  PGFDTA73  JDESRC     JDFSRC73  JDFDTA73
- LFS       SECURE     PGFSRC73  PGFDTA73  SECURE     JDFSRC73  JDFDTA73
- PF        JDESRC    PGFSRC73  PGFDTA73  JDESRC     JDFSRC73  JDFDTA73
- PFS       SECURE     PGFSRC73  PGFDTA73  SECURE     JDFSRC73  JDFDTA73
- PLI       SECURE     PGFSRC73  PGFOBJ73  SECURE     JDFSRC73  JDFOBJ73
- PRTF      JDESRC    PGFSRC73  PGFOBJ73  JDESRC     JDFSRC73  JDFOBJ73
- PRTS      JDESRC    PGFSRC73  PGFOBJ73  JDESRC     JDFSRC73  JDFOBJ73
- RPG       JDESRC    PGFSRC73  PGFOBJ73  JDESRC     JDFSRC73  JDFOBJ73
- RPGS      JDESRC    PGFSRC73  PGFOBJ73  JDESRC     JDFSRC73  JDFOBJ73

Opt: 1=Copy  2=Target  F11=Ctrl Files  F13=CASE Profile  F24=More Keys
    
```

The From Environment area on the Promotion Path Members form shows the current locations of the source and object code. The To Environment area shows the locations to which the code will be moved.

2. Specify source files and library names for each member type you list on this screen.

To display valid member types and their descriptions, press F1 while your cursor is in a Mbr Type field. The member types are defined in the Function Codes user defined code table (98/FN).

To copy source file and library names from one member type to another, type 1 (Copy) in the OP (Option) field next to the member type you want to copy. Type 2 (Target) in the OP fields next to the member types you want the information copied to, and press Enter. You can specify multiple targets.

The following chart shows some of the function keys available on this screen.

KEY	RESULT
F9	Redisplays the record for the previously-changed path.
F11	Displays the Promotion Path Control Files screen.
F13	Displays the CASE Profiles screen.
F14	Retrieves the source file, source library, and object library from your CASE profile and fills in the From environment. This overwrites any information currently in the fields.
F15	Duplicates the source file and library names from the first member type to the remaining member types.

What You Should Know About

Copying an existing promotion path

If you copy an existing promotion path to create a new path, be sure that the source files and library names for the members are correct for the new path.

Changing library names

To change library names, enter the new library names over the current ones.

To define a promotion path for control tables

1. Locate the Promotion Path Control Files using one of the following methods:

From Manage Promotion Paths, locate the promotion path you want to define and enter 3 (Ctl Files) in the OP (Option) field next to the promotion path name.

From the Promotion Path screen, press F11 (Ctl Files).

From the Promotion Path Members screen, press F11 (Ctrl Files).

```

92402                               Promotion Path Control Files

Action Code . . . I
Promotion Path . JDF73      Transfer to JDF73

O Rec      From          To
P Typ Data Libr  Control Lib Record Type Description      Control
-  C  JDFCTL73      JDFTEM71      Members Affected      F9801
-  D  PGFDTA73      JDFCTL73      Menu Modifications     F0090
-  F  JDFCTL73      JDFTEM71      Software Inventory Records      F9801
-  G  PGFDTA73      JDFCTL73      DREAM Writer/Processing Option  F98301
-  H  PGFDTA73      JDFCTL73      Vocabulary Overrides     F9220
-  M  JDFCTL73      JDFTEM71      Data Dictionary          F9200
-  N  PGFDTA73      JDFCTL73      User Defined Codes       F0005
-  W  JDFCTL73      JDFTEM71      Pre-Compiler Commands    F98CRTCMD
-  -  - - - - -
-  -  - - - - -
-  -  - - - - -
-  -  - - - - -
-  -  - - - - -
-  -  - - - - -
-  -  - - - - -

Opt: 1=Copy  2=Target  F10=Members  F13=CASE Profile  F24=More Keys

```

The From Data Libr column on the Promotion Path Control Files form shows the current location of the data records. The To Control Lib column shows the location to which the data records will be moved.

2. Specify library names for each record type listed on this form.

The following chart shows some of the function keys available on this form.

KEY	RESULT
F9	Redisplays the record for the previously-changed project.
F10	Displays the Promotion Path Members screen.
F13	Displays the CASE Profiles screen.

KEY	RESULT
F14	Retrieves the data library from your CASE profile and fills in the first From Data Libr field. This overwrites any information currently in the field.
F15	Duplicates the library names from the first record type to the remaining record types.

To copy library names from one record type to another, type 1 (Copy) in the OP (Option) field next to the record type you want to copy. Type 2 (Target) in the OP fields next to the record types you want the information copied to, and press Enter. You can specify multiple targets.

Guidelines

If you copy an existing promotion path to create a new path, be sure the library names for the control files are correct for the new path.

To change library names, enter the new library names over the current ones.

Defining a Project

Complete the following tasks:

- Locate a project
- Add a project
- Assign promotion paths
- Assign project SARs

From the Version Control menu (G9261), choose Manage Projects.

```

92413                                Manage Projects

Project . . . . . _____          Code 1 . . . . . _____
Client . . . . . _____          Code 2 . . . . . TEC
Originator . . . . . _____       Code 3 . . . . . _____
Assigned To. . . . . _____       Code 4 . . . . . _____
                                      Code 5 . . . . . _____

O
P Project   Description           Client  Orig  Assigned
- REINSTALL Simplified Reinstall Process
- TEC       Tech Foundation Corrections
- TECHENH   Tech Foundation Enhancements
- UBP       User Based Pricing
- UPGRADE   Upgrade Enhancements/fixes   256006  878411  878411
- VC        Version Control                875561
- 1055020   Merge PO Display Level
- 4 BYTE SYS 4 Byte System Code           878411  2211696
-
-
-

Opt: 1=Details  2=Paths  3=SARs  F5=Add Project  F24=More Keys
    
```

```

92413                                Manage Projects

Project . . . . . _____          Code 1 . . . . . _____
Client . . . . . _____          Code 2 . . . . . TEC
Originator . . . . . _____       Code 3 . . . . . _____
Assigned To. . . . . _____       Code 4 . . . . . _____
                                      Code 5 . . . . . _____

O
P Project   Description           Client  Orig  Assigned
- REINSTALL Simplified Reinstall Process
  Code 1 . 300 Code 2 . TEC Code 3 . ____ Code 4 . ____ Code 5 . ____
    
```

► **To locate a project**

Locate a project using one of the following methods:

- On a blank Manage Projects form, press Enter.
 - A complete list of projects appears.
- On the Manage Projects form, enter the project name in the Project field.
 - The project name appears on the form. If the project does not exist, the project name that is closest alphabetically appear on the form.

► **To add a project**

1. On Manage Projects select Add Project.

```

9241                               Software Development Project
Action Code. . . I
Project. . . . . _____
Description. . . _____
Parent Project . _____
Edit File. . . . . _

Client . . . . . _____
Originator . . . . . _____
Assigned To. . . . . _____
Auth List. . . . . _____
Design Doc . . . . . _____

Requested. . . . . _____
Planned Comp . . . . . _____
Date Assigned. . . . . _____

Code 1 . . . . . ____
Code 2 . . . . . ____
Code 3 . . . . . ____
Code 4 . . . . . ____
Code 5 . . . . . ____

F9=Redisplay   F10=Promotion Paths   F11=Project SARs   F24=More Keys
    
```

The Software Development Project form appears.

2. Complete the Software Development Project form.
 - Enter a new project name.
 - Enter a project description.
 - Enter any other information you want to associate with the project.
 - Complete the Code 1–5 fields for additional classifications.
 - The Code 1–5 fields are user defined in system 92, types P1, P2, P3, P4, and P5.
3. If you want to attach this project to a parent project, specify the parent project name in the Parent Project field.

The following chart shows some of the function keys available on this form.

KEY	RESULT
F9	Redisplays the record for the previously-changed project.
F10	Displays the Project Promotion Paths screen.
F11	Displays the Project Elements screen.
F14	Displays the generic text associated with this project, and gives you access to text model selections.

You must assign promotion paths and SARs to the project you set up here. The following sections explain how to assign them.

► To assign promotion paths

1. Locate the project to which you want to assign promotion paths using one of the following methods.
 - On Manage Projects locate the project to which you want to assign promotion paths.
 - Enter 2 (Paths) in the OP (Option) field next to the project name.
 - On Software Development Project, press F10 (Promotion Paths).

```

92411                               Project Promotion Paths
Action Code. . . I
Project. . . . TEC_____ Tech Foundation Corrections

O Promotion                               Release
P  Path          Description                Number
-  A62CUM        Transfer to current A62 Cum   A62
-  A62PC000TI    User based pricing             A62
-  A62PREV       Transfer to previous A62 Cum   A62
-  A72CUM        Transfer to current A71 Cum   A71
-  A71PREV       Transfer to previous A71 Cum   A71
-  A72CUM        Transfer to current A72 Cum   A72
-  JDF62         Transfer to JDF62             A62
-  JDF62TEC      Transfer to JDF62-SECURE     A62
-  JDF71         Transfer to JDF71            A71
-  JDF71TEC      Transfer to JDF71-SECURE     A71
-  JDF73         Transfer to JDF73            A73
-  JDF73TEC      Transfer to JDF73 SECURE     A73
-  VCTL          Version control Update       A73
-
-
-
Opt: 1=Details  2=Members  3=Ctrl Files  F11=Project SARs  F24=More Keys
    
```


- Specify the promotion paths you want to assign to this project.

To display the available promotion paths, press F1 (Help) while the cursor is in a Promotion Path field.

The following chart shows some of the function keys available on this screen.

KEY	RESULT
F9	Redisplays the record for the previously-changed project.
F11	Displays the Project Elements screen.

The following chart shows options available on this screen.

OPTIO N	DESCRIPTION
1	Edit the promotion path details.
2	Edit the promotion path members.
3	Edit the promotion path control files.

► To assign project SARs

SARs are elements of a project, and other projects can also be elements of a project.

1. Access the Project Elements form using one of the following methods:
 - From the Version Control, choose Edit and Promote.
 - From the Manage Projects, locate the project to which you want to assign elements.
 - Then enter 3 (SARs) in the OP (Option) field next to the project name.
 - From the Software Development Project screen, press F11 (Project SARs).
 - From the Project Promotion Paths screen, press F11 (Project SARs).

```

92412                                Project Elements
Action Code. . . I
Project. . . . TEC Tech Foundation Corrections SAR #. . .
Promotion Path . . . . . Status . . . S/P _
O Project T
P Element Y Description St Status
- 00718047 S % Menu Job Stream Int/Bth Mix 01 Complete - in next release.
- 00731073 S JDEDBG - V2R3 Misc. Fixes 26 Test in Demo
- 00735672 S Can't Chg Value--DD Item Array 01 Complete - in next release.
- 00736245 S User Defined Code Security 26 Test in Demo
- 00863261 S User Based Pricing 23 Manager Review
- 00907489 S ASI Rpt and Screen 4 Digits 26 Test in Demo
- 00910451 S DDP RJE Code Correction CL 7.1 01 Complete - in next release.
- 00913176 S Version Control - Build PTF 23 Manager Review
- 00915577 S Quick Start - Vocab Overrides 01 Complete - in next release.
- 00917732 S Auto Build of JDE Msg File/JLF 25 Rework
- 00939827 S Menu Integrity rpt/sys 55-59 01 Complete - in next release.
- 00945565 S ASI Rpt Confusing When No ASIs 26 Test in Demo
- 00953602 S F6 Copy from ASI -Prt Override 01 Complete - in next release.
- 00955229 S Next Number Description-00 Sys 01 Complete - in next release.
- 00958278 S Validation rpt-prt file names 01 Complete - in next release.
- 00966438 S Action Code Security 01 Complete - in next release.
Opt: 1=SAR 2=SAR Log 3=Edit 4=Promote F10=Project Paths F24=More
    
```

The Project Elements screen displays the elements (usually SARs) assigned to the project.

2. Specify the elements (usually SARs) you want to assign to this project. You can also assign projects, which have SARs associated with them, as elements on this screen.
 - In the TY (Type) fields, specify the corresponding element types (S for SARs, and P for projects). The following chart shows some of the function keys available on this screen.

KEY	RESULT
F9	Redisplays the record for the previously-changed project.
F10	Displays the Project Promotion Paths screen.

The following chart shows options available on this screen.

OPTION	DESCRIPTION
1	Display or edit the SAR detail.
2	Display or edit the SAR log. The SAR Log Transfer screen appears, which lets you edit the SAR log and update the project SARs. For more information about updating the SARs by using this log, see <i>Update the SARs</i> in this publication. For information about the SAR log, refer to the <i>Computer Assisted Design Reference Guide</i> .
3	Display the Pre-Promotion Edit History screen. For information about this function, see <i>Promote a SAR</i> in this publication.
4	Promote a project. For information about this function, see <i>Promote a SAR</i> in this publication.
5	Display the promotion history of a SAR ('Z' record).
6	Display or edit notes associated with a SAR (for J.D. Edwards environments only; '*' record).

Promote a Project

Promoting a Project

After you create a project, link promotion paths and SARs to it, and complete project development, you are ready to begin the promotion process. The promotion process has three parts.

Complete the following tasks:

- Update the SARs (F4802) by using the SAR log
- Validate the SAR for promotion by performing a pre-promotion edit
- Promote the SAR

Before You Begin

- The SAR system uses the Work Order files (F4801 and F4802). If your production environment uses these files, and if the F4802 file has different record types than what version control needs, define a separate library that contains these files for version control purposes only.

See Also

Defining a Promotion Path

Updating the SARs

From the Version Control menu (G9261), choose Edit and Promote.

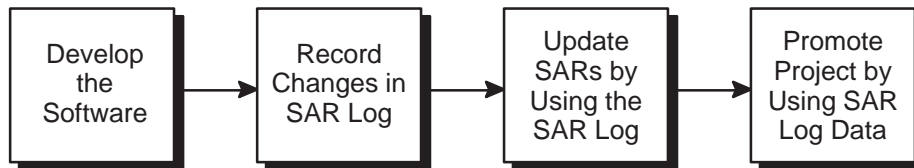
```

92412                                Edit and Promote

Action Code. . . I                    SAR #. . . 1079777
Project. . . . TEC                    Tech Foundation Corrections   Project.
Promotion Path . JDF73                Transfer to JDF73         Status .   S/P
O Project T
P Element Y Description St Status
- 01079777 S Multiple Jobs Submitted 23 Manager Review
- 01081666 S Release Specific Transfers 23 Manager Review
- 01083573 S Help Window Mods A73 26 Test in Demo
- 01086299 S Unable to use A Action Code 06 Returned - Already reported
- 01087558 S Data Selection - HMCU 23 Manager Review
- 01088104 S V3R1 CRTCPGM/CRTBND 28 A test complete
- 01088163 S Handle special char for DBCS 01 Complete - in next release.
- 01089414 S Localization Issues in A/B 01 Complete - in next release.
- 01093536 S No previous item displayed 23 Manager Review
- 01099807 S Finalize Version Control 23 Manager Review
- 01101364 S Video Illustration 23 Manager Review
- 01102615 S J97UPGRADE Command Validation 23 Manager Review
- 01104004 S DW Merge Database-No Merge Opt 26 Test in Demo
- 01105226 S WW-Reads all versions at once 28 A test complete
- 01107601 S Don't delete SAR Log if Trf er 23 Manager Review
- 01113921 S Variable Length Field Support 26 Test in Demo
Opt: 1=SAR 2=SAR Log 3=Edit 4=Promote 5='Z' F10=Proj Paths F24=More
    
```

► **To update the SARs**

The SARs, which are contained in the Work Order Header file (F4801), have detailed information in the Work Order Detail file (F4802). You must update the information in the SARs to reflect software developments that are recorded in the SAR log.



When you developed the software, the changes were recorded in the SAR log automatically. You now must update the F4802 file.

1. From the Edit and Promote screen, inquire on the project you want to promote.
2. In the OP (Option) field next to the project SAR you want to update, enter 2 (SAR Log).

The SAR Log Transfer screen appears, which lists all added or changed records logged in the SAR log (F9810) according to record type. The SAR Detail Sts field shows whether the record has been updated in the F4802 file.

```

9242                                SAR Log Transfer

SAR Number . . . 1079777 Multiple Jobs Submitted
Record Type . . . ---
and/or Member . . . ---
O
P Record Type      Primary   Secondary  Data File  T A
  Record Type      Log Item   Log Item   Library    R C SAR Detail Sts
- M - Data Dictionary 4888      JDFCTL73   1 A Updated
- M - Data Dictionary 4889      JDFCTL73   1 A Updated
- C - Modified Source J9242S    JDFSRC73   1 A Updated
- C - Modified Source J98901B   JDFSRC73   1 A Updated
- C - Modified Source J98901T   JDFSRC73   1 A Updated
- C - Modified Source P924124    JDFSRC73   1 A Updated
- C - Modified Source P9242      JDFSRC73   1 A Updated
- C - Modified Source P9242D    JDFSRC73   1 A Updated
- C - Modified Source P924210    JDFSRC73   1 A Updated
- C - Modified Source P98905      JDFSRC73   1 A Updated
- C - Modified Source P98907      JDFSRC73   1 A Updated
- F - Software Reposit J9242S    JDFCTL73   1 A Updated
- F - Software Reposit P9242D    JDFCTL73   1 A Updated

Opt: 1=Details  9=Delete  F5=Add  F10=Update SAR  F24=More Keys

```

If this screen lists many SAR log records, you can narrow your search by entering information in the Record Type and the and/or Member fields.

NOTE: If you want to view the details of a SAR log item, enter 1 (Details) in the OP (Option) field next to the item. From the screen that appears, you can edit the SAR details. If the SAR logging system does not log an item that you want to include, press F5 (Add) from the SAR Log Transfer screen to add it.

3. To update the F4802 file, press F10 (Update SAR).

IMPORTANT: Before you update a SAR, verify that each SAR log record should be transferred with the SAR. Change or delete those that are associated incorrectly with the SAR. To display all records with data that can be transferred (TR field value is 1) or with test data (TR field value is 0), press F16 (Display Update Capable/All Items). Update only those records that should be transferred with this SAR.

The system creates or updates the records in the SAR file that is located in the SAR library you indicated in the Edit and Promote processing options (not the SAR library appearing in your library list).

Validating a Promotion Path

Before you promote a SAR, you must perform a pre-promotion edit, or validation, against the promotion path that will be used for this SAR.

► To validate a promotion path

1. From the Edit and Promote screen, inquire on the project you want to promote.
2. In the Promotion Path field, type the name of the promotion path you want to use for your project.
3. In the OP (Option) field next to the project SAR you want to update, enter 3 (Edit).

NOTE: If you did not choose a promotion path for the project, the Project Promotion Paths window lists all promotion paths defined for the project.

```
92411W          Project Promotion Paths
Project . . TEC          Tech Foundation Corre
O Path Name Description
- A62CUM          Transfer to current A62 Cum
- A62PC000TI     User based pricing
- A71CUM          Transfer to current A71 Cum
- A72CUM          Transfer to current A72 Cum
- JDF62           Transfer to JDF62
- JDF62TEC       Transfer to JDF62-SECURE
- JDF71           Transfer to JDF71
- JDF71TEC       Transfer to JDF71-SECURE
Opt: 4=Select    F24=More Keys
```

In the O (Option) field next to the promotion path you will use to promote the project, enter 4 (Select). If you have run pre-promotion edits previously for this SAR, the Pre-Promotion Edit History screen lists them. Otherwise, this screen is blank.


```

9243                               Pre Promotion Edit History

Project. . . . . TEC                Tech Foundation Corrections
SAR. . . . . 1079777              Multiple Jobs Submitted
Promotion Path . JDF73            Transfer to JDF73

O                               Hrd No.
P  Date   Time   User ID   Err Err
- 01/22/96 13:18:24 TFRCTL6
- 01/22/96  9:17:28 CHAN                8
- 01/16/96 12:39:59 CHAN                4

Opt: 1=Details  F5=Perform Edit  F24=More Keys
    
```

NOTE: To view the errors associated with a pre-promotion edit, enter 1 (Details) in the OP (Option) field next to the desired history record.

```

92431                               Pre Promotion Edit Details

Project. . . . . TEC                Tech Foundation Corrections
SAR Number . . . 1079777           Multiple Jobs Submitted
Promotion Path . JDF73            Transfer to JDF73
Date of Edit . . 01/22/96
Time of Edit . .  9:17:28

O R                               Err                               E
P T Description      Member      2nd Item   Key   Description      T
- C Members Affe J9242S          1946 Object Not Found      W
- C Members Affe J98901B         1946 Object Not Found      W
- C Members Affe J98901T         1946 Object Not Found      W
- C Members Affe P924124         1946 Object Not Found      W
- C Members Affe P9242           1946 Object Not Found      W
- C Members Affe P9242D          1946 Object Not Found      W
- C Members Affe P98905          1946 Object Not Found      W
- C Members Affe P98907          1946 Object Not Found      W

Opt: 1=Error Details  F24=More Keys
    
```

4. From the Pre-Promotion Edit History screen, press F5 (Perform Edit) to perform the pre-promotion edit.
5. Correct any errors and perform the edit until no errors occur. You do not need to resolve warnings that may occur.

The following table shows a partial list of errors and how to resolve them.

Error Code	Cause and Resolution
0020	<p>Cause: A 'From' library you entered does not exist or you are not authorized to use it.</p> <p>Resolution: Either correct the library name, create the library, or get authorization to use it.</p>
0092	<p>Cause: A database table or member could not be opened because it did not exist, a conflicting lock state held by another job exists, or you are not authorized to open it.</p> <p>Resolution: Check your job log messages.</p>
1046	<p>Cause: An XJDE or ZJDE version was expected but not found.</p> <p>Resolution: If an XJDE or ZJDE version should exist, create it. If not, then change the processing option for form ID P926304.</p>
1370	<p>Cause: A 'From' table you entered does not exist or you are not authorized to use it.</p> <p>Resolution: Review the 'From' library for the promotion path control table. Either correct the library name or create the table.</p>
1371	<p>Cause: A 'To' table you entered does not exist or you are not authorized to use it.</p> <p>Resolution: Review the 'To' library for the promotion path control table. Either correct the library name or create the table.</p>
1372	<p>Cause: A key you wanted to copy from the 'From' library does not exist.</p> <p>Resolution: Review the 'From' library for the promotion path control table. Either correct the library name or re-enter the data record.</p>
2892	<p>Cause: A 'From' library name is the same as the corresponding 'To' library name.</p> <p>Resolution: Review the 'From' and 'To' libraries for the promotion path control table. Make the appropriate changes.</p>

- 4395** **Cause:** No records exist in the Promotion Path Members table (F92401) for the promotion path you specified.
- Resolution:** Complete the Promotion Path Members form for the promotion path.
- 4396** **Cause:** No records exist in the Promotion Path Members table (F92401) for the promotion path you specified.
- Resolution:** Complete the Promotion Path Control Files form for the promotion path.
- 4397** **Cause:** No records exist in the SAR Log table (F9810) for the project you specified.
- Resolution:** In the project master record, change the based-on table for the Pre-Promotion Edit to the SAR Detail table (F4802), then manually update the SAR Detail records for the members and control table records updated by this project.
- 4400** **Cause:** No record exists in the Promotion Path Members table (F92401) for the function code of the member you want to promote.
- Resolution:** For the specified promotion path, enter the environment for the function code of the member.
- 4402** **Cause:** No record exists in the Promotion Path Control Files table (F92402) for the control table you want to promote.
- Resolution:** For the specified promotion path, enter the environment for the control table of the record.
- 4439** **Cause:** An error occurred while you attempted to copy a source code member.
- Resolution:** Check for valid library, table, and member names, as well as options in the CPYF command. Check the job log for the error message ID.

Promoting a Project

The promotion process involves transferring members and copying control file data.

Before You Begin

- Before you promote the project, be sure you have edited all items that appear on the SAR Log Transfer screen. Otherwise, the SAR Log Transfer screen appears when you attempt to promote the project.
- You must update all SAR log records associated with the SAR before you promote it.
- You also must resolve all errors (not warnings) before you promote the SAR.

▶ To promote a project

1. From the Promote a Project screen, inquire on the project you want to promote.
2. In the OP (Option) fields next to the project elements you want to promote, enter 4 (Promote).

NOTE: Press F14 to select all project elements automatically for promotion.

The Project Promotion Paths window appears.

3. In the O (Option) field next to the promotion path you want to use, enter 4 (Select).

```

924124                               Software Transfer

Project. . . . . TEC                 Tech Foundation Corrections
SAR Number . . . . 1079777          Multiple Jobs Submitted
Promotion Path . JDF73              Transfer to JDF73
Release. . . . . A73                Errors . . 000  Warnings . . 006
    
```

O	Member	From Environment			To Environment		
		Src File	Src Libr	Obj Libr	Src File	Src Libr	Obj Libr
P	ID						
-	J924147	JDECLSRC	PGFSRC73	PGFOBJ73	JDESRC	JDFSRC73	JDFOBJ73
-	P92402	JDESRC	PGFSRC73	PGFOBJ73	JDESRC	JDFSRC73	JDFOBJ73
-	P924124	JDESRC	PGFSRC73	PGFOBJ73	JDESRC	JDFSRC73	JDFOBJ73
-	P924127	JDESRC	PGFSRC73	PGFOBJ73	JDESRC	JDFSRC73	JDFOBJ73
-	P924147	JDESRC	PGFSRC73	PGFOBJ73	JDESRC	JDFSRC73	JDFOBJ73
-	V92402	JDESRC	PGRSRC73	PGFOBJ73	JDESRC	JDFSRC73	JDFOBJ73

Opt: 1=Src & Obj 2=Src 3=Obj F4=More F5=Ctl Files F6=Override F15=Edit Hist

- In the OP (OPTION) fields next to the member IDs, specify whether to transfer:
 - Both source and object code (option 1)
 - Source code only (option 2), or
 - Object code only (option 3)

NOTE: To override the From Environment and To Environment object libraries before you transfer the members, press F6 before you enter options 1, 2, or 3. Enter the names of the object libraries to which you want the members transferred.

The system transfers the members you selected to the target environment.

NOTE: You can review the batch job that was submitted by this transfer program from the J.D. Edwards command line. To display the command line, press F2.

If your promotion is successful, the system deletes all SAR log records for transferred items. It also creates a new SAR log record for each transferred item and associates it with the target library.

- To copy control file data, press F5 (Control Files) from the Software Transfer screen.

```
924127                               Control Files Copy

Project. . . . . TEC                 Tech Foundation Corrections
SAR Number . . . 1079777           Multiple Jobs Submitted
Promotion Path . JDF73             Transfer to JDF73
Release. . . . . A73               Errors . . 000 Warnings . . 000

O
P Record Type      Member   Secondary  Data Libr  Data Libr
                                                                           
                                                                           
- M - Data Dictio 4888             JDFCTL73    JDFTEM71
- M - Data Dictio 4889             JDFCTL73    JDFTEM71

- F - Software Re J9242S           JDFCTL73    JDFTEM71
- F - Software Re P9242D           JDFCTL73    JDFTEM71

Opt: 1=Copy to target library  F13=Copy All  F15=Edit History
```

6. In the OP (Option) fields next to the items you want to copy, enter 1 (Copy to target library).

NOTE: Press F13 to select all items automatically for copying.

The system copies the items you selected to the target environment.

Promote Project Updates

Promoting Project Updates

The version control process for project updates includes the following general steps.

- Create the transfer library
- Prepare the SAR system
- Define promotion paths
- Define a project
- Update the SARs
- Validate the promotion path
- Promote a SAR
- Save the transfer library to tape (or to a save file for a network)
- Restore the transfer library from tape (or from the save file)
- Print the transfer library report
- Load the transfer library

NOTE: You can merge entire control files or individual records.

Creating the Transfer Library

▶ **To create the transfer library**

1. From the Software Install menu (G9262), choose Build Transfer Library.

```
WARNING!!!

If you specify a library that already exists on you system to be used
as a software transfer library it will be cleared prior to use.
    All data and objects in that library will be lost.

If the library you specify does not exit it will be created for you.

( F6 - Execute )
```

2. After you read the warning message, press F6 (Execute).

```
98312                Build Transfer Library      Form ID. . . . P92414
Build Skeleton Transfer Library                 Version. . . . ZJDE0001
                                                Display Level. 4

This job has various options described below. Enter the desired values and
press ENTER to continue.

Enter the name of the transfer library          MYLIBRARY
to be created. If the library already
exists it will be CLEARED before use.

F5=Printer Overrides
```


3. In the processing option field, enter a name for the transfer library you want to create.

▶ **To prepare the SAR system**

To prepare your SAR system, see *Prepare the SAR System* in this publication.

▶ **To define a promotion path**

From the Version Control menu (G9261), choose Manage Promotion Paths. Use the project update library name as your promotion path name. For information about defining a promotion path, see *Define Promotion Paths* in this publication.

▶ **To define a project**

To define a project, see *Define a Project* in this publication.

▶ **To update the SARs**

From the Software Install menu (G9262), choose Edit and Promote. For information about updating a SAR, see *Update the SARs* in *Promote a SAR* in this publication.

▶ **To validate the promotion path**

From the Software Install menu (G9262), choose Edit and Promote. For information about validating a promotion path, see *Validate the Promotion Path* in *Promote a SAR* in this publication.

▶ **To promote the project**

From the Software Install menu (G9262), choose Edit and Promote. For information about promoting a SAR, see *Promote the Project* in *Promote a SAR* in this publication.

Saving the Transfer Library to Tape

▶ **To save the transfer library to tape**

1. From the Software Install menu (G9262), choose Save Library to Tape.

```
                                Save Library (SAVLIB)

Type choices, press Enter.

Library . . . . . MYLIBRARY   Name, *NONSYS, *ALLUSR, *IBM
                + for more values
Device . . . . . TAP01       Name, *SAVF
                + for more values

                                                                    Bottom
F3=Exit   F4=Prompt   F5=Refresh   F10=Additional parameters   F12=Cancel
F13=How to use this display   F24=More keys
```

2. In the Library field, type the name of your transfer library.
3. In the Device field, enter the name of your tape device.

Restoring the Transfer Library from Tape

► **To restore the transfer library from tape**

1. From the Software Install menu (G9262), choose Restore Library from Tape.

```

                                Restore Library (RSTLIB)

Type choices, press Enter.

Saved library . . . . . MYLIBRARY      Name, *NONSYS, *ALLUSR, *IBM
Device . . . . . TAP01                Name, *SAVF
                                + for more values

F3=Exit   F4=Prompt   F5=Refresh   F10=Additional parameters   F12=Cancel
F13=How to use this display   F24=More keys

                                Bottom
  
```

2. In the Saved Library field, type the name of your transfer library.
3. In the Device field, enter the name of your tape device.

Printing the Transfer Library Report

► **To print the transfer library report**

1. From the Software Install menu (G9262), choose Print Transfer Report.

A processing options screen appears. Use the roll keys to display additional processing options.

```
98312                Print Transfer report          Form ID. . . . P924143
Control File Changes to be Installed              Version. . . . ZJDE0001
                                                    Display Level. 4

This job has various options described below. Enter the desired values and
press ENTER to continue.

Enter name of Transfer Library.                   MYLIBRARY

Print UDCs                1=Yes, 0=No.            1_____
Print AAIs                 1=Yes, 0=No.            1_____
Print Menus                1=Yes, 0=No.            1_____
Print Data Dictionary      1=Yes, 0=No.            1_____
Print Vocabulary/Exits     1=Yes, 0=No.            1_____
Print CASE specs           1=Yes, 0=No.            1_____

More... +
F5=Printer Overrides
```

```
98312                Print Transfer report      Form ID. . . . P924143
Control File Changes to be Installed           Version. . . . ZJDE0001
                                                Display Level. 4

This job has various options described below. Enter the desired values and
press ENTER to continue.

Print Helps                1=Yes, 0=No.        1_____ -
Print SVR                  1=Yes, 0=No.        1_____
Print DREAMWriter         1=Yes, 0=No.        1_____
Print Next Numbers        1=Yes, 0=No.        1_____

                        Bottom.

                        F5=Printer Overrides
```

2. In the first processing option field, type the name of your transfer library.
3. In the remaining processing option fields, select the types of control files for which you want to print information.
4. To print the report, press Enter.

An example of the Print Install Records report (P924143) follows. It provides the total number of records for each type of control file. It also shows whether the transfer record exists already in your control file.

Record Type	Primary Item	Secondary Item	Description	New/Change
924143	J.D. Edwards & Company Print Install Records			Page - 2 Date - 2/05/96
-----	-----	-----	-----	-----
Menus	G9261		Version Control	Changed
Menus	G9262		Software Install	Changed
Total Number of Records for		Menus	00002	
.
DREAMwriter / PO	P00PURGE	ZJDE0024	Payee Control File Purge	Changed
DREAMwriter / PO	P92412	ZJDE0001	Promote a Project	Changed
DREAMwriter / PO	P92413	ZJDE0001	Manage Projects	Changed
DREAMwriter / PO	P92414	ZJDE0001	Build Skeleton Transfer Librar	Changed
DREAMwriter / PO	P924143	ZJDE0001	Control File Changes to be Ins	Changed
DREAMwriter / PO	P924147	ZJDE0001	Load Transfer Software	Changed
DREAMwriter / PO	P924801	ZJDE0001	SAR Inquiry by Reference	Changed
Total Number of Records for		DREAMwriter / PO	00007	
.
Vocabulary /Exits	R924143		Print Install Records	Changed
Vocabulary /Exits	V9240		Promotion Path	Changed
Vocabulary /Exits	V9240W		Promotion Path Master Window	Changed
Total Number of Records for		Vocabulary /Exits	00030	

Loading the Transfer Library

Before You Begin

- Before you load the transfer library, you must create new target libraries for the objects, source code, and data files you will transfer. In your target source library, you must create the following multi-member source files:

JDESRC

JDECPY

F98CRTCMD

To load the transfer library

Load the contents of your transfer library into your target libraries. The process merges control file records into your library files. You also can transfer control file records individually. For more information, see *Transfer Individual Control File Records* following this procedure.

1. From the Software Install menu (G9262), choose Load Transferred Library.

```

                                WARNING!!!

This program will transfer source code, objects and new data files into the
  libraries you name in the processing options.  It will also add to or
  replace data in the control files in your current library list.

It is recommended that you first run the 'Print Transfer Report' to view
control file changes.

                                ( F6 - Execute )

```

2. After you read the warning message, press F6 (Execute).

A processing options screen appears. Use the roll keys to display additional processing options.

```

98312                                Load Transferred Library      Form ID. . . . P924147
Load Transfer Software                Version. . . . ZJDE0001
                                       Display Level. 4

This job has various options described below. Enter the desired values and
press ENTER to continue.

Enter name of Transfer Library or      MYLIBRARY
blank for no transfer.                _____

Enter name of Target Object Library or MYOBJ
blank for no transfer.                _____

Enter Name of Target Source Library or MYSRC
blank for no transfer.                _____

EnterName of Target New Files Library or MYDATA
blank for no transfer.                _____

                                More... +
                                F5=Printer Overrides

```

```

98312                      Load Transferred Library      Form ID. . . . P924147
Load Transfer Software      Version. . . . ZJDE0001
                             Display Level. 4

This job has various options described below. Enter the desired values and
press ENTER to continue.

Transfer UDCs                1=Yes, 0=No.              0_____ -
Transfer AAI's              1=Yes, 0=No.              0_____
Transfer Menus              1=Yes, 0=No.              0_____
Transfer Data Dictionary    1=Yes, 0=No.              1_____
Transfer Vocabulary/Exits  1=Yes, 0=No.              0_____
Transfer CASE specs        1=Yes, 0=No.              0_____
Transfer Helps             1=Yes, 0=No.              0_____

                             More...                      +

F5=Printer Overrides
    
```

```

98312                      Load Transferred Library      Form ID. . . . P924147
Load Transfer Software      Version. . . . ZJDE0001
                             Display Level. 4

This job has various options described below. Enter the desired values and
press ENTER to continue.

Transfer SVR                1=Yes, 0=No.              0_____ -
Transfer DREAMwriter       1=Yes, 0=No.              0_____

                             Bottom.

F5=Printer Overrides
    
```

3. In the first processing option field, specify the name of your transfer library.
4. In the next three fields, specify the libraries you created for the source code, objects, and data files you will transfer.
5. In the remaining fields, select the control files you want the system to transfer.
6. To begin the transfer, press Enter.

IMPORTANT: The system merges the control files into the target data library. For non-control files, the system adds the file if it currently does not exist in the

target data library. If the file does exist in the target data library, the system does not transfer the file or any data. After the transfer process completes, you must change these files manually based on information in the Print Install Records report (P924143).

NOTE: Even though you can include next numbers in the transfer library and display information about them in the Print Install Records report, the system will not transfer them automatically. This protects your next number tables. After the transfer process completes, you must change them manually based on information in the report.

Transferring Individual Control Table Records

► **To transfer individual control table records**

1. From the Software Install menu (G9262), choose Copy DD,VO,DW,UDC,SVR,Menus.

```

99630                               Copy DD,VO,DW,UDC,SVR,Menus

From Library . . . . . MYLIBRARY    To Library . . . . . MYDATA

Dictionary Item. . . . . _____ Language . __   Appl Ovr . ____
                                   Scrn/Rpt . _____

Vocabulary Overrides . _____ Language . __   Appl Ovr . ____

DREAM Writer Form. . . _____ Language . __

User Def Codes Sys . . ____       Language . __
  Type. . . . . ____

Software Versions Rep. _____

Menu Identification. . _____

Generic Rate/Msg Sys . ____
  Type. . . . . ____

                                   F24=More
    
```

2. In the From Library, type the name of your transfer library.
3. In the To Library, type the name of the target data file library.
4. In the appropriate fields, enter information that is specific to the control file record you want to transfer.



Programming Tools

Objectives

- To work with data modeling
- To understand the Software Versions Repository
- To set up user defined values
- To retrieve information
- To create data description specifications
- To design and maintain display forms
- To design reports

About Programming Tools

Perform the following tasks:

- Work with Data Modeling
- Work with Software Versions Repository
- Work with the Object Cross-Reference Repository
- Work with Data Dictionary
- Work with Data File Design Aid
- Work with Screen Design Aid
- Work with Report Design Aid



Work with Data Modeling

Working with Data Modeling

The Data Modeling feature provides graphic representation of the relationships of different files. The important aspects of J.D. Edwards Data Modeling feature are:

It is graphical in its presentation.

It allows you to narrow the amount of information you view so you can better analyze the file and data relationships.

It is integrated back to the data dictionary and other cross reference tools.

Because data models only display files for those systems you have installed at your location, the examples in this section may vary from the ones at your company.

In order to create a data model, you must run the Data Model rebuild.

Accessing Data Modeling

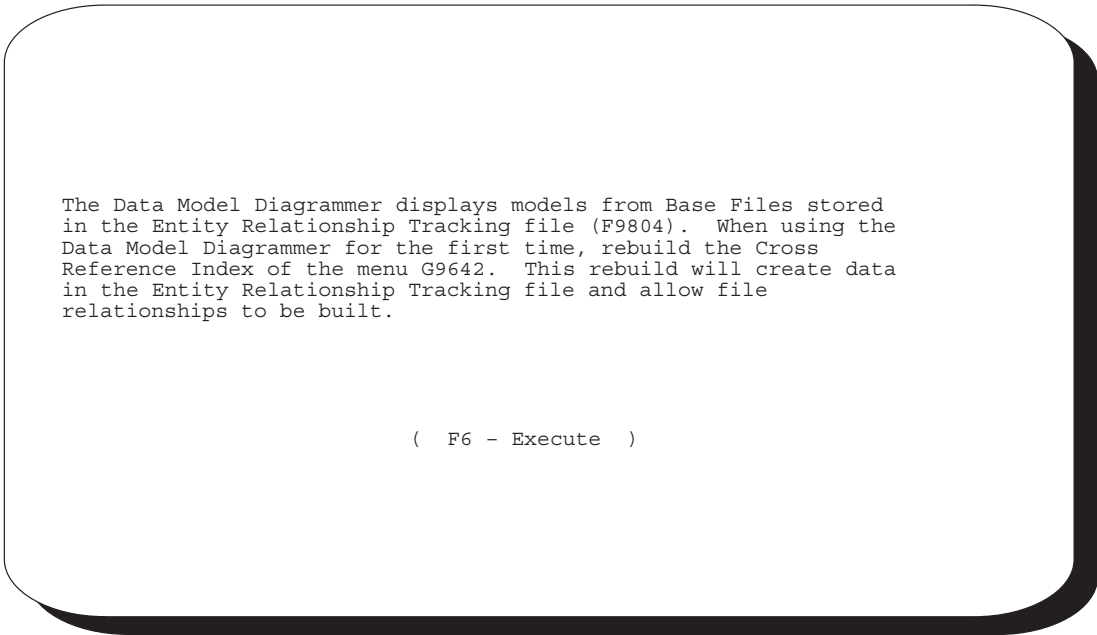
There are two ways to access Data Modeling.

▶ **To access data modeling**

1. Use one of the following two methods to access Data Modeling.

Inquire on the file through the Software Versions Repository and then press F23

Select Data Modeling from Model Relations



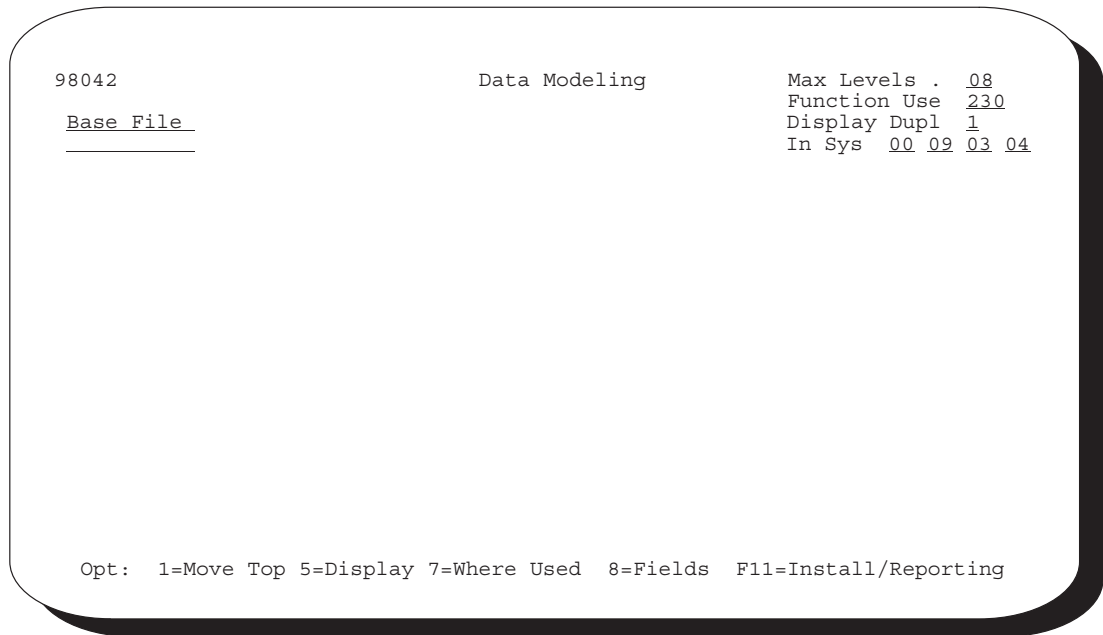
The Data Model Diagrammer displays models from Base Files stored in the Entity Relationship Tracking file (F9804). When using the Data Model Diagrammer for the first time, rebuild the Cross Reference Index of the menu G9642. This rebuild will create data in the Entity Relationship Tracking file and allow file relationships to be built.

(F6 - Execute)

A menu message screen appears suggesting the sample data you can use to view a supplied data model.

2. Press F6 to continue.

The Data Modeling screen appears with the cursor positioned in the field where the user enters a file name.



3. To view the Data Model, enter a file name and press Enter.

Field	Explanation
Max Levels	Determines what level of detail you want to view in terms of file relationships. Level 1 represents the highest level and level 10 represents the lowest level. The default value is level 08. Level 01 shows only those files that are directly related to the data model file.
Function Use	Displays the files that either match or have a function use less than the specified function use you specify.
Display Dupl	Determines whether you want to display duplicate relationships or not. The valid values are: 1 – no duplicates (default value) 2 – first logical only 3 – all files
In Sys	Limits your model to only those files from the specified install or reporting system codes. To toggle to reporting system codes, you press F11, Install/Reporting.

- 4. To narrow the amount of file information displayed specify values in the four fields appearing in the upper right of the screen.

```
98042                               Data Modeling                Max Levels . 08
                               Base File                    Function Use 230
                               F0006 Business Unit Master        Display Dupl 1
                                                                In Sys 00 09 03 04
- <M:1> F0010  F0010      Company Constants
- |
- |   <1:M> F0901  F0901LE  Account Master
- |   |
- |   |   -M:M> F4801  F4801LB  Work Order Master File
- |   |   |
- |   |   |   -M:1> F0902  F0902LA  Account Balances
- |   |   |   |
- |   |   |   |   -M:M> F0311  F0311LG  Accounts Receivable Ledger
- |   |   |   |   |
- |   |   |   |   |   -M:M> F0411  F0411LK  Accounts Payable Ledger
- |   |   |   |   |   |
- |   |   |   |   |   |   -M:M> F0911  F0911LD  Account Ledger

Opt:  1=Move Top 5=Display 7=Where Used 8=Fields F11=Install/Reporting
```


Detailed Explanation of a Line

```

Base File
  F0006      Business Unit Master
  |<M:1> F0010   F0010   Company Constants
  
```

Business Unit Master is the primary file (F0006)

Company Constants is the secondary file (F0010)

<m: |> - There is a many to one, two way direction relation between the files

Field	Explanation
Quantifier	The quantifier notation indicates the following: M:1 – many to one 1:M – one to many M:M – many to many M:N – many to zero or many N:M – zero or many to many 1:N – one to zero or many 1:1 – one to one
Direction	The three direction notation are as follows -> refers to <- referred to <-> two way relation
Type	Used to distinguish between prototype and permanent files
Subfile portion of screen	Displays the key fields that relate these two files together

Function Key Exits from Data Modeling



Install/Reporting

Allows the user to toggle between displaying install or reporting system codes.



Rebuild A File Relationship

To rebuild a data model.

Exits to a DREAM Writer versions list.

The rebuild is fundamentally based upon the program finding a connection between data items.

For example:

If you create new data items in the Data Dictionary and use those data items when creating a new file, you will *not* get a graphic representation for that file because the data items do not exist in any other file. In order to create and present file relationships, there must be at least one data item in the primary file that also resides in some other file as well.

Selection Exits from Data Modeling

Selection 1 – Move Top

To select a file in the current data model and move it to the top to view its data model.

Selection 5 – Display

To view the file relationships

The Define a File Relationship screen appears displaying the relationship detail for the two files.

Selection 7 – Where Used

Exits to the Object Cross Reference Repository and displays all the programs that access the particular file.

```

980014                               Cross Reference
Object: Name . . . F0006             Business Unit Master
        Type . . . F                 All programs using file
        To Display P
        Funct Cd . _____

O  Name                Description                Field Attr T Start Upd
P  _____          _____                Len  Dec  Y  Loc  Y/N
- PJON                 Jon Nugent Test                                N
- P0006                Business Unit Master Revisions - Single          Y
- P0006A               Business Unit Structure Revisions                Y
- P0006ISS              File Conversion - Plug the default value          Y
- P0006P                Business Unit Master Print                        N
- P0006QD               Update Bill Code If Business Unit Type = C        N
- P00061                Job Master Revisions                            Y
- P00062                Property/Building Revisions                      Y
- P00071                Work Day Calendar                               N
- P0012                 Automatic Accounting Instructions Revisi         N
- P0013QD               Convert Amounts to Domestic Decimal              N
- P0018                 Tax File Revisions                              N
- P0018P3               Tax Detail Report by Tax Authority               N

Opt: 1=SVR  2=Create Object  3=Field Explanation  F21=Print  F16=Regenerate
    
```

Selection 8 – Fields

To access the File Field Description window for any file displayed in the Data Model.

Presents all the fields in a file, the field type, their size and their position in the file.

```

98042                               Data Modeling                               Max Levels . 08
                                       Function Use 230
Base File                               Display Dupl 1
F0010 Company Constants                 In Sys 00 09 03 04

8 <1:M> F0006   F0006LB   Business Unit Master
-   |         -M:1> F0901   F0901LB   Account Master
-   |         |         -M:M> F4801   F4801LB   Work Order Master File
-   |         |         -M:1> 98FFD-----File-Field-Descriptions-----S/FMT
-   |         |         | File and Libr:  F0006   TEST   PF
-   |         |         | - I0006   - Business Unit Master File
-   |         |         | - MCMCU  K01 Business Unit. . . . A   12   1
-   |         |         | - MCDL01 Description. . . . . A   30   13
-   |         |         | - MCDC   Description - Compre A   25   43
-   |         |         | - MCLDM  Level of Detail. . . A   1   68
-   |         |         | - MCAN8  Address Number . . . S   8 0  69
-   |         |         | - MCO    Company. . . . . A   3   77
-   |         |         | - MCSTYL Type Business Unit . A   2   80
-   |         |         | - MCRP01 Division x . . . . . A   3   82
-   |         |         | - MCRP02 Region . . . . . A   3   85
-   |         |         | Opt:-2=Dictionary--4=Sel--F15=Resequene--F3=Return
Opt: 1=Move Top 5=Display 7=Where Used 8=Fields F11=Install/Reporting
    
```

Work with the Object Cross Reference Repository

Working with the Object Cross Reference Repository

The Object Cross-Reference Repository locates all the objects associated with a particular member or object. When you add a new member to the Software Versions Repository, run the Rebuild Cross-Reference job to have the new member included in the display. You must have source on your machine to run this rebuild and display this option.

Complete the following tasks:

- Access the Object Cross-Reference Repository
- Conduct an Object Cross-Reference Repository search

Accessing the Object Cross-Reference Repository

▶ To access the Object Cross-Reference Repository

Select one of the following methods.

From the Master Directory, select the Technical and Advanced Operations menu. From the Technical and Advanced Operations menu (G9), select Documentation Services. From the Documentation Services menu (G91), select Object Cross Reference Repository.

From Software Version Repository use F15 to access the Object Cross Reference Repository.

Example

The screen below displays all programs using the file F0006.

The first four fields on this screen relate to the object being cross-referenced. The remainder of the screen lists the members found during the cross-reference search.

```
980014                Object Cross Ref. Repository
Object: Name . . . F0006      Business Unit Master
      Type . . . F          All programs using file
      To Display P
      Funct Cd . _____

O  Name                Description                Field Attr T Start Upd
P  _____          _____          _____
- P000661      Business Unit Master Conversion                Y
- P06238       Report - Payroll Check Register                N
- P06371       Report - Certified Payroll Register            N
- P06611I     Tip Credit Generation with Interim Check        N
- P06638       Sales Allocation Report                        N
- P126410     STAR - Columnar Spreadsheet                            N
- P200        Submit Network Job                                    N
- P23250      Texas 250 Report                                        N
- P26011     Gas Balancing - Entitlement Extract                        N
- P26112     Gas Balancing - Entitlement Explosion to                    N
- P26115     Gas Balancing Statement by Sales Point                    N
- P26116     Gas Balancing Statement by Owner                          N
- P26119     Gas Balancing Master Subfile Display                      N

Opt:  1=SVR  2=Create Object  3=Field Expl  F21=Print  F16=Regenerate
```

Conducting a Search

All members of the Software Versions Repository are cross-referenced, and you can search for these relationships in different ways.

► **To conduct an Object Cross-Reference Repository search**

From the Documentation Services menu (G91), select Object Cross Ref. Repository.

The following screen displays the statistics for program P0006.

```

980014                               Object Cross Ref. Repository
Object: Name . . . P0006 Business Unit Master Revisions - Single
Type . . . P Statistics for program
To Display #
Funct Cd . _____

O  Name          Description          Field Attr T Start Upd
P  _____          _____          Len  Dec  Y  Loc  Y/N
-
-  1,259 Total Statements in RPG II
-  1,313 Total Statements as Comments
-  1,313 Total Statements in RPG III
-  3,993 Total Statements in Program
    
```

1. To conduct an object cross-reference repository search, enter an object Name, Type code and To Display code. To narrow the search, enter a Funct Cd.

If you are unfamiliar with the Cross-Reference Relationships codes, type an asterisk (*) in the Type field, as shown below. Press Enter.

The window opens, and the Cross Reference Relationships codes appear.

```

Object: Name . . . F0006 Business Unit Master
Type . . . *
To Display -
Funct Cd . _____

O  Name          Description          Field Attr T Start Upd
P  _____          _____          Len  Dec  Y  Loc  Y/N
    
```

```

81QM      User Defined Codes Window
98      XR      Cross-Reference Relationships
Skip To Code . . . . .
- /D      All data fields in /COPY
- /F      All files in /COPY
- /I      Program invocations from /COPY
- /P      Programs containing /COPY
- CP      All Programs using command
- DF      All files using data field
- DP      All programs using data field
- EP      Error messages in a program
- F/      All /COPY members using file
4 FD      All data fields in file
Opt: 4=Select F9=Glossary F14=Memo
    
```

2. Enter 4 in the single character field to the left of the desired code. The window closes and the Object Cross Ref. Repository screen displays with the selected codes.

```

980014      Object Cross Ref. Repository
Object: Name . . . F0006      Business Unit Master
Type . . . F      All data fields in file
To Display D
Funct Cd .
    
```

O	Name	Description	Field Len	Attr Dec	T Y	Start Loc	Upd Y/N
P	MCMCU	Business Unit	12		A	1	
-	MCSTYL	Type Business Unit	2		A	13	
-	MCDC	Description - Compressed	40		A	15	
-	MCLDM	Level of Detail	1		A	55	
-	MCCO	Company	5		A	56	
-	MCAN8	Address Number	8	0	S	61	
-	MCAN80	Owner/Receivable Address	8	0	S	69	
-	MCCNTY	County	3		A	77	
-	MCADDS	State	3		A	80	
-	MCDL01	Description	30		A	83	
-	MCDL02	Description 02	30		A	113	
-	MCDL03	Description 03	30		A	143	
-	MCDL04	Description 04	30		A	173	

```

Opt: 1=SVR 2=Create Object 3=Field Expl F21=Print F16=Regenerate
    
```


Data Dictionary Repository

About the Data Dictionary Repository

The Data Dictionary is singularly the most powerful element in all of J.D. Edwards' software offerings. We define all data items used by J.D. Edwards programs in the Data Dictionary. By requiring this up-front definition, the Data Dictionary enforces uniformity, consistency, and accuracy across all J.D. Edwards applications.

The Data Dictionary represents a centralized glossary of all:

- Field definitions
- Program error messages, both interactive and batch
- Menu messages
- Work fields
- User Defined Help instructions
- Program and field descriptions accessed by the Help facility

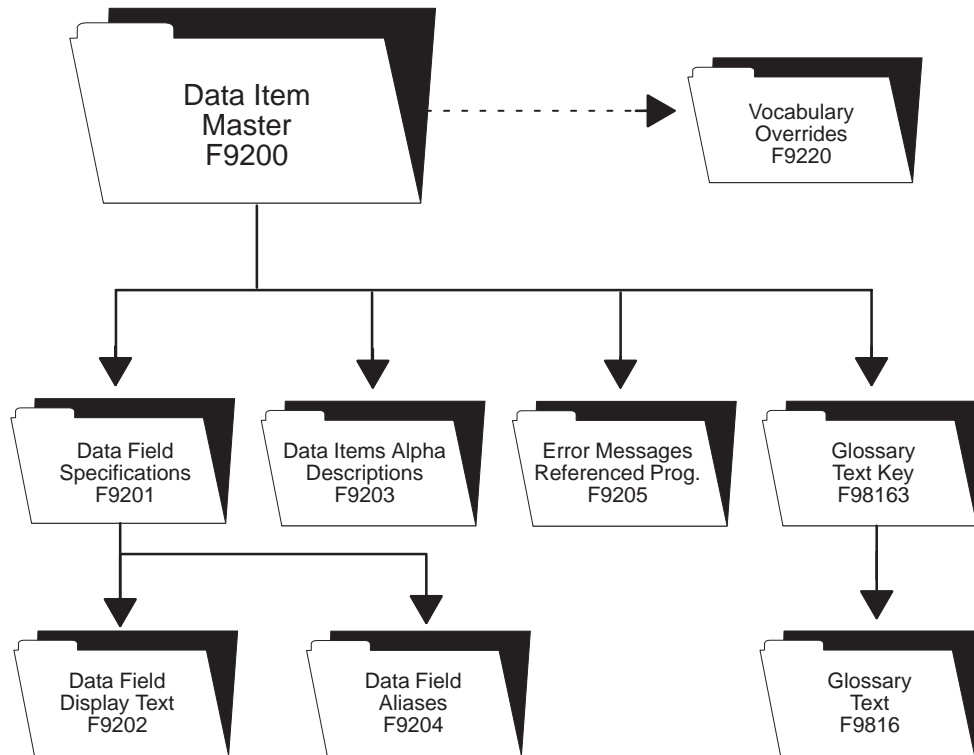
Complete the following tasks:

- Understand the Data Dictionary structure
- Locate a data item name
- Work with the Data Dictionary
- Work with data item alias revisions
- Work with Data Dictionary glossary
- Work with user defined help instructions
- Work with data field descriptions
- Work with the next numbers facility
- Locate the field reference rebuild

Understanding the Data Dictionary Structure

Eight separate files comprise the Data Dictionary Repository.

The following diagram illustrates the relationships between these files.



Data Item Master (F9200)

This is the master file for the Data Dictionary. Every data item has a record in this file.

Data Field Specifications (F9201)

This file contains database fields, which is a glossary group of “D” or “S,” work fields, glossary group “U,” and categories, glossary group “C.” This file contains the base display/validation rules for all file and data items.

Data Field Display Text (F9202)

This file lets you define multiple row descriptions and column titles for each data item, based upon language and/or reporting system — application override. You may add a language value for each language translation required for the row description and column title. The reporting system code allows the entry of jargon or company terminology.

Data Item Alpha Descriptions (F9203)

This file contains the alpha and compressed descriptions for all data items. This allows users to perform a Data Dictionary search by description. You may also specify separate alpha descriptions by language preference and reporting system. Every data item has a record in this file.

Data Item Aliases (F9204)

This file only contains database fields, which is a glossary group of “D” or “S”. This file contains multiple aliases for both a COBOL alias and a C alias for each data item.

Error Message Program ID (F9205)

This file contains error messages that have a program, video, or report ID attached to them. The user exits to this program, video, or report when he/she receives the error. For example, if a user receives a user defined code error, he/she could exit to User Defined Code Revisions program to modify a value.

Glossary Text File (F9816)

This file contains the glossary text for every data item. Each line of text in the glossary is one record.

Key Index File (F98163)

This file contains key information to link the data items to their glossary and to specific items.

Locating A Data Item Name

The system uses data items to define the parameters of a field or message. For example, AT1 defines the field Search Type. The system maintains each data item used in a file or retrieved for a form or report based on a data item name, such as AT1. To work with the Data Dictionary functions you need to know this name.

► **To locate a data item name**

The J.D. Edwards field-level help displays data item names.

Position the cursor on any field and press F1.

For example, position the cursor in the Search Type field on the Address Book Revisions form and press F1. The User Defined Codes form displays for the Search Type field. In the upper right corner of this form is the data item name for the Search Type field, which is AT1.

01051 Address Book Revisions
Long Addr No. _____
Resp. Bus. Unit . . . _____

Action Code . . . -
Address Number : _____

Alpha Name . . . _____

Search Type . . . _____
Payables Y/N/M . . -
Receivable Y/N . . -
Employee Y/N . . -
User Code . . . -
Subldgr Inact. . . -

81QM User Defined Codes Window **AT1**

01 ST Search Type

Skip To Code

- A Applicants
- C Customers
- E Employees
- F Facilities
- I Investors
- J Jobs
- M Mail Distribution List
- O Company
- P Prospects
- Q Participants

Opt: 4=Select F9=Glossary F14=Memo

13=Add'l Info F24=More

The data item name is always in the upper right corner of the help form, no matter which help form displays, such as the User Defined Codes form or the field explanation form.

Working with the Data Dictionary

The Data Dictionary provides many useful abilities. You can create data item aliases for other programming languages, work with the glossary, add or change user defined help instructions, and locate data field descriptions.

▶ **To work with the Data Dictionary**

From menu G92, choose Data Dictionary. The Data Dictionary form displays.

```

9201                               Data Dictionary                               Rls Last Chg _____
Action Code . . . . . _                                         Item Parent. _____
Data Item . . . . . _____
Glossary Group . . . . . _
-----
Alpha Desc . . . . . _____                               General Information
Reporting System . . . . . _____
System Code . . . . . _____                               Type . _ Size . _____ Data File Decimals __
Data Item Class . . . . . _____                           Item Occurrences ____ Display Decimals . _
-----
Row Description . . . . . _____                               Descriptions
Column Title . . . . . _____
-----
Default Value . . . . . _____                               Default and Display/Edit Rules
Data Display Rules _____ Justify. _
Data Edit Rules . . . . . _____
-----
Search Program . . . . . _____
Next Nbr System . . . . . _____ Next Number Index . . . . . _
-----
F4=Search F8=UDC F9=Prev F10=Glossary F11=Descriptions F15=Where Used

```

You will find the Data Dictionary selection on several J.D. Edwards menus and repository services.

Also display Data Dictionary by entering the mnemonic DD in the Selection line of any J.D. Edwards menu.

Use the following fields where applicable:

Field	Explanation
Release Number	The release number as defined in the Software Versions Repository file.
Data Field – Parent	A data item which becomes the template from which other data items are created. For example: AC (Category Codes) is the parent to AC01.

Field	Explanation
Data Item	<p>The RPG data name. This data field has been set up as a 10-byte field for future use. Currently, it is restricted to 4 bytes so that, when preceded by a 2-byte table prefix, the RPG data name will not exceed 6 bytes.</p> <p>Within the Data Dictionary, all data items are referenced by this 4-byte data name. As they are used in database tables, a 2-character prefix is added to create unique data names in each table specification (DDS). Special characters are not allowed as part of the data item name, with the exception of #, @, \$.</p> <p>You can create protected data names by using \$xxx and @xxx, where you define xxx.</p>
Glossary Group	<p>A code which designates a type of data used to select data dictionary terms for printing. See User Defined Codes, system code '98', record type 'GG'.</p> <p>The data item names for error messages are assigned automatically.</p> <p>The data item name for a non-database field (used on a video or report but not in a file – glossary group U) must begin with a #.</p>
Description–Alpha	<p>Categorizes data item names. Enter text in upper and lower case. The system uses this field to search for similar data items. To enter an alpha description, follow these conventions:</p> <ul style="list-style-type: none"> Dates – Begin all Date fields with Date - Amounts – Begin all Amount fields with Amount - Units – Begin all Unit, Quantity, and Volume fields with Units - Name – Begin all 30-byte description fields with Name - Prompt – Begin any Y/N prompting field with Prompt - Address Number – Begin all address numbers (employee, customer, owner) with Address Number
System Code/Reporting	<p>A code that designates the system number for reporting and jargon purposes. See UDC 98/SY.</p>
System Code	<p>A user defined code (98/SY) that identifies a J.D. Edwards system.</p>
Data Item Type	<p>The type of data. The data item types are defined in User Defined Codes, system code '98', record type 'DT'. Note: All amount fields should be entered as 15 bytes, 0 decimals, and data item type should be P (packed).</p>
Data Item Size	<p>The field size of the data item.</p> <p>NOTE: All amount fields should be entered as 15 bytes, 0 decimals, and the data item type should be P (packed).</p>
Data File Decimals	<p>The number of positions to the right of the decimal of the data item.</p>

Field	Explanation
Data Item Class	Data item class. A class defines the essential attributes and characteristics of a data item. Informational only.
Number of Array Elements	<p>In setting up a data item in the data dictionary, you may specify a number of array elements. This will cause the automatic creation of one additional data item for each array element.</p> <p>The array data item names are restricted to certain lengths depending on the number of array elements:</p> <ul style="list-style-type: none"> 3 bytes – 1 to 9 elements 2 bytes – 10 to 99 elements 1 byte – 100 to 999 elements
Data Display Decimals	Use this parameter to designate the number of decimals in the currency, amount, or quantity fields the system displays. For example, U.S. Dollars would be 2 decimals, Japanese Yen would be no decimals, and Cameroon Francs would be 3 decimals.
Row Description	<p>Creates the title on text and reports. It is used in a manner similar to the column description in the query facility. It should be less than 35 characters. Use abbreviations whenever possible. For example:</p> <ul style="list-style-type: none"> U/M Units of measure YTD Year-to-date MTD Month-to-date PYE Prior year end QTY Quantity G/L General ledger A/P Accounts payable DEPR Depreciation
Column Title 1 – XREF build	The first line of description that will be used in column headings on a report or form. This description should be no larger than the data item size, if possible. If the column heading is only one line, it should be placed in this column. Use the second line of the Column Title when one is not clear.
Value for Entry – Default	<p>Used as the initial value on the data entry screen for the associated data item. The value entered must be the exact same length as the data item size. Place single quotes around the value if it contains any embedded blanks. The keywords *BLANKS and *ZEROS can be used as the default value. When entering a numeric data item with default values, the redisplay of the data item suppresses all leading zeros.</p> <p>CAUTION: If a blank entry is allowed, default values should not be used.</p>

Field	Explanation
Data Display Rules	<p>Keywords which describe a formatting technique applied when data is displayed.</p> <p>The developer can override these rules at the time of program creation.</p> <p>The current list of these rules is kept in the User Defined Codes table 98/DR.</p>
Data Edit Rules	<p>Keywords which describe an editing technique applied when data is entered. Validation applied to the data after Enter is pressed.</p> <p>The rule will be applied as specified in the F9207 table at the screen/report and/or the action code as desired.</p> <p>The developer can override these rules at the time of program creation.</p> <p>The current list of these rules is kept in the User Defined Codes at SYSTEM = 98 and RECORD TYPE = ER.</p>
Help Text Program	<p>The Help Text Program field is used to call a program when the function key - F1 is pressed on its Data Item. When F1 is pressed, the program entered in this field will be executed. If this field is left blank, the glossary will be used. If you wish the User Defined Code window to appear when F1 is pressed, enter '*UDC' in this field (this is the default when 'UDC' is entered in the Data Edit Rules field). If you do not want the UDC window to appear and you have 'UDC' in the Data Edit Rules field, change this field to be blank.</p> <p>Program Requirements: For your text program to work correctly, you must allow it to accept three standard parameters:</p> <ul style="list-style-type: none">PARAM 1 Field Name, size 10, type alphaPARAM 2 Return Value, size 30, type alphaPARAM 3 Return Description, size 30, type alpha
System Code – Next Numbers	<p>Designates the system number for the Next Number retrieval. See User Defined Codes, system code '98', record type 'SY'.</p>
Next Numbering Index Number	<p>The array element number retrieved in the Next Number Revisions program. For example, the next voucher number is array element '02' of system '04'.</p>

What You Should Know About

Data Dictionary Security Once a system is operational, you must be particularly careful to secure the integrity of the Data Dictionary. Two facilities are provided to aid you with the security:

Operational systems coding — System numbers and names are defined in User Defined Codes, system code 98, record type SY. If you place an X in the second line of description for a particular system, it will be designated as operational. Once a system has been set up as operational, all data fields coded to this system are protected from modifications. This control, however, can be violated by removing the X in User Defined Codes.

Action Code Security — A more prudent form of control is to assign change/delete authority to only one individual, the database administrator. If you choose to use this control, you should restrict access to the Data Dictionary program (P9201) in Action Code Security. See *Working with Action Code Security*. All users must be set up with add authority only. The database administrator would be set up with add/change/delete authority.

The Function Keys for the Data Dictionary

The following function keys are available from the Data Dictionary form.

F4 — A data item search facility. If you are a double-byte user, you must provide a search description for each data item you create or change in order for the search facility to function properly. Enter the search text in the Search Description field on the Data Dictionary screen.

F6 — Repository Services

F8 — User Defined Code Tables

F9 — Automatic Re inquiry

F15 — A data item cross reference

Working with Data Item Alias Revisions

Use the Data Item Alias form to assign alias names to a data item that other programming languages will use. When adding a data item of glossary group “D” or “S,” you must enter an alias for that field. This window automatically appears on an Add function when the alias is not unique. The alias defaults from the alpha description.

► **To work with data item alias revisions**

From Data Dictionary Repository

1. Press F5. The Data Field Alias form displays.

```

9201                                Data Dictionary Repository    Rls Last Chg _____
                                Item Parent. _____
Action Code. . . . I
Data Item. . . . . AT1_____
Glossary Group . . . D
-----
Alpha Desc . . . . Search
Reporting System . 01_____
System Code. . . . _____
Data Item Class. . _____
-----
Row Description. . Search
Column Title . . . S
                                T
                                -
----- Defa
Default Value. . . _____
Data Display Rules _____ Justify. _
Data Edit Rules. . UDC 01_____
                                ST_____
Search Program . . _____
Next Nbr System. . _____ Next Number Index . . _

F4=Search F8=UDC F9=Prev F10=Glossary F11=Descriptions F15=Where Used
    
```

```

9204                                Data Field Alias
Action Code. . . I
Data Item. . . . . AT1_____
Search Type
Alias
Type      Alias
1  ADDRESS TYPE 1
2  Address Type1
-----
                                F24=More
    
```

2. Enter an alias type and name.

An alias name must be unique to the system or the system will not let you exit from the Data Field Alias form.

Current alias types required:

1 = PL1 or COBOL

2 = C language

An alias needs to adhere to J.D. Edwards’ syntax rules of the ‘C’ language.

Working with the Data Dictionary Glossary

What are the Data Dictionary Glossary Groups?

The Data Dictionary consists of several glossary groupings that define the data item in the J.D. Edwards software. All glossary groups typically have associated text. The glossary stores this text. The major glossary groups follow:

- E** J.D. Edwards interactive error messages
- J.D. Edwards defines interactive error messages with numbers less than 5000 and with numbers from 000A to 999Z. For example, 0001 or 595C
- Client defines interactive error messages with numbers from 5001 to 9999
- M** Menu Messages
- J.D. Edwards defines menu message data items as MENUMSGxxx, where xxx represents a number. For example, MENUMSG044
- Client defines menu message data items as MENUCLTxxx, where xxx represents a number
- J** J.D. Edwards batch error messages
- J.D. Edwards defines batch error messages with JDExxxx, where xxxx represents a number less than 7000. For example, JDE0001 or JDE5000
- Client defines batch error messages with JDExxxx, where xxxx represents a number greater than 7000 and less than 9000
- The QJDEMSG message file contains batch error messages
- A J.D. Edwards program found on Rebuilds and Global Updates (G9642) must build the batch error messages files QJDEMSG
- C** Data Item Functions Categories
- Groups common data elements
- For example, CURRENCY

D or S	Primary or Secondary Data Items Used for validations Text on Videos Text on Reports Field Reference Files – F98FRFA–Z \$ and @ For example, AC for a D data item; AC01 for an S data item
F	Files
G	General Narrative — use to add information about a specific data item
H	User Defined program Helps Client use only for adding custom helps for J.D. Edwards programs For example, U00MENU
L	Report Messages — messages or warnings for certain procedures, or letters written and produced through DREAM Writer
N	Program Notes Used by programmers to type notes about a program in the system Add the notes to the glossary in the Data Dictionary Create notes for a program, add a data item with an “N” as a prefix in front of the program name. For example, N01051 for program notes about Address Book Revisions View the notes using F9 off the Help Task List form for the Address Book Revisions form
P	Program Purposes Used in the general summary help instructions Used for the Program Generator Product For example, P01051
R	Report Data Elements — the majority of these data items are letters produced through DREAM Writer

T

Terms

These data items are definitions of commonly used terms. The prefix of the data item name is "TERM." For example, the AAI definition is in the glossary under the data item TERMAAI.

U

For work fields that a program utilizes

Begin with #
For example, #AA

▶ To work with the glossary

- 1. From Data Dictionary, press F10. The Data Item Glossary Revisions form displays.

If your glossary group is E, H, J, or M, this form automatically displays when you press Enter on the main Data Dictionary form.

```

92001                               Data Item Glossary Revisions  Language . . . . . ___
                                      Applic Override   ___
                                      Scrn/Rpt . . . . . ___

Action Code. . . . . I
Data Item. . . . . AT1          Desc Search Type _____
System Code. . . . . 01        Reporting System Code. 01___
Glossary Group . . . . D      Search Desc _____

A user defined code (system 01, type ST) that identifies the kind of Address
Book record you want the system to select when you do name or message
searches. Examples:
      E - Employees
      X - Ex-Employees
      V - Vendors
      C - Customers
      P - Prospects
      M - Mail Distribution Lists

F4=Search   F9=Redisplay Prev   F19/F20=Prev/Next Item   F24=More

```

2. Do the following that applies:

Use the Language, Applic Override, and Scrn/Rpt fields for jargon. See About Language and Jargon for details.

Use Roll keys to see additional text lines.

When entering an “E” glossary group item, which is an interactive error message, use F5 to define a program, video, or report to reference when the system displays the error message.

On double-byte machines, this form displays the Search Desc field. To ensure the data item search facility will function properly, you must enter a search description for each data item you create or change. You can enter it on this form or on the Data Dictionary form.

3. Always leave the last two character positions of each text line blank.

Field	Explanation
Data Item	If you are adding an error message, this field must be left blank. The system assigns the error message number using next numbers. The name appears on a successful add. You should assign interactive error message numbers greater than 5000.
Glossary Group	NOTE: If you need to assign your own error message numbers, use 4 digit numbers greater than '5000'. For help text (glossary group H), the data dictionary “Inquiry/Revision Program” field may be used to specify the name of a follow-on item. To create your own messages for the IBM message file (glossary group J), begin the data item name with your own three characters (e.g., CLT0001).

Working with User Defined Help Instructions

The easiest way to modify help instructions is to utilize the User Defined Instructions in Data Dictionary.

► **To work with user defined help instructions**

From Data Item Glossary Revisions

```

92001                               Data Item Glossary Revisions  Language . . . . . __
                                      Applic Override   ____
                                      Scrn/Rpt . _____

Action Code. . . . . I
Data Item. . . . . U00MENU Desc Help - User Defined Instructions
Install System Code. 00 Reporting System Code. 00
Glossary Group . . . H

This is a sample of user defined instructions that may be entered by users for
any given program in the system. If you wish to provided -high lighted-, or
|underlined,|or {both high lighted and underlined} text refer to the special
attributes section of help instructions. All user defined instructions may be
entered directly into the data dictionary.

_____
_____
_____
_____
_____
_____
_____

F4=Search    F9=Redisplay Prev    F19/F20=Prev/Next Item    F24=More

```

J.D. Edwards provides an example record (U00MENU) in your system.

1. Enter a program name in the Data Item field, replacing the “P” with “U.” For example, for program P01051, create a data item U01051.
2. Enter H in the Glossary Group field. The H Glossary Group defines user defined help. J.D. Edwards will not replace H Glossary Group data items during an upgrade.
3. Perform an add or change.

From the Help Task List form, F5=User Inst displays if you wrote your own User Defined Help instructions

Working with Data Field Descriptions

► **To work with data field descriptions**

1. From Data Dictionary, press F11. The Data Field Descriptions form displays.

```

9202                                Data Field Descriptions
Action Code. . . . . I
Data Item. . . . . AN8                Address Number
Row Description. . . . Address Number . . . . .
Column Title . . . . Address
                               Number
                               -----

O Lan Appl                                Column
P  ___ Over                               Titles
-  ___ 44 Row   Vendor Number. . . . . Vendor
                               Number
                               -----
-  ___ 48 Row   Customer Number. . . . . Address
                               Number
                               -----
-  ___   Row   _____
                               _____
-  ___   Row   _____
                               _____

Opt:  5=Glossary   F9=Redisplay Prev   F19/20=Prev/Next Item   F24=More
    
```

2. Enter specific jargon or language descriptions for each data item. See *About Language and Jargon in Technical Foundation* for details.

Working with the Next Numbers Facility

The Next Number facility controls the automatic numbering for such items as new G/L account numbers, voucher numbers, address numbers. It allows you to specify what numbering system you want to use and gives you a method of incrementing numbers to reduce transpositions and keying errors.

Complete the following tasks:

- Locate the Next Numbers facility
- Work with Next Numbers by company and fiscal year

▶ **To locate the Next Numbers facility**

From menu G00, choose Next Numbers.

```

0002                               Next Numbers
Action Code. . . . . I
System Code. . . . . 09_  General Accounting

      Use      Next Number  Check Digit
Next Account ID   21831      -
Journal Entries  1946      -
Consol Accounts 90000214  -
____
____
____
____
____
____
____
____
____
____

CAUTION:
Changing the data on this screen may make it impossible to retrieve
previously added addresses and may result in attempts to assign
duplicate numbers.

      F8=Next Numbers by Co/FY      F24=More Keys
    
```

What You Should Know About

Next Numbers

The next numbers file is F0002

- 10 element array
- 1 record per system
- Modulus 11 check optional

Once set, don't change

- Has an impact on system performance
- Will not duplicate numbers. When it reaches max, starts over
- Cannot change position of user or add new entry without programming modifications

Ties with the Data Dictionary

Data Item in Data Dictionary points to the Next Number System. For example, System Code 09 AID Data Item

▶ To work with Next Numbers by company and fiscal year

1. From Next Numbers, press F8.

```
00021                               Next Numbers by Company/Fiscal
Action Code. . . _                   Next Number Constant . _
Skip to Company / Sequence . . . . . _____
Skip to Fiscal Year. . . . . _____
```

Doc Co	Seq Number	Do Ty	Sm As	Description	Fisc Year	I D	Next Number	C D	Auto Reset
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

F24=More

2. Set the Next Number constant field to maintain next numbers by
Company
Company and Fiscal Year

Use Next Number by Company for these original documents:

- Journal Entries
- Accounts Payable Vouchers
- Accounts Receivable Invoices
- Sales Orders
- Purchase Orders

About the Field Reference File

What is the Field Reference File?

The Field Reference File contains the specifications for each data item in the J.D. Edwards Data Dictionary. Because the J.D. Edwards Data Dictionary is different from the standard IBM data dictionary, each data item record needs to be translated from the J.D. Edwards standard to the IBM standard.

When building the Field Reference File, J.D. Edwards groups the data items. Items that begin with “A” are translated into the IBM-readable format and stored in file F98FRFA. Data items that begin with “B” are in F98FRFB. Each letter of the alphabet has a corresponding F98FRF file. Client data items are stored in F98FRF\$ and F98FRF@. You can rebuild one file at a time. You can also build the message file in alternate languages.

What Happens with the Rebuild?

The system does the following:

- Rebuilds F98FRFA–Z, \$, and @

- Picks up Data Dictionary data item glossary groups D and S

- Rebuilds the message file (QJDEMSG) in QGPL. Uses a processing option — Form ID J98DDMSGF to determine which library to build the QJDEMSG file. The default is QGPL

- Does not rebuild the J.D. Edwards message file if entering a single field reference file to be built

- Builds a separate message file for each language installed. Enter ** for all languages installed on the system.

Always rebuild the files in the same library as previously built.

About the J.D. Edwards Message File

What is the J.D. Edwards Message File?

The J.D. Edwards Message (QJDEMSG) file contains all the messages that are coded Glossary Group J. The programs access the messages from this file. If a client adds messages with Glossary Group J, a rebuild is necessary to correctly add the new messages to the J.D. Edwards Message (QJDEMSG) file.

What Happens When Only Rebuilding the J.D. Edwards Message File?

The system does the following:

Rebuilds the message file (QJDEMSG) in QGPL. Uses a processing option — Form ID J98DDMSGF to determine which library to build the QJDEMSG file. The default is QGPL

Picks up Data Dictionary data item glossary group J

Enter a value from UDC table 01/LP to generate a message file for a single language.
Enter ‘**’ for all languages installed on the system.

Locating the Rebuild FRF and JDE Msg File Form

► **To locate the Rebuild FRF and JDE Msg File form**

From menu G9642, choose Rebuild FRF & JDE Msg File

```
98FRF                                Rebuild FRF & JDE Msg File

The Field Reference Files are facsimiles of the J. D. Edwards Data Dictionary
and are vital for the creation of all data base files. The version of the Data
Dictionary upon which they are based determines the type and characteristics
of all application data elements. This procedure will recreate these files
based upon the Data Dictionary files found in the library specified, placing
the DDS source in the JDESRC source file the Source Library selected, with
the Field Reference Files being created in the Data Library selected.

      Base Field Ref Files on Data Dictionary in Library _____
      Create Field Ref source in Source Library   _____
      Create Field Ref Files in Data Library      _____
      Single field ref($, @, A-Z or blank=all)   _
      Language for message file (** for all) . __

NOTE:  Generation of Field Reference and Message File is
        submitted to batch. No data files may be
        created during this generation process.

Press Enter to Rebuild Field Reference Files      F3=Exit without Rebuild
```



Exercises

See the exercises for this chapter.

Data File Design Aid

About the Data File Design Aid

J.D. Edward Data File Design Aid provides a simple mechanism for creating Data Description Specifications (DDS) for physical and logical files.

J.D. Edwards does not allow any file changes through SEU in order to enforce standards. Changes must be done through File Design Aid.

What You Should Know About

Enforced Prefixes

Throughout the Data Dictionary, J.D. Edwards makes extensive use of the data item name. Within files, these data item names are qualified with a prefix to make them unique. Every data file in J.D. Edwards software is assigned a two-character prefix. For example:

Business Unit Master file is MC

Address Book Master is AB

The data name MCU in the Business Unit Master file is MCMCU

The data name in the Address Book file is ABMCU

Use of prefixes ensure that data item names are both consistent and unique.

Enforced naming conventions

At J.D. Edwards, file names begin with an F prefix and the format within that file begins with an I prefix.

Data Dictionary validation

All data fields defined in files are verified against the Data Dictionary.

Programmers cannot enter data names without first creating and documenting them in the Data Dictionary.

Prefixes of \$ and @ are reserved for client use.

Automatic reference to Field Reference Files

J.D. Edwards uses IBM's Field Reference File (FRF) technology for all files. When creating the DDS for a file, you need to enter the Data Dictionary data item name. Data File Design Aid automatically enters the correct keywords for referring to the FRFs. If data items are added to the Data Dictionary, the user needs to run the rebuild for the Field Reference Files before using Data File Design Aid.

Resequencing

A sequence number allows you to rearrange data items within a file while you are designing.

About Assigning the File Prefix

File prefixes are assigned through the Software Versions Repository.

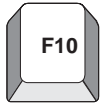
```
9801                               Software Versions Repository
Action Code. . . I
Member ID. . . . F92801
Description. . . SDM Item Master File
Function Code. . PF
Function Use . . 210
System Code. . . 92
Reporting System 92
Base Member Name F92801                               File Prefix. . . QX
Maint/RSTDSP . . _ Omit Option. . . _ Generation Sev .
Copy Data (Y/N). N Optional File. . N Common File. . . N
O Source      Object      Source      SAR      Version     S D      User      Date
P Library    Library    File       Number   ID         C P    ID      Modified
  JDFSRC71  JDFDTA71  JDESRC    241883  A71      1 -  HERITAGE  02/02/92
  _____  _____  _____  _____  _____  _____
  _____  _____  _____  _____  _____  _____
  _____  _____  _____  _____  _____  _____
  _____  _____  _____  _____  _____  _____
  _____  _____  _____  _____  _____  _____
  _____  _____  _____  _____  _____  _____
Opt: 1=Browse 2=Edit 3=Copy 5=SAR 8=Print 9=Dlt 10=Design 14=Crt F24=More
```

The Q series is reserved for clients.

If creating a new logical, the prefix will default from the based on physical.

To view all file prefixes currently in use, press F1 on the File Prefix field. Note that a file prefix may display in this list more than once if it is attached to more than one file.

F10 from this window will display all file prefixes that should not be used.



F10 – User Defined Code Window

Displays the User Defined Code Window to see which prefixes you should not use.

Field	Explanation
File Description	Description of the file. Defaults in from the Software Versions Repository.

The information in this window comes from a logical file built over the Software Versions Repository.

The information in this window is updated automatically whenever the user adds/updates/deletes software version repository record(s) for files.

Programmers are responsible for not assigning the same prefix to files that may be used in the same program.

Entering Data File Design Aid

You must have access to the source file to enter FDA.

▶ To enter Data File Design Aid

1. Inquire on a physical file.
2. Copy the production source down to a development environment.
3. Select Option 10 to take you to the appropriate Design Aid screen based on the members Function Code value.

A PF or LF value will take you to File Design Aid.

```

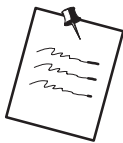
92102                                Data File Design Aid

File Description . . . SDM Item Master File
Unique Keys(Y/N) . . . Y                Member ID. . . . . F92801
File Prefix. . . . . QX                 Src Library. . . . . PGFSRC
                                       Source File Name . . . JDESRC

Data Item. Data Field Desc.  K/S Function Specifications          Seq No
I92801                                R
XIT      Item ID              - REFFLD(XIT      F98FRFX      ) 2.00
XDS      Description          - REFFLD(XDS      F98FRFX      ) 3.00
XTY      Item Type            - REFFLD(XTY      F98FRFX      ) 4.00
XDT      Date Last Ship      - REFFLD(XDT      F98FRFX      ) 5.00
XBU      Business Unit       - REFFLD(XCC      F98FRFX      ) 6.00
XOT      Quantity - On Hand  - REFFLD(XOT      F98FRFX      ) 7.00
XUM      Item Unit of Measur - REFFLD(XUM      F98FRFX      ) 8.00
X001     Item Category Code  - REFFLD(X001     F98FRFX      ) 9.00
X002     Item Category Code  - REFFLD(X002     F98FRFX      ) 10.00
X003     Item Category Code  - REFFLD(X003     F98FRFX      ) 11.00
X004     Item Category Code  - REFFLD(X004     F98FRFX      ) 12.00
X005     Item Category Code  - REFFLD(X005     F98FRFX      ) 13.00
XIT      Item ID              K
F3=Exit/Save  F16=Search by File  F1=Search by Name  F4=Field Attributes
    
```

Field	Explanation
File Description	Description of the file. Defaults in from the Software Versions Repository.
Unique Keys (Y/N)	Specifies if the data file contains unique keys. If you say yes, Data File Design Aid puts the unique keyword in the DDS. As a result, no two records may have duplicate keys. If you say no, Data File Design Aid leaves the UNIQUE keyword out of the file DDS.
Member ID	The name assigned to the file. Defaults in from the Software Versions Repository.
File Prefix	The prefix assigned to the file. Defaults in from the Software Versions Repository.
Src Library	The library where the source for the data file resides. Defaults in from the Software Versions Repository.
Source File Name	The name of the file within the source library that contains the source member. Defaults in from the Software Versions Repository.
Based on File	Designates the physical file on which a logical file is based. Defaults in from the Software Versions Repository and only displays for logical files.

Field	Explanation
Data Item	<p>The Data Dictionary name of the field or the record format name.</p> <p>The file prefix is added to create unique data names in each file specification if a data item is entered in this field.</p> <p>The record format line is automatically defaulted in.</p>
Data Field Desc	<p>The description of the data item entered in the previous field.</p> <p>Comes from the Row Description field in the Data Dictionary.</p>
K/S (Key/Select)	<p>Identifies the DDS Type indicating whether the field is a format name, key field, select logic field or omit logic field. It may be used in conjunction with information that appears in the Function Specifications field.</p>
Function Specifications	<p>Used with the DDS Type specified in the K/S column.</p> <p>If it is a record format name:</p> <p>It is blank for physical files</p> <p>Contains the PFILE(Filename) statement for a logical file and you enter: <i>JFILE</i> (Filename Filename) statement for join files listing all the files involved in the join. Right below the JFILE statement, you use the <i>JFLD</i> (Field Field) statement to list the fields that are used to construct the join.</p> <p>If you are defining a normal data item and you want the FRF field designation pulled in, you leave it blank.</p> <p>If you are defining Select/Omit logic on a field, you enter the logic itself.</p> <p>If you are defining a key data item, you may leave the Function Specifications field blank or you may enter any valid DDS function keyword (DESCEND, RENAME, SIGNED, ZONE, etc.)</p>
Seq No	<p>Determines the order of the fields in the file.</p>



There is a fold area which includes additional information: data item type, data item size, and number of display decimals.

Sample — Logical File

J.D. Edwards logicals contain all fields from the PF, only keys are specified.

```

92102                               Data File Design Aid

File Description . . . LF - Business Unit, Item ID
Unique Keys(Y/N) . . . Y                Member ID. . . . . F92801LA
File Prefix. . . . . QX                Src Library. . . . . PGFSRC
Based on File. . . . . F92801         Source File Name . . . JDESRC

Data Item. Data Field Desc.  K/S Function Specifications      Seq No
I92801     .                R  PFILE(F92801)                1.00
XCC        Business Unit    K  .                    2.00
XIT        Item ID          K  .                    3.00
.          .                .  .                    4.00
.          .                .  .                    5.00
.          .                .  .                    6.00
.          .                .  .                    7.00
.          .                .  .                    8.00
.          .                .  .                    9.00
.          .                .  .                   10.00
.          .                .  .                   11.00
.          .                .  .                   12.00
.          .                .  .                   13.00
.          .                .  .                   14.00

F3=Exit/Save  F16=Search by File  F1=Search by Name  F4=Field Attributes
    
```

Sample — Logical File with Selects

This example represents an AND condition for the selects.

```

92102                               Data File Design Aid

File Description . . . LF - Acct ID, LT, DOI, Sub LT, Serv Date, Doc TyN#
Unique Keys(Y/N) . . . _                Member ID. . . . . F0911LH
File Prefix. . . . . GL                Src Library. . . . . PGFSRC
Based on File. . . . . F0911         Source File Name . . . JDESRC

Data Item. Data Field Desc.  K/S Function Specifications      Seq No
I0911     .                R  PFILE(F0911 )                1.00
AID        Account ID       K  .                    2.00
LT         Ledger Type      K  .                    3.00
DOI        DOI Sub          K  .                    4.00
SBL        Subledger        K  .                    5.00
DSV        Date - Service/Tax K  .                    6.00
DSVY       Date - Service/Tax K  .                    7.00
DSVM       Date - Service/Tax K  .                    8.00
DSVD       Date - Service/Tax K  .                    9.00
DCT        Document Type    K  .                   10.00
DOC        Document (Voucher, K  .                   11.00
KCO        Document Company K  .                   12.00
POST       G/L Posted Code   S  CMP(EQ 'P')              13.00
BC         Bill Code         .  CMP(NE 'H')              14.00

F3=Exit/Save  F16=Search by File  F1=Search by Name  F4=Field Attributes
    
```

Sample — Logical File with Omits

This example represents an AND condition for the omits.

```

92102                                Data File Design Aid
File Description . . . LF - Report Code 01
Unique Keys(Y/N) . . . _             Member ID. . . . . F0101LH
File Prefix. . . . . AB              Src Library. . . . . PGFSRC
Based on File. . . . . F0101        Source File Name . . . JDESRC

Data Item. Data Field Desc.   K/S Function Specifications           Seq No
I0101      _____         R  PFILE(F0101 )                          1.00
AC01       Category Code - Add K  _____                          2.00
ALPH       Name - Alpha        K  _____                          3.00
AN8        Address Number      K  _____                          4.00
DFI        Date - First Invoic Q  COMP(EQ 000000)                    5.00
DLI        Date - Last Invoice  -  COMP(EQ 000000)                    6.00
_____   _____         -  _____                          7.00
_____   _____         -  _____                          8.00
_____   _____         -  _____                          9.00
_____   _____         -  _____                         10.00
_____   _____         -  _____                         11.00
_____   _____         -  _____                         12.00
_____   _____         -  _____                         13.00
_____   _____         -  _____                         14.00

F3=Exit/Save  F16=Search by File  F1=Search by Name  F4=Field Attributes
    
```



Creating Join Files and Work Files

To create a join file or a work file, you should use the Source Edit Utility.

Function Keys From File Design Aid



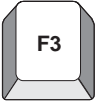
F1 – Field Help on Data Item

Using F1 in the Data Item field takes you to the Data Item Search screen.



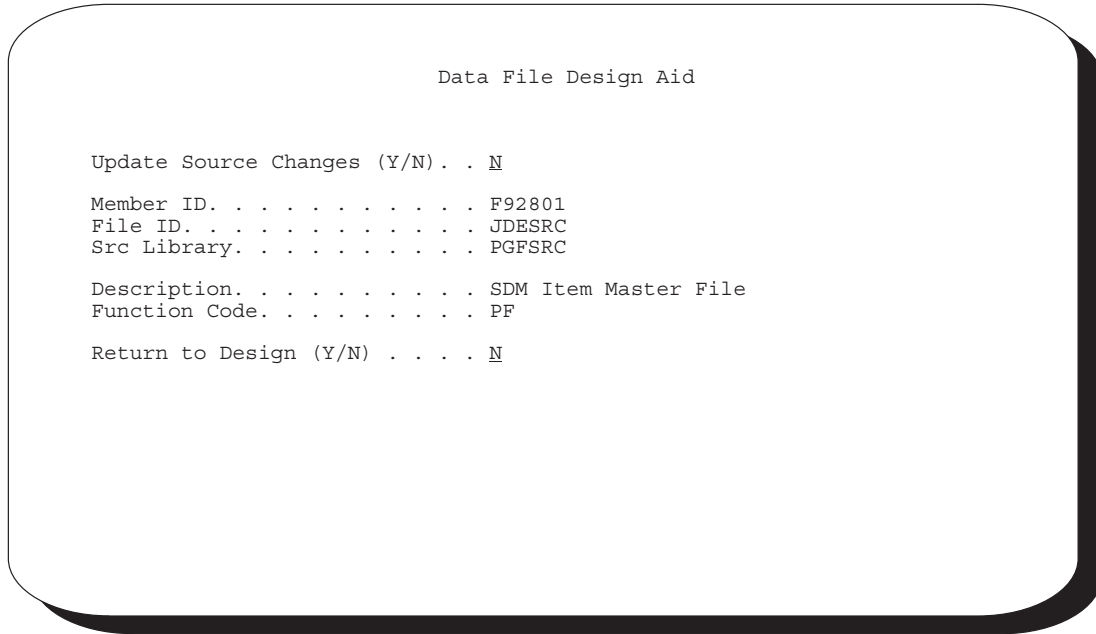
F2 – J.D. Edwards Command Line

Access command line in order to enter a J.D. Edwards or IBM command without having to exit to Command Entry or a menu. If the user is secured out of Command Entry or Menu Traveling, the user will still get this command line but they will *not* be able to execute commands or menu travel.



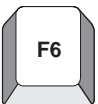
F3 – Exiting Data File Design Aid

When the user presses F3 to exit Data File Design Aid, the following screen appears.



From this screen, the user can choose to:

- Exit without saving the changes made.
- Exit and save the changes made.
- Save the changes made and return to the design aid screen.



F6 – Access Repository Services

This window provides access to other repository services within J.D. Edwards.



F16 – Search by File

Accesses the File Field Description window to view file formats and field descriptions for any file on the system.

What Are the Data File Design Aid Standards?

Field	Explanation
Unique Keys	<p>If a file can be organized so the key will uniquely identify only one specific record, define the Unique Keys field. Uniqueness can be specified for physical and logical files.</p> <p>Most J.D. Edwards physical files in the past have been defined as sequential and logicals were used for creating keyed sequences. More recently, however, physical files have been keyed.</p>
File Description	<p>The description associated with each file is used to further identify the relation of the file and its purpose. It should match the Description in Software Versions Repository.</p> <p>Physical files should have a description that explains the purpose of the file.</p> <p>Logical files should be designated as follows: <i>LF – fldname, fldname, fldname</i>, where <i>fldname</i> is equal to a key field.</p> <p>Join files should be designated as follows: <i>JF – filename/filename/filename – fldname, fldname</i>, where <i>filename</i> is a file over which the join is built and <i>fldname</i> is the key field that joins the files.</p> <p>Work files should be designated as follows: <i>WF – filename</i> where <i>filename</i> is the file that the work file accesses.</p>
Based On File	<p>For physical and logical files, the Based on File is the same as the physical file.</p> <p>For join files, the Based on File is the name of the first physical that the join is built over.</p>
Recompiling	<p>When recompiling a physical, you need to delete any logicals or joins from the data file library and then recompile them after the physical has been recompiled.</p>
Record Format	<p>It is a J.D. Edwards standard that only one record format is defined for each physical and logical file. Joins may contain more. Record format names begin with I followed by the physical file number.</p>
Ordering of Fields	<p>When designing a physical, list the component fields in descending order of their importance to the file. Keyed items must always be last in sequence number within the Data File Design Aid program itself.</p>
Field Reference Files	<p>Used in all file creations to retrieve field descriptions.</p>
Logical Files	<p>Logical files include all fields; we do not define specific fields.</p>

Merge Functions for PTFs and Reinstalls

The reinstall or PTF install does the following:

In a PTF install, prints a report that identifies all files that are in the PTF library but were not installed in the client's production libraries. The user must add the new files manually into the appropriate libraries.

In a reinstall, the client prints a report to add new files into appropriate libraries.

Updates JDFDATA in a PTF install; replaces JDFDATA in a reinstall.

Adds new keys to both logical and physical files.

Changes the file formats of logical and physical files.



Data Models displays relational models of the major files within each J.D. Edwards product.

Data File Design Aid Summary

Has direct ties to the Data Dictionary and the Field Reference Files.

Attaches a two-character prefix to each data item to create a unique field within the file.

A record format must be defined for all files with a *K/S* value of R. This is the default record format.

PFILE keyword will automatically be pulled in for logical files.

Logical files must have a *Based on File* designated in the Software Versions Repository which will carry over to the design screen.

You must enter the data item names from the Data Dictionary.

File Design Aid will add the two-character prefix.

Steps for creating a new file.

- Data items must reside in the Data Dictionary.

- Must rebuild the FRF files if new data items were added (from the Rebuilds menu, G9642).

- Must have a file prefix specified on the Software Versions Repository record.

Field Reference Files

- Contain all the definitions for creating fields.

- 28 in all (F98FRFA–F98FRFZ, F98FRF\$, and F98FRF@).

- Each field reference file contains all the data items beginning with the same character as the field reference file

- For example: F98FRFA contains all Data Dictionary data items beginning with the letter A.



Exercises

See the exercises for this chapter.

Screen Design Aid

About Screen Design Aid

Screen Design Aid (SDA) is an interactive feature to design and maintain display screens. This full-screen editor validates against the Data Dictionary and adds records to Vocabulary Overrides. You can work with multiple record formats simultaneously and you can move fields from one format to another.

Features

Design is conducted in a safe work environment. If you make a mistake you can exit without changing a screen's DDS.

Screen specifications are stored in data structures in the QRECOVERY library. Much like the IBM recovery of SEU.

You can create a screen in normal mode (80 columns by 24 rows) or wide mode (132 columns by 27 rows). You can also design wide screens on 80 column devices using a windowing facility.

Answering initial yes/no options allows you to create a basic screen skeleton for a subfile, non-subfile or window-style screen.

SDA is fully integrated with the Data Dictionary and Vocabulary Override files. You can place fields on the screen by referring to a Data Dictionary name and override default attributes, if necessary. You can place Vocabulary Override fields on the screen and, if desired, modify their contents through the full screen.

SDA is fully integrated with the system database. You can select fields from the system database, create a pick list and then reorder fields in the pick list. You can place fields on the screen individually or in mass by pinpointing locations on the full screen with an ampersand (&) or asterisk (*).

SDA has full screen capability. You can add, change, move or delete fields by entering control characters directly on the screen.

Unlike the IBM SDA, the JDE SDA allows you to work with multiple record formats at one time. You can display and change any combination of formats simultaneously (as long as they do not overlap). You can also move fields from one format to another.

SDA allows you to simulate a screen at program execution time. You can run the simulation for any set of conditioning indicators to represent a particular error condition or other program functions.

Editing Commands

Command	Explanation
*DEL	Delete field(s) (used in Field Definition window)
d (cannot be uppercase D)	Delete field(s) (used in Field Definition window)
<<, >>	Shift field(s) to the left or right
(xx...xx) 'xx...xx'	Literals (use apostrophes)
-	Move from position.
=	Move to position.
- -	Move block from position
=	Move block to position.
F7	Restore the screen if you accidentally press Field Exit or a power failure knocks you off.



Do not use the INSERT or DELETE keys while in the actual design portion of SDA.

Automatically assigns Editing Indicators.

Indicators 40 to 79 are reserved for editing.

Indicator 40 is reserved for the Action Code field.

Indicator 41 is reserved for the key fields.

If all available indicators have been used, an error message is issued.

Indicator 37 is used in subfile videos to highlight all fields on the last line of the subfile to indicate that no more records exist.

Prefix Standards

Prefix	Explanation
VD	Video display fields. VD fields display data base information from the file being used for the video and may be used to enter database information. Default size is the size specified in the Data Dictionary for the data item being displayed. Reside in the based on file and can be input/output.
SF	Subfile fields. Same as VD fields, but they are in a subfile. Default size is the size specified in the Data Dictionary for the data item being displayed plus editing characters.
SH	Subfile Hidden fields. SH fields store data that is not displayed on a screen.

Field Name Standards

Field	Standard
VC0 – Video constants	<p>VC0 fields display definitions and/or descriptions for a single piece of data or for a group of data.</p> <p>VC0 fields are always output fields and the description that will be loaded into the VC0 field is obtained from a separate file</p> <p>For example, if creating a video using the Item Master file (F92801), the user will need to take the <i>Item Master Business Unit</i> field and chain out to the Business Unit Master file (F0006) to get the description for that Business Unit.</p> <p>User enters *VC0 for the <i>Field Name</i> field in the Field Definition Window when adding a new constant/description field.</p> <p>The default size for VC0 fields is 30.</p>
VTX – Video text	<p>These fields display the row description or column headings from the Data Dictionary.</p> <p>The text that displays in the VTX fields is stored in the Vocabulary Overrides file (F9220).</p> <p>Can key directly over Vocabulary Override fields in SDA.</p> <p>User enters *VTX for the <i>Field Name</i> field in the Field Definition Window when adding a new text field.</p> <p>The default size for VTX fields is 16.</p>
Line 24 is always VDL24	<p>Cannot change the text for Line 24 by using the Field Definition window because it is too large.</p> <p>Key over the text in Line 24 to change it.</p>
TTL@	<p>Uses the default title from Vocabulary Overrides if the video is called from another video.</p> <p>Uses the menu selection text if the video is called from a menu.</p>
ACTION	<p><i>Action Code</i> field.</p> <p>The name assigned by SDA.</p> <p>The default cursor keyword is assigned to the action code field.</p>
*LITER – Literal fields	<p>Literals are added by placing apostrophes around the text on the screen and pressing Enter. (e.g. 'V928011').</p>

Updating/Adding Fields through SDA

Field	Explanation
* – Field Definition Window	<p>Allows the user to update existing fields and add new fields without using the Pick List feature. Place the * one space to the left of the first character of the requested field to display the Field Definition Window.</p> <p>To add a field, the user places an asterisk (*) on the SDA design area where they want to add the field.</p> <p>To update a field, the user places an asterisk in the attribute character of the field they want to update.</p> <p>The user can pull in the video field, the Row Description/Column Headings (VTX), and a 30 character description field (VC0) all at the same time by making special entries in the field definition window (*BOTH and *ALL).</p>
& – Field Selection Window	<p>Allows the user to add new fields using the Pick List feature</p> <p>Causes the Field Selection window to display.</p> <p>To place a field on the screen from the user's Pick List, place an ampersand (&) on the SDA design area where you want to place the first character of the field.</p> <p>Allows the user to pull in one or all of the following at the same time:</p> <ul style="list-style-type: none"> The Row Description/Column Headings (VTX) The video field A description field (VC0)

Working with Screen Design Aid

To work with Screen Design Aid you must have access to the source file

▶ To work with Screen Design Aid

1. Inquire on a video in SVR
2. Copy the production source down to a development environment using selection 3.
3. Select option 10 to access the appropriate Design Aid form based on the members' Function Code value.

```

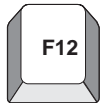
928200                                Item Search

Business Unit. BBBBBBBBBBB 00000000000000000000000000000000

O Item                               Ship
P Number Description Date Quantity On Hand UM
E 00000000 00000000000000000000000000000000 00000000 000000000000000000 00
Code 1 . 000 Code 2 . 000 Code 3 . 000 Code 4 . 000 Code 5 . 000
E 00000000 00000000000000000000000000000000 00000000 000000000000000000 00
Code 1 . 000 Code 2 . 000 Code 3 . 000 Code 4 . 000 Code 5 . 000
E 00000000 00000000000000000000000000000000 00000000 000000000000000000 00
Code 1 . 000 Code 2 . 000 Code 3 . 000 Code 4 . 000 Code 5 . 000
B 00000000 00000000000000000000000000000000 00000000 000000000000000000 00
Code 1 . 000 Code 2 . 000 Code 3 . 000 Code 4 . 000 Code 5 . 000
E 00000000 00000000000000000000000000000000 00000000 000000000000000000 00
Code 1 . 000 Code 2 . 000 Code 3 . 000 Code 4 . 000 Code 5 . 000
E 00000000 00000000000000000000000000000000 00000000 000000000000000000 00
Code 1 . 000 Code 2 . 000 Code 3 . 000 Code 4 . 000 Code 5 . 000
E 00000000 00000000000000000000000000000000 00000000 000000000000000000 00
Code 1 . 000 Code 2 . 000 Code 3 . 000 Code 4 . 000 Code 5 . 000
E 00000000 00000000000000000000000000000000 00000000 000000000000000000 00
Code 1 . 000 Code 2 . 000 Code 3 . 000 Code 4 . 000 Code 5 . 000

Opt:1=Item Master Information      F5=Item Maintenance      F24=More Keys
    
```

Function Key Exits



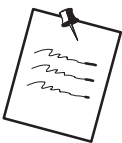
F12 – Return to Previous Panel

Will exit you out of the current window or utility and return to the screen you were previously on.

Use instead of F3

When calling another program outside of SDA (for example: F13, F24), you must use F3 to return to SDA.

Field	Explanation
Field Name	Identifies a screen field name. *VTX (VTX001–VTX200) automatically assigns next available. *VC0 (VC0001–VC0200) automatically assigns next available. *LITER literal fields. *BOTH or *ALL to bring in video (VD), VC0, and VTX fields.
Row/Column	Two 3–digit fields that define the row and column location of field.
Field Use	How the data is to be used on the screen. I input only. O output only. B Both input and output. H Hidden field. M IBM Message field.
Size	Two fields identify the length of the data item and for numeric fields, the decimal places. If left blank, automatically fills.
Text Form	For VTX fields, identifies the field from the Data Dictionary that is used for headings. R Row Description. C Column Heading 1. D Column Heading 1 and 2.
Dft Cursor	Starting cursor position on a data entry screen, Y or N.
Edited	Should the field be checked for error conditions, Y or N. Will assign an indicator for error handling and default Condition Indicator information. Assigns error indicators 40–79. Key fields, K. Assigns indicator 41.
Lower Case	To allow lowercase, Y or N.
Change	CHANGE keyword is in effect, Y or N. The indicator will be seton whenever the value in this field is changed.
OVERDTA	OVRDTA keyword is in effect, Y or N. Used with PUTOVR to override data that is in a field already on the video.



All input capable fields should be edited ('Y' or 'K' in Edited field).

Field	Explanation
Duplicate	Duplicate the data. Only valid for an SFL format. Puts the DUP keyword in the video/report DDS but the Program Generator does not generate any code to enable this.
OVRATR	OVRATR keyword is in effect, Y or N. Used with PUTOVR to override display attributes of a field on the video.
Field Cond	Field Conditioning Indicators. Determines if the user can see the field or not.
Condition Indicators	<p>To set a condition indicator on a field, enter a Y in the first blank to the right of the desired condition. You have the option of entering up to 3 indicators to be associated with the condition. Three spaces are provided to allow an N prior to the two digit indicator to create a negative condition. The allowed conditions are:</p> <ul style="list-style-type: none">RI Reverse ImageHI HighlightUL UnderlineND NondisplayBL BlinkPR ProtectPC Place Cursor <p>A blank or N will deactivate the condition.</p>
Color	F8 toggles to display the color attributes for the field. The first blank to the right of each color controls the order that multiple colors will appear in the DDS (1-7). If multiple colors are defined, the first enabled color appears and the remaining colors are ignored. A blank or N disables the color. The color values default based on whether you selected JDE or SAA colors in QJDF.

Accessing Fast Path Create for a New Form

When you design the format for a new screen, you have the option to use Fast Path Create.

► **To access Fast Path Create for a new form**

1. Locate your video and enter selection 10

If SDA cannot find the existing DDS for your screen, the following screen will appear:

```

92510                                Create New Screen
Screen: V927400
Text Description. . . Item Search
                               (Y/N)
Fast Path Create                Y
Screen Type
Action Code                     Y
Window                          N
Wide Screen (Y/N). . .         N
Subfile Creation
Subfile                         N
Subfile Fold                    N
Subfile Clear                   Y
Selection Exits                 N
Record Format Level
PUTOVR                          N
OVERLAY                         Y
                               F3=Exit   F12=Previous
    
```

Field	Explanation
Text Description	Description of your screen.
Fast Path Create	Automatically create record formats, fields, file, and record level parameters.
Action Code	Automatically create an Action Code field.
Window	Video is a window.
Wide Screen	Video is in wide format (132 columns by 27 rows) or normal format (80 columns by 24 rows).
Subfile	Create subfile format.
Subfile Fold	Create a fold area in the subfile using SFLDROP and SFLFOLD keywords.

Field	Explanation
Subfile Clear	Use SFLCLR (Y) or SFLINZ (N).
Selection Exits	Create selection exits to allow the user to exit the program using selection codes.
PUTOVR	The video record format uses the PUTOVR keyword. Causes the video to be erased and redisplayed when a window is displayed.
OVERLAY	The video record format uses the OVERLAY keyword. Will not erase and redisplay video when a window is displayed. Most J.D. Edwards videos use OVERLAY.

2. Press Enter and SDA begins the creation of your video based on what you specified.

Example – Video with Action Code and No Subfile

92700 Item Maintenance

Action Code. . . B

F24=More Keys

Adding Fields Without Using a Pick List

▶ To add a Video Text Field (VTX)

1. Place an asterisk (*) on the SDA design area where you want the text field to be placed.

```

928011                               Item Master Information
Action Code. . . B
*

Screen: V928011-----Field Definition-----Format: V928011-
Dict Name  XIT_      Text
Data Type  _        Field Name  *VTX_
Row/Column _        Field Use  _          Cond Ind
Size       _        Text Form  R          HI
Dft Cursor _        Edited      _          UL
Lower Case _        Change      _        ND
OVRDTA    _        Duplicate  _        BL
OVRATR    _        Field Cond  _        PR
--F3=Exit  F12=Prev Screen F17=Dictionary-----PC
    
```

When the field definition window appears:

2. Enter the data dictionary item name in the Dict Name field.
3. Specify *VTX in the Field Name field.

The system will assign the next available VTX number.

4. Enter a value in the Text Form field to indicate whether the row description or a column heading from the Data Dictionary should be used as the text.

R Row Description.

C Column Heading 1.

D Column Heading 2.

Default is R Description.

Text will default from the Data Dictionary based upon the Text Form value.

5. Enter a value in the Size field only if you want to override the default length of 16 for the Row Description that will be brought in.



Start your fields in column two (unless selection exits exist). This allows you to place an asterisk to the left of the first field in column one.

▶ **To add a Data Base Video Field (VD)**

1. Place an * on the SDA design area where you want the field to be placed.

```

928011                               Item Master Information
Action Code. . . B
                                     *

Screen: V928011-----Field Definition-----Format: V9280111-
Dict Name  XIT      Text
Data Type  -       Field Name  _____  Cond Ind
Row/Column  _      Field Use   B          RI   _ _ _ _
Size       _ _ _   Text Form  -          HI   _ _ _ _
Dft Cursor -      Edited      -          UL   _ _ _ _
Lower Case -      Change      -          ND   _ _ _ _
OVRDTA    -       Duplicate   -          BL   _ _ _ _
OVRATR    -       Field Cond  - _ _ _   PR   _ _ _ _
                                     PC   _ _ _ _

--F3=Exit  F12=Prev Screen  F17=Dictionary-----
    
```

When the field definition window appears:

2. Enter the data dictionary item name in the *Dict Name* field.
3. Specify a field use.
 - The default for field use is O for output.
 - Editing indicators are *not* assigned for output fields.
4. Enter the Data Type, Size, and Text defaults from the Data Dictionary.

► To add a Video Constant Field (VCO)

1. Place an * on the SDA design area where you want the description/constant field to be placed.

```

928011                               Item Master Information
Action Code. . . B

                                     *

```

Screen: V928011-----Field Definition-----Format: V9280111-	
Dict Name	Text
Data Type	Field Name *VC0
Row/Column	Field Use
Size	Text Form
Dft Cursor	Edited
Lower Case	Change
OVRDTA	Duplicate
OVRATR	Field Cond
	RI
	HI
	UL
	ND
	BL
	PR
	PC

```

--F3=Exit F12=Prev Screen F17=Dictionary-----

```

When the field definition window appears:

2. Specify *VC0 in the Field Name field.

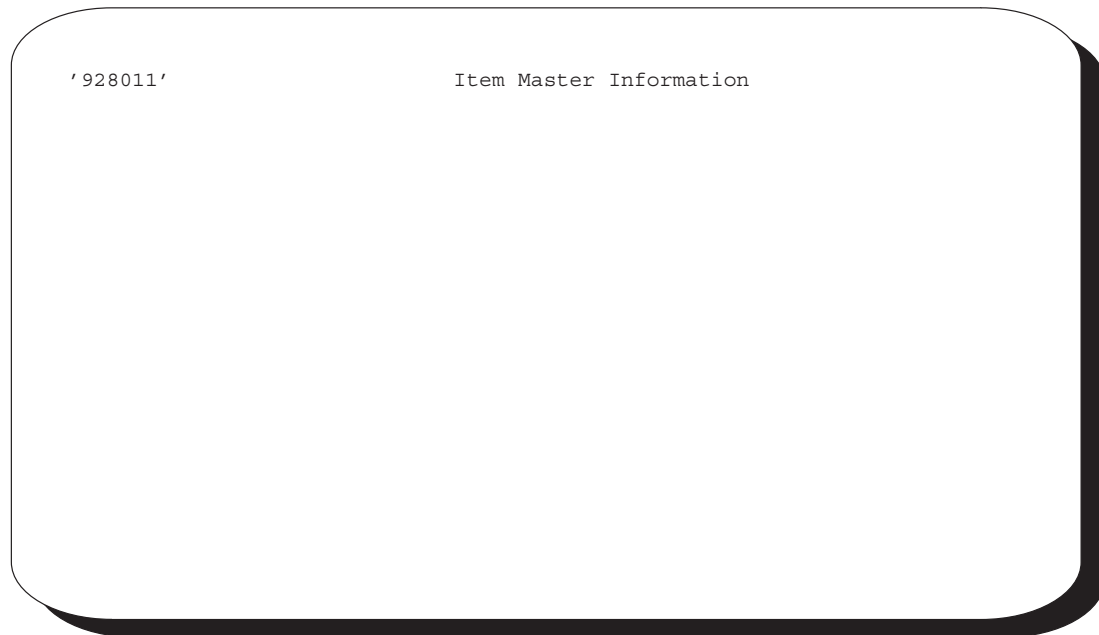
The system will assign the next available VCO number.

3. Enter a value in the Size field only if you want to override the default length of 30.

Adding a Literal Field

▶ **To add a literal field**

Enter the literal text on the SDA Design area, enclose the text within single quotes, and press Enter.



J.D. Edwards standard is that the only literal on a video is the program ID in the top left corner.

The previous example will cause the following to appear on the SDA design area for the Unit of Measure field:

```
928011                               Item Master Information
Action Code. . . . _
Item ID. . . . . _____ Item Desc. . _____
Business Unit. . . _____ 00000000000000000000000000000000
Item Type. . . . . _____ 00000000000000000000000000000000
Date Last Ship . . _____
Quantity On Hand . _____
Unit of Measure. ____
Item Code 001. . . _____ 00000000000000000000000000000000
Item Code 002. . . _____ 00000000000000000000000000000000
Item Code 003. . . _____ 00000000000000000000000000000000
Item Code 004. . . _____ 00000000000000000000000000000000
Item Code 005. . . _____ 00000000000000000000000000000000
F24=More Keys
```


The previous example will cause the following to appear on the SDA design area for the Unit of Measure field:

```
928011                               Item Master Information
Action Code. . . . _
Item ID. . . . . _____ Item Desc. . _____
Business Unit. . . _____ 00000000000000000000000000000000
Item Type. . . . . _____ 00000000000000000000000000000000
Date Last Ship . . _____
Quantity On Hand . _____
Unit of Measure. _____ 00000000000000000000000000000000
Item Code 001. . . _____ 00000000000000000000000000000000
Item Code 002. . . _____ 00000000000000000000000000000000
Item Code 003. . . _____ 00000000000000000000000000000000
Item Code 004. . . _____ 00000000000000000000000000000000
Item Code 005. . . _____ 00000000000000000000000000000000
F24=More Keys
```



Field Defaults

VD — Video Display field

Output only

Can enter a B in the Field Use field to override output only to both input/output.

No Editing

If B is entered in the Field Use field, the Edited field will default to Y.

The Condition Indicators default to Y and the next available editing indicator will be assigned to that field.

VTX — Video Text field

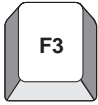
16 bytes long

Row description

VC0 — Video Constant field

30 bytes long

Understanding the SDA Exit/Save Function Key



F3 – Design Aid Exit / Save

```

92590                                Design Aid Exit/Save

Save DDS (Y/N) . . . . N
Member ID. . . . . V928200
File ID. . . . . JDESRC
Src Library. . . . . STB301SRC
Description. . . . . Item Search
Function Code. . . . . DSPF
Return to Edit (Y/N) N

F12=Previous
    
```

Field	Explanation
Save DDS (Y/N)	Saves the DDS and updates or creates Vocabulary Overrides and Function Key definitions.
Member ID	Name of the screen.
File ID	Identifies the file that will contain the source code.
Src Library	Identifies the library where the source code resides.
Description	Description of the Member ID. Should be the same as in F9801.
Function Code	Identifies the Member ID.
Return to Edit (Y/N)	EOJ or return to SDA.

Screen Design Standards and Tips

Title

Screen title is limited to 30 characters and should match the F9801 file (Software Versions Repository). The title entered in SDA updates the Vocabulary Overrides record for the video. Be aware that if a user accesses the screen using a menu selection, the menu selection name overrides the screen title. If a user accesses the screen using a selection option or function key, the vocabulary overrides title is used.

Line 24

All function keys should be documented on the right side of line 24 and options should be documented on the left side.

List both the options and function keys in numeric order.

F24 should always appear and should say *MORE KEYS* or *MORE*.

F4 should always read *MORE DETAIL* or *DETAIL*.

Do not include standard exits of F3, F7, F22, Help, Rollup, Rolldown.

Line 24 should be in reverse image during error condition except on windows. Line 24 is conditioned to appear in reverse image on screens based on indicator 93.

If *SAME is specified for the field Error Text for Line 24 in Vocabulary Overrides, then the text that will display is the same as the text specified for the normal Line 24.

Windows

Within a window, line 24 should include F3 and F24 when the window is initially displayed. When designing windows in SDA, fill in unused line space with literal fields to prevent data on the calling screen from showing through on the window. The literal fields can be added as blanks with a single quote on each end or through the Field Definition Window.

General Aesthetics

Alignment

Line up fields vertically. This includes row descriptions, input fields and description fields. Fields on the left side of the screen should be in column space 2 (column 1 is needed for the attribute byte).

Use periods to equalize length of row descriptions	Line up input fields	Line up VC0 fields of row descriptions
--	-------------------------	--

```

08332                               Single D/B Relation Entry
Action Code. . . . . I
Employee Number. . . . . 6001   Allen, Raymond
Plan ID. . . . . DEPCARE       Dependent Care Reimb. Account
Dependent/Beneficiary No.. 4036 Name . Allen, Cindy
Effective From . . . . . 01/01/90 Thru .
Relationship Data:
Dependent or Beneficiary . D           Child
Relationship . . . . . C               Primary Beneficiary
Dep/Ben Type . . . . .
Percent Allocated. . . . .
Dependent/Beneficiary Data:
Social Security Number . . 524-58-5113
Date Of Birth. . . . . 04/01/72
Dep/Ben Status . . . . .
Memo/Address Info. . . . . 2525 E. 11th Avenue
                           Denver, Colorado
                           80206
F5=D/B Relationships           F21=Print           F24=More Keys

```

Grouping Fields

When entering a description heading to group related fields, use up to 40 characters for the description (or as long as space will permit). Highlight the heading and end it with a colon. Underneath the heading, indent the group of fields one space to the right.

```

08332                               Single D/B Relation Entry

Action Code. . . . . _
Employee Number. . . . . _____
Plan ID. . . . . _____
Dependent/Beneficiary No.. _____ Name . _____
Effective From . . . . . _____ Thru . _____

Relationship Data:
Dependent or Beneficiary . _
Relationship . . . . . _
Dep/Ben Type . . . . . _
Percent Allocated. . . . . _____

Dependent/Beneficiary Data:
Social Security Number . . _____
Date Of Birth. . . . . _____
Dep/Ben Status . . . . . _

Memo/Address Info. . . . . _____
_____
_____

F5=D/B Relationships           F21=Print           F24=More Keys
    
```


Spacing

Use the following as your standards when spacing different screen elements.

Separate column headings with one space.

```

O . . . . Dependent / Beneficiary . . . . Plan D DB % S Effect.
P Number Name ID B Rel Ty Alloc. T From
-- _____
-- _____
    
```



End row descriptions with at least one period followed by a single space before you begin associated input fields.

```

Dependent or Beneficiary . _
Relationship . . . . . _
Dep/Ben Type . . . . . _
Percent Allocated. . . . . _____
    
```

Indent Fold Area fields one or more spaces to offset them from regular subfile.

```

08335                      Benefits by Employee          Year . . . . . 90
                                Type of Year C
                                Dates:
Employee . . . . . 6001      Allen, Raymond           Birth . . . . . 10/20/58
Soc Sec No . 798-52-5841                                     Orig. Hire . 12/15/88
Benefit Grp.                                                 Started . . . 12/15/88
Business Unit          9 An Energy Deleted Interes         Terminated .
O
P  Plan Name . . . . . From Through . . . . . Employee Employer
-  Dependent Care Reimb. Account
   Plan ID: DEPCARE   Provider/Trustee: Edwards, J. D.
-  Life Insurance    01/01/90 12/31/90
   Plan ID: LIFE     Provider/Trustee: State Mutual Insurance Company
    
```

Use two or more spaces to separate Fold Area data fields from row descriptions that follow on the same line. End Fold Area row descriptions with a colon instead of periods to aid legibility.

```

O
P  Plan Name . . . . . From Through . . . . . Employee Employer
-  Dependent Care Reimb. Account
   Plan ID: DEPCARE   Provider/Trustee: Edwards, J. D.
-  Life Insurance    01/01/90 12/31/90
   Plan ID: LIFE     Provider/Trustee: State Mutual Insurance Company
    
```

Insert a blank line between header and subfile information.

```
Benefit Grp.                Started. . .  
Business Unit              Terminated .  
O  
P _____ Plan Name _____ From Through Employee Employer  
O . . . Effective. . . Contributions .  
P _____
```

When possible insert a blank line between title and first field. Begin fields on line 3 unless you need to use the upper right corner of line 1 and 2.

```
069116                      Pay Type Specifications  
Action Code. . . . . _
```



Exercises

See the exercises for this chapter.

Field	Explanation
Format Name	<p>Screen record format.</p> <p>The format name will be the video ID followed by a specific format suffix value. Typically, the suffix values are:</p> <ul style="list-style-type: none"> C subfile control format S subfile format 1 record format <p>If additional formats are required, each format name must be unique so new format suffix values must be assigned.</p>
Type	Record format type. See types listed below.
Fast Path File	The data base file you want to select fields from
Start/End Lines	Specifies the line number range of the format.
Related Record	Field that ties a subfile to a control record format. Required in all SFLCTL record formats.
# Fields Selected	The number of data base fields that have been selected for use on the format.
Fld Pfx	Screen field prefix to be used for the video fields: VD, SF

About Record Formats

Four Record Format Types are valid for videos:

SFLCTL – Subfile control

Present in all subfile videos. Contains all of the fields in the header or top portion of the video, include the subfile column headings.

V928200C (SFLCTL)

```

928200                                Item Search
Business Unit. BBBBBBBBBBB 00000000000000000000000000000000
O  Item                                Ship
P Number Description Date Quantity On Hand UM
    
```

SFL – Subfile

Contains all of the fields in the subfile portion of the video, including the fold area if applicable.

V928200S (SFL)

```
B 00000000 00000000000000000000000000000000 00000000 00000000000000000000 00
Code 1 . 000 Code 2 . 000 Code 3 . 000 Code 4 . 000 Code 5 . 000
B 00000000 00000000000000000000000000000000 00000000 00000000000000000000 00
Code 1 . 000 Code 2 . 000 Code 3 . 000 Code 4 . 000 Code 5 . 000
B 00000000 00000000000000000000000000000000 00000000 00000000000000000000 00
Code 1 . 000 Code 2 . 000 Code 3 . 000 Code 4 . 000 Code 5 . 000
B 00000000 00000000000000000000000000000000 00000000 00000000000000000000 00
Code 1 . 000 Code 2 . 000 Code 3 . 000 Code 4 . 000 Code 5 . 000
B 00000000 00000000000000000000000000000000 00000000 00000000000000000000 00
Code 1 . 000 Code 2 . 000 Code 3 . 000 Code 4 . 000 Code 5 . 000
B 00000000 00000000000000000000000000000000 00000000 00000000000000000000 00
Code 1 . 000 Code 2 . 000 Code 3 . 000 Code 4 . 000 Code 5 . 000
B 00000000 00000000000000000000000000000000 00000000 00000000000000000000 00
Code 1 . 000 Code 2 . 000 Code 3 . 000 Code 4 . 000 Code 5 . 000
```

RECORD

Present in all videos. In subfile videos, contains VDL24 (line 24 text). In non-subfile videos, may contain all fields on the video, including VDL24.

V9282001 (RECORD)

```
Opt:1=Item Master Information      F5=Item Maintenance      F24=More Keys
```

SFLMSG – Subfile Message

Display error message text. J.D. Edwards does not use this format because errors are handled through RPG programs.

The Field Selection List appears.

Seq No	Field Name	Description	DT	Size	HDG	D	Use
92524		Field Selection List					
Report: V928200							
					Format: V928200C		
___	QXXIT K01	Item ID.	S	8	0	—	—
___	QXXDS	Description	A	30		—	—
___	QXXTY	Item Type.	A	2		—	—
___	QXXDT	Date Last Ship	S	6	0	—	—
___	QXXCC	Business Unit.	A	12		—	—
___	QXXQT	Quantity On Hand	S	15	0	—	—
___	QXXUM	Unit of Measure.	A	2		—	—
___	QXX001	Item Code 001.	A	3		—	—
___	QXX002	Item Code 002.	A	3		—	—
___	QXX003	Item Code 003.	A	3		—	—
___	QXX004	Item Code 004.	A	3		—	—
___	QXX005	Item Code 005.	A	3		—	—

F3=Exit F12=Prev Screen F21=Select All

Field	Explanation
Seq No	Sequence Number to indicate which data items you want on the video you are creating and what order you want them to be displayed in the Pick List window accessed from SDA
Field Name	The name of the field in the file
Description	The Data Dictionary row description
DT	Data Item Type
DS	Data Item Size
HDG	Which heading to use from the Data Dictionary R Row Description. C Column 1 heading. D Column 1 and 2 heading.
D	Used to indicate whether a 30 character VC field should be brought for constant information to be loaded into.
Use	Specifies how the data field is to be used on the video: I Input only. O Output only (default). B Both input and output. M IBM Message field.

Field	Explanation
Selection	Controls the display of record formats. 1 Format is active. Blank Not to display.
Format	Lists the DDS format names for the video screen. All names begin with Video name Subfile control formats end with C. Subfile formats end with S. Record (non-subfile) formats end with 1.
Type	Describes the DDS format name.
Boundaries	Two 3-digit numbers that define the range (rows) for the DDS.
Window	Allows access to fields outside the boundaries.
Browse (Y/N)	Allows user to enable/disable the browse mode and view the screen as it would appear when executed. Cannot change or access any item while in browse mode.



F4 – Subfile Drop (while in browse mode)

Toggle between displaying the Fold Area or not for a subfile video
Must set Browse in Format Display Control Window (F5)



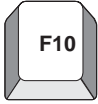
F6 – Access Repository Services

This window provides access to other repository services within J.D. Edwards.



F8 – Toggle Monochrome/Color Display

Will display your screen in monochrome or color
If accessing the Field Definition window, will toggle between Condition Indicators and Color Attributes



F10 – Option 5 — Format Keyword Maintenance

```

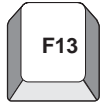
92537                               Format Keyword Maint
Screen: V928200                      Format: V928200C

      General Keywords
PUTOVR (Y/N) . . . . . N
OVERLAY (Y/N) . . . . . Y
-----
      Subfile Keywords
Subfile Fold . . . . . Y
Type (A/F) . . . . . F
Subfile Clear. . . . . Y
Subfile Next Change. . . . . Y

Subfile Page . . . . . 8
Subfile Size . . . . . 30
    
```

Field	Explanation
PUTOVR	Erases video and rewrites when an action is taken; for example, when a window is displayed
OVERLAY	Displays an action; for example, displaying a window, without erasing the video. Most J.D. Edwards videos use OVERLAY.
Subfile Fold	Indicates whether the screen will have a fold area. Uses the SFLDROP keyword.
Type (A/F)	Further identifies subfile fold area: A Will lose modified data in the subfile when you press F4. F Data is retained.
Subfile Clear	Whether or not to use SFLCLR or SFLINZ: Y SFLCLR (clears subfile) N SFLINZ (clears and initializes subfile to blank)
Subfile Next Change	Whether or not to use SFLNXTCHG (Y/N). Will require the user to correct any errors in the subfile before further execution of program.
Subfile Page	Identifies number of records on one subfile page, with the fold area open if applicable. 1 to 27, inclusive

Field	Explanation
Subfile Size	Identifies the total number of records in the subfile that will be loaded in one program cycle. 1 to 9999, inclusive



F13 – Function Key/Opt Definition

```

9601                Function Key/Opt Definition
Action Code. . . I      Video Screen . . . V928200
                        Video Title. . . . Item Search
Line 24
  Opt:1=Item Master Information      F5=Item Maintenance      F24=More Keys
-----
Include  Description                                     Key/Opt  Field
  Y      Exit Program                                     03      #FEOJ
  Y      Clear Screen                                     22      #FCLR
  Y      Help Instructions                                 HL      #FHELP
  Y      Roll Up/Next Record                             RU      #FROLU
  Y      Roll Down/Previous Record                       RD      #FROLD
  Y      Field Sensitive Help                            01      #FOMRK
  Y      Display Error Message(s)                        07      #FERRD
  Y      Display All Function Keys_                       24      #FKEYS
  Y      Item Maintenance                                 05      #F01
  Y      Item Master Information                          01      #S01
-----
Include: Y/N                F16=Display All
    
```

Used to define the function keys for the screen
Function Key Definition files (F9601 and F9611)

Field	Explanation
Line 24	Identifies the function key exits and options exits.
Include	Whether or not to include the function key or option on the screen.
Description	Describes the function or option exit. Cannot exceed 40 characters
Key/Opt	Identifies the function key number or option. Special values: HL Helps. RU Roll up. RD Roll down.
Field	Identifies the name of the function or option exit. Values always begin with a # (pound sign).



F14 – Indicator Control

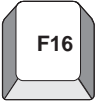
```

928200                                     Item Search
-----Indicator-Control-----
Business Unit                               00000000

O Item                                     1 0 0 0 0 0 0 0 0 0
P Number _____ 11 0 0 0 0 0 0 0 0 0 0
B 00000000 00 21 0 0 0 0 0 0 0 0 0 0
  Code 1 . 00 31 0 0 0 0 0 0 0 0 0 0
B 00000000 00 41 0 0 0 0 0 0 0 0 0 0
  Code 1 . 00 51 0 0 0 0 0 0 0 0 0 0
B 00000000 00 61 0 0 0 0 0 0 0 0 0 0
  Code 1 . 00 71 0 0 0 0 0 0 0 0 0 0
B 00000000 00 81 0 0 0 0 0 0 0 0 0 0
  Code 1 . 00 91 0 0 0 0 0 0 0 0 0 0
B 00000000 00
  Code 1 . 00 Ignore all conditioning _ (Y/N)
B 00000000 00 Reset all indicators _ (1/0)
  Code 1 . 00 ----F3=Exit---F12=Prev-Screen-----
B 00000000 00000000000000000000000000000000 00000000 000000000000000000 00
  Code 1 . 000 Code 2 . 000 Code 3 . 000 Code 4 . 000 Code 5 . 000
B 00000000 00000000000000000000000000000000 00000000 000000000000000000 00
  Code 1 . 000 Code 2 . 000 Code 3 . 000 Code 4 . 000 Code 5 . 000

Opt:1=Item Master Information      F5=Item Maintenance      F24=More Keys
    
```

Used with the Browse mode to simulate a screen at program execution



F16 – List of Defined Fields

```

92540                               List of Defined Fields
Screen: V92801

  Opt  Fmt/Field  Description  Row/Col  Typ  Size  Use
  ---  -
  -- VTX007      Item          006 013  A    30    O
  -- VTX009      Quantity      006 044  A    21    O
  -- VTX011      Ship          006 066  A     8    O
  -- VTX003      P             007 002  A     1    O
  -- VTX006      Number        007 004  A     8    O
  -- VTX008      Description    007 013  A    30    O
  -- VTX010      On Hand       007 044  A    21    O
  -- VTX012      Date          007 066  A     8    O
  -- V92801S    Record Format  SFL
  -- SHXIT      Item ID - Hidden Field  000 000  A     8    H
  -- SFSELC      Selection Exits  008 002  A     1    B
  -- SFXIT      Item ID. . . . .  008 004  A     8    B
  -- SFXDS      Description . . . . .  008 013  A    30    B
  -- SFXQT      Quantity On Hand . . . . .  008 044  A    21    B

Opt: 4=Delete      5=Display/Update      F3=Exit      F12=Prev Screen
    
```

Used to maintain the defined fields and add hidden fields.

Only shows fields for the formats that are active.

Hidden Fields

Used to see hidden field information

▶ To add a hidden field

1. Roll to the bottom blank line of the format that will contain the field.
2. Type 5 to update.
3. Enter the field with a prefix of SH, description, type, size and press Enter.

This information should be the same as the displayed database field that will be affected.

Option 5 — Select Field Definition

```

928200                               Item Search

*Business Unit. BBBBBBBBBBB 00000000000000000000000000000000

O  Item                               Ship
P  Number           Description           Date  Quantity On Hand UM
B  00000000 00000000000000000000000000000000 00000000 0000000000000000 00
   Code 1 . 000 Code 2 . 000 Code 3 . 000 Code 4 . 000 Code 5 . 000
B  00000000 00000000000000000000000000000000 00000000 0000000000000000 00
   Code 1 . 000 Code 2 . 000 Code 3 . 000 Code 4 . 000 Code 5 . 000
B  00000000 00000000000000000000000000000000 00000000 0000000000000000 00
   Code 1 . 000 Code 2 . 000 Code 3 . 000 Code 4 . 000 Code 5 . 000
B  00000000 00000000000000000000000000000000 00000000 0000000000000000 00
Screen:V928200-----Field-Definition-----Format:-V928200C-
Dict Name  XCC           Text           Business Unit . . . . .
Data Type  A           Field Name  VTX004           Cond Ind
Row/Column  3 2       Field Use   O                   RI  _ _ _ _ _
Size        14       Text Form   R                   HI  _ _ _ _ _
Dft Cursor  _         Edited      _                   UL  _ _ _ _ _
Lower Case  _         Change      _ _ _                ND  _ _ _ _ _
OVRDTA     _         Duplicate   _ _ _                BL  _ _ _ _ _
OVRATR     _         Field Cond  _ _ _ _ _           PR  _ _ _ _ _
                                           PC  _ _ _ _ _

F3=Exit  F12=Prev-Screen  F17=Dictionary
    
```

Accesses the Field Definition Window, just as if the user entered an asterisk (*) for the field.



F17 – Define Soft Coding (Vocabulary Override) Fields

```

928200                               Item Search

Business Unit. BBBBBBBBBBB 00000000000000000000000000000000

O  Item                               Define-Soft-Coding-Fields-----
P  Number           Dict
B  00000000 0      Name  CH           Text Description           Screen
   Code 1 . 0      Name  CH           Text Description           Field
B  00000000 0      SELC  C           O                           VTX001
   Code 1 . 0      SELC  D           P                           VTX002
B  00000000 0      XCC   R           Business Unit . . . . . VTX003
   Code 1 . 0      XIT   C           Item                           VTX004
B  00000000 0      DL01  C           Description                       VTX005
   Code 1 . 0      XDT   C           Ship                           VTX006
B  00000000 0      XOT   C           Quantity On Hand                 VTX007
   Code 1 . 0      XUM   C           UM                           VTX008
B  00000000 0      XIT   D           Number                           VTX009
   Code 1 . 0      X001  R           Code 1 . . . . . VTX010
B  00000000 0      XDT   D           Date                           VTX011
   Code 1 . 0
B  00000000 0
   Code 1 . 0
-----F3=Exit--F12=Prev-----

Opt:1=Item Master Information      F5=Item Maintenance      F24=More Keys
    
```

To define VTX fields other than row and column headings on the screen. Row and column headings are protected here. Specify whether you want to use the Data Dictionary row description, column heading 1 or column heading 2.

Can specify the literal text that will be loaded into a *VC0 field.

You must save your video at least once in order to be able to update vocabulary overrides and/or function key definitions by this method. This is because when you are first defining a video, the vocabulary override record and function key definition record are not created until you save the video.



After changing the size of a VTX field, you should execute the Rebuild Vocabulary Override Field Lengths program (11/G9642). This displays the correct VTX field lengths in the Field Size field in Vocabulary Overrides.



F19 – Window left



F20 – Window right

Only applicable when designing wide screens (132 by 27 rows) on 80 column terminal.

Changing Subfile Boundaries

Be careful when changing the size of a subfile through SDA. Consider using these processes to make such changes easier and less confusing.

You can make a subfile smaller or larger.

▶ To make a subfile smaller

1. Press F10 to access the Record Formats List video.
2. Change the starting line number for the subfile format (VxxxxxS).
3. Press Enter to return to SDA.
4. Press F10 to access the Record Formats List video again.
5. Change the ending line number for the control format (VxxxxxC).
6. Press Enter to return to SDA.
7. Move or add headings.

▶ To make a subfile larger

The above steps are reversed if you want to make the subfile larger. You must move the control format fields up before changing the starting line number for the subfile format.

1. Move headings.
2. Press F10 to access the Record Formats List video.
3. Change the ending line number for the control format (VxxxxxC).
4. Press Enter to return to SDA.
5. Press F10 to access the Record Formats List video again.
6. Change the starting line number for the subfile format (VxxxxxS).
7. Press Enter to return to SDA.
8. Press F10 and enter 5 on control format.

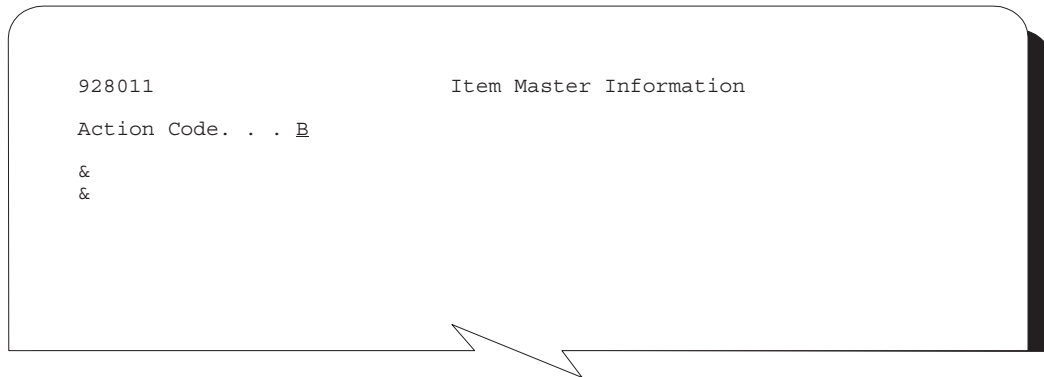
Change subfile page size if desired.



When the subfile is changed, the subfile page and subfile size must be changed to correctly reflect the size of the new subfile.

Process Overview – Placing Selected Fields

Once you've established your field pick list, use the ampersand (&) to specify where you want to locate the field.



The ampersand (&) calls up the pick list in the Field Selection window where you can order the fields and further define their specifications.

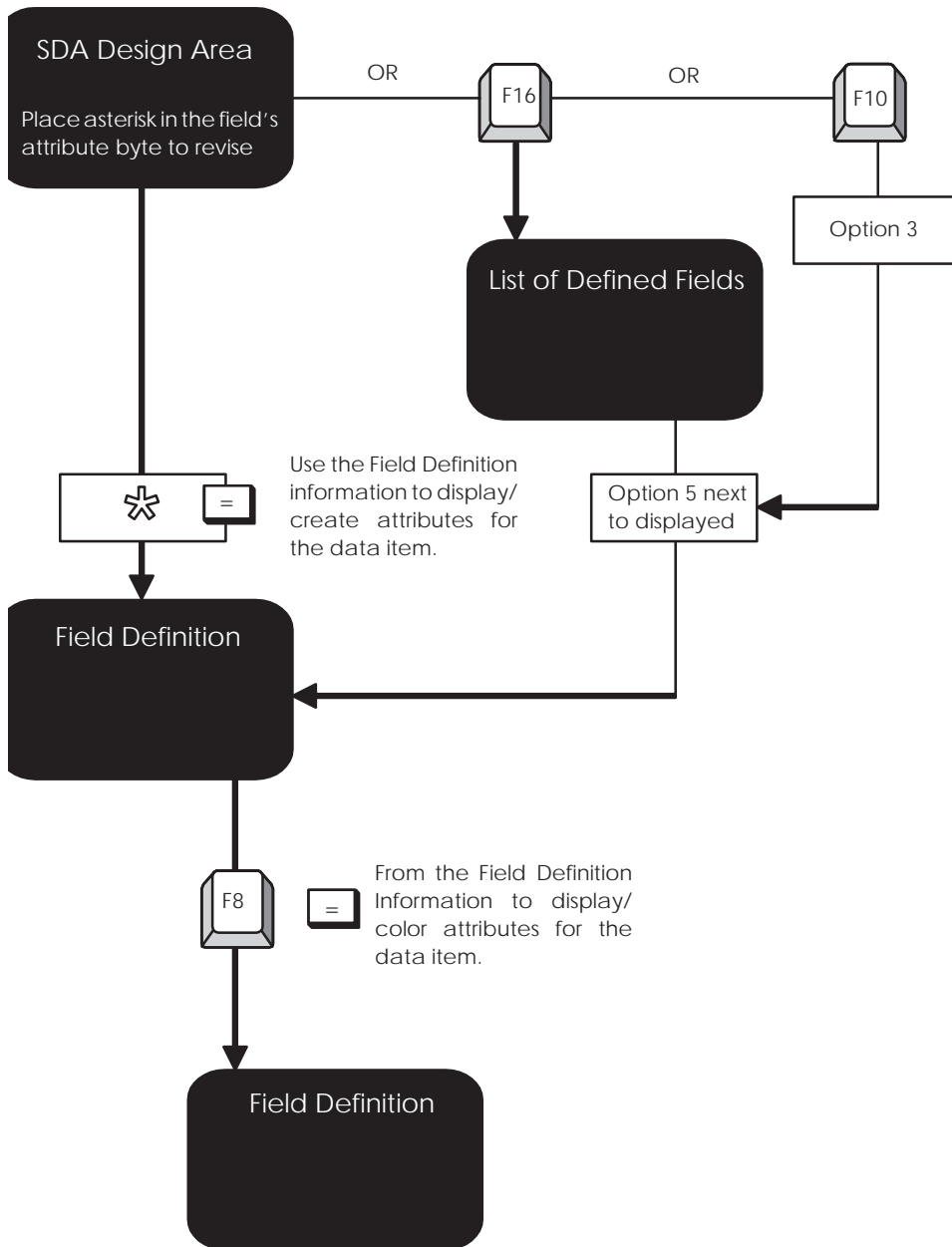
Seq	Fields to select	Description	Row	DT	Size	HDG	D	Use
1	Ox\$xit 01	Item ID.	S		8 0	R		B
2	Ox\$xCC	Business Unit.	A		12	R	D	B

Screen: V928200 Field Selection List Format: V928200C
 Desc Length. . . 10
 F3=Exit F10=Formats F12=Prev Screen F16=Field List

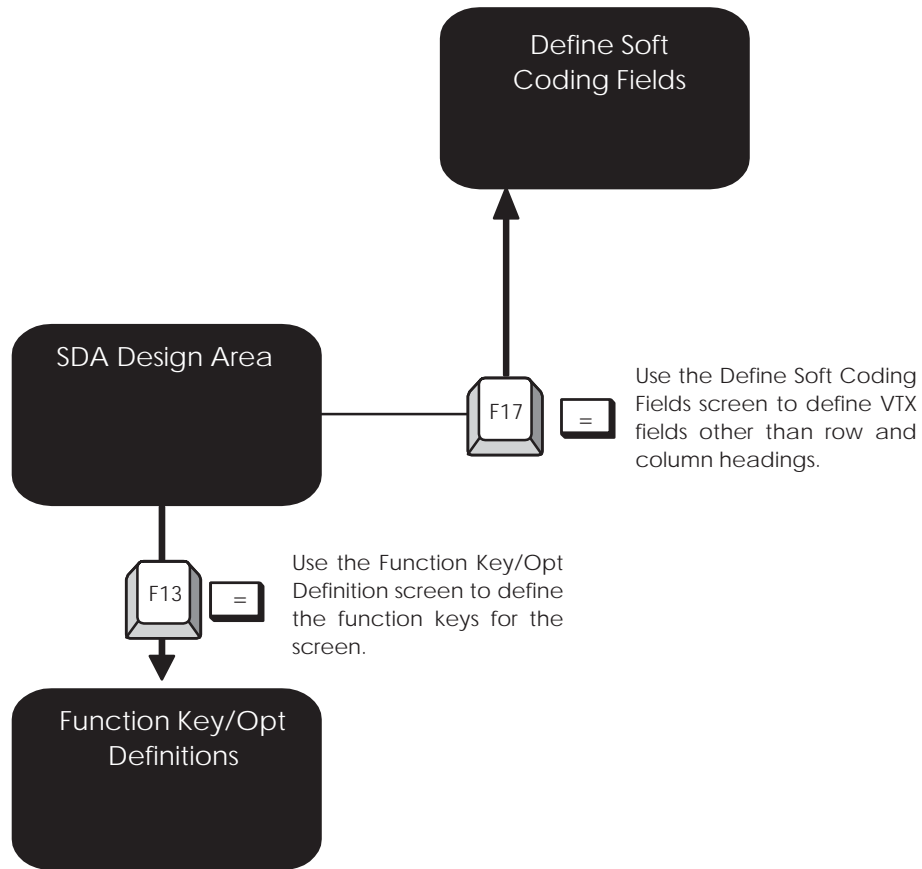
Options

- Override Row Description length
- Resequene fields in list
- Select headings (Row, Column headings) *VTX
- Description Field (*VC0)
- Usage (O=Output, B=Both Input and Output)

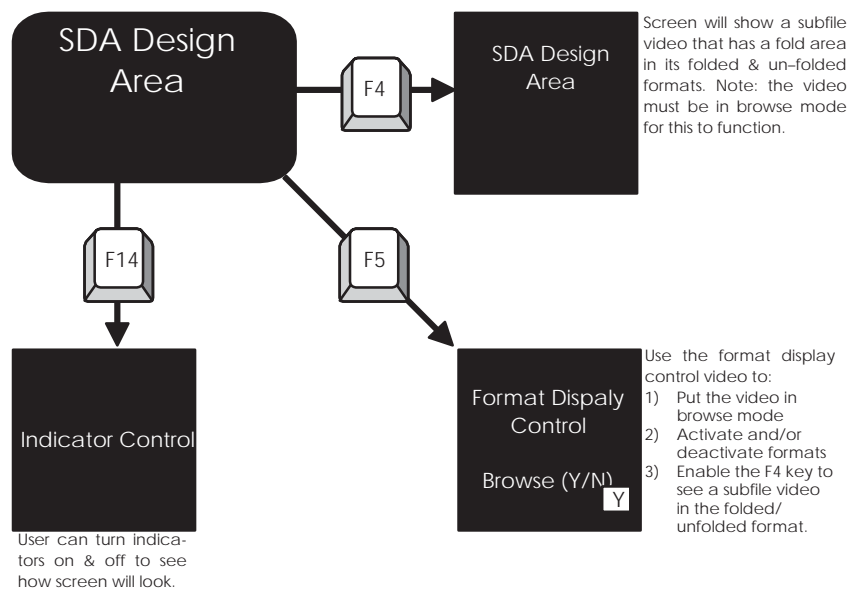
Process Overview – Revising the Field Definition



Process Overview – Revising Vocabulary and Function Keys



Function Keys for Screen and Display Format Control



Summary of Screen Design Aid

Editing options

d, *DEL

<<, >>

xx...xx

-, =

--, =

* and &

You should not use the INSERT and DELETE keys while in SDA.

F7 will restore a video if Field Exit is accidentally pressed.

Standard prefixes

VD, SF, SH

Special Fields

*VTX, *VC0, *LITER, *DATE, *TIME

ACTION

VDL24

TTL@

Error indicators 40 to 79 are automatically assigned to VD and SF fields that are defined as input or input/output

Update fields by using *

Two methods of adding fields to a screen

* (non-pick list method)

& (pick list method)

You can pull in VTX, VC, and the video data base fields all at the same time for one database field

Two methods of selecting data base fields

Fast Path

Non-Fast Path — Accesses File Selection screen

If changing subfile boundaries, should use the outlined processes to make this process easier

You must save a video at least once before updating Vocabulary Overrides or Function Key Definitions since the exit from SDA creates these records

Hidden fields are added from the List of Defined Fields video which is accessed by pressing F16 from SDA

You can only add hidden fields one at a time

Must enter a selection exit 5 to actually add the field



Exercises

See the exercises for this chapter.

Report Design Aid

About Report Design Aid

The Report Design Aid (RDA) is a powerful and versatile tool for designing reports.

It uses the same process as the Screen Design Aid (SDA), except:

- It extends to column 227

- Has windowing capability

You only need to identify field names, field lengths, and field positions on the report.

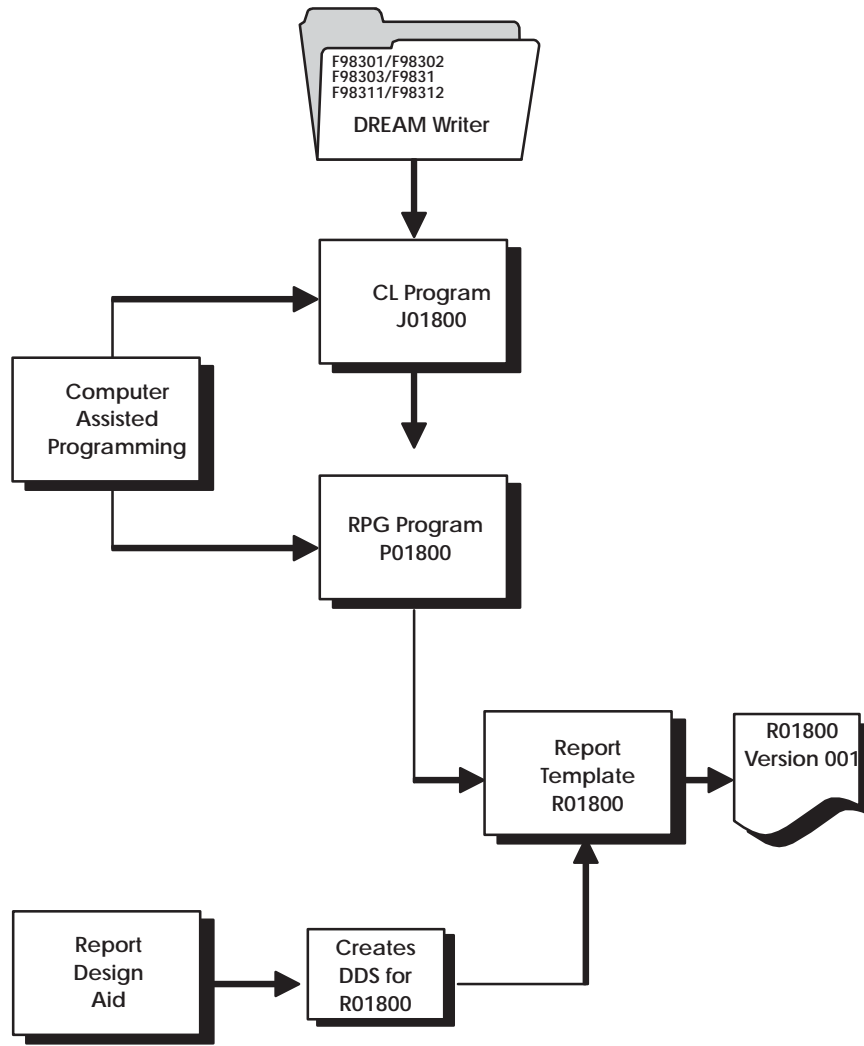
J.D. Edwards reports are externally defined, which means that all the DDS specifications are created and compiled as a printer file, separate from the program object. Report Design Aid automatically generates the DDS specifications. It also incorporates the report information into the documentation and adds it to the cross reference facilities. You can print illustrations of each report.

RDA differs from SDA in that its parameters are targeted for print-based output, which includes page skipping, line skipping and relative positioning.

Perform the following tasks:

- Access Report Design Aid
- Update Report Fields
- Compile the Report

Illustrative Example – RDA and DREAM Writer



Report Design Aid vs. Screen Design Aid – Field Definition Window

```

Screen: V5501z-----Field Definition-----Format: V5501ZS
Dict Name  $xDS      Text      Description. . . . .
Data Type  A         Field Name SF$xDS
Row/Column 8 13     Field Use  B
Size       _ _ _ _  Text Form  _
Dft Cursor _       Edited    Y 44
Lower Case Y         Change    _ _
OVRDTA    _         Duplicate _ _
OVRATR    _         Field Cond _ _ _ _ _

RI  Y 44 _ _ _
HI  Y 44 _ _ _
UL  Y N44 _ _ _
ND  _ _ _ _ _
BL  _ _ _ _ _
PR  _ _ _ _ _
PC  _ _ _ _ _

--F3=Exit F12=Prev Screen F17=Dictionary-----
    
```

```

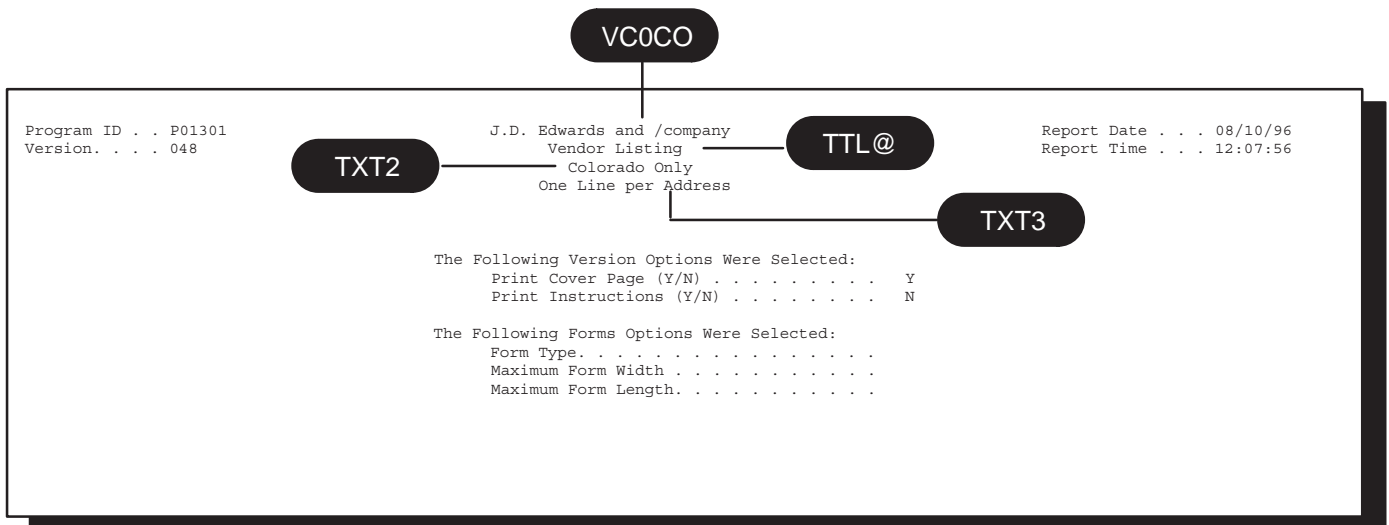
Report:R55400x-----Field-Definition-----Format:-DETAIL1--
Dict Name  $xDS      Text      Description. . . . .
Data Type  A         Field Name RR$xDS
Row/Column 9 89     Field Use  Q
Size       12 _ _   Text Form  _
          Lines Cond Ind
Space Before _ _ _ _ _
Space After  _ _ _ _ _
Skip Before  _ _ _ _ _
Skip After   _ _ _ _ _

Highlight _ _ _ _ _
Underline _ _ _ _ _
Field Cond _ _ _ _ _
Char per Inch _ _ _ _ _
Edit Code  _ _ _ _ _
Asterisk Fill _ _ _ _ _
Float Symbol _ _ _ _ _

--F3=Exit F12=Prev-Screen F17=Dictionary-----
    
```

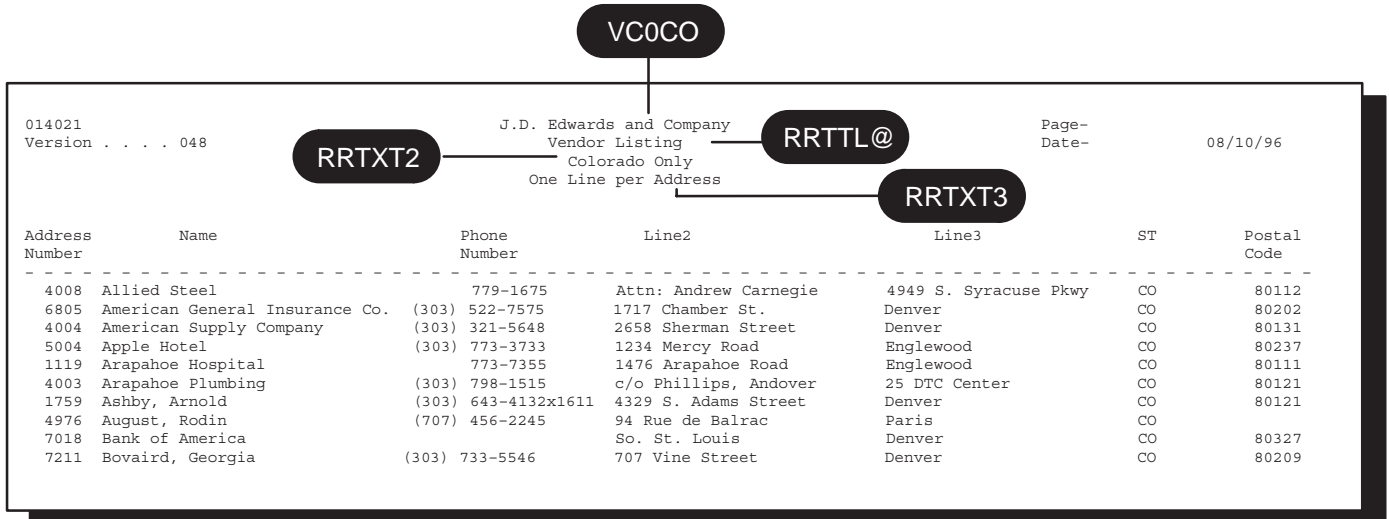
	FIELD POSITIONING	FIELD CONDITIONING
RDA	Row positions are relative to other field, not fixed. Location on the report is determined by Space and Skip designations. Column positions are fixed.	A field can optionally appear in bold face, be underlined, etc. J.D. Edwards does not typically use these features because they impact printer performance.
SDA	Both row and column positions are fixed. Field will appear on the screen exactly where Row/Column field specify.	A field can appear highlighted, underlined, in reverse image, etc. J.D. Edwards makes use of these attribute for marking fields in error.

Cover Page Fields



Name	Description
VCOCO	Name of company 00000
TTL@	Line 1 of DREAM Writer Version ID if it exists, otherwise it is blank
TXT2	Line 2 of DREAM Writer Version ID, or blank
TXT3	Line 3 of DREAM Writer Version ID, or blank

Report Header Fields



Name	Description
VCOCO	Name of company 00000
RRTTL@	Line 1 of DREAM Writer Version ID if it exists, otherwise it is blank
RRTXT2	Line 2 of DREAM Writer Version ID, or blank
RRTXT3	Line 3 of DREAM Writer Version ID, or blank

What Are the Report Formats?

The first step in designing a new report is laying out the formats. All lines of information of the report should be accounted for in order to correctly define the formats needed and their size.

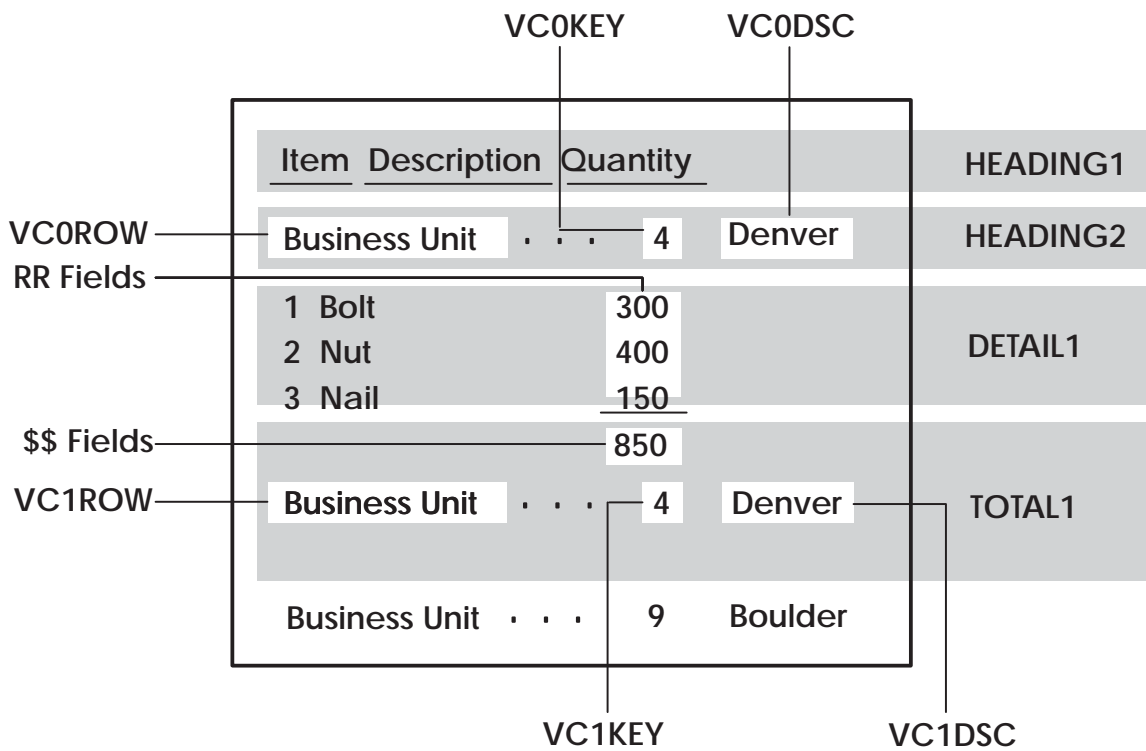
FORMAT	FIELD	DESCRIPTION
Any format	*VTX	Assigns the first available VTX name to the field and will pull in a description from the Data Dictionary that can be overridden.
	*VC0	Assigns the first available VC0 field and assigns a default size of thirty.
HEADING1 – contains the standard fields to be printed on the top of every page	VTX001	The default VTX field which prints the row description, Page –.
	*PAGE	The default special field that inserts the DDS keyword PAGNBR in the source and retrieves the current page number on the report.
	VTX002	The default VTX field which prints the row description, Date –.
	*DATE	Special field that retrieves today's date.
	VC0CO	The name of the default company 000, it appears on the first line of each page.
	RRTTL@	Line 1 of DREAM Writer Version ID if it exists, otherwise it is blank.
	RRTXT2 & RRTXT3	DREAM Writer overrides that correspond to the second and third header lines of the report.
HEADING2 – contains the subheading fields used to describe the level break detail that is to follow	VC0ROW	Data Dictionary row description of the level break field.
	VC0KEY	The value of the level break field.
	VC0DSC	The description of the value of the level break field.
DETAIL1 – contains the data line fields	RRxxxx	The value of the data for this field

FORMAT	FIELD	DESCRIPTION
TOTAL1 – contains the total line fields	VC1ROW	Data Dictionary row description of the level break field
	VC1KEY	The value of the level break field
	VC1DSC	The description of the level break field
	\$\$XXX	Value on total line.



You may have as many formats as you can fit on one RDA screen. Just remember to increment the suffix number for each format added as well as any VC fields you may be using.

Certain fields are used in RDA when generating reports that will contain subheadings or dynamic (hierarchical) totaling. The following illustrates how these fields are used within a report.



What Are the Report Design Standards?

RDA Features

Normal Design range of 132 – 198 Character Reports

To validate against Data Dictionary

To automatically add records to the Vocabulary Overrides File

J.D. Edwards Standards/Record Formats

Prefix standards

RR for output fields

\$\$ for total fields

General Aesthetics

When possible, design your reports using the following set of rules:

Column Headings

Column headings should not be wider than the length of the data that appear below them.

Alignment

Begin fields in column space 2 and do not extend fields beyond column 132 unless necessary.

Spacing

Use the following as your guides when spacing different report elements:

Separate column headings by one space

Use both column headings when one heading isn't clear enough

Special Effects

Always use dashes below column headings instead of underlines. Underlines can impact the performance of printers. Dashes are entered as literal fields.

Do not use highlight as it will print a line three times to achieve the highlighted (or boldface) effect, again impacting performance.

Format

In order to avoid overflow, limit the number of lines in any detail or total format to six or less.

Line and Page Skipping

To be consistent with other report programs use SPACEB and SKIPB instead of SPACEA and SKIPA.

About Designing the Report

DDS is being created as you design the report

SPACEB and SPACEA are entered and removed as you add and move fields around.

Multiple formats are relative to each other.

Function	What to use
Changing the Report Title	TTL@
Adding a New Field	*, &
Updating Existing Fields	*
Deleting an Existing Field	*DEL on field definition window, d.
Format Name	Displayed in upper right hand corner of window.
Field positions	Represent <i>starting</i> positions.

Field	Explanation
Char per Inch	Specifies the horizontal printing density. J.D. Edwards specifies this at the report level and this field is not used.
Edit Code	Used to specify output formatting of numeric data. Used in conjunction with *DATE, *TIME, *PAGE.
Asterisk Fill	Optionally specify asterisk fill for edit codes 1–4, A–D, and J–M. An asterisk will print for each zero suppressed in the edited field.
Float Symbol	Specify a currency symbol (corresponding to the system value QCURSYM) that will be printed immediately to the left of the left–most digit of an edited field. Valid for a numeric field that has an edit code of 1–4, A–D, or J–M.

Understanding the Report Design Aid Function Keys



F5 – Format Display Control

```

928400                                00000000000000000000000000000000
                                       Inventory by Business Unit
                                       00000000000000000000000000000000
                                       00000000000000000000000000000000

Business                               It
Unit                                   -----Format-Display-Control-----
----- Description -----
000000000000 00000000000000000000000000000000
   1 HEADING1  REPORT  001  008
   1 DETAIL1   REPORT  009  009
   1 TOTAL1   REPORT  010  011
-
-
-
-
Window:      Row 001 Col 001
Browse (Y/N) N Form Width 132
Opt:1=Display-Fmt--F3=Exit-F12=Pre
    
```

Field	Explanation
Sel	Selection. Controls the display of record formats.
Format	Lists the DDS format names. Valid format names are: HEADING1 HEADING2 DETAIL1 TOTAL1
Type	Describes the DDS format type. Always REPORT or SFORMS in RDA.
Boundaries	Two 3-digit numbers that define the range (rows) for the DDS. HEADING1 is rows 1 to 8 DETAIL1 is row 9 TOTAL1 is rows 10 to 11
Window	Allows you to access fields outside the boundaries.
Browse (Y/N)	Indicator that allows you to enable/disable the browse mode.

The Record Formats establish the arrangement of fields on your report and in what segment of the page they are to print.

Field	Explanation
Opt	Selection, combined with the Fast Path file name, accesses the Field Selection List.
Format Name	Specifies the format name. HEADINGx DETAILx TOTALx
Type	Specifies the type format. REPORT Record formats that do not use line numbers in the DDS. Instead, they use relative positioning. Default for all report formats. SFORMS Record formats that use line numbers in the DDS. These formats exist in special forms (example: checks, mailing labels)
Fast Path File	Specifies the file you are working with.
<i>Start/End Lines</i>	The beginning line of the format. RDA automatically assigns the end number and adjust when needed
Related Record	Used for SDA only.
Fld Pfx	Defaults to RR for HEADING and DETAIL formats. Defaults to \$\$ for TOTAL formats.



There should be no gaps between the end line of one format and the start line of the next format. If you make changes to the positioning of a format and leave a gap between formats, RDA will automatically adjust the end lines for you.



F14 – Indicator Control Window

```

928400                                00000000000000000000000000000000
-----Indicator-Control-----      Inventory by Business Unit
                                     00000000000000000000000000000000
                                     00000000000000000000000000000000
                                     00000000000000000000000000000000

      1 0 0 0 0 0 0 0 0 0 0 0 0 0
Business 11 0 0 0 0 0 0 0 0 0 0 0 0 0
Unit      21 0 0 0 0 0 0 0 0 0 0 0 0 0
----- 31 0 0 0 0 0 0 0 0 0 0 0 0 0
000000000000 41 0 0 0 0 0 0 0 0 0 0 0 0 0
            51 0 0 0 0 0 0 0 0 0 0 0 0 0 0
            61 0 0 0 0 0 0 0 0 0 0 0 0 0 0
            71 0 0 0 0 0 0 0 0 0 0 0 0 0 0
            81 0 0 0 0 0 0 0 0 0 0 0 0 0 0
            91 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Ignore all conditioning _ (Y/N)
Reset all indicators    _ (1/0)
----F3=Exit---F12=Prev-Screen-----
    
```



F16 – Display All Defined Fields

```

92540                                List of Defined Fields
Report: R928400

Opt  Fmt/Field  Description              Row/Col Typ  Size  Use
-----
-    HEADING1   Record Format             REPORT    001 003    6    0
-    *LITER     Company Name             001 046  A    40    0
-    VTX001     Page No. . . . . .      001 112  A    12    0
-    *PAGE     Inventory by Business Unit 002 046  A    40    0
-    RRTTL@    Date - . . . . .        002 112  A    12    0
-    *DATE     Processing Option Text    003 046  A    40    0
-    RRTXT2    Processing Option Text    004 046  A    40    0
-    RRTXT3    Cost                     006 002  A    12    0
-    VTX003    Item                     006 046  A     2    0
-    VTX006    Item                     006 080  A     8    0
-    VTX009    Ship                     006 109  A     8    0
-    VTX011
    
```

Opt: 4=Delete 5=Display/Update F3=Exit F12=Prev Screen



F17 – Maintain Vocabulary Override Fields

```
928400                0000000000000000000000000000000000000000
                        Inventory by Business Unit
                        0000000000000000000000000000000000000000
                        0000000000000000000000000000000000000000

Business
Unit    -----Define-Soft-Coding-Fields-----
-----
000000000000    Dict Name  CH      Text Description  Screen Field  -
                  PAGN    R      Page No. . . . . VTX001    0
                  DATE    R      Date - . . . . . VTX002
                  XCC     C      Business         VTX003    00
                  XCC     D      Unit             VTX004
                  DL01   C      Description      VTX005
                  XTY     C      Item            VTX006
                  XTY     D      Type            VTX007
                  DL01   C      Description      VTX008
                  XIT     C      Item            VTX009
                  XIT     D      Number          VTX010
                  XDT     C      Ship            VTX011
                  XDS     D      Description      VTX012
-----
                        -F3=Exit--F12=Prev-----
```

You must save your report at least once in order to be able to update vocabulary overrides by this method. This is because when you are first defining a report, the vocabulary override record is not created until you save the report.



F19 – Window Left



F20 – Window Right

Compiling A Report

► To compile a report

From the Software Versions Repository screen

```

9801                          Software Versions Repository
Action Code. . . I
Member ID. . . R928400
Description. . . Inventory by Cost Center w/o Subheadings
Function Code. . PRTE Printer Files
Function Use . . 161 Simple Reports
System Code. . . 92 Computer Assisted Design
Reporting System  92 Computer Assisted Design
Base Member Name P928400 File Prefix. . .
Maint/RSTDSP . . 1 Omit Option. . . Generation Sev .
Copy Data (Y/N). N Optional File. . N Common File. . N

O Source Object Source SAR Version S D User Date
P Library Library File Number ID C P ID Modified
-- JDFSRC71 JDFOBJ71 JDESRC 834451 A71 1 QUARLES 10/26/94
14 STB301SRC STB301OBJ JDESRC 241883 A71 2 STUDENT3 07/19/95
-- -- -- -- -- -- -- -- --
-- -- -- -- -- -- -- -- --
-- -- -- -- -- -- -- -- --
-- -- -- -- -- -- -- -- --
-- -- -- -- -- -- -- -- --
-- -- -- -- -- -- -- -- --

```

Opt: 1=Browse 2=Edit 3=Copy 5=SAR 8=Print 9=Dlt 10=Design 14=Crt F24=More

Enter 14 next to the member in the subfile that you want to create and press Enter.

A screen of printer file parameters will display.

```

Printer File Parameters

Member ID. . . . . R928400
Forms Length . . . . . 068
Forms Width. . . . . 132
Lines/Inch (4/6/8/9) . 8
Char./Inch (10/15) . . 15
Overflow Line. . . . . 062
Align Forms. . . . . N
Form Type. . . . . *STD
Copies . . . . . 001
Separator Pages. . . . 1

```

2. You can either accept the defaults or change them as necessary.

Changing Compile Option Defaults for Reports

Reports must be compiled through the J.D. Edwards compiler by this method so that R98COVER and R98RPTH are pulled in for the cover page and help instructions.

Compiling through PDM or some other method will not bring this information in automatically.

► To change compile option defaults for reports

Change the Data Dictionary defaults for the following data items:

```

#FLN– Forms Length
WDTH– Forms Width
LPI– Lines Per Inch
#CPI – Characters Per Inch
#OVF– Overflow Line Number
#ALN – Alignment (Y/N)
#FTY– Form Type

```

#CPY – Number of Copies

#SPG – Number of Separator Pages



Some severity level 10 errors may occur when your report compiles because of R98COVER (DREAM Writer cover page) and R98RPTH (DREAM Writer help instructions). These are only warning errors.



Exercises

See the exercises for this chapter.



Programming Standards

Objectives

To understand and use J.D. Edwards programming standards

Programming Standards

The Program Generator serves as the primary enforcer of J.D. Edwards programming standards. Because all J.D. Edwards programs are created through the Program Generator, J.D. Edwards programming standards are enforced throughout the software. These standards include subroutines and consistent formats that ease the maintenance process. The following areas are covered in the programming standards.

- Program Specifications
- Program Overview
- Program Structure
- Performance Issues
- User Spaces
- User Indexes
- File Servers
- Functional Servers
- Group Jobs
- J.D. Edwards Source Debugger



Program Specifications

About Program Specifications

As described in IBM's *Languages: RPG/400 User's Guide*, there are several kinds of RPG/400 specifications. When your source program is compiled, these specifications are arranged in the following sequence:

- Control specifications (H Specs)
- File description specifications (F Specs)
- Extension specifications (E Specs)
- Input specifications (I Specs)
- Calculation specifications (C Specs)
- Output specifications (O Specs)

An RPG/400 program does not have to use all specifications. A typical J.D. Edwards program will contain control, file description, extension, input, calculation, and output specifications. The following descriptions were pulled from the manual, *Languages: RPG/400 User's Guide*, and are repeated here for your convenience.

What Are Control Specifications?

The control specification includes the name of the program.

The first line identifies the program, P55011X, including its description, Item Information Update.

The next fourteen lines are comments that are included in J.D. Edwards programs for copyright purposes and reproduction restrictions.

```
Columns . . . :   1  71          Browse          DEVSRC/JDESRC

SEU==>> _____ P55011X
FMT **  ...+... 1 ...+... 2 ...+... 3 ...+... 4 ...+... 5 ...+... 6 ...+... 7
***** Beginning of data *****
0001.00  H/TITLE P55011X - Item Information Update
0002.00  H* -----
0003.00  H*
0004.00  H*      Copyright (c) 1993
0005.00  H*      J. D. Edwards & Company
0006.00  H*
0007.00  H*      This unpublished material is proprietary to
0008.00  H*      J. D. Edwards & Company. All rights reserved.
0009.00  H*      The methods and techniques described herein are
0010.00  H*      considered trade secrets and/or confidential.
0011.00  H*      Reproduction or distribution, in whole or in part,
0012.00  H*      is forbidden except by express written permission
0013.00  H*      of J. D. Edwards & Company.
0014.00  H* -----
0015.00  H*
0016.00  F*

F3=Exit   F5=Refresh   F9=Retrieve   F10=Cursor   F12=Cancel
F16=Repeat find   F24=More keys
```

What are File Description Specifications?

File description specifications describe all the files that your program uses. The information for each file includes:

- Name of the file
- How the file is used (for example, input)
- Size of records in the file for internal files or an external designation
- Whether or not the file is keyed
- Input or output device used for the file
- If the file will have records added to it

```

Columns . . . :   1  71           Browse           DEVSRC/JDESRC
SEU==>> _____ P55011X

FMT **  . . . + . . . 1 . . . + . . . 2 . . . + . . . 3 . . . + . . . 4 . . . + . . . 5 . . . + . . . 6 . . . + . . . 7
0027.00  F*
0028.00  FF0001  IF  E           K           DISK
0029.00  FF5501X UF  E           K           DISK           A
0030.00  FV55011X CF  E           WORKSTN   KINFDS  SRVFDS
0031.00  F*****
0032.00  F*
0033.00  F*      Copy Member for Composite Common Subroutine - C0001
0034.00  F*
0035.00  F/COPY JDECPY,D0001
0036.00  F*****
0037.00  E*****
0038.00  E*      PROGRAM TABLES AND ARRAYS
0039.00  E*      -----
0040.00  E*

F3=Exit  F5=Refresh  F9=Retrieve  F10=Cursor  F12=Cancel
F16=Repeat find  F24=More keys
    
```

When the Program Generator generates a program, it arranges the included files in alphabetical order within the F Specs.

When a program runs, it opens the files in bottom-to-top order. As a general rule:

- Place the files that have the most I/Os at the bottom of the F specs.
- Place any small usage files or files that are closed after first use at the top of the F specs.
- Place the display or print files at the bottom of the list.

What Are Extension Specifications?

Extension specifications describe all record address files, table files, and array files used in the program. The information includes:

- Name of the file, table or array
- Number of entries in a table or array input record
- Length of the table or array entry
- Optional comment text

```

Columns . . . : 1 71          Browse          DEVSRC/JDESRC
SEU==>>      P55011X
FMT **      ...+... 1 ...+... 2 ...+... 3 ...+... 4 ...+... 5 ...+... 6 ...+... 7
0040.00      E*****
0041.00      E*      PROGRAM TABLES AND ARRAYS
0042.00      E*      -----
0043.00      E*
0044.00      E          EMK          64 4          Error Msg
0045.00      E          @MK          64 1          Error Msg
0046.00      E          @ER          64 4          Error Msg
0047.00      E          @DV          40 1          Dflt Wrk
0048.00      E*
0049.00      E*
0050.00      E*      Copy Member for Composite Common Subroutine - C0001
0051.00      E*
0052.00      E/COPY JDECPY,E0001
0053.00      E*****

F3=Exit  F5=Refresh  F9=Retrieve  F10=Cursor  F12=Cancel
F16=Repeat find  F24=More keys
    
```

Lines 44 through 47 are used in this program to facilitate error handling and field editing.

The first line defines an array called EMK which has a maximum of 64 entries, each with a length of 4 characters.

Line 52 requests that the compiler program copy in a specific set of E Specs.

The E Specs, E0001, are used in any program that executes the common subroutine, C0001.

What Are Input Specifications?

Input specifications describe the records, fields, data structures, and named constants used by the program. The information in the input specifications includes:

Name of the file

Sequence of record types

Whether record-identifying indicators, control-level indicators, field-record relation indicators, or field indicators are used

Whether data structures, look-ahead fields, record identification codes, or match fields are used

Type of each file (alphanumeric or numeric; packed-decimal, zoned decimal, or binary format)

Location of each field in the record

Name of each field in the record

Named constants

```

Columns . . . : 1 71          Browse          DEVSRC/JDESRC
SEU==>>          P55011X
FMT **  ...+... 1 ...+... 2 ...+... 3 ...+... 4 ...+... 5 ...+... 6 ...+... 7
0067.00 I*****
0068.00 I*  PROGRAM INPUT SPECIFICATIONS AND DATA STRUCTURES
0069.00 I*  -----
0070.00 I*
0071.00 I*  Data Structure to Load Video Screen Text
0072.00 I*
0073.00 IDSTXT      DS          520
0074.00 I          1 18 VTX001
0075.00 I          41 58 VTX002
0076.00 I          81 92 VTX003
0077.00 I         121 138 VTX004
0078.00 I         161 178 VTX005
0079.00 I         201 218 VTX006
0080.00 I         241 258 VTX007
0081.00 I         281 298 VTX008
0082.00 I         321 338 VTX009
0083.00 I         361 378 VTX010

F3=Exit  F5=Refresh  F9=Retrieve  F10=Cursor  F12=Cancel
F16=Repeat find  F24=More keys
There are no commands to retrieve.

```

Lines 73 through 83 are used to define some of the vocabulary overrides that appear on this screen.

The lengths change from program to program, and the program retrieves the values for each field at the time it executes the housekeeping subroutine, S999.

What Are Calculation Specifications?

Calculation specifications describe the calculation to be done on the data and the order of the calculations. Calculation specifications can also be used to control certain input and output operations. The information includes:

Control-level and conditioning indicators for the operation specified (generally not used in J.D. Edwards)

Fields or constants to be used in the operation

The operation to be processed

Whether resulting indicators are set after the operation is processed

```

Columns . . . : 1 71          Browse          DEVSRC/JDESRC
SEU==>>      P55011X
FMT **      . . . + . . . 1 . . . + . . . 2 . . . + . . . 3 . . . + . . . 4 . . . + . . . 5 . . . + . . . 6 . . . + . . . 7
0098.00     C*      MAINLINE PROGRAM
0099.00     C*      -----
0100.00     C*
0101.00     C*      Process housekeeping.
0102.00     C*
0103.00     C          EXSR S999
0104.00     C*      -----
0105.00     C*
0106.00     C*      If LR on, end program.
0107.00     C*
0108.00     C          *INLR   CABEQ'1'   EOJ
0109.00     C*      -----
0110.00     C*
0111.00     C*      If automatic inquiry set, process inquiry.
0112.00     C*
0113.00     C          $AUTO   CASEQ'1'   S003          24
0114.00     C*      -----

F3=Exit    F5=Refresh  F9=Retrieve  F10=Cursor  F12=Cancel
F16=Repeat find  F24=More keys
    
```

The C Specs are the heart of the processing of a program. J.D. Edwards programs are designed with a MAINLINE portion which is a select set of C Specs that call other subroutines.

What Are Output Specifications?

Output specifications describe the records and fields in the output files and the conditions under which output operations are processed. They include information such as:

- Name of the file
- Type of record to be written
- Spacing and skipping instructions of Printer files
- Output indicators that condition when the record is to be written
- Name of each field in the output record
- Location of each field in the output record
- Edit codes and edit words
- Constants to be written
- Format name for a workstation file

```

Columns . . . : 1 71          Browse          DEVSRC/JDESRC
SEU==>          P55011X
FMT **  ...+... 1 ...+... 2 ...+... 3 ...+... 4 ...+... 5 ...+... 6 ...+... 7
2334.00  CSR          MOVE '0026'   EMK,08          Inv MCU
2335.00  CSR          MOVE '0027'   EMK,09          Inv Desc Ttl
2336.00  C*-----
2337.00  C*
2338.00  C*      Load invalid action code array.
2339.00  C*
2340.00  CSR          MOVEA'      @NAC
2341.00  C*-----
2342.00  C*
2343.00  C*      Load system date.
2344.00  C*
2345.00  CSR          TIME          $WRK12 120
2346.00  CSR          MOVE $WRK12   $$EDT   60
2347.00  C*-----
2348.00  CSR          END999      ENDSR
2349.00  C*****
2350.00  OI5501X E          UNLOCK

```

F3=Exit F5=Refresh F9=Retrieve F10=Cursor F12=Cancel
F16=Repeat find F24=More keys

J.D. Edwards utilizes the RPG EXCPT operation to release locks on data records. This O Spec informs the program which record format is to be released when the EXCPT UNLOCK calculation is performed. Additional formats can be identified with a name such as UNLCKA or UNLCKB.

Typically, J.D. Edwards does not perform reporting functions using O Specs.

The Opcode “UNLCK” can be used instead of EXCPT/O-SPECS.

Program Overview

About the Program Overview

The program overview provides a basic overview of the standards used in a program, including:

- Subroutines
- Error Handling
- Indicator Usage
- Documentation
- Miscellaneous Items

Subroutines

The Program Generator uses two categories of subroutines:

- Standard Subroutines
- Common Subroutines

About Standard Subroutines

The Program Generator includes the required standard routines in the Calculation Specifications at the time it generates a program. It arranges them in alphanumeric order.

If you must enter your own standard subroutine, name it in such a way that it will be executed in the necessary order. For example, if you need your subroutine to be executed after the scrub and edit subroutine (S005) but before the update files subroutine (S010), begin the name with an S and then use a three to four character suffix that fits in logically, such as S005A or S006.

Standard subroutine code lines are identified in positions 7 and 8 with SR. Their name always begins with an S. Subroutines are separated by a single line of asterisks. Major blocks of code within a subroutine are separated by a single line of dashes.

```
1870.00   CSR                MOVE *BLANK   HRJBCD
1871.00   CSR                MOVE *BLANK   HRJBST
1872.00   CSR                MOVE *BLANK   HRRVW
1873.00   CSR                END
1874.00   C*-----
1875.00   CSR                END001   ENDSR
1876.00   C*****
1877.00   C*
1878.00   C*   SUBROUTINE S003 - Edit Key
1879.00   C*   -----
1880.00   C*
```

Place an END tag on the ENDSR statement. The TAG name should start with END. The subroutine name is added as a suffix. For example, END001 would be the used for subroutine S001. Do not use the end tag for anything else. Use a T tag if the code needs to be executed prior to the ENDSR statement. For example, T001 would be used for subroutine S001 if the tag is used in the middle of the subroutine.

```
1874.00   C*-----
1875.00   CSR                END001   ENDSR
1876.00   C*****
```

About Common Subroutines

Common subroutines are maintained outside the program and are included at the appropriate times using the COPY statement. Common subroutines are also referred to as copy modules for that reason. J.D. Edwards stores all common subroutines in the file JDECPY.

At compile time, the compiler copies in code for all instances of the COPY statement. The included code appears only once and then can be called from anywhere within the program.

The statement that instructs the compiler to copy in the source code is shown below. Single lines of asterisks separate common subroutines.

```

0731.00      C*****
0732.00      C*
0733.00      C*   Copy Common Subroutine - Right Justify Numeric Fields
0734.00      C*
0735.00      C/COPY_JDECPY_C0012
0736.00      C*****

```

This example shows how the COPY statement in the source (above) brings in additional code to the compiled source (below).

```

73400 C*
73500 C/COPY_JDECPY_C0012
Q000000+ MEMBER C0012 IN FILE JDECPY LIBRARY JDFSRC OPENED FOR /COPY.
Q000100+ C*****
Q000200+ C*   This is part of a composite common subroutine. In
Q000300+ C*   order for the subroutine to work correctly, the
Q000400+ C*   RPG program must /COPY in the following members:
Q000500+ C*   E0012, C0012
Q000600+ C*****
Q000700+ C*   MAINLINE PROGRAM
Q000800+ C*   -----
Q000900+ C*
Q001000+ C*
Q001100+ C*   SUBROUTINE C0012 - Right Justify Numeric Fields
Q001200+ C*   -----
Q001300+ C*
Q001400+ C*   PURPOSE
Q001500+ C*   -----
Q001600+ C*   To provide a subroutine common to all programs which
Q001700+ C*   right justifies numeric fields and places the sign over
Q001800+ C*   the low order byte of the fields, designated by either a
Q001900+ C*   leading or trailing minus sign. This routine also ignores
Q002000+ C*   all non-numeric characters in the input field, and
Q002100+ C*   determines the placement of the decimal point.
Q002200+ C*
Q002300+ C*   REMARKS
Q002400+ C*   -----
Q002500+ C*
Q002600+ C*   Prior to executing this subroutine data from an
Q002700+ C*   alphanumeric input field should be placed in the array
Q002800+ C*   named '@NM' with a 'MOVEA' command. The right justified
Q002900+ C*   number is available from the subroutine field named
Q003000+ C*   '#NUMR', which is a 15 digit 6 decimal field.
Q003100+ C*   CAUTION: The largest number that can be handled
Q003200+ C*   by this subroutine is 999,999,999.999999.
Q003300+ C*   However, the input field may contain only 15
Q003400+ C*   numbers.
Q003500+ C*
Q003600+ CSR           C0012      BEGSR
Q003700+ C*           -----
Q003800+ C*
Q003900+ CSR           Z-ADD0      #NUMR  299
Q004000+ CSR           Z-ADD0      #NUMR2 152      Compile only
Q004100+ CSR           Z-ADD0      #NUMR9 159      Compile only
Q004200+ C*
Q004300+ CSR           MOVEA@NM     #ALNUM
Q004400+ CSR           CABEQ*BLANKS EN0012
Q004500+ CSR           MOVE *ALL'0'  #ALNUM 22

```

The following user defined code contains an online listing and specifications.

Install System Code: 93

User Defined Code: /C

Error Handling

J.D. Edwards has devised an efficient means of handling errors by way of arrays.

```

Columns . . . : 1 71          Browse          DEVSRC/JDESRC
SEU==>>      P55011X
0040.00      E*****
0041.00      E*   PROGRAM TABLES AND ARRAYS
0042.00      E*   -----
0043.00      E*
0044.00      E           EMK           64  4           Error Msg
0045.00      E           @MK           64  1           Error Msg
0046.00      E           @ER           64  4           Error Msg
0047.00      E           @DV           40  1           Dflt Wrk
0048.00      E           @AV           10 10           Allowed Values
0049.00      E           @40           40  1           Allowed Values
0050.00      E           @10           10  1           Allowed Values
0051.00      E*
0052.00      E*
0053.00      E*   Copy Member for Composite Common Subroutine - C0001
0054.00      E*
0055.00      E/COPY JDECPY,E0001
0056.00      E*****
0057.00      E*
0058.00      E*   Copy Member for Composite Common Subroutine - C0012
0059.00      E*
0060.00      E/COPY JDECPY,E0012
    
```

The EMK array holds the four byte data dictionary name of every error that could occur in this program. Loaded in Housekeeping (S999).

The @MK array maintains a flag setting for each error identified in EMK. If one of the errors occurs, the flag is set on.

The @ER array loads the related error messages when the user presses F7 to view the errors that actually occurred.

A program may have up to 64 errors.

The call to the error message handling program is shown below.

```

Columns . . . : 1 71          Browse          DEVSRC/JDESRC
SEU==>>          P55011X
0278.00 C*
0279.00 C*   If Display errors pressed, exit to error messages.
0280.00 C*   -----
0281.00 C*
0282.00 CSR   @@AID   IFEQ #FERRD
0283.00 CSR           Z-ADD1   #G
0284.00 CSR           Z-ADD1   #H
0285.00 CSR   #G     DOWLE64
0286.00 CSR   @MK, #G  IFEQ '1'
0287.00 CSR           MOVE EMK, #G @ER, #H
0288.00 CSR           ADD 1 #H
0289.00 CSR           END
0290.00 CSR           ADD 1 #G
0291.00 CSR           END
0292.00 CSR           CALL' P0000E'          98
0293.00 C*           -----
0294.00 CSR           PARM @ER
0295.00 CSR           GOTO ENDEXE
0296.00 C*           ----
0297.00 CSR           END
0298.00 C*

```

If any error flag is set to one, then the program moves the corresponding data item from the array of all possible errors (EMK) into the array of the errors that have actually occurred (@ER). P0000E is called to display the errors when the function key is pressed.

The next example of code shows how a flag is set in the @MK array.

```

Columns . . . : 1 71          Browse          DEVSRC/JDESRC
SEU==>>          P55011X
0347.00 C*
0348.00 C*   If error on read, set error.
0349.00 C*
0350.00 CSR   *IN82   IFEQ '1'
0351.00 CSR           SETON          9341
0352.00 CSR           MOVE '1' @MK, 2
0353.00 CSR           GOTO ENDEXE
0354.00 C*           ----
0355.00 CSR           END
0356.00 CSR           END
0357.00 CSR           END
0358.00 C*
0359.00 C*   If ROLL DOWN key pressed, process read prior.
0360.00 C*   -----
0361.00 C*
0362.00 CSR   @@AID   IFEQ #FROLD
0363.00 C*
0364.00 C*   Reset error indicators if roll
0365.00 C*
0366.00 CSR           MOVEA$RESET *IN, 41
0367.00 CSR           MOVE '0' *IN, 40

```

If indicator 82 is on, the standard indicator for an error (93) is set on and indicator 41 is set on to highlight the field in error.

The next example of code shows the loading of the array that contains every possible error for this program. This loading takes place only once (in S999).

```
Columns . . . : 1 71          Browse          DEVSRC/JDESRC
SEU==>>          P55011X
2324.00          C*
2325.00          C*      Load error messages array.
2326.00          C*
2327.00          CSR          MOVE '0001'      EMK,01          Inv Action
2328.00          CSR          MOVE '0002'      EMK,02          Inv Key
2329.00          CSR          MOVE '0003'      EMK,03          Inv Blanks
2330.00          CSR          MOVE '0004'      EMK,04          Inv Date
2331.00          CSR          MOVE '0005'      EMK,05          Inv Next Nbr
2332.00          CSR          MOVE '0007'      EMK,06          In Use
2333.00          CSR          MOVE '0025'      EMK,07          Inv Values
2334.00          CSR          MOVE '0026'      EMK,08          Inv MCU
2335.00          CSR          MOVE '0027'      EMK,09          Inv Desc Ttl
2336.00          C*-----
2337.00          C*
2338.00          C*      Load invalid action code array.
2339.00          C*
2340.00          CSR          MOVEA'          '@NAC
2341.00          C*-----
2342.00          C*
2343.00          C*      Load system date.
2344.00          C*
```

Indicator Usage

There are 99 indicators available for use. They are grouped by purpose. The chart on the next page lists the available indicators and their description.

Indicator	Explanation
01	Causes the Invalid Function Key Pressed message to appear
02	Dictates the color palette to be used
15	Indicates a function key was pressed.
20	Handles the clear screen action code
21	Handles the add action code
22	Handles the change action code
23	Handles the delete action code
24	Handles the inquire action code
25	Handles the inquire action code 'P' for print (payroll)
31	Used in conjunction with subfile processing to initiate the INVITE or SFLCLR keyword. Using INVITE will slow processing
32	Used in conjunction with subfile processing initiating the keyword SFLNXTCHG
37	Used in conjunction with subfile processing to avoid display of an empty subfile (used only with inquiry subfiles)
38	Used in conjunction with subfile processing to highlight the last record in the display (keyword SFLDSP) and avoid display of an empty subfile
40-79	Used for error processing to indicate which fields are in error and need to be highlighted
40	Reserved for errors in the Action Code field
41	Reserved for errors in the key fields
80-89	General reusable one-time indicators. Use them as needed.
93	Global error indicator that highlights line 24
98	Indicates a chain or read failure
99	Indicates a record is in use or file error
OF	Indicates overflow for report processing
LR	Indicates that the last record has been read and the program should end normally
RT	Indicates that a temporary or final halt in the program should take place. Returns to calling program leaving files open.

Documentation

In the F specifications the program contains several comment lines that are to serve as the program revisions log. The log should list all programmers who have revised the program, the date the revisions were made and the SAR outlining the change that was made.

When entering comment lines, use the following conventions.

An asterisk in column seven specifies that the line is a comment line only.

The asterisk should be followed by four blank spaces before the comment begins.

Precede and follow the comment lines with a blank line.

Notice in the example below how these conventions are observed.

Guidelines

Common sense should be your guide when documenting your programs. Be thorough and descriptive. Put yourself in the place of the next programmer who will inherit your work. Use English and not “programmerese” to specify the action occurring. For example, for the code shown below:

```

0130.00      C*
0131.00      C          $998      CASEO' '      S998
0132.00      C*          -----
0133.00      C          END
  
```

DON'T WRITE: If \$998 is blank, execute S998.

INSTEAD WRITE: Load data field dictionary parameters (one cycle only).

Notice that the good example gives more detail than can be inferred from the actual code.

Include a line of dashes beneath any line of code that branches to another line of code (CASxx, CABxx, GOTO, EXSR, CALL, BEGSR). The receiving tag statement should also be followed by a line of dashes as shown in the example below.

```

0275.00      C*
0276.00      C          EXSR S999
0277.00      C*          -----
  
```

Miscellaneous Items

The following represent miscellaneous items of note that you should keep in mind when writing your own code.

Naming Conventions

Use the following first character to distinguish different item names:

- @ Array names
- \$ Program created field names (flags and work fields)
- # Fields defined in common subroutines

Key List (KLIST)

Key lists should all be defined in the housekeeping subroutine.

Begin the key list name with the data file prefix. For example, the Address Book Master file prefix is AB, so the key list would be ABKY01.

The Program Generator creates key lists using the following naming conventions:

XXKY01 for physical files where XX = the file prefix

For example: ABKY01

When a physical needs to have more than one key list in a program, the successive files are noted in the last character space. For example, for three key lists for the physical F0101, the key lists would be: ABKY01, ABKY02, and ABKY03.

XXKY0x for logical files where XX is equal to the file prefix and x is equal to the last letter of the logical file name.

For example: ABKY0A for F0101LA, ABKY0B for F0101LB.

When a logical needs to have more than one key list in a program, the successive files are noted in the second to last character space. For example for three key lists for the logical F0101LA the key lists would be: ABKY0A, ABKY1A, and ABKY2A.

Work Fields

Define work fields only once within a program. The use of the *LIKE DEFN command is highly recommended for defining work fields when their attributes are directly tied to those of data base fields.

For example, if the work field needs to have the same attributes as a field that exists in a file:

```
MOVE ABANS $$ANS,
```

then define \$\$ANS as follows:

```
*LIKE DEFN ABANS $$ANS
```

The advantage of this method is that the work field and data base field will retain the same attributes even if the data base field changes.

When using work fields as a flag, you should assign them the prefix \$ and have the remainder of the name be descriptive. In the example below, the work field name is \$GLOBL. This name is more descriptive than a field name such as \$G.

```

0831.00      C*
0832.00      C*      If F6 pressed, Global Update by Percent or Amount.
0833.00      C*      -----
0834.00      C*
0835.00      CSR      @@AID      IFPQ #F03
0836.00      CSR      MOVE '1'      $GLOBL 1
    
```

Optional Files

If a program uses files which are dependent upon your particular setup, you should designate those files as user control open (UC) in the file specifications and then write the program such that they are opened, if needed, in the Housekeeping subroutine. This eliminates the need to open files unnecessarily and conserves resources.

```

FF085201 UF  E      K      DISK      UC
FF08501LAIF E      K      DISK      UC
    
```

The lines that perform the open are shown below.

```
Columns . . . : 1 71          Browse          JDFSRC/JDESRC
SEU==>>          P08320
3825.00          C*
3826.00          C*      Check for existence of pension files.
3827.00          C*
3828.00          CSR          OPEN F085201          99
3829.00          CSR          IFEQ '0'
3830.00          CSR          *IN99          MOVE '1'          $PENS 1
3831.00          CSR          END
3832.00          C*
3833.00          CSR          OPEN F08501LA          99
3834.00          CSR          *IN99          IFEQ '0'
3835.00          CSR          MOVE '1'          $PENS2 1
3836.00          CSR          END
```

If you are doing a user-controlled open for a file that is part of another system, you will also need to provide pre-compiler commands in the event the user hasn't purchased that system. The example below illustrates the necessary pre-compiler commands designed to address just such a situation.

In the example, if a Payroll client has not purchased Human Resources, the code specifies a file override and then substitutes an empty file (identified with the suffix E) which all Payroll clients receive.

```
***** Beginning of data *****
0001.00          OVRDRBF      FILE (F082001B) TOFILE (F082001E)
0002.00          OVRDRBF      FILE (F08001) TOFILE (F08001E)
0003.00          OVRDRBF      FILE (F08005B) TOFILE (F08005E)
***** End of data *****
```

The user-controlled opens in the program allow the program to run in the absence of certain files, whereas the precompiler commands allow the program to be compiled in the absence of those files.

Program Structure

About Program Structure

There are several types of subroutines used in the J.D. Edwards program structure, including the following:

- Internal RPG Subroutines within J.D. Edward programs
- Subfile program with selection exits
- Interactive non-subfile program
- Report program without subheadings
- Report program with subheadings
- Maintenance program without a subfile

Internal RPG Subroutines Within J.D. Edwards Programs

Standard names make program maintenance easier.

Called primarily from Mainline.

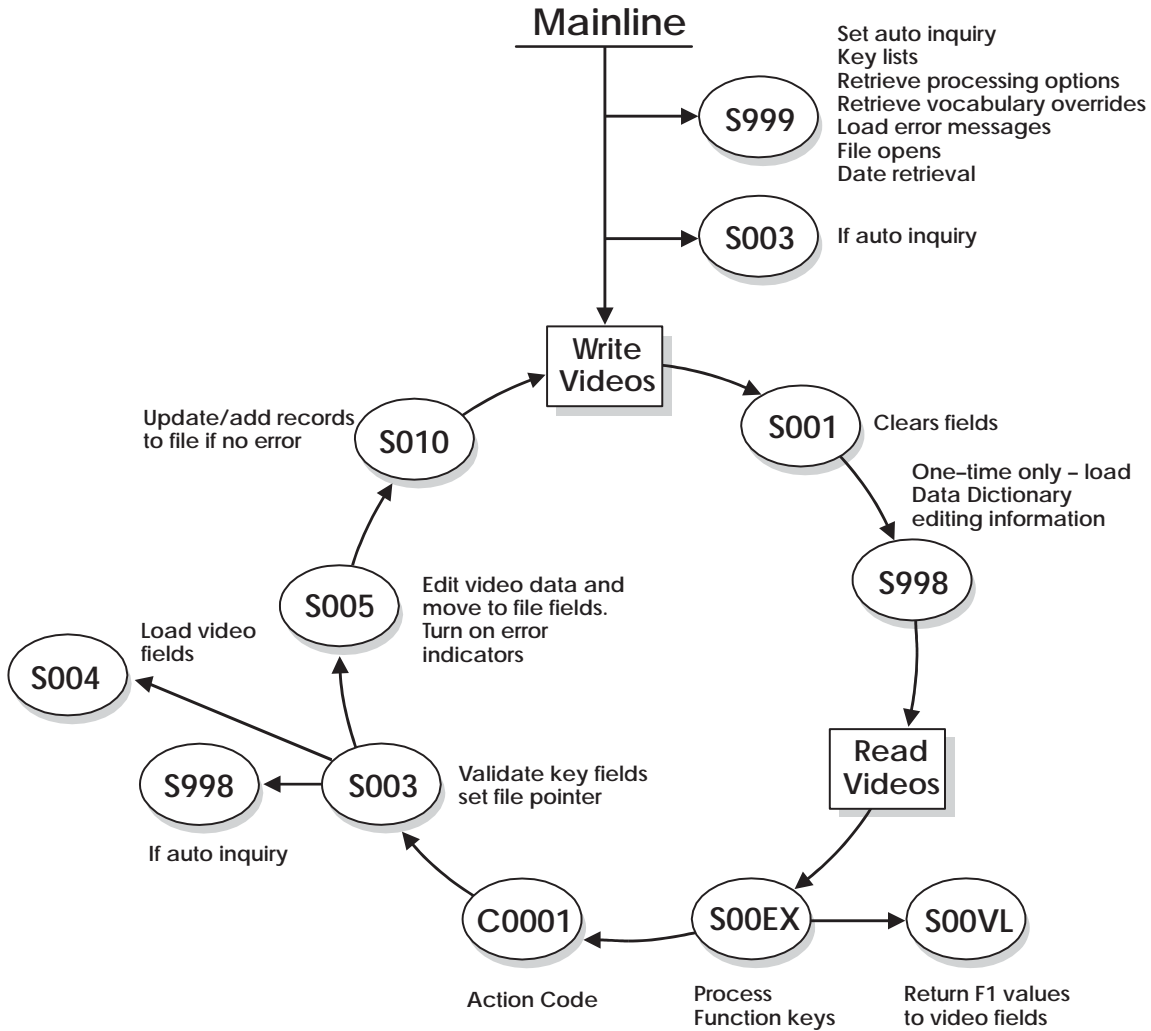
The table below describes internal RPG subroutines within J.D. Edwards programs:

Field	Explanation
S00EX	Processes all function key exits. Calls P9601H if F24 was pressed Calls X96CCX if F1 was pressed Calls subroutine S00VL if F1 was pressed after X96CCX was called Calls P0000E if F7 was pressed Calls P00HELP if the HELP key was pressed Calls subroutine S001 if F22 was pressed Calls all programs to process all user defined function keys
S00VL	Values returned with Cursor Sensitive Help. Is called from the subroutine S00EX after the program X96CCX is called
S00OP	Subfile Selection Exits (Options).

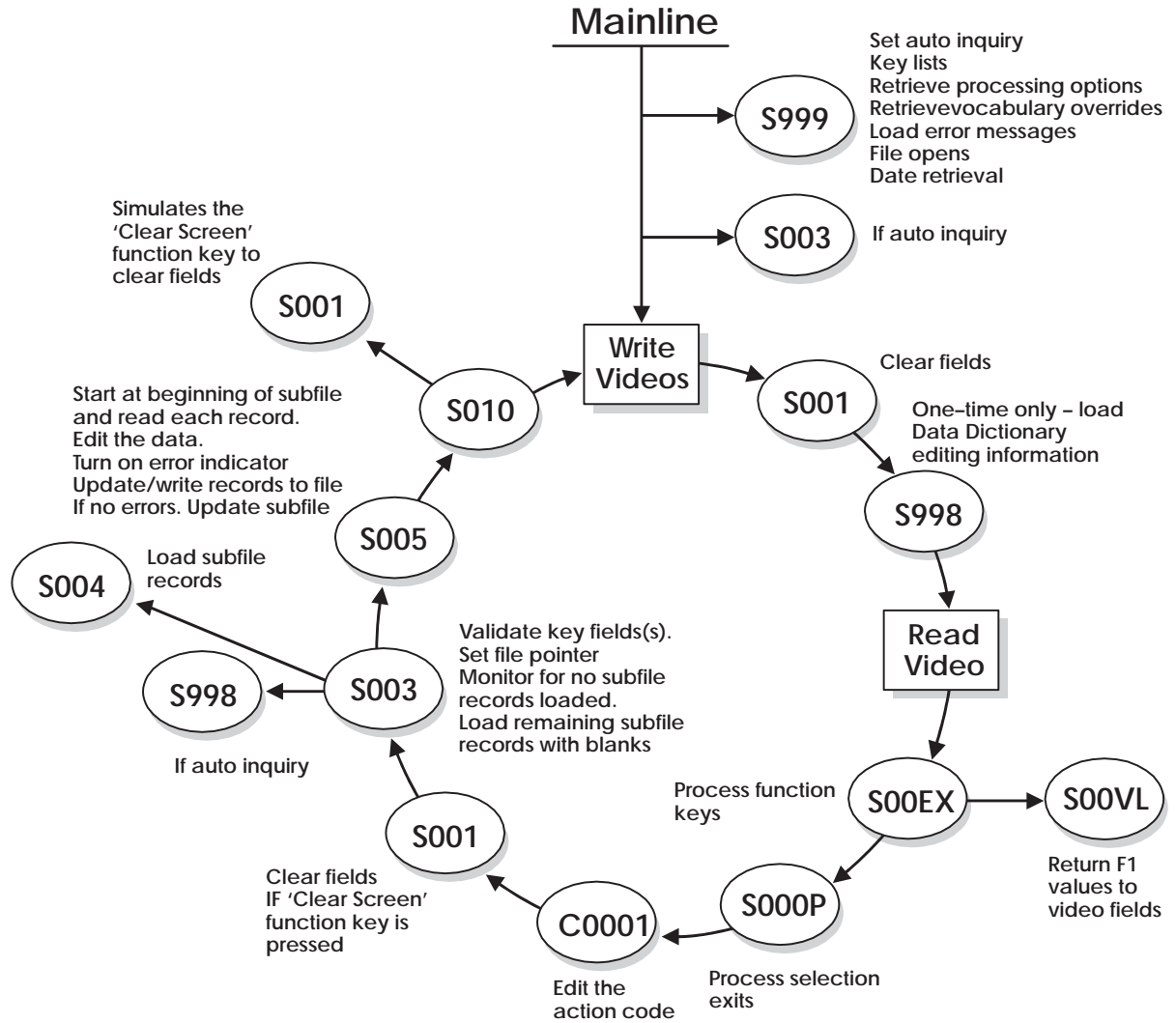
Field	Explanation
S001	Clears all database and video fields. Usually only clears key fields and VC0 fields if F22 (Clear) is pressed
S002	Checks for level breaks for reports. Turns on level break flags. Retrieves total line description
S003	Validates the key fields. Calls S998 subroutine if auto inquire was invoked Sets the file pointer. Performs a SETLL or CHAIN if a single record maintenance program Performs a SETLL for subfile programs Calls a subroutine S004 to load video/report fields Monitors for no subfile records loaded if a subfile Loads unused subfile records with blanks
S004	Display/load video/report fields.
S005	Scrubs and edits video/report fields. Moves video data to database fields Turns on error indicators if a field is in error Updates/writes records to the database file if a subfile Updates the subfile
S010	For reports with level breaks it: Prints the total Clears the level break totals Prints the grand total (if it has reached the end of the file) Prints the detail Adds to the new level break totals Calls subroutine S020 if it is a report with subheadings If it is <i>not</i> a report, it updates, adds, or deletes records from the database file Turns on F22 (Clear) to force S001 to be executed to clear the buffer before reading another record.
S020	Print Report Subheadings.
S998	Loads Data Dictionary values. (One time only) Retrieves row description for level breaks and subheadings, if applicable

Field	Explanation
S999	Housekeeping. (One time only) Sets auto inquiry Defines key lists Retrieves processing options and level breaks, if applicable Retrieves vocabulary overrides Loads error messages Performs file opens Current date retrieval Work fields defined using *LIKE Prints cover page and Helps in a report

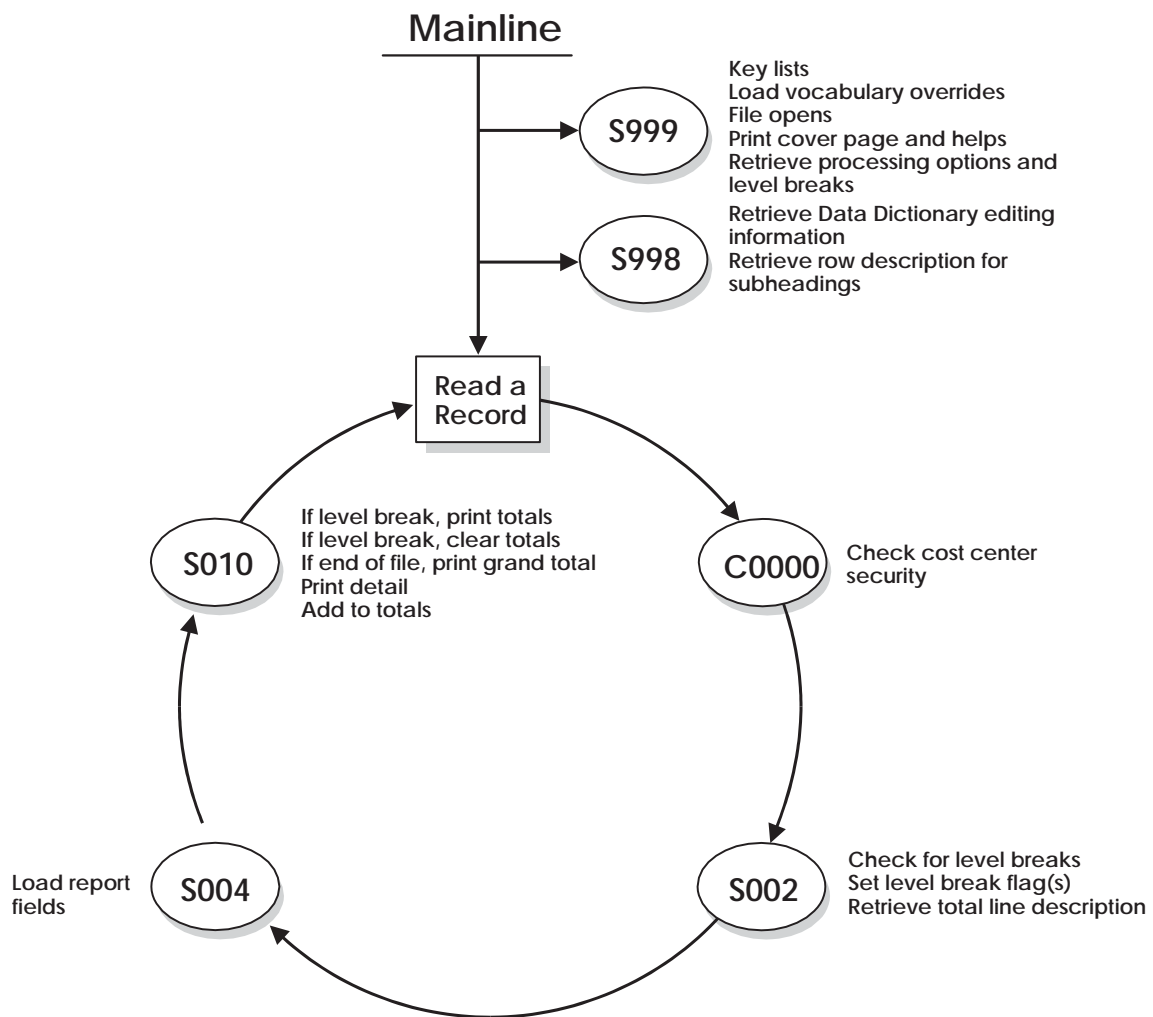
Interactive Non-Subfile Program



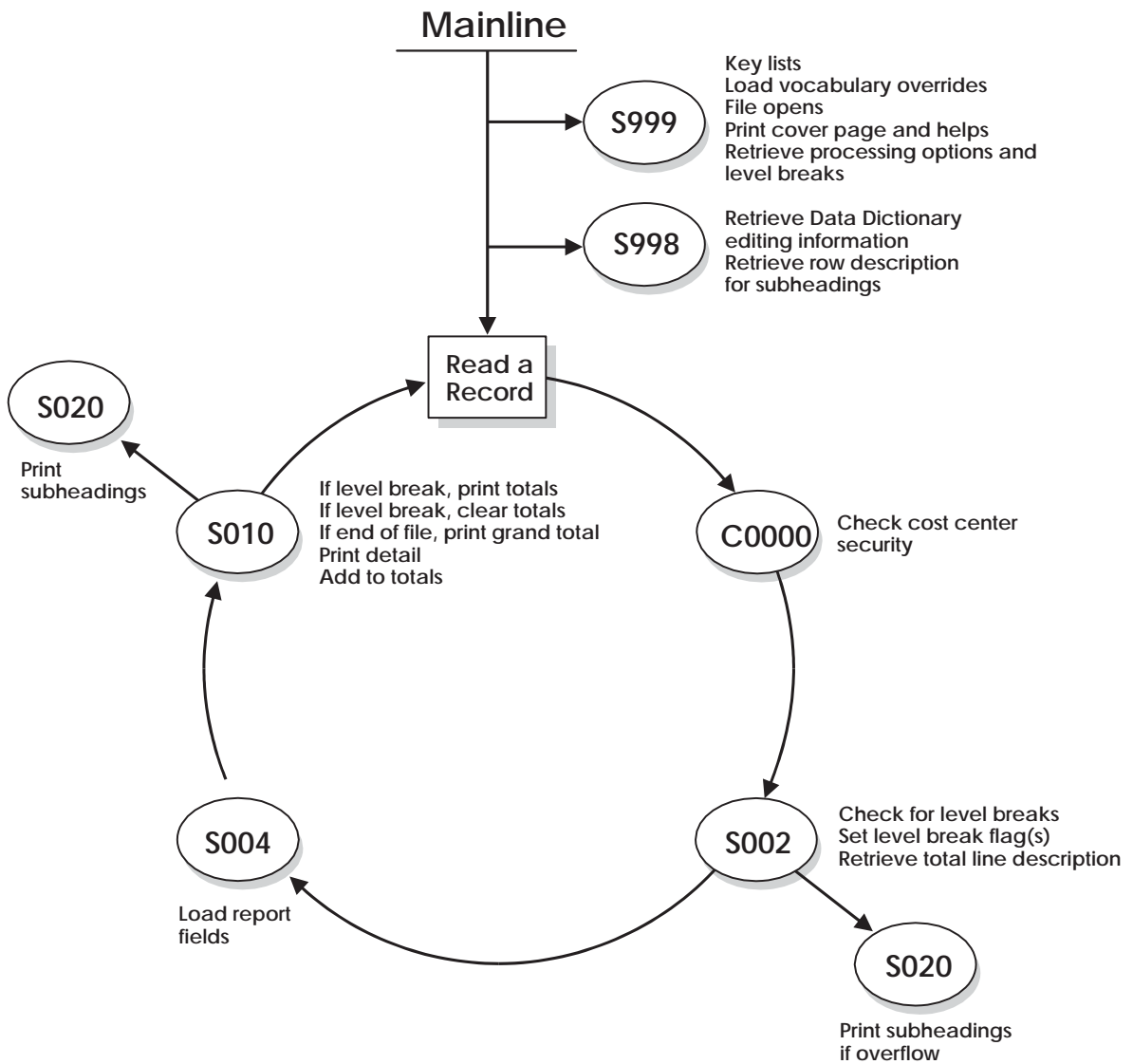
Subfile Program With Selection Exits



Report Program Without Subheadings



Report Program With Subheadings



Review an RPG Program's Source

The following pages illustrate a maintenance program without a subfile.

Some of the more important areas and commonly used fields are highlighted and explained.

```

1.00 H/TITLE P928011 Item Master Information
2.00 H*
3.00 H*
4.00 H* Copyright (c) 1993
5.00 H* J. D. Edwards & Company
6.00 H*
7.00 H* This unpublished material is proprietary to
8.00 H* J. D. Edwards & Company. All rights reserved.
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12.00 H* is forbidden except by express written permission
13.00 H* of J. D. Edwards & Company.
14.00 H*
15.00 H* -----
16.00 F*
17.00 F* PROGRAM REVISION LOG
18.00 F* -----
19.00 F*
20.00 F* Date Programmer Nature of Revision
21.00 F*
22.00 AUTHRF* 12/07/93 QUARLES SAR # 241883 (AS/400 A/G)
23.00 F*
24.00 F* B0010 - Standard Maintenance Program Type
25.00 F* This program provides the standard single cycle
26.00 F* processing for adding, changing, deleting and
27.00 F* inquiring into data records as requested.
28.00 F*
29.00 F* *****
30.00 F*
31.00 F* FF0001 IF E K DISK
32.00 F* FFF92801 UF E K DISK A
33.00 F* FFV928011 CF E WORKSTN KINFDS SRVFDS
34.00 F* *****
35.00 F*
36.00 F* Copy Member for Composite Common Subroutine - C001
37.00 F*
38.00 F* F/COPY JDECPY,D0001
39.00 F* *****
40.00 E* *****
41.00 E* PROGRAM TABLES AND ARRAYS
42.00 E* -----
43.00 E*
44.00 E* EMK 64 4 Error Msg
45.00 E* @MK 64 1 Error Msg
46.00 E* @ER 64 4 Error Msg
47.00 E* @DV 40 1 Dflt Wrk
48.00 E* @C 256 1 Literal Work
49.00 E*
50.00 E*
51.00 E* Copy Member for Composite Common Subroutine - C00001
52.00 E*
53.00 E* E/COPY JDECPY,E0001
54.00 E* *****
55.00 E*
56.00 E* Copy Member for Composite Common Subroutine C0012
57.00 E*
58.00 E* E/COPY JDECPY,E0012
59.00 E* *****
60.00 E*
61.00 E* Copy Member for Composite Common Subroutine - C997
62.00 E*
63.00 E* E/COPY JDECPY,E97
64.00 E* *****
65.00 I* *****
66.00 I* PROGRAM INPUT SPECIFICATIONS AND DATA STRUCTURES
67.00 I* -----
68.00 I*

```

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Copyright statement
 can be changed through
 the Program Generator

Date	Programmer	Nature of Revision
12/07/93	QUARLES	SAR # 241883 (AS/400 A/G)

Shows all SARs
 used to make
 changes to the
 program

File	Mode	Device	Attributes
FF0001	IF E	K	DISK
FFF92801	UF E	K	DISK A
FFV928011	CF E	WORKSTN	KINFDS SRVFDS

The Program
 Generator puts in
 numeric order. RPG
 opens from bottom
 to top so JDE puts
 more heavily used
 files at the bottom.

Copy Member for Composite Common Subroutine - C001

F/COPY JDECPY,D0001

Informational
 data structure
 for the video

Array Name	Length	Count	Description
EMK	64	4	Error Msg
@MK	64	1	Error Msg
@ER	64	4	Error Msg
@DV	40	1	Dflt Wrk
@C	256	1	Literal Work

Arrays that handle
 error messages

Copy Member for Composite Common Subroutine - C00001

E/COPY JDECPY,E0001

Will copy in additional
 specifications for copy
 module C0001

```

69.00      I*      Data Structure to Load Video Screen Text
70.00      I*
71.00      IDSTXT      DS      1000
72.00      I      1 18 VTX001
73.00      I      41 58 VTX002
74.00      I      81 92 VTX003
75.00      I      121 138 VTX004
76.00      I      161 178 VTX005
77.00      I      201 218 VTX006
78.00      I      241 258 VTX007
79.00      I      281 298 VTX008
80.00      I      321 338 VTX009
81.00      I      361 378 VTX010
82.00      I      401 418 VTX011
83.00      I      441 458 VTX012
84.00      I      481 498 VTX013
85.00      I      521 536 VTX014
86.00      I      561 576 VTX015
87.00      I      601 616 VTX016
88.00      I      541 656 VTX017
89.00      I      681 696 VTX018
90.00      I      721 736 VTX019
91.00      I      761 776 VTX020
92.00      I      801 816 VTX021
93.00      I      841 856 VTX022
94.00      I      881 896 VTX023
95.00      I      921 936 VTX024
96.00      I      961 976 VTX025
97.00      I*
98.00      I/COPY JDECPY, I00DSINX
99.00      I/COPY JDECPY, I00PS@@
100.00     I/COPY JDECPY, I00PSPROG
101.00     I*
102.00     I*
103.00     I*
104.00     I*      Copy Member for Composite Common Subroutine - C00SC
105.00     I*
106.00     I/COPY JDECPY, I00SC
107.00     I*****
108.00     I*
109.00     I*      Copy Member for Server - X0005
110.00     I*
111.00     I/COPY JDECPY, I0005U
112.00     I*****
113.00     I*
114.00     I*      Copy Member for Server - X0006
115.00     I*
116.00     I/COPY JDECPY, I000661
117.00     I*****
118.00     I*
119.00     I*      Copy Member for Server - X9800E
120.00     I*
121.00     I/COPY JDECPY, I9800E
122.00     I*****
123.00     C*****
124.00     C*      MAINLINE PROGRAM
125.00     C*      -----
126.00     C*
127.00     C*      Process housekeeping.
128.00     C*
129.00     C*      EXSR S999
130.00     C*      -----
131.00     C*
132.00     C*      If LR on, end program.
133.00     C*
134.00     C*      *INLR      CABEQ'1'      EOJ
135.00     C*      -----      ---
136.00     C*
137.00     C*      If automatic inquiry set, process inquiry.
138.00     C*
139.00     C*      $AUTO      CASEQ'1'      S003
140.00     C*      -----      ----
141.00     C*      END
142.00     C*
143.00     C*      Begin normal program processing.
144.00     C*      -----
145.00     C*
146.00     C*      *INLR      DOWEQ'0'
147.00     C*
148.00     C*      Write video screen.
149.00     C*

```

Each VTX field is 40 long but may not use all 40. Pulls in text from Vocabulary Overrides.

I/COPY JDECPY, I00DSINX — Data structure for commonly used indexes
 I/COPY JDECPY, I00PS@@ — Data structure used with file servers
 I/COPY JDECPY, I00PSPROG — Program status data structure

I/COPY JDECPY, I00SC — Data structure for vocabulary overrides and function keys

I/COPY JDECPY, I0005U — Data structure for file server X0005

EXSR S999 — Only time only functions

\$AUTO CASEQ'1' S003 — If information is passed to this program, it will automatically inquire on the record


```

150.00 C WRITEV9280111
151.00 C MOVE '1' @@AID
152.00 C EXSR S001 ----- Clears fields
153.00 C*
154.00 C*
155.00 C* Load data field dictionary parameters (one cycle only).
156.00 C*
157.00 C $998 CASEQ' ' $998 ----- One time only. Pulls in Data
158.00 C* Dictionary editing information
159.00 C END functions
160.00 C*
161.00 C* Begin video screen read processing.
162.00 C*
163.00 C SETOF 999301
164.00 C READ V928011 9998
165.00 C Z-ADD0 ##RROW ----- Used for cursor sensitive help.
166.00 C Z-ADD0 ##RCOL ----- Tells where the cursor is.
167.00 C*
168.00 C* If video read timed out, end program.
169.00 C*
170.00 C *IN99 CABEQ'1' EOJ LR
171.00 C* -----
172.00 C @@AID CABEQ#FEQJ EOJ LR
173.00 C* -----
174.00 C*
175.00 C* If valid function key pressed, process and return.
176.00 C*
177.00 C *IN15 IFEQ '1' ----- All function keys are assigned indicator 15 so if
178.00 C EXSR S00EX ----- 15 is on, a function key has been pressed
179.00 C* -----
180.00 C *INLR CABEQ'1' EOJ
181.00 C* -----
182.00 C *IN15 CABEQ'1' END
183.00 C* -----
184.00 C END
185.00 C*
186.00 C* Edit the action code.
187.00 C*
188.00 C EXSR C0001 ----- Edits the action code.
189.00 C* ----- Checks action code security.
190.00 C*
191.00 C* If end of job requested, end program.
192.00 C*
193.00 C @@AID CABEQ#FEQJ EOJ
194.00 C* -----
195.00 C*
196.00 C* If clear screen requested, process and return.
197.00 C*
198.00 C @@AID IFEQ #FCLR
199.00 C EXSR S001
200.00 C* -----
201.00 C GOTO END
202.00 C* -----
203.00 C END
204.00 C*
205.00 C* Load subfile records.
206.00 C*
207.00 C EXSR S003 ----- Sets the file pointer and calls S004
208.00 C* ----- to load the video/report fields
209.00 C*
210.00 C* If add or change, validate all video input.
211.00 C*
212.00 C *IN93 CABEQ'0' S005 ----- If an error has not
213.00 C* ----- occurred, validates and
214.00 C END edits data
215.00 C*
216.00 C* If no errors and not inquiry, update file.
217.00 C*
218.00 C *IN93 IFEQ '0'
219.00 C* *IN24 CASEQ'0' S010 ----- Updates files
220.00 C -----
221.00 C END
222.00 C END
223.00 C*
224.00 C* Return for next input.
225.00 C*
226.00 C* END TAG
227.00 C* -----
228.00 C* -----

```

```

229.00 C*
230.00 C*
231.00 C
232.00 C
233.00 C
234.00 C
235.00 C
236.00 C*
237.00 C
238.00 C*
239.00 C
240.00 C*
241.00 C*
242.00 C*
243.00 C*
244.00 C*****
245.00 C*
246.00 C*
247.00 C*
248.00 C/COPY JDECPY,C0001
249.00 C*****
250.00 C*
251.00 C*
252.00 C*
253.00 C*
254.00 C*
255.00 C*
256.00 C*
257.00 CSR
258.00 C*
259.00 CSR
260.00 C*
261.00 C*
262.00 C*
263.00 C*
264.00 CSR
265.00 C*
266.00 C*
267.00 C*
268.00 C*
269.00 C*
270.00 CSR
271.00 CSR
272.00 C*
273.00 CSR
274.00 CSR
275.00 CSR
276.00 C*
277.00 CSR
278.00 C*
279.00 CSR
280.00 C*
281.00 CSR
282.00 C*
283.00 C*
284.00 C*
285.00 C*
286.00 CSR
287.00 CSR
288.00 C*
289.00 C*
290.00 CSR
291.00 CSR
292.00 CSR
293.00 CSR
294.00 CSR
295.00 C*
296.00 CSR
297.00 CSR
298.00 C*
299.00 CSR
300.00 CSR
301.00 CSR
302.00 CSR
303.00 C*
304.00 CSR
305.00 C*

```

Set correct message in line 24.

```

*IN93      IFEQ '1'
           MOVELSVL24E      VDL24
           ELSE
           MOVELSVL24M      VDL24
           END

```

— Sets the message for Line 24

```

          EOJ      TAG
          ---      ---
          END MAINLINE PROGRAM
          -----
          C*****
          C*
          C*      Copy Common Subroutine - Edit Action Code
          C*
          C/COPY JDECPY,C0001
          C*****
          C*
          C*      SUBROUTINE SOOEX - Process Function Keys
          C*      -----
          C*
          C*      Processing:  1. Determine function key pressed.
          C*                  2. Process function key request.
          C*
          CSR          S00EX      BEGSR
          C*          -----
          CSR          T00EXA      TAG
          C*          -----
          C*
          C*      If EOJ requested, exit subroutine.
          C*
          CSR          @@AID      CABEQ#FEOJ      ENDEXE      LR
          C*          -----
          C*
          C*      If Display Keys pressed, exit to help facility and return.
          C*      -----
          CSR          @@AID      IFEQ #FKEYS
          CSR          CALL 'P9601H'      98
          C*          -----
          CSR          PARM          IOOSC
          CSR          PARM          SRVFDS
          CSR          PARM          IOOCSR
          C*
          CSR          @@AID      CABNE#FKEYS      TOOEXA
          C*          -----
          CSR          GOTO ENDEXE
          C*          -----
          CSR          END
          C*
          C*      If Cursor Sensitive Help Pressed, exit to CS Help.
          C*      -----
          CSR          @@AID      IFEQ #FQMRK
          CSR          MOVEA*IN      ##IN
          CSR          CALL 'X96CCX'      98
          C*          -----
          CSR          PARM          IOOSC
          CSR          PARM          SRVFDS
          CSR          PARM          IOOCSR
          CSR          PARM          ##CCFF      2
          CSR          PARM          IOOMDE
          C*
          CSR          ##FLDN      IFNE *BLANKS
          CSR          EXSR SOOVL
          C*          -----
          CSR          MOVEA##IN      *IN,1
          CSR          END
          CSR          MOVEL*BLANKS      ##DTAI
          CSR          GOTO ENDEXE
          C*          -----
          CSR          END
          C*

```

Contains what function key was pressed by the user

Values assigned in the Function Key Definitions program

External programs start with an X. This is the cursor sensitive help program

Parameters passed identifying where the cursor was when F1 was pressed

```

306.00 C*      If Display errors presse, exit to error messages.
307.00 C*      -----
308.00 C*
309.00 CSR      @@AID      IFEQ #FERRD
310.00 CSR      Z-ADD1      #G
311.00 CSR      Z-ADD1      #H
312.00 CSR      #G      DOWLE64
313.00 CSR      @MK,#G    IFEQ '1'
314.00 CSR      MOVE EMK, #G      @ER, #H
315.00 CSR      ADD 1      #H
316.00 CSR      END
317.00 CSR      ADD 1      #G
318.00 CSR      END
319.00 CSR      CALL 'P0000E'      98
320.00 C*      ----
321.00 CSR      PARM      @ER
322.00 CSR      GOTO ENDEXE
323.00 C*      ----
324.00 CSR      END
325.00 C*
326.00 C*      If HELP key pressed, exit to help facility and return.
327.00 C*      -----
328.00 C*
329.00 CSR      @@AID      IFEQ #FHELP
330.00 CSR      CALL 'POOHELP'      99
331.00 C*
332.00 CSR      PARM      HS@@
339.00 CSR      PARM      HE@@
334.00 CSR      PARM      I00SC
335.00 CSR      PARM      SRVIDS
337.00 CSR      GOTO ENDEXE
338.00 C*      ----
339.00 CSR      END
340.00 C*
341.00 C*      If Clear screen pressed, clear screen and return.
342.00 C*      -----
343.00 C*
344.00 CSR      @@AID      IFEQ #FCLR
345.00 CSR      EXSR S001
346.00 C*      ----
347.00 CSR      GOTO ENDEXE
348.00 C*      ----
349.00 CSR      END
350.00 C*
351.00 C*      Process roll up and down keys.
352.00 C*      -----
353.00 C*
354.00 CSR      @@AID      IFEQ #FROLU
355.00 CSR      @AID      OREQ #FROLD
356.00 CSR      $SECUR    DOUEQ' '
357.00 CSR      MOVE ' '      $SECUR 1
358.00 C*
359.00 C*      If ROLL UP key pressed, process read next.
360.00 C*      -----
361.00 C*
362.00 CSR      @@AID      IFEQ #FROLU
363.00 C*
364.00 C*      Reset error indicators if roll
365.00 C*
366.00 CSR      MOVEA$RESET      *IN, 41
367.00 CSR      MOVE '0'      *IN, 40
368.00 CSR      SETOF      818299
369.00 CSR      READ I92801      9981
370.00 CSR      *IN81      IFEQ '1'
371.00 CSR      $RUKEY      SETLLI92801
372.00 CSR      SETOF      8299
373.00 CAR      READI92801      9982
374.00 C*
375.00 C*      If error on read, set error.
376.00 C*
377.00 CSR      *IN82      IFEQ '1'
378.00 CSR      SETON      9341
379.00 CSR      MOVE '1'      @MK,2
380.00 CSR      GOTO ENDEXE
381.00 C*      ----
382.00 CSR      END
383.00 CSR      END

```

Access JDE program level
Help information

```

384.00   CSR           END
385.00   C*
386.00   C*           If ROLL DOWN key pressed, process read prior.
387.00   C*           -----
388.00   C*
389.00   CSR           @@AID       IFEQ #FROLD
390.00   C*
391.00   C*           Reset error indicators if roll
392.00   C*
393.00   CSR           MOVEA$RESET   *IN,41
394.00   CSR           MOVE '0'      *IN,40
395.00   CSR           SETOF                818299
396.00   CSR           READPI92801      9981
397.00   CSR           *IN81          IFEQ '1'
398.00   CSR           $RDKEY          SETLLI92801
399.00   CSR           SETOF                8299
400.00   CSR           READPI92801      9982
401.00   C*
402.00   C*           If error on read, set error.
403.00   C*
404.00   CSR           *IN82          IFEQ '1'
405.00   CSR           SETON                9341
406.00   CSR           MOVE '1'        @MK,2
407.00   CSR           GOTO ENDEXE
408.00   C*           -----
409.00   CSR           END
410.00   CSR           END
411.00   CSR           END
412.00   C*
413.00   C*           Load video screen data on roll keys.
414.00   C*           -----
415.00   C*
416.00   CSR           @@AID       IFEQ #FROLU
417.00   CSR           @@AID       OREQ #FROLD
418.00   C*
419.00   C*           Release record lock or report record in use.
420.00   C*
421.00   CSR           *IN99          IFEQ '0'
422.00   CSR           EXTCPTUNLOCK
423.00   CSR           ELSE
424.00   CSR           CALL 'P98RLCK'      81
425.00   C*           -----
426.00   CSR           PARM                ##PSDS
427.00   CSR           SETON                9341
428.00   CSR           MOVE '1'        @MK,6
429.00   CSR           GOTO ENDEXE
430.00   C*           -----
431.00   CSR           END
432.00   C*
433.00   C*
434.00   C*           Cost Center security edit.
435.00   C*
436.00   CSR           MOVE'L'F92801    ' #FILE
437.00   CSR           MOVE'LQXXCC     #MCU
438.00   CSR           #AUT           IFNE '1'
439.00   CSR           #FAUT          ANDNE'1'
440.00   CSR           EXSR COOOO
441.00   C*           -----
442.00   CSR           END
443.00   CSR           #AUT           IFNE '1'
444.00   CSR           #FAUT          ANDNE'1'
445.00   CSR           #MAUT          ANDNE'1'
446.00   CSR           MOVE '1'        $SECUR
447.00   CSR           END
448.00   CSR           $SECUR        CASEQ' '    S004
449.00   C*           -----
450.00   CSR           END
451.00   C*
452.00   CSR           END
453.00   C*
454.00   CSR           END
455.00   CSR           GOTO ENDEXE
456.00   C*           -----
457.00   CSR           END
458.00   C*
459.00   CSR           @@AID          IFNE '1'
460.00   CSR           SETON                0193
461.00   CSR           GOTO ENDEXE
462.00   C*           -----
463.00   CSR           END
464.00   C*
465.00   CSR           ENDEXE        ENDSR

```

Program that will display a record lock window when a record in use error is encountered

Could not find a match in the Function Key Definitions for the function key pressed, so program displays *Invalid Function Key* message.

```

466.00 C*****
467.00 C*
468.00 C*      Copy Common Subroutine - Cost Center Security Check
469.00 C*
470.00 C/COPY JDECPY,C0000
471.00 C*****
472.00 C*
473.00 C*      SUBROUTINE SGOVL - Cursor Control Return Values
474.00 C*
475.00 C*
476.00 C*      By format, find the field to update and move in the
477.00 C*      returned value.  If the format is a subfile, the record
478.00 C*      to change is found in @@RRN.
479.00 C*
480.00 CSR          SOOVL          BEGSR
481.00 C*          -----          -----
482.00 C*
483.00 CSR          ##RVAL          IFEQ '*BLANK
484.00 CSR          MOVE '*BLANK          ##RVAL
485.00 CSR          END
486.00 C*
487.00 C*      Return values for fields in format V9280111
488.00 C*
489.00 CSR          ##RFMT          IFEQ 'V9280111'
490.00 C*
491.00 CSR          ##FLDN          IFEQ 'ACTION          '
492.00 CSR          MOVEL##RVAL          ACTION
493.00 CSR          GOTO ENDOVL
494.00 C*          -----
495.00 CSR          END
496.00 C*
497.00 CSR          ##FLDN          IFEQ 'VDXIT          '
498.00 CSR          MOVEL##RVAL          VDXIT
499.00 CSR          GOTO ENDOVL
500.00 C*          -----
501.00 CSR          END
502.00 C*
503.00 CSR          ##FLDN          IFEQ 'VDXDS          '
504.00 CSR          MOVEL##RVAL          VDXDS
505.00 CSR          GOTO ENDOVL
506.00 C*          -----
507.00 CSR          END
508.00 C*
509.00 CSR          ##FLDN          IFEQ 'VDXCC          '
510.00 CSR          MOVEL**RVAL          VDXCC
511.00 CSR          GOTO ENDOVL
512.00 C*          -----
513.00 CSR          END
514.00 C*
515.00 CSR          ##FLDN          IFEQ 'VDXTY          '
516.00 CSR          MOVEL##RVAL          VDXTY
517.00 CSR          GOTO ENDOVL
518.00 C*          -----
519.00 CSR          END
520.00 C*
521.00 CSR          ##FLDN          IFEQ 'VDXDT          '
522.00 CSR          MOVEL##RVAL          VDXDT
523.00 CSR          GOTO ENDOVL
524.00 C*          -----
525.00 CSR          END
526.00 C*
527.00 CSR          ##FLDN          IFEQ 'VDXQT          '
528.00 CSR          MOVEL##RVAL          VDXQT
529.00 CSR          GOTO ENDOVL
530.00 C*          -----
531.00 aSR          END
532.00 C*
533.00 CSR          ##FLDN          IFEQ 'VDXUM          '
534.00 CSR          MOVEL##RVAL          VDXUM
535.00 aSP          GOTO ENDOVL
536.00 C*          -----
537.00 CSR          END
538.00 C*
539.00 CSR          ##FLDN          IFEQ 'VDX001          '
540.00 CSR          MOVEL##RVAL          VDX001
541.00 CSR          GOTO ENDOVL
542.00 C*

```

For cursor sensitive help. Information was retrieved in program X96CCX. The retrieved information is returned to the video fields in this subroutine.

```

543.00      CSR                END
544.00      C*
545.00      CSR                ##FLDN      IFEQ 'VDX002      '
546.00      CSR                MOVEL##RVAL      VDX002
547.00      CSR                GOTO ENDOVL
548.00      C*                -----
549.00      CSR                END
550.00      C*
551.00      CSR                ##FLDN      IFEQ 'VDX003      '
552.00      CSR                MOVEL##RVAL      VDX003
553.00      CSR                GOTO ENDOVL
554.00      C*                -----
555.00      CSR                END
556.00      C*
557.00      CSR                ##FLDN      IFEQ 'VDX004      '
558.00      CSR                MOVEL##RVAL      VDX004
559.00      CSR                GOTO ENDOVL
561.00      CSR                END
562.00      C*                -----
563.00      CSR                *#FLDN      IFEQ 'VDX005      '
564.00      CSR                MOVEL##RVAL      VDXoos
565.00      CSR                GOTO ENDOVL
566.00      C*                -----
567.00      CSR                END
568.00      CSR                END
569.00      C*
570.00      csR                ENDOVL      ENDSR
571.00      C*****
572.00      C*
573.00      C*                SUBROUTINE S001 - Clear Fields
574.00      C*                -----
575.00      C*
576.00      C*                Processing: 1.      Reset all video screen and data file fields
577.00      C*                                for next transaction.
578.00      C*                                2.      Clear action code only if requested.
579.00      C*
580.00      CSR                S001      BEGSR
581.00      C*                -----
582.00      C*
583.00      C*                Reset fields for next transaction.
584.00      C*
585.00      CSR                *NOKEY      CLEARF92801
586.00      CSR                MOVE *BLANK      ###CFL
587.00      CSR                MOVE *BLANK      ###CRC
588.00      CSR                Z-ADD*ZERO      ##RCOL
589.00      CSR                Z-ADD*ZERO      ##RROW
590.00      CSR                MOVE *BLANK      VDXCC
591.00      CSR                MOVE *BLANK      VDXDS
592.00      CSR                MOVE *BLANK      VDXDT
593.00      CSR                MOVE *BLANK      VDXIT
594.00      CSR                MOVE *BLANK      VDXQT
595.00      CSR                MOVE *BLANK      VDXTY
596.00      CSR                MOVE *BLANK      VDXUM
597.00      CSR                MOVE *BLANK      VDX001
598.00      CSR                MOVE *BLANK      VDX002
599.00      CSR                MOVE *BLANK      VDX003
600.00      CSR                MOVE *BLANK      VDX004
601.00      CSR                MOVE *BLANK      VDX005
602.00      CSR                MOVELSVL24M      VDL24
603.00      CSR                MOVE ' '      @IN37      1
604.00      C*
605.00      C*                Clear action code only if clear screen action.
606.00      C*
607.00      CSR                @@AID      IFEQ #FCLR
608.00      CSR                MOVE *ALL'0'      $RESET
609.00      CSR                MOVE$RESET      *IN,41
610.00      CSR                MOVE ' '      ACTION      1
611.00      CSR                Z-ADD*ZERO      QXXIT
612.00      CSR                MOVE *BLANK      VC001
613.00      CSR                MOVE *BLANK      VC002
614.00      CSR                MOVE *BLANK      VC003
615.00      CSR                MOVE *BLANK      VC004
616.00      CSR                MOVE *BLANK      VC005
617.00      CSR                MOVE *BLANK      VC006
618.00      CSR                MOVE *BLANK      VC007
619.00      CSR                MOVE *BLANK      VC008
620.00      CSR                Z-ADD*ZERO      $$EDT      60
621.00      CSR                END
622.00      C*
623.00      CSR                END001      ENDSR

```

Clears all the fields in the record format for F92801

Clears the video fields

These fields will only be cleared if the user presses the function key to clear the screen. We want to save certain information like key fields and descriptions so they don't get cleared everytime S001 is executed.

```

624.00 C*****
625.00 C*
626.00 C* SUBROUTINE S003 - Edit Key — Sets the file pointer and edits the key
627.00 C* -----
628.00 C*
629.00 C* Processing: 1. Clear error indicators and arrays.
630.00 C* 2. Load input keys.
631.00 C* 3. Validate master file key.
632.00 C* 4. Release master file record lock.
633.00 C* 5. Load video screen output on inquiry.
634.00 C*
635.00 CSR S003 BEGSR
636.00 C* ----
637.00 C*
638.00 C* Load data field dictionary parameters (one cycle only).
639.00 C*
640.00 CSR $998 CASEQ' ' S998
641.00 C* ----
642.00 CSR END
643.00 C*
644.00 C* Reset error indicators and arrays.
645.00 C*
646.00 CSR MOVE *ALL'0' $RESET 39
647.00 CSR MOVE *BLANK $REST1 63
648.00 CSR MOVEA$RESET *IN,41
649.00 CSR MOVEA$REST1 @MK,2
650.00 CSR CLEAR@ER
651.00 C*-----
652.00 C*
653.00 C* Load video input field for - Item ID
654.00 C*
655.00 CSR MOVEAVDXIT @NM
656.00 CSR EXSR C0012
657.00 C* ----
658.00 CSR z-ADD#NUMR $NBR08 80
659.00 CSR MOVE $NBR08 QXXIT
660.00 C*
661.00 C* Automatic Next Number for - Item ID
662.00 C*
663.00 CSR *IN21 IFEQ '1'
664.00 CSR VDXIT ANDEQ*BLANK
665.00 CSR SETON 81
666.00 CSR *IN81 DOWEQ'1'
667.00 CSR MOVE N@XIT PSIDX 2
668.00 CSR CALL 'X0010' 82
669.00 C* ----
670.00 CSR PARM S@XIT NNSY 4
671.00 CSR PARM PSIDX
672.00 CSR PARM *ZERO #NXTNO 80
673.00 CSR MOVE #NXTNO QXXIT
674.00 CSR MOVE #NXTNO VDXIT
675.00 CSR QXXIT SETLLF92801 8281
676.00 CSR END
677.00 CSR END
678.00 C*-----
679.00 CSR QXKY01 CHAINI92801 9899
680.00 C*
681.00 C* Cost Center security edit.
682.00 C*
683.00 CSR MOVEL'F92801 '#FILE
684.00 CSR MOVELQXXCC #MCU
685.00 CSR #AUT IFNE '1'
686.00 CSR #FAUT AXDNE'1'
687.00 CSR EXSR C0000 — Checks cost center security
688.00 C* ----
689.00 CSR END
690.00 CSR #AUT IFNE '1'
691.00 CSR #FAUT ANDNE'1'
692.00 CSR #MAUT ANDNE'1'
693.00 CSR MOVE '1' $$SECR 1
694.00 CSR END
695.00 C*
696.00 C* If security violation,set error condition.
697.00 C*
698.00 CSR $$SECR IFEQ '1'
699.00 CSR MOVE '1' @MK,8
700.00 CSR SETON 9341

```

```

701.00      CSR                MOVE ' '                $$SECR  1
702.00      CSR                GOTO END003
703.00      C*                ----  -----
704.00      CSR                END
705.00      C*
706.00      C*      Edit result of read and action code.
707.00      C*
708.00      CSR      *IN98      IFEQ '1'
709.00      CSR      *IN21      COMP '0'                41 *error*
710.00      CSR                ELSE
711.00      CSR      *IN21      COMP '1'                41 *error*
712.00      CSR                END
713.00      C*
714.00      C*      If indicator 41 on, invalid key for action code.
715.00      C*
716.00      CSR      *IN41      IFEQ '1'
717.00      CSR                MOVE '1'                @MK,2
718.00      CSR                SETON                    93
719.00      CSR                END
720.00      C*
721.00      C*      If indicator 99 on, record in use.
722.00      C*
723.00      CSR      *IN99      IFEQ '1'
724.00      CSR                CALL 'P98RLCK'            81
725.00      C*                ----  -----
726.00      CSR                PARM                    ##PSDS
727.00      CSR                MOVE '1'                @MK,6
728.00      CSR                SETON                    9341
729.00      CSR                END
730.00      C*-----
731.00      C*
732.00      C*      If not inquiry, skip remainder of subroutine.
733.00      C*
734.00      CSR      *IN24      CABEQ'0'                END003
735.00      C*                ----  -----
736.00      C*-----
737.00      C*
738.00      C*      Release record lock on master file.
739.00      C*
740.00      CSR      *IN98      IFEQ '0'
741.00      CSR      *IN99      ANDEQ'0'
742.00      CSR                EXCPTUNLOCK
743.00      CSR                END
744.00      C*
745.00      C*      If errors, skip remainder of subroutine.
746.00      C*
747.00      CSR      *IN93      CABEQ'1'                END003
748.00      C*                ----  -----
749.00      C*-----
750.00      C*
751.00      C*      Move data base information to video screen.
752.00      C*
753.00      CSR                EXSR S004
754.00      C*                ----  -----
755.00      C*-----
756.00      CSR      ENDOO3      ENDSR
757.00      C*****
758.00      C*
759.00      C*      Copy Common Subroutine - Right Justify Numeric Fields
760.00      C*
761.00      C/COPY JDECPY,C0012
762.00      C*****
763.00      C*
764.00      C*      SUBROUTINE S004 - Load Video Screen Data
765.00      C*      -----
766.00      C*
767.00      C*      Processing:  1. Move data base information to video screen.
768.00      C*                All video screen fields are alpha and
769.00      C*                therefore numeric information must be
770.00      C*                processed through subroutine C0014 to set
771.00      C*                proper decimals and provide editing for
772.00      C*                display on screen
773.00      C*
774.00      C*                Date fields must be converted from their
775.00      C*                internal format of month, day and year or
776.00      C*                julian to the systsem format using program
777.00      C*                X0028

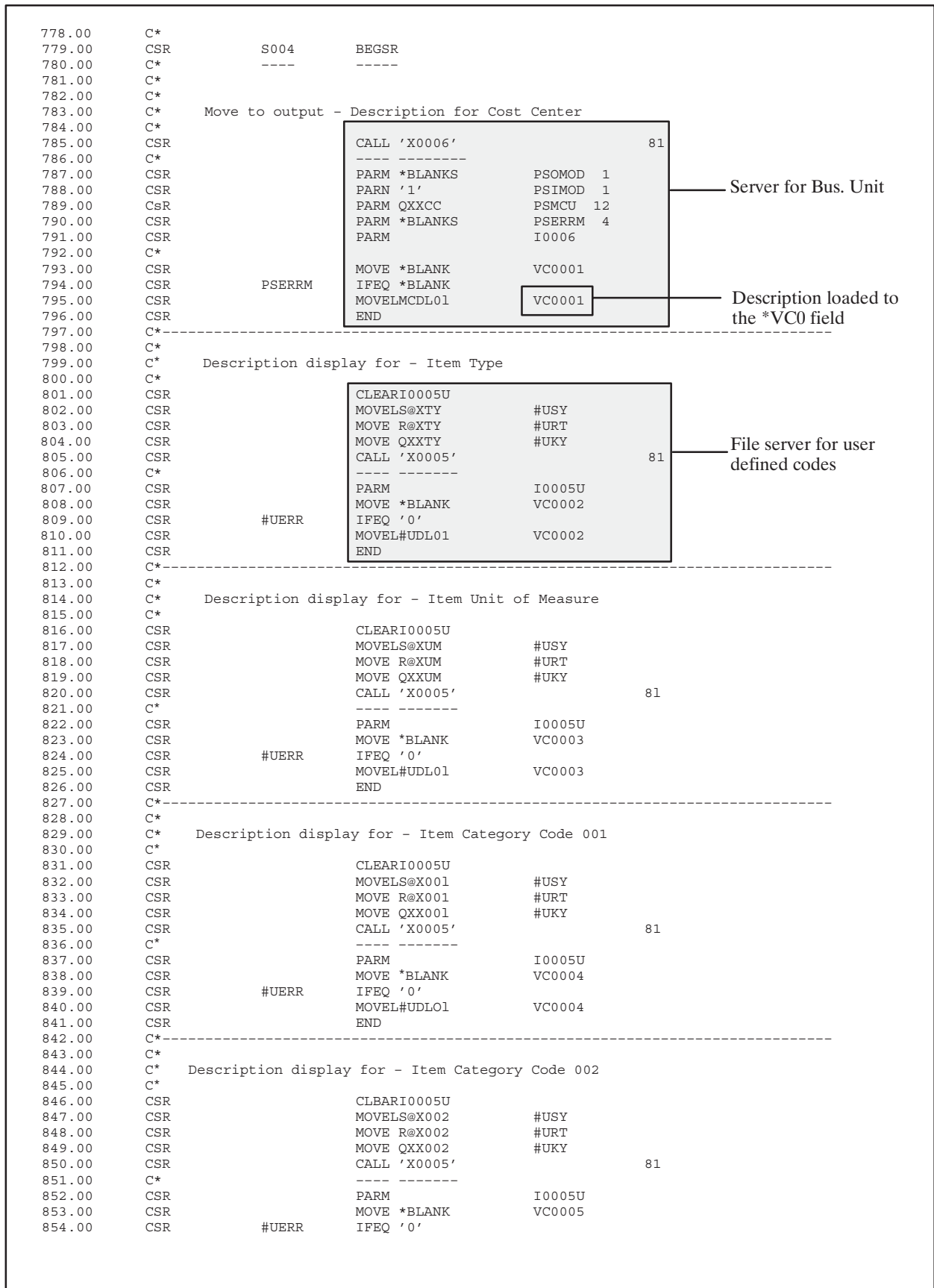
```

738.00 C* Release record lock on master file.
739.00 C*
740.00 CSR *IN98 IFEQ '0'
741.00 CSR *IN99 ANDEQ'0'
742.00 CSR EXCPTUNLOCK
743.00 CSR END

JDE uses this or SETLL to release record locks

753.00 CSR EXSR S004
754.00 C* ----

Moves information to the video/report fields



```

855.00 CSR          MOVEL#UDL01          VC0005
856.00 CSR          END
857.00 C*-----
858.00 C*
859.00 C*      Description display for - Item Category Code 003
860.00 C*
861.00 CSR          CLEARI0005U
862.00 CSR          MOVELS@X003          #USY
863.00 CSR          MOVE R@X003          #URT
864.00 CSR          MOVE QXX003          #UKY
865.00 CSR          CALL 'X0005'          81
866.00 C*-----
867.00 CSR          PARM
868.00 CSR          MOVE *BLANK          VC0006
869.00 CSR          #UERR IFEQ '0'
870.00 CSR          MOVEL#UDL01          VC0006
871.00 CSR          END
872.00 C*-----
873.00 C*
874.00 C*      Description display for - Item Category Code 004
875.00 C*
876.00 CSR          CLEARI0005U
877.00 CSR          MOVELS@X004          #USY
878.00 CSR          MOVE R@X004          #URT
879.00 CSR          MOVE QXX004          #URY
880.00 CSR          CALL 'X0005'          81
881.00 C*-----
882.00 CSR          PARM
883.00 CSR          MOVE *BLANK          VC0007
884.00 CSR          #UERR IFEQ '0'
885.00 CSR          MOVEL#UDL01          VC0007
886.00 CSR          END
887.00 C*-----
888.00 C*
889.00 C*      Description display for - Item Category Code 005
890.00 C*
891.00 CSR          CLEARI0005U
892.00 CSR          MOVELS@X005          #USY
893.00 CSR          MOVE R@X005          #URT
894.00 CSR          MOVE QXX005          #UKY
895.00 CSR          CALL 'X0005'          81
896.00 C*-----
897.00 CSR          PARM
898.00 CSR          MOVE *BLANK          VC0008
899.00 CSR          #UERR IFEQ '0'
900.00 CSR          MOVEL#UDL01          VC0008
901.00 CSR          END
902.00 C*-----
903.00 C*
904.00 C*      Move to output - Cost Center
905.00 C*
906.00 CSR          MOVE *BLANK          #SINBR
907.00 CSR          MOVELQXXCC          #SINBR
908.00 CSR          MOVE T@XCC          #DTYP
909.00 CSR          MOVE W@XCC          #EWRD
910.00 CSR          MOVE E@XCC          #EC
911.00 CSR          MOVE F@XCC          #DSPD
912.00 CSR          MOVE G@XCC          #DATD
913.00 CSR          MOVE J@XCC          #ALR
914.00 CSR          MOVE ' '          #ECOR
915.00 CSR          MOVE ' '          #DCOR
916.00 CSR          EXSR C00161
917.00 C*-----
918.00 CSR          #ALR IFEQ 'L'
919.00 CSR          MOVEL#SINBR          VDXCC
920.00 CSR          ELSE
921.00 CSR          MOVE #SINBR          VDXCC
922.00 CSR          END
923.00 C*-----
924.00 C*
925.00 C*      Move to output - Description
926.00 C*
927.00 CSR          MOVELQXXDS          VDXDS
928.00 C*-----
929.00 C*
930.00 C*      Move to Output - Date Last Ship
931.00 C*

```

MOVE T@XCC	#DTYP
MOVE W@XCC	#EWRD
MOVE E@XCC	#EC
MOVE F@XCC	#DSPD
MOVE G@XCC	#DATD
MOVE J@XCC	#ALR
MOVE ' '	#ECOR
MOVE ' '	#DCOR
EXSR C00161	

Editing information retrieved in S998

Copy module to edit field for use on screen/report

```

932.00   CSR           MOVE QXXDT           #SIDAT  6
933.00   CSR           MOVE *BLANK           #EDAT   8
934.00   CSR           MOVEL' *JUL           '#FFMT  7
935.00   CSR           MOVEL' *SYSVAL        '#TFMT  7
936.00   CSR           MOVEL' *SYSVAL        '#SEP   7
937.00   CSR           MOVE ' '              $ERTST  1
938.00   CSR           CALL 'X0028           '      81
939.00   C*           -----
940.00   CSR           PARM                   #SIDAT
941.00   CSR           PARM                   #EDAT
942.00   CSR           PARM                   #FFMT
943.00   CSR           PARM                   #TFMT
944.00   CSR           PARM                   #SEP
945.00   CSR           PARM                   $ERTST
946.00   CSR           MOVEL#EDAT            VDXDT
947.00   C*           -----
948.00   C*
949.00   C*           Move to output - Item ID
950.00   C*
951.00   CSR           MOVE *BLANK           #SINBR
952.00   CSR           MOVELQXXIT           #SINBR
953.00   CSR           MOVE T@XIT           #DTYP
954.00   CSR           MOVE W@XIT           #EWRD
955.00   CSR           MOVE E@XIT           #EC
956.00   CSR           MOVE F@XIT           #DSPD
957.00   CSR           MOVE G@XIT           #DATD
958.00   CSR           MOVE J@XIT           #ALR
959.00   CSR           MOVE ' '              #ECOR
960.00   CSR           MOVE ' '              #DCOR
961.00   CSR           EXSR C00161
962.00   C*           -----
963.00   CSR           #ALR IFEQ 'L'
964.00   CSR           MOVEL#SINBR           VDXIT
965.00   CSR           ELSE
966.00   CSR           MOVE #SINBR           VDXIT
967.00   CSR           END
968.00   C*           -----
969.00   C*
970.00   C*           Move to output - Quantity - On Hand
971.00   C*
972.00   CSR           MOVE *BLANK           #SINBR
973.00   CSR           MOVELQXXQT           #SINBR
974.00   CSR           MOVE T@XQT           #DTYP
975.00   CSR           MOVE W@XQT           #EWRD
976.00   CSR           MOVE E@XQT           #EC
977.00   CSR           MOVE F@XQT           #DSPD
978.00   CSR           MOVE G@XQT           #DATD
979.00   CSR           MOVE J@XQT           #ALR
980.00   CSR           MOVE ' '              #ECOR
981.00   CSR           MOVE ' '              #DCOR
982.00   CSR           EXSR C00161
983.00   C*           -----
984.00   CSR           #ALR IFEQ 'L'
985.00   CSR           MOVEL#SINBR           VDXQT
986.00   CSR           ELSE
987.00   CSR           MOVE #SINBR           VDXQT
988.00   CSR           END
989.00   C*           -----
990.00   C*
991.00   C*           Move to output - Item type
992.00   C*
993.00   CSR           MOVELQXXTY           VDXTY
994.00   C*           -----
995.00   C*
996.00   C*           Move to output - Item Unit of Measure
997.00   C*
998.00   CSR           MOVELQXXUM           VDXUM
999.00   C*           -----
1000.00  C*
1001.00  C*           Move to output - Item Category Code 001
1002.00  C*
1003.00  C*           MOVE *BLANK           #SINBR
1004.00  C*           MOVELQXX001          #SINBR
1005.00  C*           MOVE T@X001          #DTYP
1006.00  C*           MOVE W@X001          #EWRD
1007.00  C*           MOVE E@X001          #EC
1009.00  C*           MOVE G@X001          #DATD

```

External program
used to edit dates

Advanced Programming Concepts and Skills

```

1010.00  CSR                MOVE J@X001          #ALR
1011.00  CSR                MOVE ' '                #ECOR
1012.00  CSR                MOVE ' '                #DCOR
1013.00  CSR                EXSR C00161
1014.00  C*                -----
1015.00  CSR                #ALR          IFEQ 'L'
1016.00  CSR                MOVE#SINBR          VDX001
1017.00  CSR                ELSE
1018.00  CSR                MOVE #SINBR          VDX001
1019.00  CSR                END
1020.00  C*                -----
1021.00  C*
1022.00  C*          Move to output - Item Category Code 002
1023.00  C*
1024.00  CSR                MOVE *BLANK          #SINBR
1025.00  CSR                MOVE#LQXX002        #SINBR
1026.00  CSR                MOVE T@X002         #DTYP
1027.00  CSR                MOVE W@X002         #EWRD
1028.00  CSR                MOVE E@X002         #EC
1029.00  CSR                MOVE F@X002         #DSPD
1030.00  CSR                MOVE G@X002         #DATD
1031.00  CSR                MOVE J@X002         #ALR
1032.00  CSR                MOVE ' '                #ECOR
1033.00  CSR                MOVE ' '                #DCOR
1034.00  CSR                EXSR C00161
1035.00  C*                -----
1036.00  CSR                #AIR          IFEQ 'L'
1037.00  CSR                MOVE#SINBR          VDX002
1038.00  CSR                ELSE
1039.00  CSR                MOVE #SINBR          VDX002
1040.00  CSR                END
1041.00  C*                -----
1042.00  C*
1043.00  C*          Move to output - Item Category Code 003
1044.00  C*
1045.00  CSR                MOVE *BLANK          #SINBR
1046.00  CSR                MOVE#LQXX003        #SINBR
1047.00  CSR                MOVE T@X003         #DTYP
1048.00  CSR                MOVE W@X003         #EWRD
1049.00  CSR                MOVE E@X003         #EC
1050.00  CSR                MOVE F@X003         #DSPD
1051.00  CSR                MOVEa G@X003        #DATD
1052.00  CSR                MOVE J@X003         #ALR
1053.00  CSR                MOVE ' '                #ECOR
1054.00  CSR                MOVE ' '                #DCOR
1055.00  CSR                EXSR C00161
1056.00  C*                -----
1057.00  CSR                #ALR          IFEQ 'L'
1058.00  CSR                MOVE#SINBR          VDX003
1059.00  CSR                ELSE
1060.00  CSR                MOVE #SINBR          VDX003
1061.00  CSR                END
1062.00  C*                -----
1063.00  C*
1064.00  C*          Move to output - Item Category Code 004
1065.00  C*
1066.00  CSR                MOVE *BLANK          #SINBR
1067.00  CSR                MOVE#LQXX004        #SINBR
1068.00  CSR                MOVE T@X004         #DTYP
1069.00  CSR                MOVE W@X004         #EWRD
1070.00  CSR                MOVE E@X004         #EC
1071.00  CSR                MOVE F@X004         #DSPD
1072.00  CSR                MOVE G@X004         #DATD
1073.00  CSR                MOVE J@X004         #ALR
1074.00  asa                MOVE ' '                #ECOR
1075.00  CSR                MOVE ' '                #DCOR
1076.00  CSR                EXSR C00161
1077.00  C*                -----
1078.00  CSR                #ALR          IFEQ 'L'
1079.00  CSR                MOVE#SINBR          vDX004
1080.00  CSR                ELSE
1081.00  CSR                MOVE #SINBR          VDX004
1082.00  CSR                END
1083.00  C*                -----
1084.00  C*
1085.00  C*          Move to output - Item Category Code 005
1086.00  C*

```

```

1087.00 CSR          MOVE *BLANK          #SINBR
1088.00 CSR          MOVE LQXX005        #SINBR
1089.00 CSR          MOVE T@X005        #DTYP
1090.00 CSR          MOVE W@X005        #EWRD
1091.00 CSR          MOVE ESK005        #EC
1092.00 CSR          MOVE F@X005        #DSPD
1093.00 CSR          MOVE G@X005        #DATD
1094.00 CSR          MOVE J@X005        #ALR
1095.00 CSR          MOVE ' '          #ECOR
1096.00 CSR          MOVE ' '          #DCOR
1097.00 CSR          EXSR C00161
1098.00 C*          -----
1099.00 CSR          #ALR          IFEQ 'L'
1100.00 CSR          MOVE L#SINBR        VOX005
1101.00 CSR          ELSE
1102.00 CSR          MOVE #SINBR        VDX005
1103.00 CSR          END
1104.00 C*-----
1105.00 CSR          END004          ENDSR
1106.00 C*****
1107.00 C*
1108.00 C*          Copy Common Subroutine - Format Numeric Fields for Output with Override
1109.00 C*
1110.00 C/COPY JDECOPY,C00161
1111.00 C*****
1112.00 C*
1113.00 C*          SUBROUTINE S005 - Scrub Input
1114.00 C*          -----
1115.00 C*
1116.00 C*          Processing:  1.  Validate all video input.
1117.00 C*                      All numeric fields must be processed
1118.00 C*                      thru subroutines C0012 and C0015 in order
1119.00 C*                      to scrub the alpha input field and convert
1121.00 C*                      15 digits and 0 decimals.
1122.00 C*
1123.00 C*                      Date fields must be converted from system
1124.00 C*                      format to their internal format of month,
1125.00 C*                      day and year or julian using program X0028.
1126.00 C*          2.  Update data record fields from video.
1127.00 C*
1128.00 CSR          S005          BEGSR
1129.00 C*          -----
1130.00 C*
1131.00 C*          If not addition or change, bypass subroutine.
1132.00 C*
1133.00 CSR          *IN21          IFEQ '0'
1134.00 CSR          *IN22          ANDEQ '0'
1135.00 CSR          GOTO END005
1136.00 C*          -----
1137.00 CSR          END
1138.00 C*
1139.00 C*
1140.00 C*
1141.00 C*          Scrub and edit - Cost Center
1142.00 C*
1143.00 CSR          CALL 'X0006'          99
1144.00 C*          -----
1145.00 CSR          PARM '1'          PSOMOD 1
1146.00 CSR          PARM ' '          PSIMOD 1
1147.00 CSR          PARM VDXCC        PSMCU 12
1148.00 CSR          PARM *BLANKS      PSERRM 4
1149.00 CSR          PARM          I0006
1150.00 C*
1151.00 CSR          PSERRM          IFNE *BLANK
1152.00 CSR          SETON          4393
1153.00 CSR          MOVE LPSERRM      EMK,10
1154.00 CSR          MOVE '1'          @MK,10
1155.00 aSK          END
1156.00 CSR          MOVE PSMCU          QXXCC
1157.00 C*-----
1158.00 C*
1159.00 C*          Scrub and edit - Description
1160.00 C*
1161.00 CSR          MOVE LVXDSD          QXXDSD
1162.00 C*
1163.00 C*          Set default value - Description
1164.00 C*

```

Validates and edits data entered by the user

Only performs this subroutine if action code is add or change

```

1165.00 CSR QXXDS IFEQ *BLANK
1166.00 CSR D@XDS IFNE *BLANK
1167.00 CSR MOVEAD@XDS @DV
1168.00 CSR MOVEA@DV QXXDS
1169.00 CSR @DV,1 IFEQ
1170.00 CSR MOVE ' ' @DV,1
1171.00 CSR Z-ADD2
1172.00 CSR #M DOWLE40
1173.00 CSR @DV,#M IFEQ ''''
1174.00 CSR MOVE ' ' @DV,#M
1175.00 CSR END
1176.00 CSR ADD 1 #M
1177.00 CSR END
1178.00 CSR MOVEA@DV,2 QXXDS
1179.00 CSR END
1180.00 CSR END
1181.00 CSR END
1182.00 C*
1183.00 C* Edit allowed values - Description
1184.00 C*
1185.00 CSR A@XDS IFEQ '*NB'
1186.00 CSR QXXDS ANDEQ*BLANK
1187.00 CSR MOVE '1' @MK,03
1188.00 CSR SETON 4293
1189.00 CSR END
1190.00 C*-----
1191.00 C*
1192.00 C* Scrub and edit - Date Last Ship
1193.00 C*
1194.00 CSR MOVEAVDXDT @NM A
1195.00 CSR EXSR C0012
1196.00 C*-----
1197.00 CSR Z-ADD#NUMR $NBR6 60
1198.00 CSR MOVE $NBR6 QXXDT
1199.00 C*
1200.00 C* Edit julian date - Date Last Ship
1201.00 C*
1202.00 CSR VDXDT IFNE *BLANK
1203.00 CSR MOVE QXXDT #SIDAT 6
1204.00 CSR MOVE *BLANK #EDAT 8
1205.00 CSR MOVE# *SYSVAL '#FFMT 7
1206.00 CSR MOVE# *JUL '#TFMT 7
1207.00 CSR MOVE# *NONE '#SEP 7
1208.00 CSR MOVE# ' '$ERTST 1
1209.00 CSR CALL 'X0028 ' 99
1210.00 C*-----
1211.00 CSR PARM #SIDAT
1212.00 CSR PARM #EDAT
1213.00 CSR PARM #FFMT
1214.00 CSR PARM #TFMT
1215.00 CSR PARM #SEP
1216.00 CSR PARM $ERTST
1217.00 CSR MOVE#SIDAT QXXDT
1218.00 CSR $ERTST IFEQ '1'
1219.00 CSR MOVE '1' @MK,04
1220.00 CSR SETON 4593
1221.00 CSR END
1222.00 CSR END
1223.00 C*-----
1224.00 C*
1225.00 C* Scrub and edit - Item ID
1226.00 C*
1227.00 CSR MOVEAVDXIT @NM
1228.00 CSR EXSR C0012
1229.00 C*-----
1230.00 CSR MOVE F@XIT #DSPD
1231.00 CSR MOVE G@XIT #DATD
1232.00 CSR EXSR C00151
1233.00 C*-----
1234.00 CSR MOVE #NUMBR QXXIT
1235.00 C*
1236.00 C* Set default value - Item ID
1237.00 C*
1238.00 CSR VDXIT IFEQ *BLANK
1239.00 CSR D@XIT ANDNE*BLANK
1240.00 CSR MOVEAD@XIT @NM
1241.00 CSR EXSR C0012

```

Common subroutine to convert screen fields to numeric data

Work fields used in the RPG program begin with \$

Work fields used in a copy module begin with #

Convert to numeric Adjust for display decimals

```

1242.00 C*          -----
1243.00 CSR          MOVE F@XIT          #DSPD
1244.00 CSR          MOVE G@XIT          #DCTD
1245.00 CSR          EXSR C00151
1246.00 C*          -----
1247.00 CSR          MOVE #NUMBR          QXXIT
1248.00 CSR          END
1249.00 C*
1250.00 C*          Edit upper and lower range - Item ID
1251.00 C*
1252.00 CSR          L@XIT          IFNE *BLANK
1253.00 CSR          MOVE *BLANK          X@XIT 15
1254.00 CSR          MOVE '1'          $ERTST
1255.00 CSR          MOVE LQXXIT          X@XIT
1256.00 CSR          X@XIT          IFGE L@XIT
1257.00 CSR          X@XIT          ANDLEU@XIT
1258.00 CSR          MOVE ' '          $ERTST
1259.00 CSR          END
1260.00 CSR          $ERTST          IFEQ '1'
1261.00 CSR          MOVE '1'          @MK,07
1262.00 CSR          SETON                      4193
1263.00 CSR          END
1264.00 CSR          END
1265.00 C*-----
1266.00 C*
1267.00 C*          Scrub and edit - Quantity - on Hand
1268.00 C*
1269.00 CSR          MOVEAVDXQT          @NM
1270.00 CSR          EXSR C0012
1271.00 C*          -----
1272.00 CSR          MOVE F@XQT          #DSPD
1273.00 CSR          MOVE G@XQT          #DATD
1274.00 CSR          EXSR C00151
1275.00 C*          -----
1276.00 CSR          MOVE #NUMBR          QXXQT
1277.00 C*
1278.00 C*          Set default value - Quantity - On Hand
1279.00 C*
1280.00 CSR          VDXQT          IFEQ *BLANK
1281.00 CSR          D@XQT          ANDNE*BLANK
1282.00 CSR          MOVEAD@XQT          @NM
1283.00 CSR          EXSR C0012
1284.00 C*          -----
1285.00 CSR          MOVE F@XQT          #DSPD
1286.00 CSR          MOVE G@XQT          #DATD
1287.00 CSR          EXSR C00151
1288.00 C*          -----
1289.00 CSR          MOVE #NUMBR          QXXQT
1290.00 CSR          END
1291.00 C*
1292.00 C*          Edit upper and lower range - Quantity - On Hand
1293.00 C*
1294.00 CSR          L@XQT          IFNE *BLANK
1295.00 CSR          MOVE *BLANK          X@XQT 15
1296.00 CSR          MOVE '1'          $ERTST 1
1297.00 CSR          MOVE LQXXQT          X@XQT
1298.00 CSR          X@XQT          IFGE L@XQT
1299.00 CSR          X@XQT          ANDLEU@XQT
1300.00 CSR          MOVE ' '          $ERTST
1301.00 CSR          END
1302.00 CSR          $ERTST          IFEQ '1'
1303.00 CSR          MOVE '1'          @MK,07
1304.00 CSR          SETON                      4693
1305.00 CSR          END
1306.00 CSR          END
1307.00 C*-----
1308.00 C*
1309.00 C*          Scrub and edit - Item Type
1310.00 C*
1311.00 CSR          MOVE LVDXTY          QxXTY
1312.00 C*
1313.00 C*          Set default value - Item Type
1314.00 C*
1315.00 CSR          QXXTY          IFEQ *BLANK
1316.00 CSR          D@XTY          IFNE *BLANK
1317.00 CSR          MOVEAD@XTY          @40
1318.00 CSR          MOVEA@40          QXXTY

```

Set default value - Quantity - On Hand

Default value from Data Dictionary

Edit upper and lower range - Quantity - On Hand

Upper and lower ranges from Data Dictionary

```

1319.00 CSR          @40,1    IFEQ  ''''
1320.00 CSR          MOVE  ' '          @40,1
1321.00 CSR          Z-ADD2          #M
1322.00 CSR          #M          DOWLE40
1323.00 CSR          @40,#M    IFEQ  ''''
1324.00 CSR          MOVE  ' '          @40,#M
1325.00 CSR          END
1326.00 CSR          ADD  1          #M
1327.00 CSR          END
1328.00 CSR          MOVEA@40,2    QXXTY
1329.00 CSR          END
1330.00 CSR          END
1331.00 CSR          END
1332.00 C*
1333.00 C*          Edit allowed values - Item Type
1334.00 C*
1335.00 CSR          A@XTY    IFNE *BLANK
1336.00 CSR          A@XTY    IFEQ  '*NB'
1337.00 CSR          QxxTY    ANDEQ*BLANK
1338.00 CSP          MOVE  '1'          @MK,03
1339.00 CSR          SETON          4493
1340.00 CSR          ELSE
1341.00 CSR          MOVEAA@XTY    @40
1342.00 CSR          MOVE  *HIVAL    @AV
1343.00 CSR          EXSR  C997
1344.00 C*          ----
1345.00 CSR          MOVE  ' '          $ERTST 1
1346.00 CSR          MOVE  *BLANK    $WRK10 10
1347.00 CSR          MOVELQXXTY    $WRK10
1348.00 CSR          @AV,1    IFNE *HIVAL
1349.00 CSR          $WRK10    LOKUP@AV          81
1350.00 CSR          *IN81    IFEQ  '0'
1351.00 CSR          MOVE  '1'          $ERTST
1352.00 CSR          END
1353.00 CSR          $ERTST    IFEQ  '1'
1354.00 CSR          MOVE  '1'          @MK,07
1355.00 CSR          SETON          4493
1356.00 CSR          END
1357.00 CSR          END
1358.00 CSR          END
1359.00 CSR          END
1360.00 C*
1361.00 C*          Edit upper and lower range - Item Type
1362.00 C*
1363.00 CSR          L@XTY    IFNE *BLANK
1364.00 CSR          MOVE  '1'          $ERTST
1365.00 CSR          QXXTY    IFGE L@XTY
1366.00 CSR          QXXTY    ANDLEU@XTY
1367.00 CSR          MOVE  ' '          $ERTST
1368.00 CSR          END
1369.00 CSR          $ERTST    IFEQ  '1'
1370.00 CSR          MOVE  '1'          @MK,07
1371.00 CSR          SETON          4493
1372.00 CSR          END
1373.00 CSR          END
1374.00 C*
1375.00 C*          Edit from User Defined Codes - Item Type
1376.00 C*
1377.00 CSR          R@XTY    IFNE *BLANK
1378.00 CSR          CLEARI0005U
1379.00 CSR          MOVELS@XTY    #USY
1380.00 CSR          MOVE  P@XTY    #URT
1381.00 CSR          MOVE  QXXTY    #UKY
1382.00 CSR          CALL  'X0005'    81
1383.00 C*          -----
1384.00 CSR          PARM          I0005U
1385.00 CSR          #UERR    IFEQ  '1'
1386.00 CSR          MOVE  '1'          @MK,09
1387.00 CSR          SETON          4493
1388.00 CSR          END
1389.00 CSR          END
1390.00 C*-----
1391.00 C*
1392.00 C*          Scrub and edit - Item Unit of Measure
1393.00 C*
1394.00 CSR          MOVELVDXUM    QXXUM
1395.00 C*

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1396.00 C* Set default value - Item Unit of Measure
1397.00 C*
1398.00 CSR QXXUM IFEQ *BLANK
1399.00 CSR D@XUM IFNE *BLANK
1400.00 CSR MOVED@XUM @40
1401.00 CSR MOVEA@40 QXXUM
1402.00 CSR @40,1 IFEQ ' ' ' '
1403.00 CSR MOVE ' ' @40,1
1404.00 CSR Z-ADD2 #M
1405.00 CSR #M DOWLE40
1406.00 CSR @40,#M IFEQ ' ' ' '
1407.00 CSR MOVE ' ' @40,#M
1408.00 CSR END
1409.00 CSR ADD 1 #M
1410.00 CSR END
1411.00 CSR MOVEA@40,2 QXXUM
1412.00 CSR END
1413.00 CSR END
1414.00 CSR END
1415.00 C*
1416.00 C* Edit allowed values - Item Unit of Measure
1417.00 C*
1418.00 CSR A@XUM IFNE *BLANK
1419.00 CSR A@XUM IFEQ '*NB'
1420.00 CSR QXXuM ANDEQ*BLANK
1421.00 CSR MOVE '1' @MK,03
1422.00 CSR SETON 4793
1423.00 CSR ELSE
1424.00 CSR MOVEAA@XUM @40
1425.00 CSR MOVE *HIVAL @AV
1426.00 CSR EXSR C997
1427.00 C* ----
1428.00 CSR MOVE ' ' $ERTST 1
1429.00 CSR MOVE *BLANK $WRK10 10
1430.00 CSR MOVELQXXUM $WRK10
1431.00 CSR @AV,1 IFNE *HIVAL
1432.00 CSR $WRK10 LOKUP@AV 81
1433.00 CSR *IN81 IFEQ '0'
1434.00 CSR MOVE '1' $ErTST
1435.00 CSR END
1436.00 CSR $ERTST IFEQ '1'
1437.00 CSR MOVE '1' @MK,07
1438.00 CSR SETON 4793
1439.00 CSR END
1440.00 CSR END
1441.00 CSR END
1442.00 CSR END
1443.00 C*
1444.00 C* Edit upper and lower range - Item Unit of Measure
1445.00 C*
1446.00 CSR L@XUM IFNE *BLANK
1447.00 CSR MOVE '1' $ERTST
1448.00 CSR QXXUM IFGE L@XUM
1449.00 CSR QXXUM ANDLEU@XUM
1450.00 CSR MOVE ' ' $ERTST
1451.00 CSR END
1452.00 CSR $ERTST IFEQ '1'
1453.00 CSR MOVE '1' @MK,07
1454.00 CSR SETON 4793
1455.00 CSR END
1456.00 CSR END
1457.00 C*
1458.00 C* Edit from User Defined Codes - Item Unit of Measure
1459.00 C*
1460.00 CSR R@XUM IFNE *BLANK
1461.00 CSR CLEARI0005U
1462.00 CSR MOVELS@XUM #USY
1463.00 CSR MOVE R@XUM #URT
1464.00 CSR MOVE QXXUM #UKY
1465.00 CSR CALL 'X0005' 81
1466.00 C* ----
1467.00 CSR PARM I0005U
1468.00 CSR #UERR IFEQ '1'
1469.00 CSR MOVE '1' @MK,09
1470.00 CSR SETON 4793
1471.00 CSR END
1472.00 CSR END

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1473.00 C*-----
1474.00 C*
1475.00 C*      Scrub and edit - Item Category Code 001
1476.00 C*
1477.00 CSR                MOVELVDX001                QXX001
1478.00 C*
1479.00 C*      Set default value - Item Category Code 001
1480.00 C*
1481.00 CSR                QXX001      IFEQ *BLANK
1482.00 CSR                D@X001      IFNE *BLANK
1483.00 CSR                MOVEAD@X001                @40
1484.00 CSR                MOVAA@40                QXX001
1485.00 CSR                @40,1      IFEQ ''''
1486.00 CSR                MOVE ' '                @40,1
1487.00 CSR                Z-ADD2                #M
1488.00 CSR                #M          DOWLE40
1489.00 CSR                @40,#M      IFEQ ''''
1490.00 CSR                MOVE ' '                @40,#M
1491.00 CSR                END
1492.00 CSR                ADD 1                #M
1493.00 CSR                END
1494.00 CSR                MOVEA@40,2                QXX001
1495.00 CSR                END
1496.00 CSR                END
1497.00 CSR                END
1498.00 C*
1499.00 C*      Edit allowed values - Item Category Code 001
1500.00 C*
1501.00 CSR                A@X001      IFNE *BLANK
1502.00 CSR                ASK001      IFEQ '*NB'
1503.00 CSR                QXX001      ANDEQ*BLANK
1504.00 CSR                MOVE '1'                @MK,03
1505.00 CSR                SETON                4893
1506.00 CSR                ELSE
1507.00 CSR                MOVEAA@X001                @40
1508.00 CSR                MOVE *HIVAL                @AV
1509.00 CSR                EXSR C997
1510.00 C*      ----
1511.00 CSR                MOVE ' '                $ERTST 1
1512.00 CSR                MOVE *BLANK                $WRK10 10
1513.00 CSR                MOVELVQXX001                $WRK10
1514.00 CSR                @AV,1      IFNE *HIVAL
1515.00 CSR                $WRK10      LOKUP@AV                81
1516.00 CSR                *IN81      IFEQ '0'
1517.00 CSR                MOVE '1'                $ERTST
1518.00 CSR                END
1519.00 CSR                $ERTST      IFEQ '1'
1520.00 CSR                MOVE '1'                @MK,07
1521.00 CSR                SETON                4893
1522.00 CSR                END
1523.00 CSR                END
1524.00 CSR                END
1525.00 CSR                END
1526.00 C*
1527.00 C*      Edit upper and lower range - Item Category Code 001
1528.00 C*
1529.00 CSR                L@X001      IFNE *BLANK
1530.00 CSR                MOVE '1'                $ERTST
1531.00 CSR                QXX001      IFGE L@X001
1532.00 CSR                QXX001      ANDLEU@X001
1533.00 CSR                MOVE ' '                $ERTST
1534.00 CSR                END
1535.00 CSR                $ERTST      IFEQ '1'
1536.00 CSR                MOVE '1'                @MK,07
1537.00 CSR                SETON                4893
1538.00 CSR                END
1539.00 CSR                END
140.00 C*
1541.00 C*      Edit from User Defined Codes - Item Category Code 001
1542.00 C*
1543.00 CSR                R@X001      IFNE *BLANK
1544.00 CSR                CLEARI0005U
1545.00 CSR                MOVELS@X001                #USY
1546.00 CSR                MOVE P@X001                #URT
1547.00 CSR                MOVE QXX001                #UKY
1548.00 CSR                CALL 'X0005'                81
1549.00 C*      ----

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1550.00 CSR          PARM          I0005U
1551.00 CSR          #UERR        IFEQ '1'
1552.00 CSR          MOVE '1'          @MK,09
1553.00 CSR          SETON          4893
1554.00 CSR          END
1555.00 CSR          END
1556.00 C*-----
1557.00 C*
1558.00 C*      Scrub and edit - Item Category Code 002
1559.00 C*
1560.00 CSR          MOVELVDX002      QXX002
1561.00 C*
1562.00 C*      Set default value - Item Category Code 002
1563.00 C*
1564.00 CSR          QXX002        IFEQ *BLANK
1565.00 CSR          D@X002        IFNE *BLANK
1566.00 CSR          MOVEAD@X002      @40
1567.00 CSR          MOVEA@40        QXX002
1568.00 CSR          @40,1          IFEQ ''''
1569.00 CSR          MOVE ' '          @40,1
1570.00 CSR          Z-ADD2          #M
1571.00 CSR          #M            DOWLE40
1572.00 CSR          @40,#M        IFEQ ''''
1573.00 CSR          MOVE ' '          @40,#M
1574.00 CSR          END
1575.00 CSR          ADD 1          #M
1576.00 CSR          END
1577.00 CSR          MOVEA@40,2      QXX002
1578.00 CSR          END
1579.00 CSR          END
1580.00 CSR          END
1581.00 C*
1582.00 C*      Edit allowed values - Item Category Code 002
1583.00 C*
1584.00 CSR          A@X002        IFNE *BLANK
1585.00 CSR          A@X002        IFEQ '*NB'
1586.00 CSR          QXX002        ANDEQ*BLANK
1587.00 CSR          MOVE '1'          @MK,03
1588.00 CSR          SETON          4993
1589.00 CSR          ELSE
1590.00 CSR          MOVEAA@X002      @40
1591.00 CSR          MOVE *HIVAL      @AV
1592.00 CSR          EXSR C997
1593.00 C*      ----
1594.00 CSR          MOVE ' '          $ERTST
1595.00 CSR          MOVE *BLANK      $WRK10 10
1596.00 CSR          MOVELQXX002      $WRK10
1597.00 CSR          @AV,1          IFNE *HIVAL
1598.00 CSR          $WRK10        LOKUP@AV          81
1599.00 CSR          *IN81        IFEQ '0'
1600.00 CSR          MOVE '1'          $ERTST
1601.00 CSR          END
1602.00 CSR          $ERTST        IFEQ '1'
1603.00 CSR          MOVE '1'          @MK,07
1604.00 CSR          SETON          4993
1605.00 CSR          END
1606.00 CSR          END
1607.00 CSR          END
1608.00 CSR          END
1609.00 C*
1610.00 C*      Edit upper and lower range - Item Category Code 002
1611.00 C*
1612.00 CSR          L@X002        IFNE *BLANK
1613.00 CSR          MOVE '1'          $ERTST
1614.00 CSR          QXX002        IFGE L@X002
1615.00 CSR          QXX002        ANDLEU@X002
1616.00 CSR          MOVE ' '          $ERTST
1617.00 CSR          END
1618.00 CSR          $ERTST        IFEQ '1'
1619.00 CSR          MOVE '1'          @MK,07
1620.00 CSR          SETON          4993
1621.00 CSR          END
1622.00 CSR          END
1623.00 C*
1624.00 C*      Edit from User Defined Codes - Item Category Code 002
1625.00 C*
1626.00 CSR          R@X002        IFNE *BLANK

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1627.00	CSR		CLEARI0005U		
1628.00	CSR		MOVELS@X002	#USY	
1629.00	CSR		MOVE R@X002	#URT	
1630.00	CSR		MOVE QXX002	#UKY	
1631.00	CSR		CALL 'X0005'		81
1632.00	C*		-----		
1633.00	CSR		PARM	I0005U	
1634.00	CSR	#UERR	IFEQ '1'		
1635.00	CSR		MOVE '1'	@MK,09	
1636.00	CSR		SETON		4993
1637.00	CSR		END		
1638.00	CSR		END		
1639.00	C*		-----		
1640.00	C*				
1641.00	C*		Scrub and edit - Item Category Code 003		
1642.00	C*				
1643.00	CSR		MOVELVDX003	QxX003	
1644.00	C*				
1645.00	C*		Set default value - Item Category Code 003		
1646.00	C*				
1647.00	CSR	QXX003	IFEQ *BLANK		
1648.00	CSR	D@X003	IFNE *BLANK		
1649.00	CSR		MOVEAD@X003	@40	
1650.00	CSR		MOVEA@40	QXX003	
1651.00	CSR	@40,1	IFEQ		
1652.00	CSR		MOVE ' '	@40,1	
1653.00	CSR		z-ADD2	#M	
1654.00	CSR	#M	DOWLE40		
1655.00	CSR	@40,#M	IFEQ ''''		
1656.00	CSR		MOVE ' '	@40,#M	
1657.00	CSR		END		
1658.00	CSR		ADD 1	#M	
1659.00	CSR		END		
1660.00	CSR		MOVEA@40,2	QXX003	
1661.00	CSR		END		
1662.00	CSR		END		
1663.00	CSR		END		
1664.00	C*				
1665.00	C*		Edit allowed values - Item Category Code 003		
1666.00	C*				
1667.00	CSR	A@X003	IFNE *BLANK		
1668.00	CSR	A@X003	IFEQ '*NB'		
1669.00	CSR	QXX003	ANDEQ*BLANK		
1670.00	CSR		MOVE '1'	@MK,03	
1671.00	CSR		SETON		5093
1672.00	CSR		ELSE		
1673.00	CSR		MOVEAA@X003	@40	
1674.00	CSR		MOVE *HIVAL	@AV	
1675.00	CSR		EXSR C997		
1676.00	a*		-----		
1677.00	CSR		MOVE ' '	\$ERTST	
1678.00	CSR		MOVE *BLANK	\$WPK10 10	
1679.00	CSR		MOVELQXX003	\$WRK10	
1680.00	CSR	@AV,1	IFNE *HIVAL		
1681.00	CSR	\$WRK10	LOKUP@AV		81
1682.00	CSR	*IN81	IFEQ '0'		
1683.00	CSR		MOVE '1'	\$ERTST	
1684.00	CSR		END		
1685.00	CSR	\$ERTST	IFEQ '1'		
1686.00	CSR		MOVE '1'	@MK,07	
1687.00	CSR		SETON		5093
1688.00	CSR		END		
1689.00	CSR		END		
1690.00	CSR		END		
1691.00	CSR		END		
1692.00	C*				
1693.00	C*		Edit upper and lower range - Item Category Code 003		
1694.00	C*				
1695.00	CSR	L@X003	IFNE *BLANK		
1696.00	CSR		MOVE '1'	\$ERTST	
1697.00	CSR	QXX003	IFGE L@X003		
1698.00	CSR	QXX003	ANDLEU@X003	\$ERTST	
1699.00	CSR		MOVE ' '		
1700.00	CSR		END		
1701.00	CSR	\$ERTST	IFEQ '1'		
1702.00	CSR		MOVE '1'	@MK,07	
1703.00	CSR		SETON		5093

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1704.00 CSR                END
1705.00 CSR                END
1706.00 C*
1707.00 C*          Edit from User Defined Codes - Item Category Code 003
1708.00 C*
1709.00 CSR          R@X003      IFNE *BLANK
1710.00 CSR                CLEARI0005U
1711.00 CSR                MOVELS@X003          #USY
1712.00 CSR                MOVE P@X003          #URT
1713.00 CSR                MOVE QXX003          #UKY
1714.00 CSR                CALL 'X0005'                81
1715.00 C*                -----
1716.00 CSR                PARM                I0005U
1717.00 CSR          #UERR      IFEQ '1'
1718.00 CSR                MOVE '1'                @MK,09
1719.00 CSR                SETON                5093
1720.00 CSR                END
1721.00 CSR                END
1722.00 C*-----
1723.00 Ct
1724.00 C*          Scrub and edit - Item Category Code 004
1725.00 C*
1726.00 CSR                MOVELVDX004          QXX004
1727.00 C*
1728.00 Ct          Set default value - Item Category Code 004
1729.00 C*
1730.00 CSR          QXX004      IFEQ *BLANK
1731.00 CSR          D@X004      IFNE *BLANK
1732.00 CSR                MOVEAD@X004          @40
1733.00 CSR                MOVEA@40          QXX004
1734.00 CSR          @40,1      IFEQ ' '
1735.00 CSR                MOVE ' '                @40,1
1736.00 CSR                Z-ADD2                #M
1737.00 CSR          #M          DOWLE40
1738.00 CSR          @40,#M      IFEQ ' '
1739.00 CSR                MOVE ' '                @40,#M
1740.00 CSR                END
1741.00 CSR                ADD 1                #M
1742.00 CSR                END
1743.00 CSR                MOVEA@40,2          QXX004
1744.00 CSR                END
1745.00 CSR                END
1746.00 CSR                END
1747.00 C*
1748.00 C*          Edit allowed values - Item Category Code 004
1749.00 C*
1750.00 CSR          A@X004      IFNE *BLANK
1751.00 CSR          A@X004      IFEQ '*NB'
1752.00 CSR          QXX004      ANDEQ*BLANK
1753.00 CSR                MOVE '1'                @MK,03
1754.00 CSR                SETON                5193
1755.00 CSR                ELSE
1756.00 CSR                MOVEAA@X004          @40
1757.00 CSR                MOVE *HIVAL          @AV
1758.00 CSR                EXSR C997
1759.00 C*                -----
1760.00 CSR                MOVE ' '                $ERTST 1
1761.00 CSR                MOVE *BLANK          $WRK10 10
1762.00 CSR                MOVELQXX004          $WRK10
1763.00 CSR          @AV,1      IFNE *HIVAL
1764.00 CSR          $WRK10      LOKUP@AV                81
1765.00 CSR          *IN81      IFEQ '0'
1766.00 CSR                MOVE '1'                $ERTST
1767.00 CSR                END
1768.00 CSR          $ERTST      IFEQ '1'
1769.00 CSR                MOVE '1'                @MK,07
1770.00 CSR                SETON                5193
1771.00 CSR                END
1772.00 CSR                END
1773.00 CSR                END
1774.00 CSR                END
1775.00 C*
1776.00 C*          Edit upper and lowr range - Item Category Code 004
1777.00 C*
1778.00 CSR          L@004      IFNE *BLANK
1779.00 CSR                MOVE '1'                $ERTST
1780.00 CSR          QXX004      IFGE L@X004

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1781.00	CSR	QXX004	ANDLEU@X004		
1782.00	CSR		MOVE ' '	\$ERTST	
1783.00	CSR		END		
1784.00	CSR	\$ERTST	IFEQ '1'		
1785.00	CSR		MOVE '1'	@MK,07	
1786.00	CSR		SETON		5193
1787.00	CSR		END		
1788.00	CSR		END		
1789.00	C*				
1790.00	C*	Edit from User Defined Codes - Item Category Code 004			
1791.00	C*				
1792.00	CSR	R@X004	IFNE *BLANK		
1793.00	CSR		CLEARI0005U		
1794.00	CSR		MOVELS@X004	#USY	
1795.00	CSR		MOVE R@X004	#URT	
1796.00	CSR		MOVE QXX004	#UKY	
1797.00	CSR		CALL 'X0005'		81
1798.00	C*		-----		
1799.00	CSR		PARM	I0005U	
1800.00	CSR	#VERR	IFEQ '1'		
1801.00	CSR		MOVE '1'	@MK,09	
1802.00	CSR		SETON		5193
1803.00	CSR		END		
1804.00	CSR		END		
1805.00	C*	-----			
1806.00	C*				
1807.00	C*	Scrub and edit - Item Category Code 005			
1808.00	C*				
1809.00	CSR		MOVELVDX005	QXX005	
1810.00	C*				
1811.00	C*	Set default value - Item Category Code 005			
1812.00	C*				
1813.00	CSR	QXX005	IFEQ *BLANK		
1814.00	CSR	D@X005	IFNE *BLANK		
1815.00	CSR		MOVEAD@X005	@40	
1816.00	CSR		MOVEA@40	QXX005	
1817.00	CSR	@40,1	IFEQ ' '' '		
1818.00	CSR		MOVE ' '	@40,1	
1819.00	CSR		Z-ADD2	#M	
1820.00	CSR	#M	D0WLE40		
1821.00	CSR	@40,#M	IFEQ		
1822.00	CSR		MOVE ' '	@40,#M	
1823.00	CSR		END		
1824.00	CSR		ADD 1	#M	
1825.00	CSR		END		
1826.00	CSR		MOVEA@40,2	QXX005	
1827.00	CSR		END		
1828.00	CSR		END		
1829.00	CSR		END		
1830.00	C*				
1831.00	C*	Edit allowed values - Item Category Code 005			
1832.00	C*				
1833.00	CSR	A@X005	IFNE *BLANK		
1834.00	CSR	A@X005	IFEQ '*NB'		
1835.00	CSR	QXX005	ANDEQ*BLANK		
1836.00	CSR		MOVE '1'	@MK,03	
1837.00	CSR		SETON		5293
1838.00	CSR		ELSE		
1839.00	CSR		MOVEAA@X005	@40	
1840.00	CSR		MOVE *HIVAL	@AV	
1841.00	CSR		EXSR C997		
1842.00	C*		-----		
1843.00	CSR		MOVE ' '	\$ERTST	
1844.00	CSR		MOVE *BLANK	\$WRK10 10	
1845.00	CSR		MOVELQXX005	\$WRK10	
1846.00	CSR	@AV,1	IFNE *HIVAL		
1847.00	CSR	\$WRK10	LOKUP@AV		81
1848.00	CSR	*IN81	IFEQ '0'		
1849.00	CSR		MOVE '1'	\$ERTST	
1850.00	CSR		END		
1851.00	CSR	\$ERTST	IFEQ '1'		
1852.00	CSR		MOVE '1'	@MK,07	
1853.00	CSR		SETON		5293
1854.00	CSR		END		
1855.00	CSR		END		
1856.00	CSR		END		
1857.00	CSR		END		

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1858.00 C*
1959.00 C*      Edit upper and lower range - Item Category Code 005
1860.00 C*
1861.00 CSR      L@X005      IFNE *BLANK
1862.00 CSR              MOVE '1'          $ERTST
1863.00 CSR      QXX005      IFGE L@X005
1864.00 CSR      QXX005      ANDLEU@X005
1865.00 CSR              MOVE ' '          $ERTST
1866.00 CSR              END
1867.00 CSR      $ERTST      IFEQ '1'
1868.00 CSR              MOVE '1'          @MK,07
1869.00 CSR              SETON              5293
1870.00 CSR              END
1871.00 CSR              END
1872.00 C*
1873.00 C*      Edit from User Defined Codes - Item Category Code 005
1874.00 C*
1875.00 CSR      R@X005      IFNE *BLANK
1876.00 CSR              CLEARI0005U
1877.00 CSR              MOVELS@X005      #USY
1878.00 CSR              MOVE R@X005      #URT
1879.00 CSR              MOVE QXX005      #UKY
1880.00 CSR              CALL 'X0005'      81
1881.00 C*
1882.00 CSR              PARM              I0005U
1883.00 CSR      #UERR      IFEQ '1'
1884.00 CSR              MOVE '1'          @MK,09
1885.00 CSR              SETON              5293
1886.00 CSR              END
1887.00 CSR              END
1888.00 C*-----
1889.00 CSR      END005      ENDSR
1890.00 C*****
1891.00 C*
1892.00 C*      Copy Common Subroutine - Currency - Translate Video Fields to Data Base
1893.00 C*
1894.00 C/COPY JDECPY,C00151
1895.00 C*****
1896.00 C*
1897.00 C*      Copy Common Subroutine - Build Allowed Values Work Array
1898.00 C*****
1899.00 C/COPY JDECPY,C997
1900.00 C*****
1901.00 C*
1902.00 C*      SUBROUTINE S010 - Update Data Base
1903.00 C*      -----
1904.00 C*
1905.00 C*      Processing: 1.      Update data base file based upon valid
1906.00 C*                        action codes.
1907.00 C*
1908.00 CSR      S010      BEGSR
1909.00 C*      ----      -----
1910.00 C*
1911.00 C*      If add action, add record.
1912.00 C*
1913.00 CSR      *IN21      IFEQ '1'
1914.00 CSR              WRITEI92801      99
1915.00 CSR              END
1916.00 C*
1917.00 C*      If change action, update record.
1918.00 C*
1919.00 CSR      *IN22      IFEQ '1'
1920.00 CSR              UDATI92801      99
1921.00 CSR              END
1922.00 C*
1923.00 C*      If delete action, delete record.
1924.00 C*
1925.00 CSR      *IN23      IFEQ '1'
1926.00 CSR              DELETI92801      99
1927.00 CSR              END
1928.00 C*

```

Indicator value for action code is assigned in copy module C0001.

```

1929.00 C*      Clear data field for next transactione
1930.00 C*
1931.00 CSR      MOVE #FCLR          @@AID
1932.00 CSR      EXSR S001
1933.00 C*      -----
1934.00 CSR      END010          ENDSR
1935.00 C*****
1936.00 C*
1937.00 C*      SUBROUTINE S998 - Load dictionary parameters.
1938.00 C*      -----
1939.00 C*
1940.00 CSR      S998          BEGSR
1941.00 C*      -----
1942.00 C*
1943.00 C*
1944.00 C*      Dictionary parameters for - Cost Center
1945.00 C*
1946.00 CSR      MOVE *BLANK          FRDTAI
1947.00 CSR      MOVEL 'XCC'          FRDTAI
1948.00 CSR      CALL 'X9800E'          81
1949.00 C*      -----
1950.00 CSR      PARM                    19800E
1951.00 CSR      FRERR          IFEQ '0'
1953.00 CSR      MOVE FRDTAT          T@XCC          1
1954.00 CSR      MOVE FREC          E@XCC          1
1955.00 CSR      MOVE FRDTAS          C@XCC          50
1956.00 CSR      MOVE FRDTAD          G@XCC          20
1957.00 CSR      MOVE FRCDEC          F@XCC          1
1958.00 CSR      MOVELFRSY          S@xCC          4
1959.00 CSR      MOVE FRRT          R@XCC          2
1960.00 CSR      MOVE FRDVAL          D@XCC          40
1961.00 CSR      MOVE FRVAL          A@XCC          40
1962.00 CSR      MOVE FRLVAL          L@XCC          40
1963.00 CSR      MOVE FRUVAL          U@XCC          40
1964.00 CSR      MOVE FREDWR          W@XCC          30
1965.00 CSR      MOVE FRLR          J@XCC          1
1966.00 CSR      -          MOVE FRNNIX          N@XCC          20
1967.00 CSR      Z-ADD1          #@xCC          110
1968.00 CSR      MOVE F@XCC          #A
1969.00 CSR      DO #A
1970.00 CSR      MULT 10          #@XCC
1971.00 CSR      END
1972.00 CSR      END
1973.00 C*-----
1974.00 C*
1975.00 C*      Dictionary parameters for - Description
1976.00 C*
1977.00 CSR      MOVE *BLANK          FRDTAI
1978.00 CSR      MOVEL 'XDS'          FRDTAI
1979.00 CSR      CALL 'X9800E'          81
1980.00 C*      -----
1981.00 CSR      PARM                    I9800E
1982.00 CSR      FRERR          IFEQ '0'
1984.00 CSR      MOVE FRDTAT          T@XDS          1
1985.00 CSR      MOVE FREC          E@XDS          1
1986.00 CSR      MOVE FRDTAS          C@xDS          50
1987.00 CSR      MOVE FRDTAD          G@XDS          20
1988.00 CSR      MOVE FRCDEC          F@XDS          1
1989.00 CSR      MOVELPPSY          S@xDS          4
1990.00 CSR      MOVE FRRT          R@XDS          2
1991.00 CSR      MOVE FRDVAL          D@XDS          40
1992.00 CSR      MOVE FRVAL          A@EDS          40
1993.00 CSR      MOVE FRLVAL          L@XDS          40
1994.00 CSR      MOVE FRUVAL          U@XDS          40
1995.00 CSR      MOVE FREDWR          W@XDS          30
1996.00 CSR      MOVE FRLR          J@XDS          1
1997.00 CSR      MOVE FRNNIX          N@XDS          20
1998.00 CSR      Z-ADD1          #@XDS          110
1999.00 CSR      MOVE F@XDS          #A
2000.00 CSR      DO #A
2001.00 CSR      MULT 10          #@XDS
2002.00 CSR      END
2003.00 CSR      END
2004.00 C*-----
2005.00 C*

```

Forces clear of everything before processing next record. Simulates user pressing the *Clear Screen* function key.

Retrieves all of the Data Dictionary editing parameters for necessary data items used in the program and moves the information into constant fields

Data Dictionary file server


```

2006.00 C* Dictionary parameters for - Date Last Ship
2007.00 C*
2008.00 CSR MOVE *BLANK FRDTAI
2009.00 CSR MOVE 'XDT' FRDTAI
2010.00 CSR CALL 'X9800E' 81
2011.00 C* -----
2012.00 CSR PARM I9800E
2013.00 CSR FRERR IFEQ '0'
2015.00 CSR MOVE FRDTAT T@XDT 1
2016.00 CSR MOVE FREC E@XDT 1
2017.00 CSR MOVE FRDTAS C@EDT 50
2018.00 CSR MOVE FRDTAD G@XDT 20
2019.00 CSR MOVE FRCDEC F@XDT 1
2020.00 CSR MOVEFRSY S@XDT 4
2021.00 CSR MOVE FRRT R@XDT 2
2022.00 CSR MOVE FRDVAL D@XDT 40
2023.00 CSR MOVE FRVAL A@xDT 40
2024.00 CSR MOVE FRLVAL L@XDT 40
2025.00 CSR MOVE FRUVAL U@XDT 40
2026.00 CSR MOVE FREDWR W@XDT 30
2027.00 CSR MOVE FRLR J@xDT 1
2029.00 CSR MOVE FRNNIX N@XDT 20
2029.00 CSR Z-ADD1 #@XDT 110
2030.00 CSR MOVE F@XDT #A
2031.00 CSR DO #A
2032.00 CSR MULT 10 #@XDT
2033.00 CSR END
2034.00 CSR END
2035.00 C*-----
2036.00 C*
2037.00 C* Dictionary parameters for - Item ID
2039.00 C*
2039.00 CSR MOVE *BLANK FRDTAI
2040.00 CSR MOVE 'XIT' FRDTAI
2041.00 CSR CALL 'X9800E' 81
2042.00 C* -----
2043.00 CSR PARM I9800E
2044.00 CSR FRERR IFEQ '0'
2046.00 CSR MOVE FRDTAT T@XIT 1
2047.00 CSR MOVE FREC E@XIT 1
2048.00 CSR MOVE FRDTAS C@XIT 50
2049.00 CSR MOVE FRDTAD G@XIT 20
2050.00 CSR MOVE FRCDEC F@XIT 1
2051.00 CSR MOVEFRSY S@XIT 4
2052.00 CSR MOVE FRRT R@XIT 2
2053.00 CSR MOVE FRDVAL D@XIT 40
2054.00 CSR MOVE FRVAL A@XIT 40
2055.00 CSR MOVE FRLVAL L@XIT 40
2056.00 CSR MOVE FRUVAL U@XIT 40
2057.00 CSR MOVE FREDWR W@XIT 30
2058.00 CSR MOVE FRLR J@XIT 1
2059.00 CSR MOVE FRNNIX N@XIT 20
2060.00 CSR Z-ADD1 #@XIT 110
2061.00 CSR MOVE F@XIT #A
2062.00 CSR DO #A
2063.00 CSR MULT 10 #@XIT
2064.00 CSR END
2065.00 CSR END
2066.00 C*-----
2067.00 C*
2068.00 C* Dictionary parameters for - Quantity - On Hand
2069.00 C*
2070.00 CSR MOVE *BLANK FRDTAI
2071.00 CSR MOVE 'XQT' FRDTAI
2072.00 CSR CALL 'X9800E' 81
2073.00 C* -----
2074.00 CSR PARM I9800E
2075.00 CSR FRERR IFEQ '0'
2077.00 CSR MOVE FRDTAT T@XQT 1
2078.00 CSR MOVE FREC E@XQT 1
2079.00 CSR MOVE FRDTAS C@XQT 50
2080.00 CSR MOVE FRDTAD G@XQT 20
2081.00 CSR MOVE FRCDEC F@XQT 1
2082.00 CSR MOVEFRSY S@XQT 4

```

2083.00	CSR	MOVE FRRT	R@XQT	2
2084.00	CSR	MOVE FRDVAL	D@XQT	40
2085.00	CSR	MOVE FRVAL	A@XQT	40
2086.00	CSR	MOVE FRLVAL	L@XQT	40
2087.00	CSR	MOVE FRUVAL	U@XQT	40
2088.00	CSR	MOVE FREDWR	W@XQT	30
2089.00	CSR	MOVE FRLR	J@XQT	1
2090.00	CSR	MOVE FRNNIX	N@XQT	20
2091.00	CSR	Z-ADD1	#@XQT	110
2092.00	CSR	MOVE F@XQT	#A	
2093.00	CSR	DO #A		
2094.00	CSR	MULT 10	#@XQT	
2095.00	CSR	END		
2096.00	CSR	END		
2097.00	C*	-----		
2098.00	C*			
2099.00	C*	Dictionary parameters for - Item Type		
2100.00	C*			
2101.00	CSR	MOVE *BLANK	FRDTAI	
2102.00	CSR	MOVE L'XTY'	FRDTAI	
2103.00	CSR	CALL 'X9800E'		81
2104.00	C*	-----		
2105.00	CSR	PARM	I9800E	
2106.00	CSR	IFEQ '0'		
2108.00	CSR	MOVE FRDTAT	T@XTY	1
2109.00	CSR	MOVE FREC	E@XTY	1
2110.00	CSR	MOVE FRDTAS	C@XTY	50
2111.00	CSR	MOVE FRDTAD	G@XTY	20
2112.00	CSR	MOVE FRCDEC	F@XTY	1
2113.00	CSR	MOVE LFRSY	S@XTY	4
2114.00	CSR	MOVE FRRT	P@XTY	2
2115.00	CSR	MOVE FRDVAL	D@XTY	40
2116.00	CSR	MOVE FRVAL	A@XTY	40
2117.00	CSR	MOVE FRLVAL	L@XTY	40
2118.00	CSR	MOVE FRUVAL	U@XTY	40
2119.00	CSR	MOVE FREDWR	W@XTY	30
2120.00	CSR	MOVE FRLR	J@XTY	1
2121.00	CSR	MOVE FRNNIX	N@XTY	20
2122.00	CSR	Z-ADD1	#@XTY	110
2123.00	CSR	MOVE F@XTY	#A	
2124.00	CSR	DO #A		
2125.00	CSR	MULT 10	#@XTY	
2126.00	CSR	END		
2127.00	CSR	END		
2128.00	C*	-----		
2129.00	C*			
2130.00	C*	Dictionary parameters for - Item Unit of Measure		
2131.00	C*			
2132.00	CSR	MOVE *BLANK	FRDTAI	
2133.00	CSR	MOVE L'XUM'	FRDTAI	
2134.00	CSR	CALL 'X9800E'		81
2135.00	C*	-----		
2136.00	CSR	PARM	I9800E	
2137-.00	CSR	IFEQ '0'		
2139.00	CSR	MOVE FRDTAT	T@XUM	1
2140.00	CSR	MOVE FREC	E@XUM	1
2141.00	CSR	MOVE FRDTAS	C@XUM	50
2142.00	CSR	MOVE FRDTAD	G@XUM	20
2143.00	CSR	MOVE FRCDEC	F@XUM	1
2144.00	CSR	MOVE LFRSY	S@XUM	4
2145.00	CSR	MOVE FRRT	R@XUM	2
2146.00	CSR	MOVE FRDVAL	D@XUM	40
2147.00	CSR	MOVE FRVAL	A@XUM	40
2148.00	CSR	MOVE FRLVAL	L@XUM	40
2149.00	CSR	MOVE FRUVAL	U@XUM	40
2150.00	CSR	MOVE FREDWR	W@XUM	30
2151.00	CSR	MOVE FRLR	J@XUM	1
2152.00	CSR	MOVE FRNNIX	N@XUM	20
2153.00	CSR	Z-ADD1	#@XUM	110
2154.00	CSR	MOVE F@XUM	#A	
2155.00	CSR	DO #A		
2156.00	CSR	MULT 10	#@XUM	
2157.00	CSR	END		
2158.00	CSR	END		
2159.00	C*			

2160.00	C*				
2161.00	C*	Dictionary parameters for - Item Category Code 001			
2162.00	C*				
2163~C0	CSR	MOVE *BLANK	FRDTAI		
2164.00	CSR	MOVE L'X001'	FRDTAI		
2165.00	CSR	CALL 'X9800E'			81
2166.00	C*	-----			
2167.00	CSR	PARM	I9800E		
2168.00	CSR	FRERR IFRQ '0'			
2170.00	CSR	MOVE FRDTAT	T@X001	1	
2171.00	CSR	MOVE FREC	E@X001	1	
2172.00	CSR	MOVE FRDTAS	C@X001	50	
2173.00	CSR	MOVE FRDTAD	G@X001	20	
2174.00	CSR	MOVE FRCDEC	F5X001	1	
2175.00	CSR	MOVE LFRSY	S@X001	4	
2176.00	CSR	MOVE FRRT	R5X001	2	
2177.00	CSR	MOVE FRDVAL	D@X001	40	
2178.00	CSR	MOVE FRVAL	A@X001	40	
2179.00	CSR	MOVE FRLVAL	L@X001	40	
2180.00	CSR	MOVE FRUVAL	U@X001	40	
2181.00	CSR	MOVE FREDWR	W@X001	30	
2182.00	CSR	MOVE FRLR	J@X001	1	
2183.00	CSR	MOVE FRNNIX	N@X001	20	
2184.00	CSR	Z-ADD1	#@X001	110	
2185.00	CSR	MOVE F@X001	#A		
2186.00	CSR	DO #A			
2187.00	CSR	MULT 10	#@X001		
2188.00	CSR	END			
2189.00	CSR	END			
2190.00	C*	-----			
2191.00	C*				
2192.00	C*	Dictionary parameters for - Item Category Code 002			
2193.00	C*				
2194.00	CSR	MOVE *BLANK	FRDTAI		
2195.00	CSR	MOVE L'X002'	FRDTAI		
2196.00	CSR	CALL 'X9800E'			81
2197.00	C*	-----			
2198.00	CSR	PARM	I9800E		
2199.00	CSR	FRERR IFEQ '0'			
2201.00	CSR	MOVE FRDTAT	T@X002	1	
2202.00	CSR	MOVE FREC	E@X002	1	
2203.00	CSR	MOVE FRDTAS	C@X002	50	
2204.00	CSR	MOVE FRDTAD	G@X002	20	
2205.00	CSR	MOVE FRCDEC	F@X002	1	
2206.00	CSR	MOVE LFRSY	S@X002	4	
2207.00	CSR	MOVE FRRT	R@X002	2	
2208.00	CSR	MOVE FRDVAL	D@X002	40	
2209.00	CSR	MOVE FRVAL	A@X002	40	
2210.00	CSR	MOVE FRLVAL	L@X002	40	
2211.00	CSR	MOVE FRUVAL	U@X002	40	
2212.00	CSR	MOVE FREDWR	W@X002	30	
2213.00	CSR	MOVE FRLR	J@X002	1	
2214.00	CSR	MOVE FRNNIX	N@X002	20	
2215.00	CSR	Z-ADD1	#@X002	110	
2216.00	CSR	MOVE F@X002	#A		
2217.00	a~	DO #A			
2218.00	CSR	MULT 10	#@X002		
2219.00	CSR	END			
2220.00	CSR	END			
2221.00	Ct				
2222.00	C*				
2223.00	C*	Dictionary parameters for - Item Category Code 003			
2224.00	C*				
2225.00	CSR	MOVE *BLANK	FRDTAI		
2226.00	CSR	MOVE L'X003'	FRDTAI		
2227.00	CSR	CALL 'X9800E'			81
2228.00	C*	-----			
2229.00	CSR	PARM	I9800E		
2230.00	CSR	FRERR IFRQ '0'			
2232.00	CSR	MOVE FRDTAT	T@X003	1	
2233.00	CSR	MOVE FREC	E@X003	1	
2234.00	CSR	MOVE FRDTAS	C@X003	50	
2235.00	CSR	MOVE FRDTAD	G@X003	20	
2236.00	CSR	MOVE FRCDEC	F@X003	1	

2237.00	CSR	MOVELFRSY	S@X003	4
2238.00	CSR	MOVE FRRT	R@X003	2
2239.00	CSR	MOVE FRDVAL	D@X003	40
2240.00	CSR	MOVE FRVAL	A@X003	40
2241.00	CSR	MOVE FRLVAL	L@X003	40
2242.00	CSR	MOVE FRUVAL	U@X003	40
2243.00	CSR	MOVE FREDWR	W@X003	30
2244.00	CSR	MOVE FRLR	J@X003	1
2245.00	CSR	MOVE FRNNIX	N@X003	20
2246.00	CSR	Z-ADD1	#@X003	110
2247.00	CSR	MOVE F@X003	#A	
2248.00	CSR	DO #A		
2249.00	CSR	MULT 10	#@X003	
2250.00	CSR	END		
2251.00	CSR	END		
2252.00	C*	-----		
2253.00	C*			
2254.00	C*	Dictionary parameters for - Item Category Code 004		
2255.00	C*			
2256.00	CSR	MOVE *BLANK	FRDTAI	
2257.00	CSR	MOVE 'X004'	FRDTAI	
2258.00	CSR	CALL 'X9800E'		81
2259.00	C*	----		
2260.00	CSR	PARM	I9800E	
2261.00	CSR	IFEQ '0'		
2263.00	CSR	MOVE FRDTAT	T@X004	1
2264.00	CSR	MOVE FREC	E@X004	1
2265.00	CSR	MOVE FRDTAS	C@X004	50
2266.00	CSR	MOVE FRDTAD	G@X004	20
2267.00	CSR	MOVE FRCDEC	F@X004	1
2268.00	CSR	MOVELFRSY	S@X004	4
2269.00	CSR	MOVE FRRT	R@X004	2
2270.00	CSR	MOVE FRDVAL	D@X004	40
2271.00	CSR	MOVE FRVAL	A@X004	40
2272.00	CSR	MOVE FRLVAL	L@X004	40
2273.00	CSR	MOVE FRUVAL	U@X004	40
2274.00	CSR	MOVE FREDWR	W@X004	30
2275.00	CSR	MOVE FRLR	J@X004	1
2276.00	CSR	MOVE FRNNIX	N@X004	20
2277.00	CSR	Z-ADD1	#@X004	110
2278.00	CSR	MOVE F@X004	#A	
2279.00	CSR	DO #A		
2280.00	CSR	MULT 10	#@X004	
2281.00	CSR	END		
2282.00	CSR	END		
2283.00	C*	-----		
2284.00	C*			
2285.00	C*	Dictionary parameters for - Item Category Code 005		
2286.00	C*			
2287.00	CSR	MOVE *BLANK	FRDTAI	
2288.00	CSR	MOVE 'X005'	FRDTAI	
2289.00	CSR	CALL 'X9800E'		81
2290.00	C*	----		
2291.00	CSR	PARM	I9800E	
2292.00	CSR	IFEQ '0'		
2294.00	CSR	MOVE FRDTAT	T@X005	1
2295.00	CSR	MOVE FREC	E@X005	1
2296.00	CSR	MOVE FRDTAS	C@X005	50
2297.00	CSR	MOVE FRDTAD	G@X005	20
2298.00	CSR	MOVE FRCDEC	F@X005	1
2299.00	CSR	MOVELFRSY	S@X005	4
2300.00	CSR	MOVE FRRT	R@X005	2
2301.00	CSR	MOVE FRDVAL	D@X005	40
2302.00	CSR	MOVE FRVAL	A@X005	40
2303.00	CSR	MOVE FRLVAL	L@X005	40
2304.00	CSR	MOVE FRUVAL	U@X005	40
2305.00	CSR	MOVE FREDWR	W@X005	30
2306.00	CSR	MOVE FRLR	J@X005	1
2307.00	CSR	MOVE FRNNIX	N@X005	20
2308.00	CSR	Z-ADD1	#@X005	110
2309.00	CSR	MOVE F@X005	#A	
2310.00	CSR	DO #A		
2311.00	CSR	MULT 10	#@X005	
2312.00	CSR	END		
2313.00	CSR	END		

```

2314.00 C*-----
2315.00 C*
2316.00 C*   Set subroutine execution flag.
2317.00 C*
2318.00 CSR           MOVE '1'           $998           1
2319.00 C*
2320.00 CSR           END998           ENDSR
2321.00 C*****
2322.00 C*
2323.00 C*   SUBROUTINE S999 - Housekeeping
2324.00 C*   -----
2325.00 C*
2326.00 C*   Processing:  1.  Load video screen text.
2327.00 C*                2.  Retrieve screen title data area, test
2328.00 C*                   for unauthorized access, center video
2329.00 C*                   title and move to video screen.
2330.00 C*                3.  Initialize key list.
2331.00 C*                4.  Load roll keys.
2332.00 C*                5.  Passed parameters.
2333.00 C*                6.  Load error message array.
2334.00 C*
2335.00 CSR           S999           BEGSR
2336.00 C*           ----           ----
2337.00 C*
2338.00 C*   Required program parameters.
2339.00 C*
2340.00 CSR           *ENTRY           PLIST
2341.00 C*
2342.00 C*   Passed Parameter - Item ID
2343.00 C*
2344.00 CSR           PARM           ##XIT           8
2345.00 C*
2346.00 C*   Move to internal reference - Item ID
2347.00 C*
2348.00 CSR           MOVE ##XIT           VDXIT
2349.00 C*
2350.00 C*   Test for auto inquiry function.
2351.00 C*
2352.00 CSR           VDXIT           IFNE *BLANK
2353.00 CSR           MOVE '1'           $AUTO           1
2354.00 CSR           END
2355.00 C*-----
2356.00 C*
2357.00 C*   Load video screen text.
2358.00 C*
2359.00 CSR           MOVEL@@FILE           PSKEY           10
2360.00 CSR           Z-ADD025           PSVTX#           30
2361.00 C/COPY JDECPY,C00SC
2362.00 C*-----
2363.00 C*
2364.00 C*   Key list for - Cost Center Security
2365.00 C*
2366.00 CSR           MSKY01           KLIST
2367.00 CSR           KFLD           MSUSER
2368.00 CSR           KFLD           MSFILE
2369.00 CSR           KFLD           MSMCUT
2370.00 C*-----
2371.00 C*
2372.00 C*   Key list for - SUM Item Master File
2373.00 C*
2374.00 CSR           QXKY01           KLIST
2375.00 CSR           KFLD           QXXIT
2376.00 C*-----
2377.00 C*
2378.00 C*   Load roll key upper and lower key values.
2379.00 C*
2380.00 CSR           *LIKE           DEFN QXXIT           $RUKEY
2381.00 CSR           *LIKE           DEFN $RUKEY           $RDKEY
2382.00 CSR           MOVE *LOVAL           $RUKEY
2383.00 CSR           MOVE *ALL'9'           $RDKEY
2384.00 C*-----
2385.00 C*

```

Assures S998 will only be executed once

Parameters passed to program

Set auto-inquiry if information is passed

Retrieves vocabulary overrides
Only loads these VTX fields displayed on the video instead of all 144.

Composite keys are defined here

Using *LIKE more and more, especially for work fields.

```

2386.00 C*          Load error messages array.
2387.00 C*
2388.00 CSR          MOVE '0001'          EMK,01      Inv Action
2389.00 CSR          MOVE '0002'          EMK,02      Inv Key
2390.00 CSR          MOVE '0003'          EMK,03      Inv Blanks
2391.00 CSR          MOVE '0004'          ENK,04      Inv Date
2392.00 CSR          NIVE '0005'          EMK,05      Inv Next Nbr
2393.00 CSR          MOVE '0007'          EMK,06      In Use
2394.00 CSR          MOVE '0025'          EMK,07      Inv Values
2395.00 CSR          MOVE '0026'          EMK,08      Inv MCU
2396.00 CSR          MOVE '0027'          EMK,09      Inv Desc Ttl
2397.00 CSR          MOVE '0052'          EMK,10
2398.00 C*-----
2399.00 C*
2400.00 C*          Load invalid action code array.
2401.00 C*
2402.00 CSR          MOVEA'          @NAC
2403.00 C*-----
2404.00 C*
2405.00 C*          Load system date.
2406.00 C*
2407.00 CSR          TIME          $WRK12 120
2408.00 CSR          MOVE $WRK12          $$EDT 60
2409.00 CSR          MOVE $$EDT          #SIDAT 6
2410.00 CSR          MOVEV '*SYSVAL      ' #FFMT 7
2411.00 CSR          MOVEV *BLANKS      #EDAT 8
2412.00 CSR          MOVEV '*JUL        ' #TFMT 7
2413.00 CSR          MOVEV '*NONE       ' #SEP 7
2414.00 CSR          MOVE ' '          $ERTST 1
2415.00 CSR          CALL 'X0028      '
2416.00 C*-----
2417.00 CSR          PARM          #SIDAT
2418.00 CSR          PARM          #EDAT
2419.00 CSR          PARM          #FFMT
2420.00 CSR          PARM          #TFMT
2421.00 CSR          PARM          #SEP
2422.00 CSR          PARM          $ERTST
2423.00 CSR          MOVE #SIDAT          $$UPMJ 60
2424.00 C*-----
2425.00 CSR          END999          ENDSR
2426.00 C*****
2427.00 C*****
2428.00 OI92801 E          UNLOCK

```

Error message numbers from Data Dictionary

Lockout action code function used with the Program Generator

Use the TIME feature to allow for all date formats

Method of releasing master file record locks



Exercises

See the exercises for this chapter.

User Spaces

About User Spaces

User spaces are objects managed by Application Program Interfaces (APIs) to store data. User object APIs create, manipulate, and delete user spaces and indexes. An API provides you:

- A faster way of retrieving information
- A means of dynamically modifying sizes
- A means of manipulating user objects

You should place your user spaces in library QTEMP so that it will be deleted automatically when you sign off. In this chapter you will learn the following about user spaces:

- What are they?
- What are the advantages of using them?
- How do they function?

To work with user spaces perform the following tasks:

- Create a user space
- Write to a user space
- Read from a user space

What is a User Space?

A user space is:

An object made up of a collection of bytes that are used for storing any user-defined information.

When you use a user space, there is no key to use to retrieve the information placed in the space. Therefore, the information in the user space is in the order that it was entered. A user space can store up to 16 megabytes of information.



To see the contents of a User Space, enter the command DMPOBJ (Dump Object) from any command line after the space has been loaded.

What Are the Advantages of Using a User Space?

The main advantage of using a user space is its speed.

Because a user space consists of bytes instead of elements like an array, you can write and retrieve records faster using a user space than an array.

In addition to speed, a user space provides you with more flexibility.

A user space does not have a fixed record length. When you write a record to a user space, you define the length of that record. Therefore, each record you write to your user space can be a different size. In addition, it is possible to dynamically increase the size of your user space by calling the Enter User Space program (X00SPC) after creating the user space.

For example: @EX 999 30

The array @EX has a fixed record length of 30, therefore no record smaller or larger than 30 bytes can be written to this array.

User spaces are also used when communicating between two programs. The space can carry information loaded in one program to another program for retrieval.

For example: Program A creates the user space and loads information into a user space. Then Program A calls Program B and passes the name of the user space to it. Program B can retrieve information from the user space that was loaded by Program A.

How Does a User Space Function?

Remember that a user space is nothing more than a collection of bytes used to store information:



You write information to a user space, as well as retrieve information from it. Since there is no key associated with a user space, the information contained in a user space is in a user-defined order. The order is based on program controlled offset and length values

Creating a User Space

► **To create a User Space**

1. Determine if a user space already exists by using the J.D. Edwards program J98CKOBJ.

```

For example: CALL      'J98CKOBJ'      81
              - - - - -
              PARM     PSOBJ
              PARM     PSLIB
              PARM     PSTYPE
              PARM     PSMID
              PARM     PSAUT
              PARM     PSERR
    
```

PARM (Length)	Description
PSOBJ (10)	The name of your user space.
PSLIB (10)	The name of the library in which you wish to check for the existence of the user space. Generally, this is *LIBL to check all of the libraries in the library list.
PSTYPE (8)	The type of object you are checking for. Generally, this is *USRSPC for a user space.
PSMID (10)	The member ID if you are checking for a database file. Generally, this is *NONE.
PSAUT (10)	The authority or authorization list to be checked for the user. Generally, this is *NONE.

PARM (Length)	Description
PSERR (1)	The error parameter that will indicate an error while checking your object. Generally, this is *BLANK. 0 – No authority 1 – Not found 3 – No library 4 – Member not found 5 – No authority to library 6 – Cannot assign library

- If a user space does exist you should clear it and write your new information over the old.
- If the user space did **not** exist and no errors occurred, you can create your user space. To create a user space, use the QUSCRTUS (Create User Space) command.

For example: CALL 'QUSCRTUS' 81
 ----- -----
 PARM #SPNAM
 PARM #SPATT
 PARM #SPSIZ
 PARM #SPVAL
 PARM #SPAUT
 PARM #SPTXT

PARM (Length)	Explanation
#SPNAM (20)	The first 10 characters contain your user space name, and the second 10 characters contain the name of the library where your user space is located. Remember, place your user space in library QTEMP to automatically delete your space when you sign off.
#SPATT (10)	The extended attribute of your user space. You may use this field to classify your user space. For example, JDE uses this field to label all of the user spaces with JDE.
#SPSIZ (4 binary)	The initial size of your user space. Any value from 1 byte to 16 megabytes.
#SPVAL (1)	The initial value of all bytes in the user space. Generally, this is *BLANK.
#SPAUT (10)	The authority you give users to your user space. Generally, this is *ALL.

PARM (Length)	Explanation
#SPTXT (50)	The text description of your user space.

4. To dynamically increase the size of your user space when maximum allocation is reached, call the Enlarge User Space program (X00SPC).

```

For example: CALL      'X00SPC'      81
              -----
              PARM      #XSPCN
              PARM      #XRQSZ
              PARM      #XERR
    
```

PARM (Length)	Explanation
#XSPCN (20)	The first 10 characters contain your user space name, and the second 10 characters contain the name of the library where your user space is located. Remember to place your user space in library QTEMP to automatically delete your space when you sign off.
#XRQSZ (15,0)	The requested size to increase your space.
#XERR (1)	An error flag: 1 – Space not found 2 – Not authorized 3 – Error

Writing to a User Space

► **To write to a User Space**

Use either the QUSCHGUS or the X98CHGUS (Change User Space) command.

```

For example: CALL      'QUSCHGUS'  81
              -----
              PARM      #SPNAM
              PARM      #SPPOS
              PARM      #SPLGH
              PARM      #SPVAL
              PARM      #SPAUX
    
```

PARAM (Length)	Explanation
#SPNAM (20)	The first 10 characters contain your user space name, and the second 10 characters contain the name of the library where your user space is located. Remember to place your user space in library QTEMP to automatically delete your space when you sign off.
#SPPOS (4 binary)	The starting position in your user space where the information will begin. It must be the first byte and must have a value greater than 0.
#SPLGH (4 binary)	The length of the information that is being written to your user space. This field is user-defined, but it must be greater than 0.
#SPVAL (* user defined)	The actual information to be written to your user space. The field must be at least as long as the length parameter.
#SPAUX (1)	Used to force changes made to your user space to auxiliary storage, such as a disk. The valid values are: <ul style="list-style-type: none"> 0 – do not force changes 1 – write changes 2 – write changes immediately



The X98CHGUS program, JDE's version of the IBM command QUSCHGUS, will perform a transfer control to QUSCHGUS.

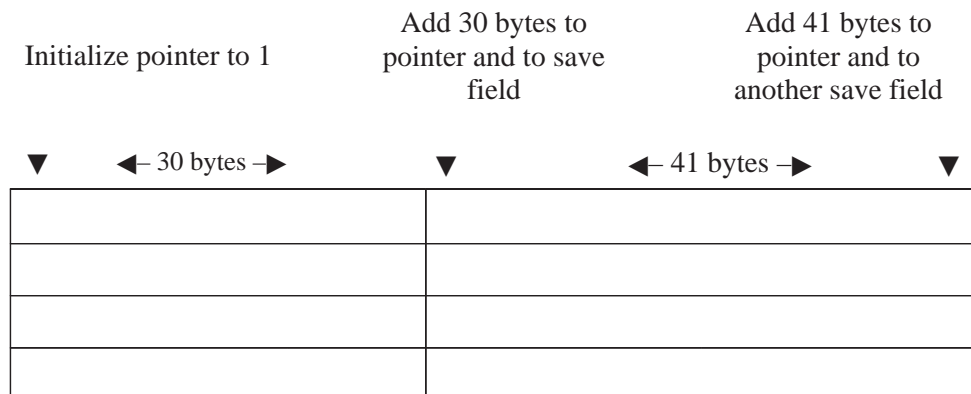
Tracking Information if Writing Variable Length Records

Method 1

During the process of writing information to your user space, you should keep track of a pointer. This will ensure that you will not overwrite information or retrieve incorrect information.

One way to do this is to initialize your pointer to 1 and after you write information to your user space, add the length of the information to your pointer. The pointer is now set at the next starting point and ready for you to enter new information.

If the information you are writing to your user space contains various lengths, you should maintain the length of each piece of information in save fields. You can use the save fields when you wish to retrieve the information from your user space.



Method 2

You can also reserve the first 2 or 3 bytes of every record for the size of that record. Then you would only have to load that part of the record with its length. When you read the record from the user space, the first 2 or 3 bytes will tell you how long the record is.

Reading from a User Space

Once you have loaded information into your user space, you are ready to retrieve it. Do not forget that your pointer must be set to the proper starting position to ensure the correct information is retrieved.

► **To read from a User Space**

Use the QUSRTVUS (Retrieve User Space) command.

```

For example: CALL      'QUSRTVUS'  81
              -----
              PARM      #SPNAM
              PARM      #SPPOS
              PARM      #SPLGH
              PARM      #SPREC
    
```

PARM (Length)	Description
#SPNAM (20)	The first 10 characters contain your user space name, and the second 10 characters contain the name of the library where your user space is located. Remember to place your user space in library QTEMP to automatically delete your space when you sign off.
#SPPOS (4 binary)	The starting position in your user space where the information will begin. It must be the first byte and must have a value greater than 0.
#SPLGH (4 binary)	The length of the information that is being retrieved to your user space. This field is user-defined, it must not be larger than the variable that will receive the information, and it must be greater than 0.
#SPREC (* user defined)	The variable that will receive the information from your user space.

User Indexes

About User Indexes

A user index is an object that will:

- Store data

- Allow search functions

- Automatically sort data based on its value

When you use a user index you must have a key to retrieve the information placed in the index.

- The key must be unique.

- You can only retrieve data using the key in ascending or descending order.

Data entered into a user index is placed in order according to its value.

A user index can store up to 4 gigabytes of information.

- Each key and record within a user index can be 1 to 999 bytes long.



To see the contents of a user index, enter the command DMPOBJ (Dump Object) from any command line after the index has been loaded.

You should place your user indexes in library QTEMP so that it will be deleted automatically when you sign off.

To work with user indexes perform the following tasks:

- Create a User Index
- Write to a User Index
- Retrieve from a User Index

What Are the Advantages of Using a User Index?

When you load data into your user index, it is automatically sorted for you. Based on your key for the index, the information is arranged according to its value.

This will help streamline table searches, cross-referencing, and the ordering of data.

The size flexibility of a user index is much better than an array because arrays have a fixed size.

A user index is only as big as the information it contains at one time. User indexes expand as you add data to them.

For example: @EX 999 30

The array @EX has a fixed size of approximately 3 kilobytes. Each record must be 30 bytes long and up to 999 records can be loaded. If you have 300 records loaded into @EX, you will waste approximately 2 kilobytes. On the other hand, if you have 1500 records to load, the program will error when record number 1000 is loaded. A user index would be able to accommodate both situations.

A user index is able to retrieve records faster than an array.

Although a user index may expand to hold more records, it will not contract when records are removed. If you load 100 records into a user index and then remove 50 of them, the user index will remain at the 100 record level size.

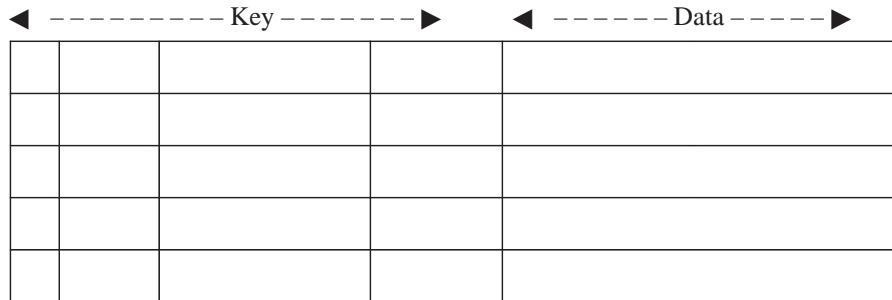
You may retrieve data from a user index in ascending order or descending order.

When data is loaded into a user index, it is loaded in ascending order. This does not restrict you to retrieving it in this order.

How Does a User Index Function?

A user index stores data and allows you to retrieve it by a key, which must be unique. The data it stores is made up of a data structure that consists of several fields that you wish to store. A user index is capable of expanding when you add data to it.

J.D. Edwards leaves the first byte in the user index blank for clearing purposes.



When using a user index you can create it, add data to it, remove data from it, and delete it.

User indexes, like user spaces, should be created in your QTEMP library so you do not have to worry about deleting it.

Creating a User Index

Before you actually create a user index, check to see if one already exists using the JDE program J98CKOBJ.

```

For example: CALL    'J98CKOBJ'    81
              -----
              PARM    PSOBJ
              PARM    PSLIB
              PARM    PSTYPE
              PARM    PSMID
              PARM    PSAUT
              PARM    PSERR
    
```

PARM (Length)	Explanation
PSOBJ (10)	The name of your user index.
PSLIB (10)	The name of the library in which you wish to check for the existence of the user index. Generally, this is *LIBL to check all of the libraries in the library list.
PSTYPE (8)	The type of object you are checking for. Generally, this is *USRIDX for a user index.
PSMID (10)	The member if you are checking for a database file. Generally, this is *NONE.
PSAUT (10)	The authority or authorization list to be checked for the user. Generally, this is *NONE.
PSERR (1)	The error parameter that will indicate an error while checking your object. Generally, this is *BLANK. 0 – No authority 1 – Not found 3 – No library 4 – Member not found 5 – No authority to library 6 – Cannot assign library

If a user index exists, clear it and write your new information over the old.

```

For example: CALL   'X00IDX'   81
              -----
              PARM           #0XNAM
              PARM   'D'       #0XACT
              PARM   'EQ'      #0XRUL
              PARM   '1'       #0XKLN
              PARM  *BLANK     #0XKEY
              PARM           #0XRLN
              PARM           #0XREC
              PARM           #0XSTA

```

If the user index did not exist, you can now create your user index.

► **To create a User Index**

Use the QUSCRTUI (Create User Index) command.

```

For example: CALL   'QUSCRTUI' 81
              -----
              PARM   #IDNAM
              PARM   #IDATT
              PARM   #IDENT
              PARM   #IDLEN
              PARM   #IDINS
              PARM   #IDKEY
              PARM   #IDUPD
              PARM   #IDOPT
              PARM   #IDAUT
              PARM   #IDTXT

```

PARM (Length)	Explanation
#IDNAM (20)	The first 10 characters contain your user index name, and the second 10 characters contain the name of the library where your user index is located. Remember to place your user index in library QTEMP to automatically delete your index when you sign off.

PARAM (Length)	Explanation
#IDATT (10)	The extended attribute of your user index. You may use this field to classify your user index. For example, JDE uses this field to label all of the user indexes with JDE.
#IDENT (1)	Whether the records you are loading into your user index are Fixed-length (F) or Variable-length (V). Generally, this is set to 'F'.
#IDLEN (4 binary)	The length of the records to be entered into your user index. For fixed-length records valid values are 1 to 999. For variable-length records, enter 0 for a key length of 1 to 120, or 1 for a key length of 1 to 999.
#IDINS (1)	Whether you are loading your user index by a key or not. Generally, this is set to 1 to load your index by a key. A value of 0 means you are not loading your index by a key.
#IDKEY (4 binary)	The length of your key. The first byte in your record must be the beginning of your key. The values are 1 to 999 or 0 for no key.
#IDUPD (1)	Whether or not the data in your user index will be immediately updated. Each data change to your index is written to auxiliary storage. The values are 0 for no immediate update or 1 for immediate update. Generally, this is 0.
#IDOPT (1)	The type of access in which to optimize your index. The values are 0 to optimize for random references or 1 to optimize for sequential references. Generally, this is 1.
#SPAUT (10)	The authority you give users to your user index. Generally, this is *ALL.
#SPTXT (50)	The text description of your user index.



You may want to define data structures containing some of the information required for the parameters to avoid having to enter values. The user index name, record length, key length, and user index text are good examples.

Writing to a User Index

► To write to a User Index

J.D. Edwards provides an external program called User Index Server (X00IDX) to manipulate data for user index entries.

```

For example: CALL    'X00IDX'    81
              -----
              PARM    #0XNAM
              PARM    #0XACT
              PARM    #0XRUL
              PARM    #0XKLN
              PARM    #0XKEY
              PARM    #0XRLN
              PARM    #0XREC
              PARM    #0XSTA
  
```

PARAM (Length)	Explanation
#0XNAM (20)	The first 10 characters contain your user index name, and the second 10 characters contain the name of the library where your user index is located. Remember to place your user index in library QTEMP to automatically delete you index when you sign off.
#0XACT (1)	The action you want to perform on your user index. The valid values are: I – Inquire A – Add C – Change D – Delete
#0XRUL (2)	The rule used to search your user index using the record. The valid values are: EQ – Equal to GT – Greater than LT – Less than GE – Greater than or Equal to LE – Less than or Equal to

PARM (Length)	Explanation
#0XKLN (3,0)	The length of your key. The first byte in your record must be the beginning of your key. The values are 1 to 999 or 0 for no key.
#0XKEY (120)	The fields that make up the key to your user index. *FIRST (first record) and *LAST (last record) are allowed.
#0XRLN (3,0)	The length of your record. The values are 1 to 999.
#0XREC (120)	The record you are entering or deleting from your user index. This parameter will also receive the record when you inquire on your user index.
#0XSTA (1)	The error status of the manipulation. The possible values are: 0 – Record found 1 – Record not found, not authorized 8 – Rule invalid 9 – Error on action

Appearance of Records

The records added to your user index will appear in ascending order.

For example: You created a user index to keep track of your ice cream sales. Each record within your user index contains the total sales amount, item, item description, and cost center. The key for your user index consists of total sales amount and item (remember the key must be unique).

The following records are to be loaded into your user index:

Total	Sales Item	Description	Cost Center
\$ 500.00	CHO	Chocolate	Denver
\$ 250.00	STR	Strawberry	Denver
\$ 750.00	C&C	Cookies & Cream	Denver
\$1200.00	VAN	Vanilla	Denver
\$ 400.00	ROC	Rocky Road	Denver

Because the key to your user index is total sales amount and item, the records will be entered into your index in ascending order by total sales amount first, then item. So your user index will look like this:

Ice Cream Sales Index			
Total	Sales Item	Description	Cost Center
\$ 250.00	STR	Strawberry	Denver
\$ 400.00	ROC	Rocky Road	Denver
\$ 500.00	CHO	Chocolate	Denver
\$ 750.00	C&C	Cookies & Cream	Denver
\$1200.00	VAN	Vanilla	Denver

Retrieving Data from a User Index

You can retrieve data in ascending or descending order.

► To retrieve data in Ascending Order

1. Use the User Index Server (X00IDX).
2. Set the Action parm to inquire (I)
3. Set Rule to Equal to (EQ)
4. Set the Key to the first record (*FIRST)

```

For example: CALL  'X00IDX'  81
              -----
              PARM          #0XNAM 20
              PARM  'I'      #0XACT 1
              PARM  'EQ'     #0XRUL 2
              PARM          #0XKLN 30
              PARM  '*FIRST' #0XKEY120
              PARM          #0XRLN 30
              PARM          #0XREC120
              PARM          #0XSTA 1
    
```

5. To retrieve the next record, load the key with the current record's values and change your rule to 'GT'.

```

For example: CALL  'X00IDX'  81
              -----
              PARM          #0XNAM 20
              PARM  'I'      #0XACT 1
              PARM  'GT'     #0XRUL 2
              PARM          #0XKLN 30
              PARM          #0XKEY120
              PARM          #0XRLN 30
              PARM          #0XREC120
              PARM          #0XSTA 1
    
```

► **To retrieve data in descending order**

1. Use the User Index Server (X00IDX)
2. Set the Action parm to inquire (I)
3. Set Rule to Equal to (EQ)
4. Set the Key to the first record (*LAST)

For example: CALL 'X00IDX' 81

 PARM #0XNAM 20
 PARM 'I' #0XACT 1
 PARM 'EQ' #0XRUL 2
 PARM #0XKLN 30
 PARM '*LAST' #0XKEY120
 PARM #0XRLN 30
 PARM #0XREC120
 PARM #0XSTA 1

5. To retrieve the next record, load the key with the current record's values and change your rule to 'LT'.

For example: CALL 'X00IDX' 81

 PARM #0XNAM 20
 PARM 'I' #0XACT 1
 PARM 'LT' #0XRUL 2
 PARM #0XKLN 30
 PARM #0XKEY120
 PARM #0XRLN 30
 PARM #0XREC120
 PARM #0XSTA 1

User Index Example Program

```

1.00 H/TITLE PINDEX - User Index Demonstration
2.00 H* -----
3.00 H*
4.00 H* Copyright (c) 1993
5.00 H* J. D. Edwards & Company
6.00 H* This unpublished material is proprietary to
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8.00 H* The methods and techniques described herein are
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11.00 H* is forbidden except by express written permission
12.00 H* of J. D. Edwards & Company.
13.00 H*
14.00 H* -----
15.00 H*
16.00 F*
17.00 F* PROGRAM REVISION LOG
18.00 F* -----
19.00 F*
20.00 F* Date Programmer Nature of Revision
21.00 F* -----
22.00 AUTHRF* 12/02/93 FRAZZINI SAR # 289 (AS/400 A/G)
23.00 F*
24.00 F* *****
25.00 F*
27.00 FVINEX CF E WORKSTN KINFDS SRVFD
28.00 F I1 KSFIL VINDE
29.00 F* *****
30.00 F*
31.00 F* Copy Member for Composite Common Subroutine - C0001
32.00 F*
33.00 F/COPY JDECPY,D0001
34.00 F* *****
35.00 E*
36.00 E* PROGRAM TABLES AND ARRAYS
37.00 E* -----
38.00 E*
39.00 E EMK 64 4 Error Msg
40.00 E @MK 64 1 Error Msg
41.00 E @ER 64 4 Error Msg
42.00 E @DV 40 1 Dflt Wrk
43.00 E @I# 99 1 Save Indicator
44.00 E @C 256 1 Literal Work
45.00 E*
46.00 E*
47.00 E* Copy Composite Member for Common Subroutine C0001
48.00 E*
49.00 E/COPY JDECPY,E0001
50.00 E* *****
51.00 E*
52.00 E* Copy Member for Composite Common Subroutine C0012
53.00 E*
54.00 E/COPY JDECPY,E0012
55.00 E* *****
56.00 E*
57.00 E* Copy Member for Composite Common Subroutine C0042
58.00 E*
59.00 E/COPY JDECPY,E0042
60.00 E* *****
61.00 E*
62.00 E* Copy Member for Composite Common Subroutine C997
63.00 E*
64.00 E/COPY JDECPY,E997
65.00 E* *****
66.00 I* *****
67.00 I* PROGRAM INPUT SPECIFICATIONS AND DATA STRUCTURES
68.00 I* -----
69.00 I*
70.00 I* Data Structure to Load Video Screen Text
71.00 I*
72.00 IDSTXT DS 240
73.00 I 1 16 VTX001
74.00 I 41 56 VTX002
75.00 I 81 92 VTX003
76.00 I 121 150 VTX004
77.00 I 161 163 VTX005
78.00 I 201 203 VTX006
79.00 I*
80.00 I/COPY JDECPY,I00DSINX
81.00 I/COPY JDECPY,I00PS@
82.00 I/COPY JDECPY,I00DSPROG
    
```

```

83.00 I*
84.00 I*
85.00 I*      Copy Member for Composite Common Subroutine - C00SC
86.00 I*
87.00 I/COPY JDECPY, I00SC
88.00 I*-----
89.00 I*
90.00 I*      Data Structures for user index.
91.00 I*      =====
92.00 I*
93.00 I*      *   Entry Record
94.00 I*
95.00 I*      DS
96.00 I          1      1 $IBLK
97.00 I          2      6 $1CO
98.00 I          7     18 $1MCU
99.00 I         19     48 $1DL01
100.00 I         49     51 $1RP01
101.00 I         52     54 $1RP02
102.00 I*
103.00 I*      *   Entry Length, Name/Library, Text
104.00 I*
105.00 I*      DS
106.00 I I          54          B 1      40$1KEY1
107.00 I I          'PINDEX      QTEMP      5      24 $1IDX
108.00 I I          'Demonstration Index 25     44 $1TEXT
109.00 I*
110.00 I*      *   Partial keys 1 & 2, full unique key KEYL.
111.00 I*
112.00 I*      DS
113.00 I I          1          B 1      40$1KEY1
114.00 I I          6          B 5      80$1KEY2
115.00 I I         18          B 9     120$1KEYL
115.01 I*
115.02 I*      Data Structure for File Servers
115.03 I*
115.04 IDS0010      E DSF0010
115.05 I*
116.00 I/COPY JDECPY, I9800E
117.00 I/COPY JDECPY, I0005U
117.01 I/COPY JDECPY, I00XFSRV
118.00 I*
119.00 I*****
120.00 C*****
121.00 C*      MAINLINE PROGRAM
122.00 C*      -----
123.00 C*
124.00 C*      Process housekeeping.
125.00 C*
126.00 C          EXSR S999
127.00 C*          ----
128.00 C*
129.00 C*      If LR on, end program.
130.00 C*
131.00 C          *INLR      CABEQ'1'          EOJ
132.00 C*          -----          ---
133.00 C*
134.00 C*      If automatic inquiry set, process inquiry.
135.00 C*
136.00 C          $AUTO      CASEQ'1'          S003      24
137.00 C*          -----          ----
138.00 C          END
139.00 C*
140.00 C*      Begin normal program processing.
141.00 C*      -----
142.00 C*
143.00 C          *INLR      DOWEQ'0'
144.00 C*
145.00 C*      If subfile page display not set, set subfile page display.
146.00 C*
147.00 C          #SFRNO      IFEQ 0
148.00 C          Z-ADD1          #SFRNO
149.00 C          END
150.00 C*
151.00 C*      If subfile page empty, don't display SFL page.
152.00 C*
153.00 C          I1          IFLE 0
154.00 C          SETOF          38
155.00 C          ELSE
156.00 C          SETON          38
157.00 C          END
158.00 C*
159.00 C*      Write video screen.

```

Record format to be used with User Index defined as a Data Structure

Data Structure containing the record length, User Index name, and User Index description text.

Data structure defining three possible key lengths. \$1KEYL is the full key length. Refer to DSIDX1 to see which fields are key fields when \$1KEY1 (1 byte), \$1KEY2 (1-6 bytes), or \$\$1KEYL (1-18 bytes) are being used.

```

160.00 C*
161.00 C
162.00 C WRITEVINDEXT1
163.00 C WRITEVINDEXC
164.00 C MOVE '1' @@AID
165.00 C EXSR S001
166.00 C* -----
167.00 C* Load data field dictionary parameters (one cycle only).
168.00 C*
169.00 C $998 CASEQ' ' S998
170.00 C* -----
171.00 C END
172.00 C*
173.00 C* Begin video screen read processing
174.00 C*
175.00 C SETOF 999301
176.00 C READ VINDEXT 9998
177.00 C Z-ADD0 ##RROW
178.00 C Z-ADD0 ##RCOL
179.00 C*
180.00 C* If video read timed out, end program.
181.00 C*
182.00 C *IN99 CABEQ'1' EOJ LR
183.00 C* -----
184.00 C @@AID CABEQ#FEOJ EOJ LR
185.00 C* -----
186.00 C*
187.00 C* If valid function key pressed, process and return.
188.00 C*
189.00 C *IN15 IFEQ '1'
190.00 C EXSR S00EX
191.00 C* -----
192.00 C *INLR CABEQ'1' EOJ
193.00 C* -----
194.00 C *IN15 CABEQ'1' END
195.00 C* -----
196.00 C END
197.00 C*
198.00 C* Edit the action code.
199.00 C*
200.00 C EXSR C0001
201.00 C* -----
202.00 C*
203.00 C* If end of job requested, end program.
204.00 C*
205.00 C @@AID CABEQ#FEOJ EOJ
206.00 C* -----
207.00 C*
208.00 C* If clear screen requested, process and return.
209.00 C*
210.00 C @@AID IFEQ #FCLR
211.00 C EXSR S001
212.00 C* -----
213.00 C GOTO END
214.00 C* -----
215.00 C END
216.00 C*
217.00 C* Load subfile records.
218.00 C*
219.00 C EXSR S003
220.00 C*
221.00 C* If add or change, validate all video input.
222.00 C*
223.00 C*
224.00 C*
225.00 C *IN93 CASEQ'0' S005
226.00 C* -----
227.00 C END
228.00 C*
229.00 C*
230.00 C* If no errors and not inquiry, update file.
231.00 C*
232.00 C *IN93 IFEQ '0'
233.00 C* *IN24 CASEQ'0' S010
234.00 C -----
235.00 C END
236.00 C END
237.00 C* Return for next input.
238.00 C*
239.00 C END TAG
240.00 C* ---
241.00 C*
242.00 C* Set correct message in line 24.
243.00 C* *IN93 IFEQ '1'

```

```

244.00
245.00 C                MOVELSVL24E          VDL24
246.00 C                ELSE
247.00 C                MOVELSVL24M          VDL24
248.00 C                END
249.00 C*
250.00 C                END
251.00 C*
252.00 C                EOJ          TAG
253.00 C*                ---          ---
254.00 C*
255.00 C*                END MAINLINE PROGRAM
256.00 C*                -----
257.00 C*****
258.00 C*
259.00 C*                Copy Common Subroutine - Edit Action Code
260.00 C*
261.00 C/COPY JDECPY,C0001
262.00 C*****
263.00 C*
264.00 C*                SUBROUTINE S00EX - Process Function Keys
265.00 C*                -----
266.00 C*
267.00 C*                Processing:  1. Process standard function keys.
268.00 C*                            2. Process special function key exits.
269.00 C*
270.00 CSR                S00EX          BEGSR
271.00 C*                -----
272.00 C*
273.00 C*                Retain current page of subfile.
274.00 C*
275.00 C                Z-ADD@SRCN          #SFRNO
276.00 C*
277.00 CSR                T00EXA          TAG
278.00 C*                -----
279.00 C*
280.00 C*                If EOJ requested, exit subroutine.
281.00 C*
282.00 CSR                @@AID          CABEQ#FEOJ          ENDEXE          LR
283.00 C*                -----
284.00 C*
285.00 C*                If Display Keys pressed, exit to help facility and return.
286.00 C*                -----
287.00 C*
288.00 CSR                @@AID          IFEQ #FKEYS
289.00 CSR                CALL 'P9601H'          98
290.00 C*                -----
291.00 CSR                PARM          I00SC
292.00 CSR                PARM          SRVFDS
293.00 CSR                PARM          I00CSR
294.00 C*
295.00 CSR                @@AID          CABNE#FKEYS          T00EXA
296.00 C*                -----
297.00 CSR                GOTO ENDEXE
298.00 C*                -----
299.00 CSR                END
300.00 C*
301.00 C*                If Cursor Sensitive Help Pressed, exit to CS Help.
302.00 C*                -----
303.00 C*
304.00 CSR                @@AID          IFEQ #FQMRK
305.00 CSR                MOVEA*IN          ##IN          98
306.00 C*                CALL 'X96CCF'
307.00 C*                -----
308.00 CSR                PARM          I00SC
309.00 CSR                PARM          SRVFDS
310.00 CSR                PARM          I00CSR
311.00 CSR                PARM ' '          ##CCFF 2
312.00 C*
313.00 CSR                ##FLDN          IFNE *BLANKS
314.00 CSR                EXSR S00VL
315.00 C*                -----
316.00 CSR                MOVEA##IN          *IN,1
317.00 CSR                END
318.00 CSR                MOVEL*BLANKS          ##DTAI
319.00 CSR                GOTO ENDEXE
320.00 C*                -----
321.00 CSR                END
322.00 C*
323.00 C*                If Display errors pressed, exit to error messages.
324.00 C*                -----
325.00 C*
326.00 CSR                @@AID          IFEQ #FERRD
327.00 CSR                Z-ADD1          #G

```

```

327.01   CSR           Z-ADD1           #H
328.00   CSR           #G             DOWLE64
329.00   CSR           @MK,#G        IIEQ '1'
330.00   CSR           MOVE EMK, #G   @ER, #H
331.00   CSR           ADD 1          #H
332.00   CSR           END
333.00   CSR           ADD 1          #G
334.00   CSR           END
335.00   CSR           CALL 'P0000E'   98
336.00   C*           -----
337.00   CSR           PARM           @ER
338.00   CSR           GOTO ENDEXE
339.00   C*           -----
340.00   CSR           END
341.00   C*
342.00   C*           If HELP key pressed, exit to help facility and return.
343.00   C*           -----
344.00   C*
345.00   CSR           @@AID         IFEQ #FHHELP
346.00   CSR           CALL 'P00IELP'  99
347.00   C*           -----
348.00   CSR           PARM           HS@@
349.00   CSR           PARM           HE@@
350.00   CSR           PARM           I00SC
351.00   CSR           PARM           SRVFDS
352.00   CSR           PARM           I00CSR
353.00   CSR           GOTO ENDEXE
354.00   C*           -----
355.00   CSR           END
356.00   C*
357.00   C*           If ROLL UP key pressed, load next page of subfile.
358.00   C*           -----
359.00   C*
360.00   CSR           @@AID         IFEQ #IROLU
361.00   CSR           $SEND         IFNE '1'
362.00   CSR           MOVE ' '      VDSELC 1
363.00   CSR           EXSR S004
364.00   C*           -----
365.00   CSR           ELSE
366.00   CSR           Z-ADD$SVI1     I1
367.00   CSR           MOVE *BLANK    SFDL01
368.00   CSR           MOVE *BLANK    SFMCU
369.00   CSR           MOVE *BLANK    SFRP01
370.00   CSR           MOVE *BLANK    SFRP02
371.00   CSR           MOVE *BLANK    SHMCU
372.00   CSR           I1            ADD 1      #SFRNO
373.00   CSR           DO $PGSZ
374.00   CSR           ADD 1          I1
375.00   CSR           MOVEA*IN       SHIN
376.00   CSR           WRITEINDEXS
377.00   CSR           END
378.00   CSR           Z-ADDI1        $SVI1
379.00   CSR           END
380.00   CSR           GOTO ENDEXE
381.00   C*           -----
382.00   CSR           END
383.00   C*
384.00   C*           If ROLL DOWN key pressed, reset subfile page display.
385.00   C*           -----
386.00   C*
387.00   CSR           @@AID         IFEQ #FROLD
388.00   CSR           MOVE $SVI1     #SFRNO
389.00   CSR           GOTO ENDEXE
390.00   C*           -----
391.00   CSR           END
392.00   C*
393.00   C*           If Clear screen pressed, clear screen and return.
394.00   C*           -----
395.00   C*
396.00   CSR           @@AID         IFEQ #FCLR
397.00   CSR           EXSR S001
398.00   C*           -----
399.00   CSR           GOTO ENDEXE
400.00   C*           -----
401.00   CSR           END
403.00   CSR           @AID         IFNE '1'
404.00   CSR           SETON          0193
405.00   CSR           GOTO ENDEXE
406.00   C*           -----
407.00   CSR           END
409.00   CSR           ENDEXE        ENDSR
410.00   C*****
411.00   C*

```



```

412.00 C* SUBROUTINE S00VL - Cursor Control Return Values
413.00 C* -----
414.00 C*
415.00 C* By format, find the field to update and move in the
416.00 C* returned value. If the format is a subfile, the record
417.00 C* to change is found in @@RRN.
418.00 C*
419.00 CSR S00VL BEGSR
420.00 C* -----
421.00 C*
422.00 CSR ##RVAL IFEQ '*BLANK'
423.00 CSR MOVE *BLANK ##RVAL
424.00 CSR END
425.00 C*
426.00 C* Return values for fields in format VINDEXC
427.00 C*
428.00 CSR ##RFMT IFEQ 'VINDEXC '
429.00 C*
430.00 CSR ##FLDN IFEQ 'ACTION '
431.00 CSR MOVEL##RVAL ACTION
432.00 CSR GOTO ENDOVL
433.00 C* -----
434.00 C* END
435.00 C*
436.00 CSR ##FLDN IFEQ 'VDCO '
437.00 CSR MOVEL##RVAL VDCO
438.00 CSR MOVEL##RDSC VC0001
439.00 CSR GOTO ENDOVL
440.00 C* -----
441.00 CSR END
442.00 CSR END
443.00 C*
444.00 C* Return values for fields in format VINDEXS
445.00 C*
446.00 CSR ##RFMT IFEQ 'VINDEXS '
447.00 CSR @@RRN ANDGTO
448.00 C*
449.00 CSR MOVEL##IN SHIN
450.00 CSR @@RRN CHAINVINDEXS 81
451.00 CSR *IN81 IFEQ '0'
452.00 CSR MOVEASHIN *IN,1
453.00 C*
454.00 C*
455.00 CSR ##FLDN IFEQ 'SFMCU '
456.00 CSR MOVEL##RVAL SFMCU
457.00 CSR GOTO T00VLA
458.00 C* -----
459.00 CSR END
460.00 C*
461.00 CSR ##FLDN IFEQ 'SFDL01 '
462.00 CSR MOVEL##RVAL SFDL01
463.00 CSR GOTO T00VLA
464.00 C* -----
465.00 CSR END
466.00 C*
467.00 CSR ##FLDN IFEQ 'SFRP01 '
468.00 CSR MOVEL##RVAL SFRP01
469.00 CSR GOTO T00VLA
470.00 C* -----
471.00 CSR END
472.00 C*
473.00 CSR ##FLDN IFEQ 'SFRP02 '
474.00 CSR MOVEL##RVAL SFRP02
475.00 CSR GOTO T00VLA
476.00 C* -----
477.00 CSR END
478.00 CSR T00VLA TAG
479.00 C* -----
480.00 CSR SETON 32
481.00 CSR MOVEA*IN SHIN
482.00 CSR UPDATVINDEXS 81
483.00 CSR END
484.00 CSR END
485.00 C*
486.00 C* Return values for fields in format VINDEX1
487.00 C*
488.00 CSR ##RFMT IFEQ 'VINDEX1 '
489.00 CSR END
490.00 C*
491.00 CSR ENDOVL ENDS
492.00 C*****
493.00 C*
494.00 C* SUBROUTINE S001 - Clear Fields

```

```

495.00 C* -----
496.00 C*
497.00 C* Processing: 1. Reset all video screen and data file fields
498.00 C* for next transaction.
499.00 C* 2. Clear action code only if requested.
500.00 C*
501.00 CSR S001 BEGSR
502.00 C* -----
503.00 CSR MOVE *BLANK $1DL01
504.00 CSR MOVE *BLANK $1RP01
505.00 CSR MOVE *BLANK $1RP02
506.00 CSR Z-ADD*ZERO ##RCOL
507.00 CSR Z-ADD*ZERO ##RROW
508.00 CSR Z-ADD*ZERO #SFRNO
509.00 CSR MOVE *BLANK SFDL01
510.00 CSR MOVE *BLANK SFMCU
511.00 CSR MOVE *BLANK SFRP01
512.00 CSR MOVE *BLANK SFRP02
513.00 CSR MOVE *BLANK SHMCU
514.00 CSR MOVE *BLANK VDCCO
515.00 CSR MOVE$SVL24M VDL24
516.00 CSR MOVE '0' SHIN37
517.00 C*-----
518.00 C*
519.00 C* Clear action code only if clear screen action.
520.00 C*
521.00 CSR @@AID IFEQ #FCLR
522.00 CSR MOVE *ALL'0' $RESET
523.00 CSR MOVEA$RESET *IN,41
524.00 CSR MOVE ' ' ACTION 1
525.00 CSR Z-ADD00000 #SFRNO
526.00 CSR SETON 31
527.00 CSR WRITEVINDEXC 99
528.00 CSR SETOF 203193
529.00 CSR Z-ADDO I1
530.00 CSR DO $PGSZ
531.00 CSSR ADD 1 I1
532.00 CSR MOVEA*IN SHIN
533.00 CRS WRITEVINDEXS 81
534.00 CSR END
535.00 CSR Z-ADDI1 $SVI1
536.00 CSR MOVE *BLANK $1CO
537.00 CSR MOVE *BLANK $1MCU
538.00 CSR MOVE *BLANK VC0001
539.00 CSR END
540.00 C*-----
541.00 CSR END001 ENDSR
542.00 C*****
543.00 C*
544.00 C* SUBROUTINE S003 - Edit Key
545.00 C* -----
546.00 C*
547.00 C* Processing: 1. Initialize error arrays and subfile.
548.00 C* 2. Load inquiry selection.
549.00 C* 3. Load subfile information.
550.00 C* 3. Monitor for empty subfile.
551.00 C*
552.00 CSR S003 BEGSR
553.00 C* -----
554.00 C*
555.00 C* Reset error indicators and arrays.
556.00 C*
557.00 CSR MOVE *ALL'0' $RESET 39
558.00 CSR MOVE *BLANK $REST1 63
559.00 CSR MOVEA$RESET *IN,41
560.00 CSR MOVEA$RESET @MK,2
561.00 CSR CLEAR@ER
562.00 C*
563.00 C* Clear the user index to begin with; set flag.
564.00 C* =====
565.00 CSR CLEAR$SIDX1
566.00 CSR MOVE 'Y' $START 1
567.00 C*
568.00 C* Load video input field for - Company
569.00 C*
570.00 CSR MOVEAVDCCO @NM
571.00 CSR EXSR C0012
572.00 CSR -----
573.00 C*
574.00 CSR Z-ADD#NUMR $WK5 50
575.00 CSR MOVE $WK5 $1CO
576.00 CSR MOVE $WK5 VDCCO
577.00 C*-----

```

Clear Data Structure containing record format for User Index

```

578.00 C*
579.00 C* Determine if any entries exist for that company.
580.00 C*
581.00 CSR Z-ADD$1KEY2 PSKEYL
582.00 CSR Z-ADD$1RECL PSRECL
583.00 CSR MOVE$SIDX1 PSKY
584.00 C*
585.00 CSR CALL 'X00IDX'
586.00 C*
587.00 CSR
588.00 CSR
589.00 CSR
590.00 CSR
591.00 CSR
592.00 CSR
593.00 CSR
594.00 CSR
595.00 C*
596.00 C* Error of trying to delete but not found.
597.00 C*
598.00 CSR PSSTS IFNE '0' Not Found
599.00 CSR *IN23 COMP '1' 41 *ERROR*
600.00 CSR END
601.00 C*
602.00 C* If indicator 41 on, invalid key for action code.
603.00 C*
604.00 CSR *IN41 IFEQ '1'
605.00 CSR MOVE'1' @MK,2
606.00 CSR SETON 93
607.00 CSR END
608.00 C*
609.00 C* If indicator 99 on, record in use.
610.00 C*
611.00 CSR *IN99 IFEQ '1'
612.00 CSR MOVE '1' @MK,6
613.00 CSR SETON 4193
614.00 CSR END
615.00 C*
616.00 C* If not inquiry, skip remainder of subroutine.
617.00 C*
618.00 CSR *IN24 CABEQ'0' END003
619.00 C* -----
620.00 C*
621.00 C* If errors, skip remainder of subroutine.
622.00 C*
623.00 CSR *IN93 CABEQ'1' END003
624.00 C* -----
625.00 C*
626.00 C* Initialize subfile indexes.
627.00 C*
628.00 CSR Z-ADD0 I1 50
629.00 CSR Z-ADD0 $SVI1 50
630.00 CSR Z-ADD0 #SFRNO
631.00 CSR MOVE '0' $SEND 1
632.00 C*
633.00 C* Reinitialize subfile display
634.00 C*
635.00 CSR SETON 31
636.00 CSR WRITEVINDEXC 99
637.00 CSR SETOF 31
638.00 C*
639.00 C* Load subfile records.
640.00 C*
641.00 CSR EXSR S004
642.00 C* ----
643.00 C* -----
644.00 CSR I1 IFLT $PGSZ
645.00 CSR $PGSZ SUB I1 #G
646.00 C*
647.00 CSR MOVE *BLANK SFDL01
648.00 CSR MOVE *BLANK SFMCU
649.00 CSR MOVE *BLANK SFRP01
650.00 CSR MOVE *BLANK SFRP02
651.00 CSR MOVE *BLANK SHMCU
652.00 CSR DO #G
653.00 CSR ADD 1 I1
654.00 CSR MOVEA*IN SHIN
655.00 CSR WRITEVINDEXS
656.00 CSR END
657.00 CSR Z-ADDI1 $SVI1
658.00 CSR END
659.00 CSR END003 ENDSR

```

Z-ADD\$1KEY2	PSKEYL
Z-ADD\$1RECL	PSRECL
MOVE\$SIDX1	PSKY

Load key length, record length, and key with values

PARM	\$1IDX	Idx Name Lib
PARM 'I'	PSACTN	Action Code
PARM 'EQ'	PSRULE	Action Rule
PARM	PSKEYL	Key Length
PARM	PSKY	Key Fields
PARM	PSRECL	Entry Length
PARM	PSREC	Entry
PARM	PSSTS	Error Status

Call to User Index to inquire on an existing record

PSSTS	IFNE '0'	Not Found
*IN23	COMP '1'	41 *ERROR*
	END	

Check error status parameter to see if a record was found

```

660.00 C*****
661.00 C*
662.00 C*          Copy Common Subroutine - Right Justify Numeric Fields
663.00 C*
664.00 C/COPY JDECPY, C0012
665.00 C*****
666.00 C*
667.00 C*          SUBROUTINE S004 - Load Video Screen Data
668.00 C*          -----
669.00 C*
670.00 C*          Processing: 1. Move data base information to video screen.
671.00 C*                        All video screen fields are alpha and
672.00 C*                        therefore numeric information must be
673.00 C*                        processed through subroutine C0014 to set
674.00 C*                        proper decimals and provide editing for
675.00 C*                        display on screen.
676.00 C*
677.00 C*                        Date fields must be converted from their
678.00 C*                        internal format of month, day and year or
679.00 C*                        julian to the system format using program
680.00 C*                        X0028.
681.00 C*
682.00 CSR          S004          BEGSR
683.00 C*          ----          -----
684.00 C*
685.00 C*          Load data field dictionary parameters (one cycle only).
686.00 C*
687.00 CSR          $998          CASEQ' '          S998
688.00 C*          -----          -----
689.00 CSR          END
690.00 C*
691.00 C*          If subfile load completed, skip subroutine.
692.00 C*
693.00 CSR          $SEND          IFEQ '1'
694.00 CSR          Z-ADD0          #SFRNO
695.00 CSR          GOTO END004
696.00 CSR          END
697.00 C*-----
698.00 C*
699.00 C*          Save company number for comparison later.
700.00 C*          =====
701.00 C*
702.00 CSR          MOVE $1CO          $$CO          5
703.00 C*-----
704.00 C*
705.00 C*          Move to output - company description.
706.00 C*
707.00 CSR          MOVE *BLANKS          PS@@
708.00 CSR          MOVE$1CO          KY@@
709.00 CSR          CALL 'XS0010'          81
710.00 C*          -----
711.00 CSR          PARM          PS@@
712.00 CSR          PARM          DS0010
713.00 C*
714.00 CSR          MOVE$CCNAME          VC0001
715.00 C*-----
716.00 C*
717.00 C*          Initialize subfile page control and index.
718.00 C*
719.00 CSR          Z-ADD0          $PG          30
720.00 CSR          Z-ADD0          #SFRNO
721.00 CSR          Z-ADD$SVI1          I1
722.00 C*-----
723.00 C*
724.00 C*          Read user index until end or subfile page filled.
725.00 C*
726.00 CSR          SETOF          96
727.00 CSR          *IN96          DOWEQ'0'
728.00 C*
729.00 C*          First time through, have already read first record, so skip
730.00 C*          the index logic. (First time through if $START = 'Y'
731.00 C*          =====
732.00 CSR          $START          IFEQ 'Y'
733.00 CSR          MOVE ' '          $START
734.00 CSR          ELSE

```

```

733.00 C*
734.00 C*      Successive times through, read next "greater" entry.
735.00 C*      =====
736.00 C*
737.00 CSR
738.00 CSR
739.00 CSR
740.00 C*
741.00 CSR
742.00 C*
743.00 CSR
744.00 CSR      Call to User
745.00 CSR      Index to
746.00 CSR      retrieve next
747.00 CSR      record that is
748.00 CSR      greater than
749.00 CSR      current key
750.00 CSR      value
751.00 C*
752.00 CSR
753.00 C*
754.00 C*      If status is '0' then assume not found.
755.00 C*      =====
756.00 C*
757.00 CSR
758.00 CSR
759.00 C*
760.00 CSR      Retrieve entry to load data structure.
761.00 C*      =====
762.00 C*
763.00 CSR
764.00 C*
765.00 C*      Compare new company to inquiry : if changed, end.
766.00 C*      =====
767.00 C*
768.00 CSR      $1CO      IFNE $$CO
769.00 CSR              SETON                      96
770.00 CSR              END
771.00 C*
772.00 C*      At end of index, set subfile completion flag and set high
773.00 C*      intensity attribute on last subfile record.
774.00 C*
775.00 CSR      *IN96      IFEQ '1'
776.00 CSR              MOVE '1'                      $SEND
777.00 CSR              MOVE ' '                      @IN37      1
778.00 CSR              GOTO END004
779.00 C*              -----
780.00 CSR              END
781.00 C*****
782.00 C*
783.00 C*      Reset record selection flag ($SEL).
784.00 C*
785.00 CSR              MOVE '1'                      $SEL      1
786.00 C*****
787.00 C*
788.00 C*      Update subfile for selected records.
789.00 C*
790.00 CSR      $SEL      IFEQ '1'
791.00 C*****
792.00 C*
793.00 C*      Move to output - Description 01
794.00 C*
795.00 CSR              MOVE $1DL01                      SFDL01
796.00 C*****
797.00 C*
798.00 C*      Move to output - Cost Center
799.00 C*
800.00 CSR              MOVE *BLANK                      #SINBR
801.00 CSR              MOVE $1MCU                      #SINBR
802.00 CSR              MOVE T@MCU                      #DTYP
803.00 CSR              MOVE W@MCU                      #EWRD
804.00 CSR              MOVE E@MCU                      #EC
805.00 CSR              MOVE F@MCU                      #DSPD
806.00 CSR              MOVE G@MCU                      #DATD
807.00 CSR              MOVE J@MCU                      #ALR
808.00 CSR              MOVE ' '                      #ECOR
809.00 CSR              MOVE ' '                      #DCOR
810.00 CSR              EXSR C00161
811.00 C*              -----
812.00 CSR      #ALR      IFEQ 'L'
813.00 CSR              MOVE #SINBR                      SFMCU
814.00 CSR              ELSE
815.00 CSR              MOVE #SINBR                      SFMCU

```

```

Z-ADD$1KEYL      PSKEYL
Z-ADD$1RECL      PSRECL
MOVE LDSIDX1     PSKY

```

Load key length, record length, and key with values

```

CALL 'X00IDX'
-----
PARM          $1IDX      Index Name
PARM 'I'      PSACTN 1  Action Code
PARM 'GT'     PSRULE    Action Rule
PARM          PSKEYL    Key Length
PARM          PSKY     Key Fields
PARM          PSRECL   Entry Length
PARM          PSREC    Error
PARM          PSSTS    Error Status

END          $START

```

Call to User Index to retrieve next record that is greater than current key value

```

          SETOF          96
PSSTS COMP '0'          96 IF GT '0'

```

Check error status parameter to see if a record was found.

```

816.00      CSR                      END
817.00      C*****
818.00      C*
819.00      C*          Move to output - Category Code - Cost Center 01
820.00      C*
821.00      CSR                      MOVE *BLANK          #SINBR
822.00      CSR                      MOVE$L1RP01         #SINBR
823.00      CSR                      MOVE T@RP01          #DTYP
824.00      CSR                      MOVE W@RP01          #EWRD
825.00      CSR                      MOVE E@RP01          #EC
826.00      CSR                      MOVE F@RP01          #DSPD
827.00      CSR                      MOVE G@RP01          #DATD
828.00      CSR                      MOVE J@RP01          #ALR
829.00      CSR                      MOVE ' '              #ECOR
830.00      CSR                      MOVE ' '              #DCOR
831.00      CSR                      EXSR C00161
832.00      C*                      ----
833.00      CSR          #ALR         IFEQ 'L'
834.00      CSR                      MOVE$L#SINBR         SFRP01
835.00      CSR                      ELSE
836.00      CSR                      MOVE #SINBR          SFRP01
837.00      CSR                      END
838.00      C*****
839.00      C*
840.00      C*          Move to output - Category Code - Cost Center 02
841.00      C*
842.00      CSR                      MOVE *BLANK          #SINBR
843.00      CSR                      MOVE$L1RP02         #SINBR
844.00      CSR                      MOVE T@RP02          #DTYP
845.00      CSR                      MOVE W@RP02          #EWRD
846.00      CSR                      MOVE E@RP02          #EC
847.00      CSR                      MOVE F@RP02          #DSPD
848.00      CSR                      MOVE G@RP02          #DATD
849.00      CSR                      MOVE J@RP01          #ALR
850.00      CSR                      MOVE ' '              #ECOR
851.00      CSR                      MOVE ' '              #DCOR
852.00      CSR                      EXSR C00161
853.00      C*                      ----
854.00      CSR          #ALR         IFEQ 'L'
855.00      CSR                      MOVE$L#SINBR         SFRP02
856.00      CSR                      ELSE
857.00      CSR                      MOVE #SINBR          SFRP02
858.00      CSR                      END
859.00      C*****
860.00      C*
861.00      C*          Move to output - Cost Center
862.00      C*
863.00      CSR                      MOVE *BLANK          #SINBR
864.00      CSR                      MOVE$L1MCU          #SINBR
865.00      CSR                      MOVE T@MCU           #DTYP
866.00      CSR                      MOVE W@MCU           #EWRD
867.00      CSR                      MOVE E@MCU           #EC
868.00      CSR                      MOVE F@MCU           #DSPD
869.00      CSR                      MOVE G@MCU           #DATD
870.00      CSR                      MOVE J@MCU           #ALR
871.00      CSR                      MOVE ' '              #ECOR
872.00      CSR                      MOVE ' '              #DCOR
873.00      CSR                      EXSR C00161
874.00      C*                      ----
875.00      CSR          #ALR         IFEQ 'L'
876.00      CSR                      MOVE$L#SINBR         SHMCU
877.00      CSR                      ELSE
878.00      CSR                      MOVE #SINBR          SHMCU
879.00      CSR                      END
880.00      C*****
881.00      C*****
882.00      C*
883.00      C*          Increment subfile page control and index.
884.00      C*
885.00      CSR                      ADD 1                $PG
886.00      CSR                      ADD 1                I1
887.00      C*
888.00      C*          If subfile page display not set, set subfile page display.
889.00      C*
890.00      CSR          #SFRNO       IFEQ 0
891.00      CSR                      Z-ADDI1                #SFRNO
892.00      CSR                      END
893.00      C*
894.00      C*          Write subfile record and save current subfile index.
895.00      C*
896.00      CSR                      MOVEA*IN              SHIN
897.00      CSR                      WRITEVINDEXS

```

```

898.00 CSR Z-ADDI1 $SVI1
899.00 C*
900.00 C* If subfile page loaded, drop out of subroutine.
901.00 C*
902.00 CSR $PG CABEQ$PGSZ END004
903.00 C* -----
904.00 CSR END
905.00 CSR END
906.00 C*-----
907.00 CSR END004 ENDSR
908.00 C*****
909.00 C*
910.00 C* Copy Common Subroutine - Format Numeric Fields for Output with Override
911.00 C*
912.00 C/COPY JDECPY,C00161
913.00 C*****
914.00 C*
915.00 C* SUBROUTINE S005 - Validate and update input data.
916.00 C* -----
917.00 C*
918.00 C* Processing: 1. Validate all video input. Numeric data
919.00 C* must be processed thru subroutines C0012 &
920.00 C* C0015 to be converted to internal numeric
921.00 C* representation (15 digits 0 decimals).
922.00 C* Date fields must be converted from system
923.00 C* format to their internal format of month,
924.00 C* day and year or julian using program X0028.
925.00 C* 2. Update data fields from input and process
926.00 C* subfile transaction.
927.00 C*
928.00 CSR S005 BEGSR
929.00 C* ----
930.00 C*
931.00 C* If not addition or change, bypass subroutine
932.00 C*
933.00 CSR *IN21 IFEQ '0'
934.00 CSR *IN22 ANDEQ'0'
935.00 CSR GOTO END005
936.00 C* ----
937.00 CSR END
938.00 C*
939.00 C* Process all subfile transactions.
940.00 C*
941.00 CSR MOVE ' ' $WRT 1
942.00 CSR Z-ADD1 $$IX 70
943.00 CSR SETOF 9699
944.00 CSR *IN96 DOWEQ'0'
945.00 CSR *IN99 ANDEQ'0'
946.00 CSR $$IX ANDLE$SVI1
947.00 CSR MOVEA$RESET *IN,41
948.00 CSR $$IX CHAINVINDEXS 9699
949.00 CSR *IN96 IFEQ '0'
950.00 CSR *IN99 ANDEQ'0'
951.00 C*
952.00 C* Load video input field for - Cost Center
953.00 C*
954.00 CSR MOVEASHMCU @FI
955.00 CSR EXSR C0042
956.00 C* ----
957.00 CSR MOVE #RADJ $1MCU
958.00 C*
959.00 C* Determine if prior record existed in user index.
960.00 C* =====
961.00 C*
962.00 CSR Z-ADD$1KEYL PSKEYL
963.00 CSR Z-ADD$1RECL PSRECL
964.00 CSR MOVELDSIDX1 PSKY
965.00 C*
966.00 CSR CALL 'X00IDX'
967.00 C*
968.00 CSR PARM $1IDX Idx Name/Lib
969.00 CSR PARM '1' PSACTN Action Code
970.00 CSR PARM 'EQ' PSRULE Action Rule
971.00 CSR PARM PSKEYL Key Length
972.00 CSR PARM PSKY Key Fields
973.00 CSR PARM PSRECL Entry Length
974.00 CSR PARM PSREC Entry
975.00 CSR PARM PSSTS Error Status
976.00 C*
977.00 C* If no data and prior record existed, delete old record.
978.00 C* =====
979.00 C*

```

Loading of parameters and call to User Index to see if a record exists

Z-ADD\$1KEYL	PSKEYL	
Z-ADD\$1RECL	PSRECL	
MOVELDSIDX1	PSKY	
CALL 'X00IDX'		
PARM \$1IDX		Idx Name/Lib
PARM '1'	PSACTN	Action Code
PARM 'EQ'	PSRULE	Action Rule
PARM PSKEYL		Key Length
PARM PSKY		Key Fields
PARM PSRECL		Entry Length
PARM PSREC		Entry
PARM PSSTS		Error Status

```

980.00 CSR          PSSTS          IFEQ '0'
981.00 CSR          SFMCU          ANDEQ*BLANK
982.00 C*
983.00 CSR
984.00 C*
985.00 CSR          CALL 'X00IDX'
986.00 CSR          PARM          $1IDX          Idx Name/Lib
987.00 CSR          PARM 'D'          PSACTN          Action
988.00 CSR          PARM 'EQ'        PSRULE          Action Rule
989.00 CSR          PARM          PSKEYL          Key Length
990.00 CSR          PARM          PSKY          Key Fields
991.00 CSR          PARM          PSRECL          Entry Length
992.00 CSR          PARM          PSREC          Entry
993.00 C*          PARM          PSSTS          Error Status
994.00 CSR          END
995.00 C*
996.00 C*          Process only non-blank records.
997.00 C*
998.00 CSR          SFMCU          IFNE *BLANK
999.00 C*
1000.00 C*
1001.00 C*
1002.00 C*          Scrub and edit - Description 01
1003.00 C*
1004.00 CSR          MOVELSFDL01          $1DL01
1005.00 C*
1006.00 C*          Edit allowed values - Description 01
1007.00 C*
1008.00 CSR          A@DL01          IFEQ '*NB'
1009.00 CSR          $1DL01          ANDEQ *BLANK
1010.00 CSR          MOVE '1'          @MK,03
1011.00 CSR          SETON          4293
1012.00 CSR          END
1013.00 C*
1014.00 C*
1015.00 C*          Scrub and edit - Cost Center
1016.00 C*
1017.00 CSR          MOVEASFMCU          @FI
1018.00 CSR          EXSR C0042
1019.00 C*
1020.00 CSR          MOVE #RADJ          $1MCU
1021.00 C*
1022.00 C*
1023.00 C*          Scrub and edit - Category Code - Cost Center 01
1024.00 C*
1025.00 CSR          MOVELSFRP01          $1RP01
1026.00 C*
1027.00 C*          Set default value - Category Code - Cost Center 01
1028.00 C*
1029.00 CSR          $1RP01          IFEQ *BLANK
1030.00 CSR          D@RP01          IFNE *BLANK
1031.00 CSR          MOVEAD@RP01          @40
1032.00 CSR          MOVEA@40          $1RP01
1033.00 CSR          @40,1          IFEQ ''''
1034.00 CSR          MOVE ' '          @40,1
1035.00 CSR          Z-ADD2          #M
1036.00 CSR          #M          DOWLE40
1037.00 CSR          @40,#M          IFEQ ''''
1038.00 CSR          MOVE ' '          @40,#M
1039.00 CSR          END
1040.00 CSR          ADD 1          #M
1041.00 CSR          END
1042.00 CSR          MOVEA@40,2          $1RP01
1043.00 CSR          END
1044.00 CSR          END
1045.00 CSR          END
1046.00 C*
1047.00 C*          Edit allowed values - Category Code - Cost Center 01
1048.00 C*
1049.00 CSR          A@RP01          IFNE *BLANK
1050.00 CSR          MOVEAA@RP01          @40
1051.00 CSR          MOVE *HIVAL          @AV
1052.00 CSR          EXSR C997
1053.00 C*
1054.00 CSR          MOVE ' '          $ERTST
1055.00 CSR          MOVE *BLANK          $WRK10 10
1056.00 CSR          MOVELS$1RP01          $WRK10
1057.00 CSR          @AV,1          IFNE *HIVAL
1058.00 CSR          $WRK10          LOKUP@AV          81
1059.00 CSR          *IN81          IFEQ '0'
1060.00 CSR          MOVE '1'          $ERTST
1061.00 CSR          END
1062.00 CSR          $ERTST          IFEQ '1'
1063.00 CSR          MOVE '1'          @MK,07

```

PSSTS IFEQ '0'
SFMCU ANDEQ*BLANK

Check error status parameter to see if record has found

Deletion of record from User Index

CALL 'X00IDX'		

PARM	\$1IDX	Idx Name/Lib
PARM 'D'	PSACTN	Action
PARM 'EQ'	PSRULE	Action Rule
PARM	PSKEYL	Key Length
PARM	PSKY	Key Fields
PARM	PSRECL	Entry Length
PARM	PSREC	Entry
PARM	PSSTS	Error Status


```

1064.00   CSR                SETON                4393
1065.00   CSR                END
1066.00   CSR                END
1067.00   CSR                END
1068.00   C*
1069.00   C*      Edit upper and lower range - Category Code - Cost Center 01
1070.00   C*
1071.00   CSR      L@RP01    IFNE *BLANK
1072.00   CSR                MOVE '1'                $ERTST
1073.00   CSR      $1RP01    IFGE L@RP01
1074.00   CSR      $1RP01    ANDLEU@RP01
1075.00   CSR                MOVE ' '                $ERTST
1076.00   CSR                END
1077.00   CSR      $ERTST    IFEQ '1'
1078.00   CSR                MOVE '1'                @MK,07
1079.00   CSR                SETON                4393
1080.00   CSR                END
1081.00   CSR                END
1082.00   C*
1083.00   C*      Edit from descriptive titles - Category Code - Cost Center 01
1084.00   C*
1085.00   CSR      R@RP01    IFNE *BLANK
1086.00   CSR                CLEARI0005U
1087.00   CSR                MOVE ' '                $ERTST
1088.00   CSR                MOVELS@RP01            #USY
1089.00   CSR                MOVE R@RP01            #URT
1090.00   CSR                MOVE $1RP01            #UKY
1091.00   CSR                CALL 'X0005 '          81
1092.00   C*
1093.00   CSR                PARM                I0005U
1094.00   CSR      #UERR    IFEQ '1'
1095.00   CSR                MOVE '1'                @MK,09
1096.00   CSR                SETON                4393
1097.00   CSR                END
1098.00   CSR                END
1099.00   C*-----
1100.00   C*
1101.00   C*      Scrub and edit - Category Code - Cost Center 02
1102.00   C*
1103.00   CSR                MOVELSFRP02            $1RP02
1104.00   C*
1105.00   C*      Set default value - Category Code - Cost Center 02
1106.00   C*
1107.00   CSR      $1RP02    IFEQ *BLANK
1108.00   CSR      D@RP02    IFNE *BLANK
1109.00   CSR                MOVEAD@RP02            @40
1110.00   CSR                MOVEA@40                $1RP02
1111.00   CSR      @40,1    IFEQ ' ' ' ' '
1112.00   CSR                MOVE ' '                @40,1
1113.00   CSR                Z-ADD2                #M
1114.00   CSR      #M      DOWLE@40
1115.00   CSR      @40,#M    IFEQ ' ' ' ' '
1116.00   CSR                MOVE ' '                @40,#M
1117.00   CSR                END
1118.00   CSR                ADD 1                #M
1119.00   CSR                END
1120.00   CSR                MOVEA@40,2            $1RP02
1121.00   CSR                END
1122.00   CSR                END
1123.00   CSR                END
1124.00   C*
1125.00   C*      Edit allowed values - Category Code - Cost Center 02
1126.00   C*
1127.00   CSR      A@RP02    IFNE *BLANK
1128.00   CSR                MOVEAA@RP02            @40
1129.00   CSR                MOVE *HIVAL            @AV
1130.00   CSR                EXSR C997
1131.00   C*      ----
1132.00   CSR                MOVE ' '                $ERTST
1133.00   CSR                MOVE *BLANK            $WRK10 10
1134.00   CSR                MOVE$1RP02            $WRK10
1135.00   CSR      @AV,1    IFNE *HIVAL
1136.00   CSR      $WRK10    LOKUP@AV
1137.00   CSR      *IN81    IFEQ '0'
1138.00   CSR                MOVE '1'                $ERTST
1139.00   CSR                END
1140.00   CSR      $ERTST    IFEQ '1'
1141.00   CSR                MOVE '1'                @MK,07
1142.00   CSR                SETON                4493
1143.00   CSR                END
1144.00   CSR                END
1145.00   CSR                END

```

```

1146.00 C*
1147.00 C* Edit upper and lower range - Category Code - Cost Center 02
1148.00 C*
1149.00 CSR L@RP02 IFNE *BLANK
1150.00 CSR MOVE '1' $ERTST
1151.00 CSR $1RP02 IFGE L@RPO2
1152.00 CSR $1RP02 ANDLEU@RPO2
1153.00 CSR MOVE $ERTST
1154.00 CSR END
1155.00 CSR $ERTST IFEQ '1'
1156.00 CSR MOVE '1'
1157.00 cSR SETON 4493
1158.00 CSR END
1159.00 cSR END
1160.00 C*
1161.00 C* Edit from descriptive titles - Category Code - Cost Center 02
1162.00 C*
1163.00 CSR R@RP02 IFNE *BLANK
1164.00 CSR CLEARI0005U
1165.00 CSR MOVE ' ' $ERTST
1166.00 CSR MOVELS@RPO2 #USY
1167.00 CSR MOVE R@RPO2 #URT
1168.00 CSR MOVE $1RP02 #UKY
1169.00 CSR CALL 'X0005' 81
1170.00 C*
1171.00 CSR PARM I0005U
1172.00 CSR #UEERR IFEQ '1'
1173.00 CSR MOVE '1' @MK,09
1174.00 CSR SETON 4493
1175.00 CSR END
1176.00 CSR END
1177.00 C*-----
1178.00 C*
1179.00 C* If no errors, update user index.
1180.00 C* =====
1181.00 C*
1182.00 CSR *IN93 IFEQ '0'
1183.00 C*
1184.00 cSR
1185.00 CSR Z-ADD$1KEYL PSKEYL
1186.00 CSR Z-ADD$1RECL PSRECL
1187.00 CSR MOVELDSIDX1 PSKY
1188.00 CSR MOVELDSIDX1 PSREC
1189.00 CSR P$STS IFEQ '0' It Existed
1190.00 CSR $1MCU ANDEQSHMCU and same CC
1191.00 C*
1192.00 CSR
1193.00 C*
1194.00 CSR CALL 'X00IDX'
1195.00 CSR PARM $1IDX Index Name
1196.00 CSR PARM 'C' PSACTN Action Code
1197.00 CSR PARM PSRULE Function Rule
1198.00 CSR PARM PSKEYL Key Length
1199.00 CSR PARM PSKY Key
1200.00 CSR PARM PSRECL Recd Length
1201.00 CSR PARM PSREC Record
1202.00 C* PARM PSSTS Status
1203.00 CSR
1204.00 C* ELSE
1205.00 CSR
1206.00 C*
1207.00 CSR CALL 'X00IDX'
1208.00 CSR PARM $1IDX Idx Name/Lib
1209.00 CSR PARM 'I' PSACTN Action Code
1210.00 CSR PARM 'EQ' PSRULE Action Rule
1211.00 CSR PARM PSKEYL Key Length
1212.00 CSR PARM PSKY Key Fields
1213.00 CSR PARM PSRECL Entry Length
1214.00 CSR PARM PSREC Entry
1215.00 C* PARM PSSTS Error Status
1216.00 CSR P$STS IFEQ '0'
1217.00 CSR MOVE '1' @MK,2
1218.00 CSR SETON 4193
1219.00 CSR ELSE
1220.00 C*
1221.00 CSR CALL 'X00IDX'
1222.00 C* -----
1223.00 CSR PARM $1IDX Idx Name/Lib
1224.00 CSR PARM 'A' PSACTN Action Code
1225.00 CSR PARM PSRULE Action Rule
1226.00 CSR PARM PSKEYL Key Length
1227.00 CSR PARM PSKY Key Fields
1228.00 CSR PARM PSRECL Entry Length
1229.00 CSR PARM PSREC Entry
1230.00 CSR PARM PSSTS Error Status

```

Z-ADD\$1KEYL PSKEYL
Z-ADD\$1RECL PSRECL
MOVELDSIDX1 PSKY
MOVELDSIDX1 PSREC

Loading key length, record length, key and record for a change or addition

P\$STS IFEQ '0' It Existed
\$1MCU ANDEQSHMCU and same CC

Check if record exists

Call to User Index to change a record

Inquire on a record

Check if record exists

Add a record to the User Index

```

1231.00 C*
1232.00 CSR          MOVE '1'          $WRT
1233.00 CSR          END
1234.00 CSR          END
1235.00 CSR          END
1236.00 C*
1237.00 CSR          *IN93      IFEQ '1'
1238.00 CSR          #SFRNO    ANDEQ*ZERO
1239.00 CSR          Z-ADDI1      #SFRNO
1240.00 CSR          END
1241.00 C*
1242.00 CSR          END
1243.00 C*
1244.00 C*      If errors, set subfile next change flag.
1245.00 C*
1246.00 CSR          *IN93      IFEQ '1'
1247.00 CSR          SETON              32
1248.00 CSR          END
1249.00 C*
1250.00 C*      Update all subfile records read.
1251.00 C*
1252.00 CSR          MOVEA*IN      SHIN
1253.00 CSR          UPDATVINDEXS      81
1254.00 CSR          SETOF              32
1255.00 C*
1256.00 C*      Read next subfile record.
1257.00 C*
1258.00 CSR          ADD 1          $$IX
1259.00 CSR          END
1260.00 CSR          END
1261.00 C*
1262.00 C*      If error detected on a add, Change Action Code to 'C'
1263.00 C*
1264.00 CSR          *IN93      IFEQ '1'
1265.00 CSR          $WRT      ANDEQ'1'
1266.00 CSR          MOVE 'C'          ACTION
1267.00 CSR          END
1268.00 C*
1269.00 CSR          END005      ENDSR
1270.00 C*****
1271.00 C*
1272.00 C*      Copy Common Subroutine - Right Adjust Alphanumeric Field
1273.00 C*
1274.00 C/COPY/JDECPY,C0042
1275.00 C*****
1276.00 C
1277.00 C*      Copy Common Subroutine - Build Allowed Values Work Array
1278.00 C*
1279.00 C/COPY JDECPY,C997
1280.00 C*****
1281.00 C*
1282.00 C*      SUBROUTINE S010 - Update Data Base
1283.00 C*      -----
1284.00 C*
1285.00 C*      Processing: 1. Update data base file for delete action.
1286.00 C*
1287.00 CSR          S010      BEGSR
1288.00 C*      ----      ----
1289.00 C*
1290.00 C*      If delete action, delete all records by primary partial key.
1291.00 C*
1292.00 CSR          *IN23      IFEQ '1'
1293.00 CSR          Z-ADD$1KEY2      PSKEYL
1294.00 CSR          Z-ADD$1RECL      PSRECL
1295.00 C*
1296.00 CSR          Deletion of
1297.00 CSR          User Index
1298.00 CSR          CALL 'X00IDX'
1299.00 CSR          -----
1300.00 CSR          PARM          $1IDX      Idx Name/Lib
1301.00 CSR          PARM 'D'      PSACTN      Action
1302.00 CSR          PARM 'EQ'      PSRULE      Action Rule
1303.00 CSR          PARM          PSKEYL      Key Length
1304.00 CSR          PARM          PSKY       Key Fields
1305.00 CSR          PARM          PSRECL      Entry Length
1306.00 CSR          PARM          PSREC       Entry
1307.00 CSR          PARM          PSSTS       Error Status
1308.00 C*
1309.00 C*      Clear data field for next transaction
1310.00 CSR          MOVE #FCLR          @@AID
1311.00 CSR          EXSR S001
1312.00 C*      ----      ----
1313.00 CSR          END010      ENDSR

```

```

1314.00 C*****
1315.00 C*
1316.00 C*      SUBROUTINE S998 - Load dictionary parameters.
1317.00 C*      -----
1318.00 C*
1319.00 CSR          S998          BEGSR
1320.00 C*          ----          ----
1321.00 C*
1322.00 C*
1323.00 C*      Dictionary parameters for - Description 01
1324.00 C*
1325.00 CSR          MOVE *BLANK          FRDTAI
1326.00 CSR          MOVE 'DL01'          FRDTAI
1327.00 CSR          CALL 'X9800E'          81
1328.00 C*          -----
1329.00 CSR          PARM          I9800E
1330.00 CSR          FRERR          IFEQ '0'
1331.00 CSR          MOVE FRDSCR          B@DL01          40
1332.00 CSR          MOVE FRDTAT          T@DL01          1
1333.00 CSR          MOVE FREC          E@DL01          1
1334.00 CSR          MOVE ERDTAS          C@DL01          40
1335.00 CSR          MOVE FRDTAD          G@DL01          10
1336.00 CSR          MOVE FRCDEC          F@DL01          1
1337.00 CSR          MOVE LFRSY          S@DL01          4
1338.00 CSR          MOVE FRRT          R@DL01          2
1339.00 CSR          MOVE FRDVAL          D@DL01          40
1340.00 CSR          MOVE FRVAL          A@DL01          40
1341.00 CSR          MOVE FRLVAL          L@DL01          40
1342.00 CSR          MOVE FRUVAL          U@DL01          40
1343.00 CSR          MOVE FREDWR          W@DL01          30
1344.00 CSR          MOVE FRLR          J@DL01          1
1345.00 CSR          MOVE FRNNIX          N@DL01          20
1346.00 CSR          Z-ADD1          #@DL01          110
1347.00 CSR          MOVE F@DL01          #1
1348.00 CSR          DO #A
1349.00 CSR          MULT 10          #@DL01
1350.00 CSR          END
1351.00 CSR          END
1352.00 C*-----
1353.00 C*
1354.00 C*      Dictionary parameters for - Cost Center
1355.00 C*
1356.00 CSR          MOVE *BLANK          FRDTAI
1357.00 CSR          MOVE 'MCU'          FRDTAI
1358.00 CSR          CALL 'X9800E'          81
1359.00 C*          -----
1360.00 CSR          PARM          I9800E
1361.00 CSR          FRERR          IFEQ '0'
1362.00 CSR          MOVE FRDSCR          B@MCU          40
1363.00 CSR          MOVE FRDTAT          T@MCU          1
1364.00 CSR          MOVE FREC          E@MCU          1
1365.00 CSR          MOVE FRDTAS          C@MCU          40
1366.00 CSR          MOVE FRDTAD          G@MCU          10
1367.00 CSR          MOVE FRCDEC          F@MCU          1
1368.00 CSR          MOVE LFRSY          S@MCU          4
1369.00 CSR          MOVE FRRT          R@MCU          2
1370.00 CSR          MOVE FRDVAL          D@MCU          40
1371.00 CSR          MOVE FRVAL          A@MCU          40
1372.00 CSR          MOVE FRLVAL          L@MCU          40
1373.00 CSR          MOVE FRUVAL          U@MCU          40
1374.00 CSR          MOVE FREDWR          W@MCU          30
1375.00 CSR          MOVE FRLR          J@MCU          1
1376.00 CSR          MOVE FRNNIX          N@MCU          20
1377.00 CSR          Z-ADD1          #@MCU          110
1378.00 CSR          MOVE F@MCU          #A
1379.00 CSR          DO #A
1380.00 CSR          MULT 10          #@MCU
1381.00 CSR          END
1382.00 CSR          END
1383.00 C*-----
1384.00 C*
1385.00 C*      Dictionary parameters for - Category Code - Cost Center 01
1386.00 C*
1387.00 CSR          MOVE *BLANK          FRDTAI
1388.00 CSR          MOVE 'RP01'          FRDTAI
1389.00 CSR          CALL 'X9800E'          81
1390.00 C*          -----
1391.00 CSR          PARM          I9800E
1392.00 CSR          FRERR          IFEQ '0'
1393.00 CSR          MOVE FRDSCR          B@RP01          40
1394.00 CSR          MOVE FRDTAT          T@RP01          1
1395.00 CSR          MOVE FREC          E@RP01          1

```

1396.00	CSR	MOVE FRDTAS	C@RP01	40
1397.00	CSR	MOVE FRDTAD	G@RP01	10
1398.00	CSR	MOVE FRCDEC	F@RP01	1
1399.00	CSR	MOVELFRSY	S@RP01	4
1400.00	CSR	MOVE FRRT	R@RP01	2
1401.00	CSR	MOVE FRDVAL	D@RP01	40
1402.00	CSR	MOVE FRVAL	A@RP01	40
1403.00	CSR	MOVE FRLVAL	L@RP01	40
1404.00	CSR	MOVE FRUVAL	U@EP01	40
1405.00	CSR	MOVE FREDWR	W@RP01	30
1406.00	CSR	MOVE FRLR	J@RP01	1
1407.00	CSR	MOVE FRNNIX	N@RP01	20
1408.00	CSR	Z-ADD1	#@RP01	110
1409.00	CSR	MOVE F@RP01	#A	
1410.00	CSR	DO #A		
1411.00	CSR	MULT 10	#@RP01	
1412.00	CSP	END		
1413.00	CSR	END		
1414.00	C*	-----		
1415.00	C*			
1416.00	C*	Dictionary parameters for - Category Code - Cost Center 02		
1417.00	C*			
1418.00	CSR	MOVE *BLANK	FRDTAI	
1419.00	CSR	MOVE L'RP02'	FRDTAI	
1420.00	CSR	CALL 'X9800E'		81
1421.00	C*	-----		
1422.00	CSR	PARM	I9800E	
1423.00	CSR	FRERR IFEQ '0'		
1424.00	CSR	MOVE FRDSCR	B@RP02	40
1425.00	CSR	MOVE FRDTAT	T@RP02	1
1426.00	CSR	MOVE FREC	E@RP02	1
1427.00	CSR	MOVE FRDTAS	C@RP02	40
1428.00	CSR	MOVE FRDTAD	G@RP02	10
1429.00	CSR	MOVE FRCDEC	F@RP02	1
1430.00	CSR	MOVELFRSY	S@RP02	4
1431.00	CSR	MOVE FRRT	R@RP02	2
1432.00	CSR	MOVE FRDVAL	D@RP02	40
1433.00	CSR	MOVE FRVAL	A@RP02	40
1434.00	CSR	MOVE FRLVAL	L@RP02	40
1435.00	CSR	MOVE FRUVAL	U@RP02	40
1436.00	CSR	MOVE FREDWR	W@RP02	30
1437.00	CSR	MOVE FRLR	J@RP02	1
1438.00	CSR	MOVE FRNNIX	N@EP02	20
1439.00	CSR	Z-ADD1	#@RP02	110
1440.00	CSR	MOVE F@RP02	#A	
1441.00	CSR	DO #A		
1442.00	CSR	MULT 10	#@RP02	
1443.00	CSR	END		
1444.00	CSR	END		
1445.00	*	-----		
1446.00	C*			
1447.00	C*	Dictionary parameters for - Company		
1448.00	C*			
1449.00	CSR	MOVE *BLANK	FRDTAI	
1450.00	CSR	MOVE L'CO'	FRDTAI	
1451.00	CSR	CALL 'X9800E'		81
1452.00	C*	-----		
1453.00	CSR	PARM	I9800E	
1454.00	CSR	FRERR IFEQ '0'		
1455.00	CSR	MOVE FRDSCR	B@C0	40
1456.00	CSR	MOVE FROTAT	T@C0	1
1457.00	CSR	MOVE FREC	E@C0	1
1458.00	CSR	MOVE FRDTAS	C@C0	40
1459.00	CSR	MOVE FRDTAD	G@C0	10
1460.00	CSR	MOVE FRCDEC	F@C0	1
1461.00	CSR	MOVELFRSY	S@C0	4
1462.00	CsR	MOVE FRRT	R@C0	2
1463.00	CSR	MOVE FRDVAL	D@C0	40
1464.00	CSR	MOVE ERVAL	A@C0	40
1465.00	CSR	MOVE FRLVAL	L@C0	40
1466.00	CSR	MOVE FRUVAL	U@c0	40
1467.00	CSR	MOVE FREDWR	W@C0	30
1468.00	CSR	MOVE FRLR	J@C0	1
1469.00	CSR	MOVE FRNNIX	N@C0	20
1470.00	CSR	Z-ADD1	#@C0	110
1471.00	CSR	MOVE F@CO		
1472.00	CSR	DO #A		
1473.00	CSR	MULT 10	#@CO	
1474.00	CSR	END		

```

1475.00 CSR          END
1476.00 C*
1477.00 C*
1478.00 C*      Create or clear the Demonstration User Index
1479.00 C*      -----
1480.00 C*
1481.00 CSR          MOVE *BLANKS          PSERR
1482.00 CSR          CALL 'J98CKOBJ'          99
1483.00 C*
1484.00 CSR          PARM 'PINDEX          'PSOBJT 10
1485.00 CSR          PARM 'QTEMP          'PSLIB 10
1486.00 CSR          PARM '*USRIDX'        PSTYPE 7
1487.00 CSR          PARM '*NONE          'PSMBR 10
1488.00 CSR          PARM '*NONE          'PSAUT 10
1489.00 CSR          PARM                  PSERR 1
1490.00 C*
1491.00 C*      If it doesn't exist, create it.
1492.00 C*
1493.00 CSR          PSERR IFEQ '1'
1494.00 C*
1495.00 CSR          CALL 'QUSCRTUI'          99
1496.00 CSR
1497.00 CSR          PARM                  $1IDX          Idx Name/Lib
1498.00 CSR          PARM *BLANKS          PSATR 10          Extnd Attb
1499.00 CSR          PARM 'F'              PSFXLN 1          Length Atrb
1500.00 CSR          PARM                  $1RECL          Entry Length
1501.00 CSR          PARM '1'              PSKIND 1          Key Insrtn
1502.00 CSR          PARM                  $1KEYL          Key Length
1503.00 CSR          PARM '0'              PSIMUP 1          Delay Update
1504.00 CSR          PARM '0'              PSOPTM 1          Optz = randm
1505.00 CSR          PARM '*ALL'           PSIDAU 10          Public Auth
1506.00 CSR          PARM $1TEXT           PSTEXT 50          Index Descr
1507.00 C*
1508.00 C*      If it does exist, clear it.
1509.00 C*
1510.00 CSR          ELSE
1511.00 C*
1512.00 CSR          Z-ADD$1KEY1          PSKEYL
1513.00 CSR          Z-ADD$1RECL          PSRECL
1514.00 CSR          MOVE *BLANK          PSKY
1515.00 C*
1516.00 CSR          CALL 'XOOIDX
1517.00 C*
1518.00 CSR          PARM                  $1IDX          Idx Name/Lib
1519.00 CSR          PARM 'D'              PSACTN 1          Action
1520.00 CSR          PARM 'EQ'           PSRULE 2          Action Rule
1521.00 CSR          PARM                  PSKEYL 30          Key Length
1522.00 CSR          PARM                  PSKY 120          Key Fields
1523.00 CSR          PARM                  PSRECL 30          Entry Length
1524.00 CSR          PARM                  PSREC 120          Entry
1525.00 CSR          PARM                  PSSTS 1          Error Status
1526.00 C*
1527.00 CSR          END
1528.00 C*
1529.00 C*
1530.00 C*      Set subroutine execution flag.
1531.00 C*
1532.00 CSR          MOVE '1'              $998 1
1533.00 C*
1534.00 CSR          END998          ENDSR
1535.00 C*****
1536.00 C*
1537.00 C*      SUBROUTINE S999 - Housekeeping
1538.00 C*      -----
1539.00 C*
1540.00 C*      Processing:
1541.00 C*          1. Load video screen text.
1542.00 C*          2. Retrieve screen title data area, test
1543.00 C*             for unauthorized access, center video
1544.00 C*             title and move to video screen.
1545.00 C*          3. Initialize key list.
1546.00 C*          4. Load roll keys.
1547.00 C*          5. Passed parameters.
1548.00 C*          6. Load error message array.
1549.00 C*          7. Initialize subfile display.
1550.00 CSR          S999          BEGSR
1551.00 C*          -----
1552.00 C*
1553.00 C*      Required program parameters.
1554.00 C*
1555.00 C*      . . . No Parameters passed
1556.00 C*

```

```

MOVE *BLANKS          PSERR
CALL 'J98CKOBJ'          99
-----
PARM 'PINDEX          'PSOBJT 10
PARM 'QTEMP          'PSLIB 10
PARM '*USRIDX'        PSTYPE 7
PARM '*NONE          'PSMBR 10
PARM '*NONE          'PSAUT 10
PARM                  PSERR 1

```

Check to see if User Index already exists

```
PSERR IFEQ '1'
```

Check error status parameter to see if User Index exists

Create User Index if User Index did not already exist

```

CALL 'QUSCRTUI'          99
-----
PARM                  $1IDX          Idx Name/Lib
PARM *BLANKS          PSATR 10          Extnd Attb
PARM 'F'              PSFXLN 1          Length Atrb
PARM                  $1RECL          Entry Length
PARM '1'              PSKIND 1          Key Insrtn
PARM                  $1KEYL          Key Length
PARM '0'              PSIMUP 1          Delay Update
PARM '0'              PSOPTM 1          Optz = randm
PARM '*ALL'           PSIDAU 10          Public Auth
PARM $1TEXT           PSTEXT 50          Index Descr

```

If it does exist, clear it.

```

Z-ADD$1KEY1          PSKEYL
Z-ADD$1RECL          PSRECL
MOVE *BLANK          PSKY

```

Load key length, record length, and key to clear User Index if it already exists

Delete all records from User Index

```

CALL 'XOOIDX
-----
PARM                  $1IDX          Idx Name/Lib
PARM 'D'              PSACTN 1          Action
PARM 'EQ'           PSRULE 2          Action Rule
PARM                  PSKEYL 30          Key Length
PARM                  PSKY 120          Key Fields
PARM                  PSRECL 30          Entry Length
PARM                  PSREC 120          Entry
PARM                  PSSTS 1          Error Status

```

```

1557.00 C*      Test for auto inquiry function.
1558.00 C*
1559.00 CSR      $AUTO      IFNE *BLANK
1560.00 CSR      MOVE '1'          $AUTO      1
1561.00 CSR      END
1562.00 C*-----
1563.00 C*
1564.00 C*      Load video screen text.
1565.00 C*
1566.00 CSR      MOVEL@@FILE      PSKEY      10
1567.00 CSR      Z-ADD006      PSVTX#     30
1568.00 C/COPY JDECPY,C00SC
1569.00 C*-----
1570.00 C*
1571.00 C*      Load error messages array.
1572.00 C*
1573.00 CSR      MOVE '0001'      EMK,01      Inv Action
1574.00 CSR      MOVE '0002'      EMK,02      Inv Key
1575.00 CSR      MOVE '0003'      EMK,03      Inv Blanks
1576.00 CSR      MOVE '0004'      EMK,04      INV Date
1577.00 CSR      MOVE '0005'      EMK,05      Inv Next Nbr
1578.00 CSR      MOVE '0007'      EMK,06      In Use
1579.00 CSR      MOVE '0025'      EMK,07      Inv Values
1580.00 CSR      MOVE '0026'      EMK,08      Inv MCU
1581.00 CSR      MOVE '0027'      EMK,09      Inv Desc Ttl
1582.00 C*-----
1583.00 C*
1584.00 C*      Load invalid action code array.
1585.00 C*
1586.00 CSR      MOVEA'      '      @NAC
1587.00 C*-----
1588.00 C*
1589.00 C*      Initialize subfile display.
1590.00 C*
1591.00 CSR      Z-ADD0      I1
1592.00 CSR      Z-ADD15      $PGSZ      30
1593.00 CSR      DO $PGSZ
1594.00 CSR      ADD 1      I1
1595.00 CSR      MOVEA*IN      SHIN
1596.00 CSR      WRITEINDEXS      99
1597.00 CSR      END
1598.00 CSR      Z-ADDI1      $SVI1
1599.00 C*-----
1600.00 C*
1601.00 C*      Load system date.
1602.00 C*
1603.00 CSR      TIME      $WRK12      120
1604.00 CSR      MOVE $WRK12      $$EDT      60
1605.00 C*-----
1606.00 CSR      END999      ENDSR

```



Exercises

See the exercises for this chapter.

File Servers

About File Servers

File servers (sometimes called I/O servers) allow you to enhance the processing time of your program. In addition, they ease the maintenance of your programs by making your system more modular. There should be no reason to bypass the use of a server. Eventually, every program should perform database functions using either a file server or a functional server. Note that all logical files are accessed through servers by their based-on file. Embedded in one server, there may be many access paths available.

To understand File Servers you should know:

What are file servers?

What are the advantages of using them?

How do they function?

What is a File Server?

A file server, or I/O server, is:

A server that performs all RPG database operation codes.

This type of server has no effect on program logic, but it isolates the actual database from the application program. Once you implement a file server into a program, the file specification is no longer required.

Types of File Servers

There are three types of file servers you can use:

XS____ Input-Only/Caching Servers

They should be used when you would otherwise use a simple CHAIN operation for input only. You may request descriptions only, or the entire record. They provide caching logic to decrease physical I/O for duplicate requests.

XF_____ Input/Output File Servers

They will allow you to replace all RPG database operation codes for a given file with program calls. They can read, chain, setll, etc. to a file.

X_____ Special Scrub & Edit Servers

They can accept the cost center or account numbers in any valid data entry or file format, convert them to any format, validate the existence of the master record, and optionally pass the master record back to the calling program.

What are the Advantages of Using a File Server?

Minimizing maintenance of your software

The ability to change a physical file without having to make changes to application programs that use the file, or even having to recompile them

Using versions in future releases to allowing programs from a previous release to run against a changed database

The transition from an old database to a new database will be smoother. Instead of applying all new programs, you will only have to apply a new set of file servers.

Ability to implement one file server at a time without affecting the rest of your system

What are the Disadvantages of Using a File Server?

A file server is minutely slower because you are performing an external call to the server from your program.

File server programs tend to be large.

File servers are designed to perform all database functions that can be performed directly.

How Does a File Server Function?

A file server performs all the interfaces between a program and file. First you will load the **control parameters**, which contain information about the record you are retrieving. The file server converts the control parameters and retrieve a record back to the program.

If you plan on using any of the file server programs and you are asking them to return the database record, you must use the record image /COPY member that the corresponding I/O server uses. The /COPY member has the following naming convention:

I(file name) (release level).

For example: The copy member for the F0101 record image should appear as:

I/COPY JDECPY, I010171



Some technical file servers (X9800E, X0005) have a /COPY member with the naming convention:

I(file name)(special character)

I/COPY JDECPY, I0005U

A file server is called with two parameters:

```
For example: CALL   'XF0101'      81
              - - - - -
              PARM   PS@@@1
              PARM   I0101
```

PARAM	Explanation
PS@@@1	Contains all of the control parameters. It is contained in copy module I00XFSRV, and it is common to all file servers.
I(file name)	Contains the record image for updates and writes specific for each I/O server. It is an exact duplicate of the record image. It is contained in the copy module I(file name) (release level).

What Are Control Parameters?

The parameter PS@@1 contains all the control parameters for the file server. All control parameters, except the format name, are cleared every time the server returns control to the calling program. You must set the parameter values every time the server is called unless you are satisfied with the default values.

PARAM (Length)	Explanation																																				
@@ACCS (1)	The type of access to the file. The valid values are K for Keyed access (default), R for relative record number access and S for sequential access (DREAM Writer).																																				
@@OPER (10)	The operation to be performed to the file. The valid values are presented below: <table border="1"> <thead> <tr> <th>Operation</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>CHAIN</td> <td>Chain by key list or RRN</td> </tr> <tr> <td>CLOSE</td> <td>Close the access path</td> </tr> <tr> <td>DELET</td> <td>Delete current record or by key or RRN</td> </tr> <tr> <td>EXIST</td> <td>Test existence of record by key</td> </tr> <tr> <td>OPEN</td> <td>Open access path (optional)</td> </tr> <tr> <td>READ</td> <td>Read next record</td> </tr> <tr> <td>READE</td> <td>Read next equal key</td> </tr> <tr> <td>READP</td> <td>Read previous record</td> </tr> <tr> <td>REDPE</td> <td>Read previous equal key</td> </tr> <tr> <td>SETGT</td> <td>Set greater than key</td> </tr> <tr> <td>SETHV</td> <td>Set greater than with *HIVAL</td> </tr> <tr> <td>SETLL</td> <td>Set lower limit by key</td> </tr> <tr> <td>SETLV</td> <td>Set lower limit with *LOVAL</td> </tr> <tr> <td>UPDAT</td> <td>Update locked record</td> </tr> <tr> <td>UPDATC</td> <td>Update current record</td> </tr> <tr> <td>WRITE</td> <td>Write new record</td> </tr> <tr> <td>UNLCK</td> <td>Unlock current record</td> </tr> </tbody> </table>	Operation	Description	CHAIN	Chain by key list or RRN	CLOSE	Close the access path	DELET	Delete current record or by key or RRN	EXIST	Test existence of record by key	OPEN	Open access path (optional)	READ	Read next record	READE	Read next equal key	READP	Read previous record	REDPE	Read previous equal key	SETGT	Set greater than key	SETHV	Set greater than with *HIVAL	SETLL	Set lower limit by key	SETLV	Set lower limit with *LOVAL	UPDAT	Update locked record	UPDATC	Update current record	WRITE	Write new record	UNLCK	Unlock current record
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REDPE	Read previous equal key																																				
SETGT	Set greater than key																																				
SETHV	Set greater than with *HIVAL																																				
SETLL	Set lower limit by key																																				
SETLV	Set lower limit with *LOVAL																																				
UPDAT	Update locked record																																				
UPDATC	Update current record																																				
WRITE	Write new record																																				
UNLCK	Unlock current record																																				
@@LOCK (1)	Whether you do or do not want to lock the record. The valid values are Y to lock the record (default) or N to not lock the record. <p>Note: This parameter is only valid for chain and read operations, and is ignored for all other operations. You should set it to N when reading records not to be updated.</p>																																				

PARM (Length)	Explanation
<i>@@CHGR (1)</i>	Servers allow records to be read without lock and then be updated (UPDATC). In this situation, the record will be re-read before it is updated and if it has changed since it was last read, action will have to be taken. This parameter determines what that action will be. The valid values are: <ul style="list-style-type: none"> N- Do not update the record. A return code (RC) is returned and it comes up to the program to determine what action to take. (default) O- Overlay the changed record with the values you are currently updating. This will cause the changes made by the other user to be lost. W- Call the Changed Record Window (P0000U) that will prompt you for what action to take. Use this option with interactive programs only.
<i>@@KLST (10)</i>	The key list that will be used for access. The calling program does not specify a logical file so that the application program is isolated from any database changes. A value must be specified unless you are accessing the file by relative record number or sequentially (<i>@@ACCS = R or S</i>). <p>Note: The server maintains status information for each access path, so multiple paths can be accessed through the server in one program. The <i>@@KLST</i> parameter determines which access path is affected by the current call to the server.</p>
<i>@@KNUM (5,0)</i>	Specifies how many key fields in the list will be used for the current operation. This allows you to perform a read equal by a partial key. The valid values are 1 through the number of fields in the key, and blank for operations not requiring a key.
<i>@@FMT (10)</i>	Specifies the release level the program is expecting. This field does not get cleared upon returning from the server, so it can be set once in S999.
<i>@@#RRN (9,0)</i>	The relative record number for RRN access.
<i>I (file name)</i>	Record image for updates and writes. This parameter is optional for OPEN, CLOSE, DELET, SETHV, SETLV, and UNLCK operations.



Access paths are opened automatically when the first operation is performed. Therefore, it is not necessary to call the server with the OPEN operation.

A server normally remains active as long as the calling program is active. If you know you will need a server for only a limited period of time and do not want it taking up space in the PAG, you can call the server the *@@OPER* parameter blank, this causes the server to return and end.

What Are Returned Parameters?

When the file server returns the record to the program, there are several parameters associated with it.

PARM (Length)	Explanation
<i>@@IOR</i>	The I/O return code. The possible values are: blank – No errors NF – Record not found NE – Not equal for a READE operation EOF – End of file EQ – Equal for a SETLL operation BOF – Beginning of file RL – Record Locked, could not read RC – Record changed YES – Record found NO – Record not found ERR – Error, check error fields for explanation
<i>@@ERR (10)</i>	Short description of the cause of the problem (invalid, relock, error, required, deleted, chgrec).
<i>@@ERRS (10)</i>	The subject causing the error. The value could be a parameter (KLST), an operation (OPEN), or a file name (Fxxxx). Used in combination with @@ERR gives a good idea of what happened. The application program will generally only use @@IOR. @@ERR and @@ERRS are most useful for debugging purposes.
<i>@@#RRN (9,0)</i>	Returns the relative record number of the record just read (both input and output).
<i>I (filename)</i>	Returns an exact duplicate of the record image (both input and output).

Implementing a File Server

► Implementing a File Server

The following are generally the steps needed to set up a file server in a program. Some programs may differ.

1. Remove F-spec line for file being accessed through the server, and replace it with a comment mentioning access through the server.
2. Add clear statement in S999 (CLEAR PS@@1). You may optionally set @@FMT to 'A71' so it does not have to be set on every call.
3. Copy in I-spec copy module I00XFSRV.
4. Copy in I-spec copy module for the required server, following the naming convention: I(file name) (release level). Example: I010171
5. Code call to server for each database access. Naming convention for server is X(file name). For example, XF0101 for F0101 and any of its logicals.

Load control parameters

Load record image if a write or update

Call the server

Check the return code

6. Remove any open statements and key lists for this file from S999.
7. Remove any output specifications dealing with EXCPT unlock statements at the bottom of the program. The server will handle all of the unlock/lock operations.



When reading sequentially (@@ACCS = S) through the physical file or through a DREAM Writer based-on file that is overridden to the physical, some operations are not available. Do not use: CHAIN, EXIST, READE, REDPE, UPDATC, SETLL, SETGT, SETHV, SETLV. Since UPDATC is not available and you are going to update a record, you need to read with lock.

If the file you are accessing though the server is the DREAM Writer based on file, the Open Query Options on the DREAM Writer Additional Parameters screen need to be changed. Change all of the "Open for xxxxx" parameters to "Y".

Searching for Key Lists

When converting programs to use the file servers, make note of what logical files are being accessed, and what mode (update/input) and what each of the defined key lists for those access paths represent.

► To search for Key Lists

1. Look up the corresponding server key list name using P93KL (fast path, KL).
2. Search for the format name for files that are accessed in the program.
3. Replace each instance of file access code with a call to the server with the correct parameters.

```

G92                J.D. Edwards & Company
                   Computer Assisted Design (CAD)

... SYSTEM DESIGN TOOLS          ... PROGRAM DESIGN TOOLS
2. Software Versions Repository  14. Processing Options
3. Menus                         15. Help Instructions
4. Data Dictionary 93KL         File Server Key Lists
5. Model Relations  Server Name. . . . . XF0101
6. CASE Profiles    Skip To Key Name . . .
7. Function Key D
8. Vocabulary Over

Key      Access  S Key
List    Path    L Item  Description
ABKY01  F0101LA   AN8   Address Number . . . . .
ABKY02  F0101LB   DC    Description - Compressed
ABKY03  F0101LC   PH1   Phone Number . . . . .
ABKY04  F0101LD   PA8   Parent Number. . . . .
                   AN8   Address Number . . . . .
ABKY05  F0101LE   * AN8 Address Number . . . . .

Selection or command
====> KL

Thur, Jan 6, 1994
    
```


Tips When Using File Servers

When converting a program to use the file servers, always set the @@LOCK parameter to *N* when reading records through an access path that the program uses to open for input only.

The reason for this is that all access paths are open for update in the server. This can cause record lock problems when a program opens multiple paths into the same file. Correct use of the @@LOCK parameter solves these problems.

Some programs may be doing a CHAIN or EXCPT to unlock a record. Instead of replacing it with a CHAIN through the server, take advantage of the UNLCK operation. Performing an UNLCK on a file that does not have a record locked does not produce an error.

Some programs perform a SETLL to validate that a record exists. The new operation EXIST is provided to handle this function. It returns a YES or NO in return code (@@IOR).

There is only one instance in which a particular file server is active in your job at one time, so if one program calls another program that accesses the file through the same access path, they are actually sharing the same open data path. If it is possible that a call to another program could relocate a file pointer that could mess up the program, it would be a good idea to save the keys and reset the pointer (CHAIN or SETLL) upon returning.

File Server Examples

```

Seq No.U      C*-----
1.00         C*
2.00         C*
3.00         C*Index of Examples:
4.00         C*
5.00         C*
6.00         C*           Scan For:   To Find:
7.00         C*
8.00         C*           1.1         File Server Calls
9.00         C*           1.1.1       Chain
10.00        C*           1.1.2       Close
11.00        C*           1.1.3       Delete
12.00        C*           1.1.4       Existence Test
13.00        C*           1.1.5       Open
14.00        C*           1.1.6       Read
15.00        C*           1.1.7       Read Equal
16.00        C*           1.1.8       Read Previous
17.00        C*           1.1.9       Read Previous Equal
18.00        C*           1.1.10      Set Greater Than
19.00        C*           1.1.11      Set Lower Level
20.00        C*           1.1.12      Update
21.00        C*           1.1.13      Write
22.00        C*           1.1.14      Unlock
23.00        C*           2.1.1       X09031
24.00        C*-----
25.00        C*
26.00        C*1.1 File Server Calls:
27.00        C*
28.00        C*Determine from P93KL what the key list name is for the
29.00        C*access path being used; this name is moved to the @@KLST.
30.00        C*If the operation uses a key list, determine how many keys
31.00        C*the key list represents; this number is Z-Added to @@KNUM.
32.00        C*The format is the release level (A61) and can be moved to
33.00        C*@@FMT in S999 once for the rest of the calls.
34.00        C*-----
35.00        C*
36.00        C*       1.1.1 Chain:
37.00        C*
38.00        C*           Old Code:
39.00        CSR           ABKY02     CHAINI0101C           8199
40.00        C*
41.00        C*           New Code:
42.00        CSR           MOVEV'A61'     @@FMT
43.00        CSR           MOVEV'ABKY04'   @@KLST
44.00        CSR           MOVEV'CHAIN'    @@OPER
45.00        CSR           MOVE 'N'       @@LOCK
46.00        CSR           Z-ADD2        @@KNUM
47.00        CSR           CALL 'XF0101'
48.00        C*
49.00        CSR           PARM           PS@@1
50.00        CSR           PARM           I0101
51.00        CSR           @@IOR        COMP 'RL'           99
52.00        CSR           @@IOR        COMP 'NF'           81
53.00        C*-----
54.00        C*
55.00        C*       1.1.2 Close:
56.00        C*
57.00        C*           Old Code:
58.00        CSR           CLOSEF0902LD           99
59.00        C*
60.00        C*           New Code:
61.00        CSR           MOVEV'A61'     @@FMT
62.00        CSR           MOVEV'GLKY04'   @@KLST
63.00        CSR           MOVEV'CLOSE'    @@OPER
64.00        CSR           CALL 'XF0902'
65.00        C*
66.00        CSR           PARM           PS@@1
67.00        CSR           PARM           I0902
68.00        CSR           @@OR         COMP 'ERR'           99
69.00        C*-----
70.00        C*
71.00        C*       1.1.3 Delete:
72.00        C*
73.00        C*           Old Code:
74.00        CSR           DELETI0101B           99
75.00        C*
76.00        C*           New Code:
77.00        CSR           MOVEV'A61'     @@FMT
78.00        CSR           MOVEV'ABKY02'   @@KLST
79.00        CSR           MOVEV'DELET'    @@OPER

```

```

80.00 CSR          CALL 'XF0101'                                1~0o:l~l~-2~
81.00 C*
82.00 CSR          PARM          PS@@1                        10.11.92
83.00 CSR          PARM          I0101                       10.11.92
84.00 CSR          @@IOR        COMP 'RL'                      99                10.11.92
85.00 C*
86.00 C*          Old Code:
87.00 CSR          ABKYOB        DELETI0101B                  8399              10.11.92
88.00 C*
89.00 C*          New Code:
90.00 CSR          MOVEL'A61'     @@FMT                      10.11.92
91.00 CSR          MOVEL'ABY02'   @@KLST                      10.11.92
92.00 CSR          MOVEL'DELET'   @@OPER                      10.11.92
93.00 CSR          Z-ADD3         @@KNUM                      10.11.92
94.00 CSR          CALL 'XF0101'                                10.11.92
95.00 C*
96.00 CSR          PARM          PS@@1                        10.11.92
97.00 CSR          PARM          I0101                       10.11.92
98.00 CSR          @@IOR        COMP 'RL'                      99                10.11.92
99.00 CSR          @@IOR        COMP 'NF'                      83                10.11.92
100.00 C*-----
101.00 C*
102.00 C*          1.1.4 Existence Test:
103.00 C*
104.00 C*          Old Code:
105.00 CSR          ABKY02        SETLLI0101D                  9982              10.11.92
106.00 C*
107.00 C*          New Code:
108.00 CSR          MOVEL'A61'     @@FMT                      10.11.92
109.00 CSR          MOVEL'RPKY01'  @@KLST                      10.11.92
110.00 CSR          MOVEL'EXIST'   @@OPER                      10.11.92
111.00 CSR          Z-ADD3         @@KNUM                      09.11.92
112.00 CSR          CALL 'XF0101'                                10.11.92
113.00 C*
114.00 CSR          PARM          PS@@1                        09.11.92
115.00 CSR          PARM          I0101                       10.11.92
116.00 CSR          @@IOR        COMP 'YES'                     82                10.11.92
117.00 CSR          @@IOR        COMP 'ERR'                     99                11.12.92
118.00 C*-----
119.00 C*
120.00 C*          1.1.5 Open:
121.00 C*
122.00 C*          Old Code:
123.00 CSR          OPEN F0006
124.00 C*
125.00 C*          New Code:
126.00 CSR          MOVEL'A61'     @@FMT                      10.11.92
127.00 CSR          MOVEL'MCKY01'  @@KLST                      10.11.92
128.00 CSR          MOVEL,'OPEN '  @@OPER                      10.11.92
129.00 CSR          CALL 'YF0006'
130.00 C*
131.00 CSR          PARM          PS@@1                        10.11.92
132.00 CSR          PARM          I0006                       10.11.92
133.00 C*-----
134.00 C*
135.00 C*          1.1.6 Read:
136.00 C*
137.00 C*          Old Code:
138.00 CSR          READ I0901A    9982                      10.11.92
139.00 C*
140.00 C*          New Code:
141.00 CSR          MOVEL'A61'     @@FMT                      10.11.92
142.00 CSR          MOVEL'GMKY01'  @@KLST                      10.11.92
143.00 CSR          MOVEL'READ '   @@OPER                      10.11.92
144.00 CSR          MOVE 'N'       @@LOCK                      05.12.92
145.00 CSR          CALL 'XF0901'                                10.11.92
146.00 C*          ----
147.00 CSR          PARM          PS@@1                        10.11.92
148.00 CSR          PARM          I0901                       10.11.92
149.00 CSR          @@IOR        COMP 'EOF'                     82                10.11.92
150.00 CSR          @@IOR        COMP 'RL'                      99                10.11.92
151.00 C*-----
152.00 C*
153.00 C*          1.1.7 Read Equal:
154.00 C*
155.00 C*          Old Code:
156.00 CSR          ABKY03        READEI0101C                  9987              10.11.92
157.00 C*
158.00 C*          New Code:
159.00 CSR          MOVEL'A61'     @@FMT                      10.11.92
160.00 CSR          MOVEL'ABKY03'  @@KLST                      10.11.92
161.00 CSR          MOVEL'READE'   @@OPER                      10.11.92
162.00 CSR          MDVE 'N'       @@LOCK                      05.12.92

```

Advanced Programming Concepts and Skills

163.00	CSR		CALL 'XF0101'			10.11.92
164.00	C*		-----			10.11.92
165.00	CSR		PARM	PS@@1		10.11.92
166.00	CSR		PARM	I0101		10.11.92
167.00	CSR	@@IOR	COMP 'NE'		87	10.11.92
168.00	CSR	@@IOR	COMP 'RL'		99	10.11.92
169.00	C*		-----			10.11.92
170.00	C*					17.11.92
171.00	C*	1.1.8	Read Previous:			17.11.92
172.00	C*					17.11.92
173.00	C*	Old Code:				17.11.92
174.00	CSR		READPI0901B		9982	17.11.92
175.00	C*					17.11.92
176.00	C*	New Code:				17.11.92
177.00	CSR		MOVE 'A61'	@@FMT		17.11.92
178.00	CSR		MOVE 'GMKY02'	@@KLST		17.11.92
179.00	CSR		MOVE 'READP'	@@OPER		17.11.92
180.00	CSR		MOVE 'N'	@@LOCK		05.12.92
181.00	CSR		CALL 'XF0901'			17.11.92
182.00	C*		-----			17.11.92
183.00	CSR		PARM	PS@@1		17.11.92
184.00	CSR		PARM	I0901		17.11.92
185.00	CSR	@@IOR	COMP 'BOF'		82	17.11.92
186.00	CSR	@@IOR	COMP 'RL'		99	17.11.92
187.00	C*		-----			17.11.92
188.00	C*					10.11.92
189.00	C*	1.1.9	Read Previous Equal:			10.11.92
190.00	C*					10.11.92
191.00	C*	Old Code:				10.11.92
192.00	CSR	ABKY04	REDPEI0101C		9987	10.11.92
193.00	C*					10.11.92
194.00	C*	New Code:				10.11.92
195.00	CSR		MOVE 'A61'	@@FMT		10.11.92
196.00	CSR		MOVE 'ABKY03'	@@KLST		10.11.92
197.00	CSR		MOVE 'REDPE'	@@OPER		10.11.92
198.00	CSR		MOVE 'N'	@@LOCK		05.12.92
199.00	CSR		CALL 'XF0101'			10.11.92
200.00	C*		-----			10.11.92
201.00	CSR		PARM	PS@@1		10.11.92
202.00	CSR		PARM	I0101		10.11.92
203.00	CSR	@@IOR	COMP 'NE'		87	10.11.92
204.00	CSR	@@IOR	COMP 'RI'		99	10.11.92
205.00	C*		-----			10.11.92
206.00	C*					10.11.92
207.00	C*	1.1.10	Set Greater Than:			10.11.92
208.00	C*					10.11.92
209.00	C*	Old Code:				10.11.92
210.00	CSR	GBKEY	SETGTI0902A		8498	10.11.92
211.00	C*					10.11.92
212.00	C*	New Code:				10.11.92
213.00	CSR		MOVE 'A61'	@@FMT		10.11.92
214.00	CSR		MOVE 'GBKY01'	@@KLST		10.11.92
215.00	CSR		MOVE 'SETGT'	@@OPER		10.11.92
216.00	CSR		2-ADD3	@@KNUM		10.11.92
217.00	CSR		CALL 'XF0902'			10.11.92
218.00	C*		-----			10.11.92
219.00	CSR		PARM	PS@@1		10.11.92
220.00	CSR		PARM	I0902		10.11.92
221.00	CSR	@@IOR	COMP 'NF'		84	10.11.92
222.00	CSR	@@IOR	COMP 'ERR'		98	10.11.92
223.00	C*					10.11.92
224.00	C*	Old Code:				10.11.92
225.00	CSR	*HIVAL	SETGTI0902A		99	10.11.92
226.00	C*					10.11.92
227.00	C*	New Code:				10.11.92
228.00	CSR		MOVE 'A61'	@@FMT		10.11.92
229.00	CSR		MOVE 'GBKY01'	@@KLST		10.11.92
230.00	CSR		MOVE 'SETTEE'	@@OPER		10.11.92
231.00	CSR		CALL 'XF0902'			10.11.92
232.00	C*		-----			10.11.92
233.00	CSR		PARM	PS@@1		10.11.92
234.00	CSR		PARM	I0902		10.11.92
235.00	CSR	@@IOR	COMP 'ERR'		99	10.11.92
236.00	C*		-----			10.11.92
237.00	C*					10.11.92
238.00	C*	1.1.11	Set Lower Limit:			10.11.92
239.00	C*					10.11.92
240.00	C*	Old Code:				10.11.92
241.00	CSR	ABK01	SETLLI0101C		849985	10.11.92
242.00	C*					10.11.92
243.00	C*	New Code:				10.11.92
244.00	CSR		MOVE 'A61'	@@FMT		10.11.92
245.00	CSR		MOVE 'ABKY03'	@@KLST		10.11.92

246.00	CSR		MDVEL' SETILL'	@@OPER		10.11.92
247.00	CSR		Z-ADD1	@@KNUM		10.11.92
248.00	CSR		CALL 'XF0101'			10.11.92
249.00	C*		-----			10.11.92
250.00	CSR		PARM	PS@@1		10.11.92
251.00	CSR		PARM	I0101		10.11.92
252.00	CSR	@@IOR	COMP 'EOF'		84	10.11.92
253.00	CSR	@@IOR	COMP 'EQ'		85	10.11.92
254.00	CSR	@@IOR	COMP 'ERR'		99	10.11.92
255.00	C*					10.11.92
256.00	C*	Old Code:				10.11.92
257.00	CSR	*LOVAL	SETLLI0101C		99	10.11.92
253.00	a*					10.11.92
259.00	C*	New Code:				10.11.92
260.00	CSR		MOVIL' A61'	@@FMT		10.11.92
261.00	CSR		MOVFL' ABKY03'	@@KLST		10.11.92
262.00	CSR		MOVEL' SETLV'	@@OPER		10.11.92
263.00	CSR		CALL' XF0101'			10.11.92
264.00	C*		-----			10.11.92
265.00	CSR		PARM	PS@@1		10.11.92
266.00	CSR		PARM	I0101		10.11.92
267.00	CSR	@@IOR	COMP 'ERR'		99	10.11.92
263.00	C*		-----			10.11.92
269.00	C*					10.11.92
270.00	C*	1.1.12 Update:				10.11.92
271.00	C*					10.11.92
272.00	C*	Old Code:				10.11.92
273.00	CSR		UPDATI0902A		99	10.11.92
274.00	C*					10.11.92
275.00	C*	New Code:				10.11.92
276.00	CSR		MOVEL' A61'	@@FMT		10.11.92
277.00	CSR		MDVEL' BBKY01'	@@KLST		10.11.92
273.00	CSR		MDVEL' UPDAT'	@@OPER		10.11.92
279.00	CSR		CALL 'XF0902'			10.11.92
230.00	C*		-----			10.11.92
231.00	CSR		PARM	PS@@1		10.11.92
232.00	CSR		PARM	I0902		10.11.92
233.00	CSR	@@IOR	COMP 'ERR'		99	10.11.92
234.00	C*					10.11.92
235.00	C*	Old Code:				10.11.92
236.00	C*		Read...			10.11.92
237.00	C*		Unlock...			10.11.92
233.00	C*		Chain...		82	10.11.92
239.00	C*					10.11.92
290.00	CSR		UPDATI0902A		99	10.11.92
291.00	C*					10.11.92
292.00	C*	New Code:				10.11.92
293.00	C*		Read with no lock...			10.11.92
294.00	C*					10.11.92
295.00	CSR		MOVEL' A61'	@@FMT		10.11.92
296.00	CSR		MOVEL' GBKY01'	@@KLST		10.11.92
297.00	CSR		MOVEL' UPDTC'	@@OPER		10.11.92
298.00	CSR		Z-ADD4	@@KNUM		10.11.92
299.00	CSR		CALL 'XF0902'			10.11.92
300.00	C*		-----			10.11.92
301.00	CSR		PARM	PS@@1		10.11.92
302.00	CSR		PARM	I0902		10.11.92
303.00	CSR	@@IOR	COMP 'NF'		82	10.11.92
304.00	CSR	@@IOR	COMP 'ERR'		99	10.11.92
305.00	C*		-----			10.11.92
306.00	C*					09.11.92
307.00	C*	1.1.13 Write:				10.11.92
308.00	C*					09.11.92
309.00	C*	Old Code:				09.11.92
310.00	CSR		WRITEI0101K		99	10.11.92
311.00	C*					09.11.92
312.00	C*	New Code:				09.11.92
313.00	CSR		MDVEL' A61'	@@FMT		10.11.92
314.00	CSR		MDVIL' ABKY11'	@@KLST		10.11.92
315.00	CSR		MDVEL' WRITE'	@@OPER		10.11.92
316.00	CSR		CALL 'XF0101'			10.11.92
317.00	C*		-----			09.11.92
313.00	CSR		PARM	PS@@1		09.11.92
319.00	CSR		PARM	I0101		10.11.92
320.00	CSR	@@IOR	COMP 'ERR'		99	10.11.92
321.00	C*		-----			09.11.92
322.00	C*					09.11.92
323.00	C*	1.1.14 Unlock:				10.11.92
324.00	C*					09.11.92
325.00	C*	Old Code:				09.11.92
326.00	CSR		EXCPTUNLOCK			10.11.92
327.00	C*		:			10.11.92
328.00	OI0101A	E	UNLOCK			10.11.92

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```

329.00 C*
330.00 C*          New Code:
331.00 CSR          MOVEVL'A61'          @@FMT
332.00 CSR          MOVEVL'ABKY01'       @@KLST
333.00 CSR          MOVEVL'UNLCK'       @@OPER
334.00 CSR          CALL 'XF0101'
335.00 C*          -----
336.00 CSR          PARM                   PS@01
337.00 CSR          PARM                   I0101
338.00 CSR          @@IOR COMP 'ERR'          99
339.00 C*-----
340.00 C*
341.00 C*      2.1.1   X09031:
342.00 C*
343.00 CSR          CALL 'X09031'
344.00 C*
345.00 CSR          PARM '2'              #CALC 1
346.00 CSR          PARM                   #CO 5
347.00 CSR          PARM                   #DG 60
348.00 CSR          PARM                   #PN 20
349.00 CSR          PARM                   #FY 20
350.00 CSR          PARM                   #CTY 20
351.00 CSR          PRAM                   #EDT 1
352.00 CSR          PARM '1'              #DGSY 1
353.00 C*
354.00 C*-----
355.00 C*
356.00 C*      2.2.1   X0901:
357.00 C*
358.00 CSR          CALL 'X0901'
359.00 C*          -----
360.00 CSR          PARM '1'              PSSYM 1
361.00 CSR          PARM RPAM              PSOMOD 1
362.00 CSR          PARM '1'              PSIMOD 1
363.00 CSR          PARM RPGLBA           PSANI 29
364.00 CSR          PARM *BLANK           PSMCU 12
365.00 CSR          PARM *BLANK           PSOBJ 6
366.00 CSR          PARM *BLANK           PSSUB 8
367.00 CSR          PARM                   PSERRM 4
368.00 C*
369.00 C*-----
370.00 C*
371.00 C*      2.3.1   X0006:
372.00 C*
373.00 CSR          CALL 'X0006'
374.00 C*          -----
375.00 CSR          PARM 'I'              PSOMOD 1          output mode
376.00 CSR          PARM                   PSIMOD 1          input mode
377.00 CSR          PARM SFMCU            PSMCU 12          cost center
378.00 CSR          PARM                   PSERRM 4          error flag
379.00 CSR          PARM                   I0006             F0006 record
380.00 C*
381.00 C*-----

```

Commonly Used File Servers

Case	File Server	Description	Notes
X	X0005	User Defined Codes Server	Retrieve Only
X	X0006	Retrieve Cost Center Master	Retrieve & Scrub
	XF0006	Cost Center I/O	Add/Change/Delete
	X0010	Automatic Next Numbering	Retrieve & Increment
	X9203	DD Alpha Description	Retrieve Only
X	X9800E	Data Dictionary Info	Editing Info
	XF0101	Address Book I/O	Add/Change/Delete
	XS0101LA	Address Book	Retrieve Only
	X0901	Account Master	Retrieve & Formats
	XF0901	Account Master I/O	Add/Change/Delete
	X41LOCN	Location Format	
	X41LOT	Lot Number Assignment	
	X41DUP	Lot Master Duplicate	Edits
	X4101	Item Master	Retrieve & Edit
	X4108	Lot Master Update	Creates & Updates
	X4111	Write to Item Ledger	Writes Only
	XF4111	CARDEX I/O	Retrieve Only
	XF42119	Sales History I/O	Add/Change/Delete
	XF42199	Sales Detail Ledger I/O	Add/Change/Delete
	XF43199	Purchasing History I/O	Add/Change/Delete

Functional Servers

About Functional Servers

A functional server allows you to enhance the processing and maintenance of your application programs. Functional servers provide a central location for standard business rules about entering documents, such as vouchers, invoices, and journal entries. These business rules establish the following:

- Data dictionary default values
- Field edits and valid values
- Error processing
- Relationships between fields or applications

To work with functional servers you should understand:

- What functional servers are
- What the advantages of using them are
- How to set up the business rules
- How they function

What Are Functional Servers?

A functional server is:

A server that performs all transaction validation and database updates.

This type of server is designed to relieve application programs from the burden of performing edit and update operations. This functionality is removed from the application program and placed into a server.

A functional server is a called program. The application program calling the server must tell the server what action is to be performed for every transaction. In turn, the functional server will return error messages, record error flags, and record update flags to the application program to use when determining the result of a call to a server.

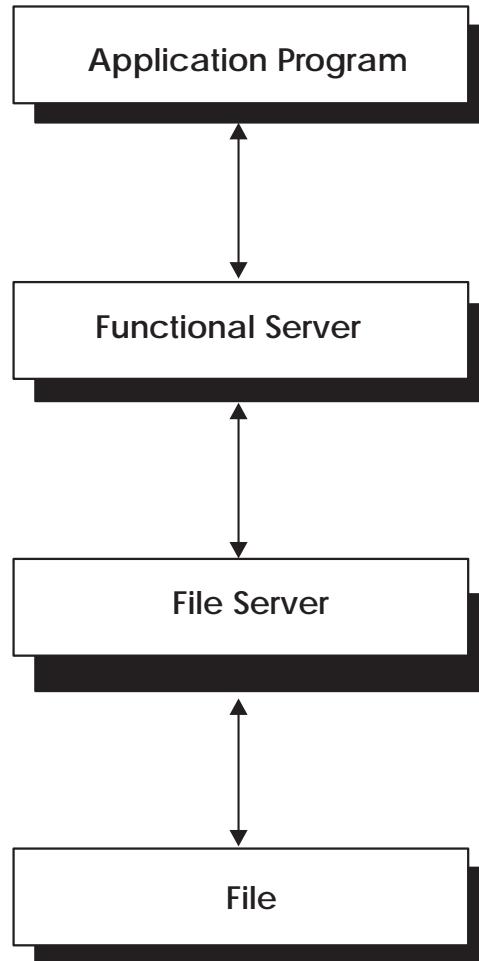
Functional Servers have the following naming convention:

XT (file name) (server version)

For example: The function server for the F0411 file should appear as:

XT0411Z1

The following diagram depicts the flow of a typical program using a functional server:



What are the Advantages of Using a Functional Server?

Minimizes maintenance and versioning of your software.

Data editing routines and actual file updates can be isolated.

Provide greater flexibility. Multiple programs can use the same functional server.

The transition from an old database to a new database will be smoother. Instead of applying all new programs, you will only have to apply a new set of functional servers.

Ability to implement one functional server at a time without affecting the rest of your system.

What are the Disadvantages of Using a Functional Server?

A functional server is minutely slower because you are performing an external call to the server from your program.

Functional server programs tend to be large.

Setting Up Business Rules for an Entry Program

▶ To set up business rules for an entry program

1. Create a DREAM Writer version for a specific functional server program (for example, XT0411Z1 for voucher entry).
2. Set the processing options within the version according to your company requirements.
3. Specify the version you want the entry program to use in the processing options for that entry program.

You can have all your entry programs use the same DREAM Writer version (and thus, use the same rules) or you can set up different DREAM Writer versions. J.D. Edwards provides DREAM Writer version ZJDE0001 as the default functional server version for your entry programs.



Only the person responsible for system-wide setup should make changes to the functional server version. For more information about how to set up DREAM Writer versions, see the *Technical Foundation Guide*.

How Does a Functional Server Function?

When a functional server is called, an entire transaction will be processed.

Generally, once a functional server is called, it will receive the data entered by you and load it into a user space.

It will then perform its functionality on the data.

Finally, it will return the requested data back to the calling program via the user space. If any errors occur, they will be loaded into a user index.

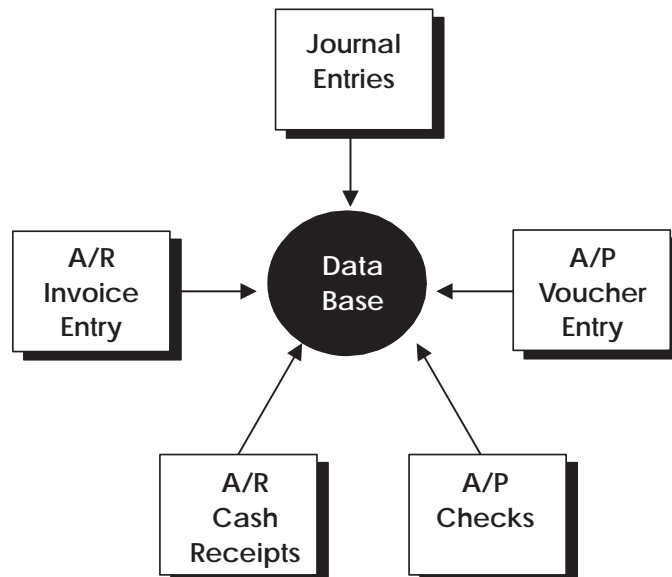
Three interfaces are used to communicate with the functional server. They are:

- The call parameters
- The control fields within each user space line
- The error index

Functional Server Highlights

- Provides all editing for a transaction
- Provides field default values
- Provides all database updates
- Performs inquiry for an entire transaction
- Runs interactively or in batch
- Supports a multitude of user interfaces

Basic Accounting Transactions



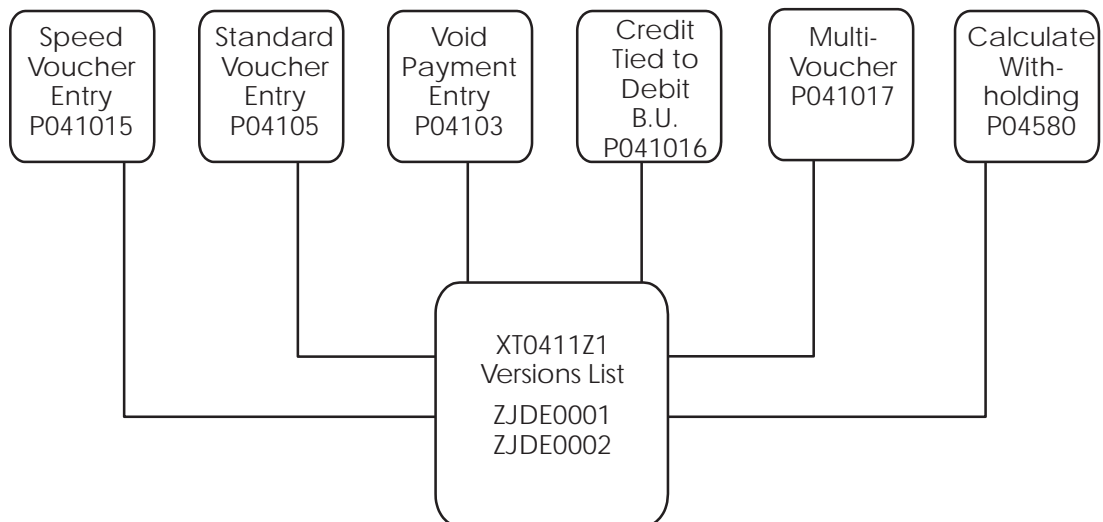
In the Financial System there are five basic transactions:

- Journal Entries
- A/P Voucher Entry
- A/P Checks
- A/R Invoice Entry
- A/R Cash Receipts

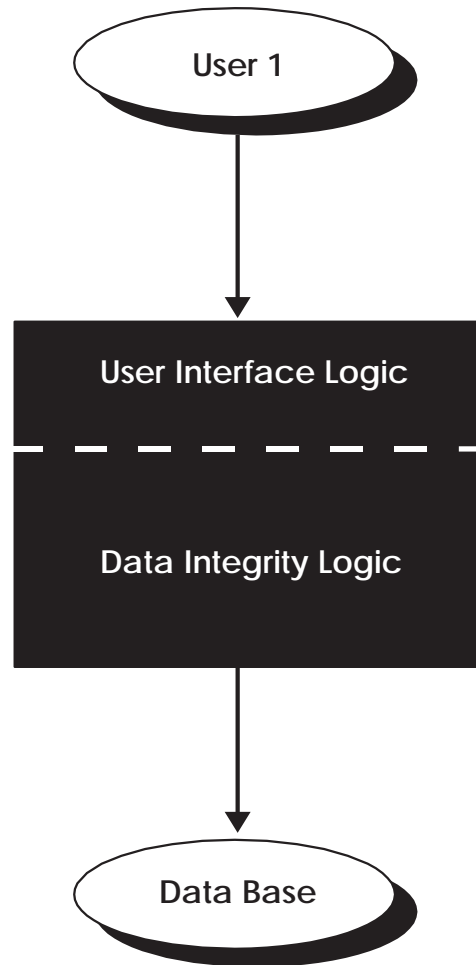
J.D. Edwards uses one program for each part or transaction of the system.

Example: Voucher Processing Functional Server

The following graphic shows the programs that use the voucher processing functional server. J.D. Edwards provides two demo versions of the functional server, ZJDE0001 and ZJDE0002.



Program Example – Traditional Architecture



Each program contains both the User Interface Logic and the Data Integrity Logic. You would access this one program to interface with the database.

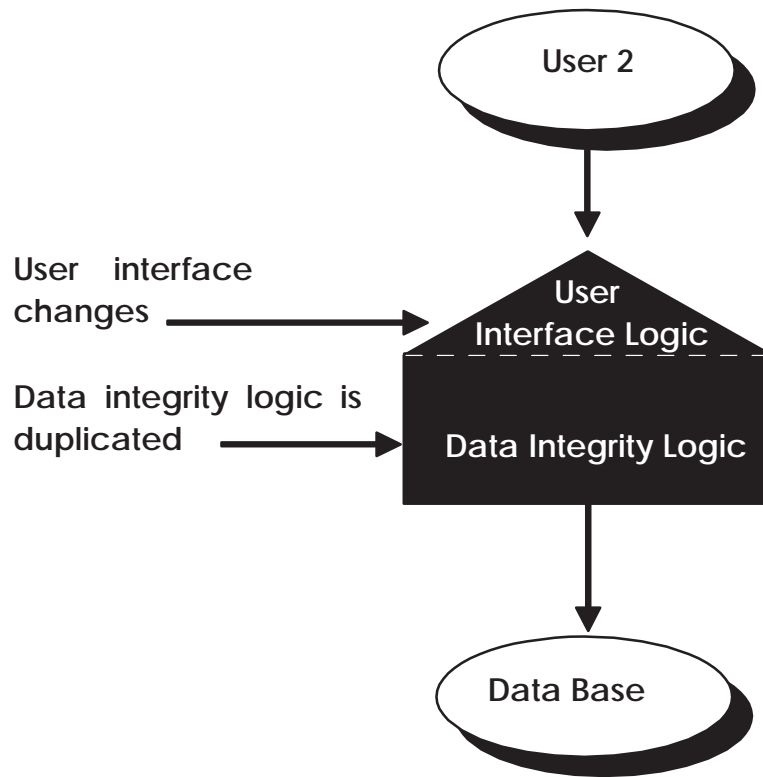
User Interface Logic

- Screen format
- Skip to and section
- Fill screen
- Field formatting
- Help functions
- Error message display
- Touch and feel

Data Integrity Logic

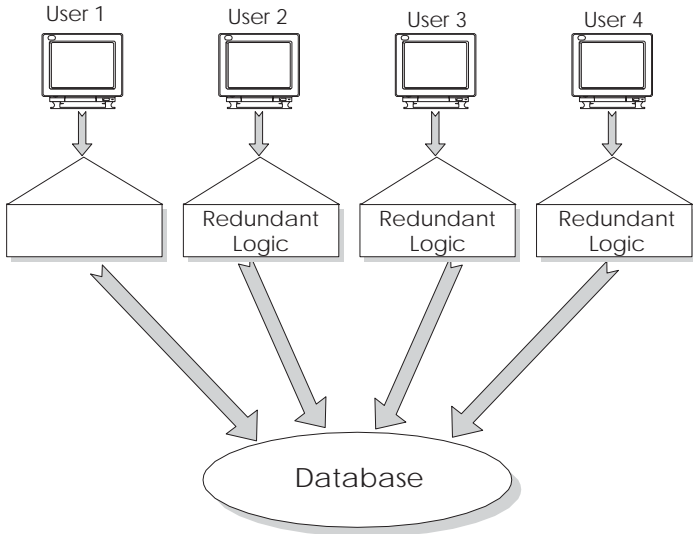
- Field editing
- Multi-field editing
- Transaction editing
- Default logic
- Error message selection
- Tax processing
- Currency processing
- Database update

**Example – Traditional Architecture . . .
. . . Alternative Method of Entry**



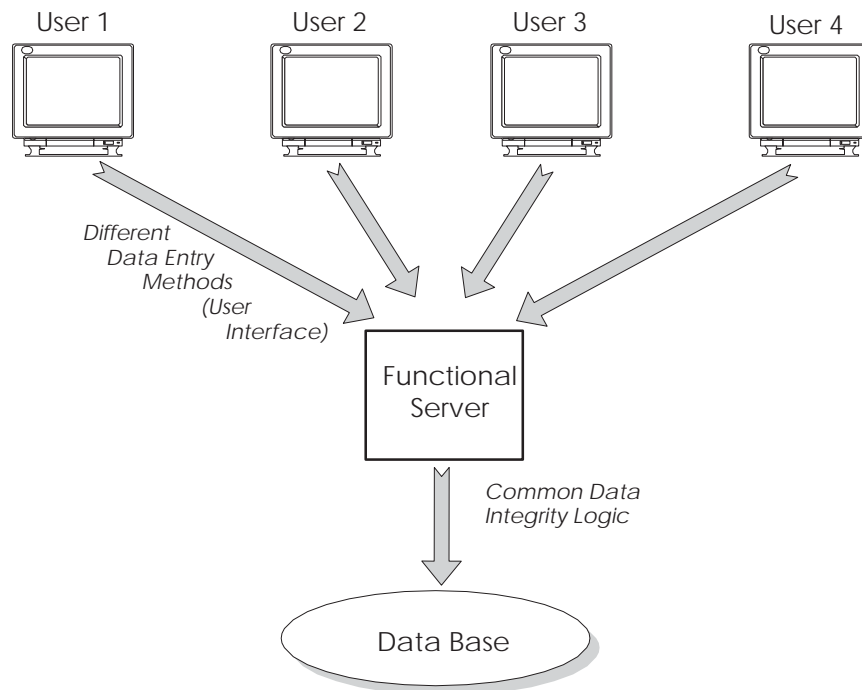
If a user wanted the screen to look different, the User Interface Logic would have to change. The Data Integrity Logic remained the same as it was duplicated.

**Example – Traditional Architecture . . .
. . . Various Entry Methods**



Several users each wanted their own User Integrity logic. The Data Integrity Logic remained the same and was duplicated too many times.

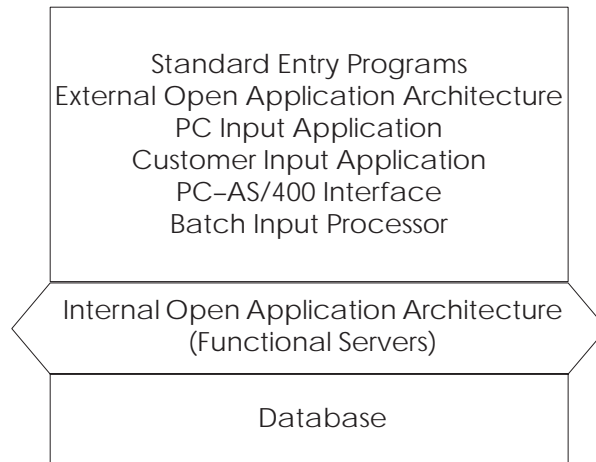
**Example – JDE Open Application Architecture . . .
. . . Various Entry Methods**



The creation of a Functional Server allows you to maintain the Data Integrity Logic in one common program. The Functional Server becomes separated from each User Integrity Logic program. All of the User Integrity Logic programs access one Functional Server to interface with the database. This concept is called an **Open Application Architecture**.

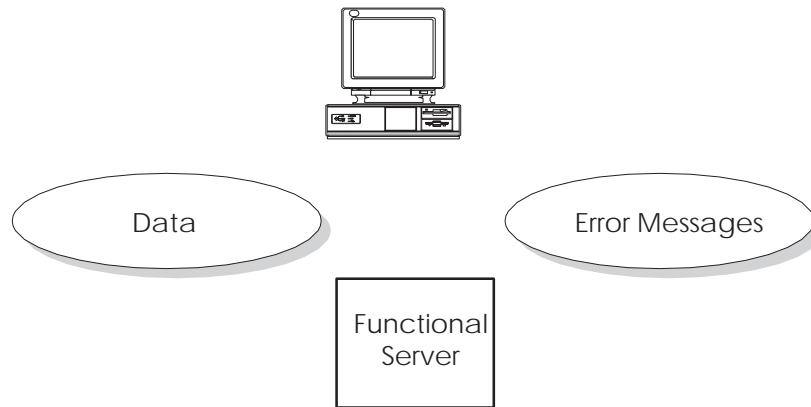
Open Application Architecture

In the Open Application Architecture, the database is separated from each User Integrity Logic program by the Functional Server. The advantages of the Open Application Architecture are:



- Automatic Consistency
- Reduced Maintenance Burden
- Stability of Custom Code
- Separation of Development Efforts
- Performance Enhancements

Functional Server Interface



A Functional Server must handle two basic components:

Data

Error messages

Functional Server Transaction Data

Arithmetic:

- 1) Full transaction passed to server at one time
- 2) A single transaction can have more than 1,000 lines
- 3) Each line from 500 to 1,000 characters long

= A lot of space

Story Problem:

How can program A pass program B a one thousand line transaction without using a 1-meg parameter?

Functional Server Error Messages

Arithmetic:

- 1) Each field can have an error
- 2) Each line can have 150 or more fields
- 3) Each transaction can have hundreds of lines

= A lot of space

Story Problem:

How can program A pass program B a one thousand line transaction without using a 1-meg parameter?

Answers

- #1. User Space
- #2. User Index

Functional Server Interface

A Functional Server can interact with a User Space and a User Index by passing and receiving parameters.

Functional Server Parameters

Single data structure defined in /COPY module

Two sections: fixed and application specific

- Fixed parameters
 - Action code (edit, update, inquire)
 - Number of lines in transactions
 - DREAM Writer version of Functional Server
- Application specific parameters
 - Contains header information for a transaction
 - Document number of transaction
 - Total amount of transaction
 - Batch number of transaction

Functional Server User Space

- One big data area
- Maximum of 16 meg
- Beginning 100 bytes of user space reserved
- Data portion of user space contains formatted lines
 - User space lines defined by /COPY module
 - Each line contains three sections

Control section

Application specific section

Record format section

Functional Server User Index

- One big keyed data area
- Used to pass error messages back to application
- User index entry defined using a /COPY module
- Each user index entry contains two sections
 - Key
 - Application ID
 - Line number (assigned by application program)
 - Data item in error
 - Error code
 - Data – value of erroneous data

Functional Server /COPY Modules

- All User Space and User Index formats contained in /COPY modules
- All database record formats contained in /COPY modules
- /COPY module I00FS@@ contains generic data structures and constants
- Each Functional Server has its own I00FSxx /COPY module to define application specific data structures

Creating User Space and User Index

- OS/400 APIs
- X00991
 - Called once for each Functional Server an application program intends to use
 - Creates user space and user index for each Functional Server
 - Returns name and library where user space exists
 - Returns the length each user space line should be

Accessing the User Space

- Writing to the user space X98CHGUS
 - .J.D. Edwards version of QUSCHGUS API
 - Updates a user space beginning at offset x for length
 - Similar to CHGDTAARA command
- Reading from the user space QUSRTVUS
 - API
 - Retrieves data from a user space beginning at offset x for length
 - Similar to RTVDTAARA command
- Application responsibilities
 - Remember number of lines written to user space
 - Increment user space offset

Accessing the User Index

- User Index written to by Functional Server
- Reading from the User Index
 - C00RIX/COPY module reads the User Index
 - C00RIX returns formatted error message defined by /COPY module
 - First execution of C00RIX reads first entry in User Index
 - Subsequent executions of C00RIX do read nexts
 - Uses X00IDX under the covers
- Application responsibilities
 - Remember the value of your Application ID (typically program name)
 - Set flag for initial read of User Index by C00RIX
 - Use the data item name and line number in error to set on screen indicators

Interactive Program Cycle Using a Functional Server

- Mainline – no change
- S001 – no change
- S003
 - No change for add, change, or delete
 - Call Functional Server to perform an inquiry
- S004 – Retrieve records from User Space for display on screen

Interactive Program Cycle Using a Functional Server

- S005:
 - Application program performs “scrubs” only
 - Write data records to User Space
 - Call Functional Server to perform edits
 - Read each line from User Space to redisplay defaulted information
 - Execute C00RIX to determine each data item in error so that screen error indicators may be set ON
- S010 – call Functional Server to perform an update

The Call Parameters for the Functional Server

The call parameters provide commands to the functional server which apply to all transaction lines in the input user space.

PARM (Length)	Explanation
<i>#PFUNC (1)</i>	Specifies a function code. The valid values are: <ul style="list-style-type: none"> 0 Edit and Update 1 Edit only 2 Update only I Inquire
<i>#PVERS (3)</i> <i>(10 as of A6)</i>	The DREAM Writer version number you are executing. This parameter uses the version number to retrieve processing options for the server. The default version number will be 001. This allows global processing options to be set at the server level, instead of for each program.
<i>#PSPCN (20)</i>	The name of the user space which the program has used. The user space contains the modified database records. Characters 1–10 contain the space name, and characters 11–20 contain the library name.
<i>#PSPCB (9,0)</i>	The byte position within the user space where the application data begins. Characters in the space prior to this position contain header information used by the functional server.
<i>#PNBRL (5,0)</i>	The number of lines in the input user space which the application program has loaded. When inquiring, this contains the number of lines output to the user space.
<i>#PWARN (1)</i>	This parameter contains a code explaining how you want warnings to be handled. The valid values are: <ul style="list-style-type: none"> 0 Normal warning processing 1 Treat warnings as errors 2 Ignore warnings
<i>#PCYCL (1)</i>	This parameter is only used if the #PWARN parameter specifies normal warning processing. The valid values are: <ul style="list-style-type: none"> 0 No cycle, all cycle processing ignored 1 First cycle, all warning messages are sent to the program 2 Second cycle, only warning messages not previously sent are sent to the program
<i>#PDFTC (1)</i>	Specifies how you want field values to be defaulted. 0 will default field values for add lines only and 1 will default field values for change or add lines.
<i>#PXATP (3)</i>	The application specific transaction type.

PARM (Length)	Explanation
<i>#PLVL (1)</i>	The transaction level. 0 implies that each detail record to be updated or added has been sent in the input user space. 1 applies only to changes or deletions because only one record is sent in the input user space and the server will change or delete all other records for that transaction.
<i>#PPROG (10)</i>	The name of the calling program. This is used by the server to update the program name field in the updated database records.
<i>#PAPPL (10)</i>	The application ID value used for writing entries to the error index. Generally, this may be the same value as the calling program.
<i>#PFLDS (4,0)</i>	The number of fields which have been loaded to the Field Names Array parameter.
<i>#PFMT (10)</i>	The record format identifier the application program has used. This is used for versioning, allowing the database to change without the need for recompiling the application program.
<i>#PEDIT (1)</i>	Indicates the overall result of edits performed against all transaction lines. 0 implies that the edits went OK, 1 means there were some warnings, 2 is errors occurred.
<i>#PUPDT (5,0)</i>	The number of database updates which occurred. This will allow the program to know whether any updates actually occurred.
<i>#PERR (4)</i>	Specifies any errors that occurred within the server. A non-blank value indicates a fatal error occurred.
<i>#PFERR (4)</i>	Contains the first error message found during editing.
<i>#PFDTA (4)</i>	Contains the data item of the first field which had an error during editing.
<i>#P#MDE (1)</i>	For currency translations, this contains the mode of entry. If this value is passed as blank, the server will output the default mode of entry.
<i>#PCRCD (3)</i>	For currency translations, this contains the currency code of entry. If this value is passed as blank, the server will output the default currency code.
<i>#PCRR (15,7)</i>	For currency translations, this contains the currency exchange rate of entry. If this value is passed as zero, the server will output the default currency rate.
<i>#PIDXN (20)</i>	The name of the user index which the functional server will use to return error messages to the program. Characters 1–10 contain the index name, and characters 11–20 contain the library name.
<i>#PSPCL (5,0)</i>	The total length of each user space record. This includes both the user space control fields and the database record format.

PARM (Length)	Explanation
<i>#OSPSPEC (100)</i>	This is a data structure which is redefined by each server. Generally, this will contain the key fields which a specific server uses.
<i>VariableVary</i>	An array of field names which the program has used. Only fields in this array will be updated in the database. If the first element contains *ALL, then all fields will be used. The number of field names parameter should contain the number of entries loaded into this array.

Control Fields within the User Space

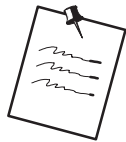
The input user space can contain multiple lines for each control field.

PARM (Length)	Explanation
<i>#SPCAC (1)</i>	The line action code. The valid values are: A Add the record D Delete the record C Change the record U Change the record if it already exists, otherwise add the record V Void the record
<i>#SPCID (15,0)</i>	Used by the program to uniquely identify each line in the user space. (optional)
<i>#SPCER (1)</i>	The line error code. X = the line is OK 1 = some warnings 2 = errors.
<i>#SPCUP (1)</i>	The line update code. 0 = the line was not updated 1 = updated.
<i>#SPCRR (9,0)</i>	Contains the database relative record number which corresponds to this user space record. For adds, this is only loaded following an update operation. For changes and deletes, this is updated following an edit operation.
<i>#SPCMN (2,0)</i>	Contains the database physical file member number which corresponds to this user space record. For adds, this is only loaded following an update operation. For changes and deletes, this is updated following an edit operation.
<i>#SPCPG (12)</i>	Allows the program to store up to 12 bytes of information with each user space record.
<i>#SPCAP (100)</i>	Any application specific information which must be passed to the server for each transaction line, but is not contained within the transaction record format.
<i>Variable Vary</i>	Externally described record format for the transaction record.

Error Message Index Line (C00RIX)

The output error message index contains warning and error messages issued for each line in the user space. The structure of the message index line is as follows:

Field (Length)	Explanation
<i>#IDXAP (10)</i>	The application identifier from the input parameter. Allows a program to access only its error messages.
<i>#IDXID (15,0)</i>	The line identifier from the input user space.
<i>#IDXFN (10)</i>	The data item portion of the field name.
<i>#IDXER (4)</i>	Contains the data dictionary error message code.
<i>#IDXMD (88)</i>	Contains the error message substitution data. Generally, this is the value of the field which caused the error.



Interactive programs using a functional server must include a call to P0000EX (in addition to P0000E) in S00EX when the F7 (Display Errors) key is pressed. P0000EX will retrieve and display the error messages contained in the Error Message Index (C00RIX).

Example – Functional Server Program Sections

```
E*****
E*   Copy Composite Member for Functional Server
E*
E/COPY JDECPY,E00FS@@
E*****
```

Copy module containing generic data structures for functional server.

```
I/COPY JDECPY,I00XFSRV
```

Contains control parameter list for file servers

```
I/COPY JDECPY,I010161
```

Contains record image of F0101 version A6.1 for file servers.

```
CLEARPS@@
MOVE$SVCO      KY@@
CALL 'XS0010'      81
-----
PARM           PS@@
PARM           DS0010
```

Call to file server XS0010 to retrieve currency code.

```
*IN81      IFEQ '0'
RT@@       ANDEQ ' '
           MOVE *BLANKS      PS@@
           MOVE$CCCRCD      KY@@
           CALL 'XS0013'      81
           -----
           PARM             PS@@
DS0013     PARM DS0013      PS0013
RT@@       IFNE 'N'
CVCDEC     ANDNE*BLANK
           MOVE CVCDEC      $CDO
           ENDIF
           ENDIF
```

Call to file server XS0013 to retrieve display decimals.

```
           MOVE$A61'      @@FMT
           MOVE$ABKY01'   @@KLST
           MOVE$CHAIN'    @@OPER
           MOVE 'Y'       @@LOCK
           Z-ADD1         @@KNUM
           CALL 'XF0101'
           -----
           PARM           PS@@1
           PARM           I0101
@@IOR      COMP 'NF'      81
```

Call to file server XF0101 to retrieve record

```

*IN81      IFEQ '0'
           ADD  $#FC      ABAFCY
           MOVEL 'A61'    @@FMT
           MOVEL 'ABKY01' @@KLST
           MOVEL 'UPDAT'  @@OPER
           CALL 'XF0101'
           -----
           PARM          PS@@1
           PARM          I0101
@@IOR      COMP 'ERR'      98
    
```

Call to file server XF0101 to update record

```

Load AR Specific Parameters

           MOVE #GLDCT    #ARDCT
           MOVE $SVKCO    #ARKCO
           Z-ADD#GLDOC    #ARDOC
           Z-ADD#GLICU    #ARICU
           MOVE #GLICT    #ARICT
           MOVE *BLANK    #ARSPL

Load functional server parms for edit/update.

           MOVEL#XIDXN    #PIDXN      index name
           MOVEL#SPAR     #PSPEC      applicatio
           MOVE ##EDUP    #PFUNC      function
           MOVEL$#311     #PVERS      DW version
           Z-ADD1         #PNBRL      number of lines
           Z-ADD$#ARBG    #PSPCB      space offset
           MOVE ##IGNW    #PWARN      warning handler
           MOVE ##OFF     #PLVL       detail level
           MOVE ##OFF     #PDFTC      default on chg
           MOVE ##PROG    #PPROG      program name
           MOVE `INV'     #PXATP      type
           MOVE #ARSN     #PSPCN      space name
           Z-ADD#ARSL     #PSPCL      space length
           Z-ADD$@AR      #PFLDS      number of field
           MOVE *BLANKS   #PFMT
           MOVE ##AR1     #PFMT      format name

           CALL 'XT0311Z1'      81
           -----
           PARM          #PPARM
           PARM          @ARN
    
```

Call functional server XT0311Z1


```

User space description
      MOVEL#SUGL      #SSPCD
Current user space offset
      Z-ADD$#GLBG    #SPCOF
Set update flag
      MOVE ##OFF     #SPCUP
General Ledger record
      MOVEAGL01      @#SSPC
Application specific line data
      MOVEL#SSGL     #SPCAP
Write record to user space
      CALL `X98CHGUS`#PCHUS      81
      -----
      ENDIF                      ##edit
    
```

Write records to user space for functional server.

```

Load G/L Functional Server Specific Parameters

      MOVE *ZERO          #GLDOC          One-to-One Rel
      MOVE `RF`          #GLDCT          Document Type
      MOVE $$VKCO        #GLKCO          Document Co.
      Z-ADD$GLDG        #GLDG           G/L Date
      Z-ADD$GLDG#       #GLDG#          G/L Date
$FICU  IFEQ ` `          #GLICU          Batch Number
      Z-ADD*ZERO        #GLICU          Batch Number
      ELSE
      Z-ADD$ICU         #GLICU          Batch Number
      ENDIF
      MOVE `I`          #GLICT          Batch Type
      MOVE $$VCO        #GLCO           Company
      MOVE *BLANKS     #GLMOD          Add a Model
      MOVE *BLANKS     #GLIMD          Change a Model
      MOVE *BLANKS     #GLRDI          Redistribute JE
      MOVE #ARSN       #GLCSN          A/R Spc Name
      MOVE ##AR1       #GLCFM          A/R Spc Fmt
      MOVE ##ARSL      #GLCLN          A/R Spc Length
      MOVE ##OFF       #GLCDG
      MOVE *ZERO       #GLCD
      MOVE ##ON        #GLONE          One-to-One Rel

-----

Call functional server - XT0911Z1 - Edit and Update
-----

Load functional server parms for edit and update

      MOVE $GACTN       #PFUNC          Action Code
      MOVEVL$#911      #PVERS          DW version
      MOVE #GLSN        #PSPCN          space name
      Z-ADD$#GLBG      #PSPCB          space offset
      Z-ADD1           #PNBRL          number of lines
      MOVE ##IGNW      #PWARN          warning handler
      Z-ADD*ZERO       #PCRR           Exchange Rate
      MOVE ##OFF       #PCYCL          cycle nes
      MOVE ##OFF       #PDFTC          default on chg
      MOVE `INV`       #PKATP          type
      MOVE ##OFF       #PLVL          detail level
      MOVE ##PROG      #PPROG          program name
      Z-ADD$@GL        #PFLDS          number of field
      MOVE *BLANKS     #PFMT
      MOVEVL##GL1      #PFMT          format name
      MOVE *BLANKS     #P#MDE          mode of entry
      MOVE *BLANKS     #PCRC          currency code
      MOVE *BLANKS     #PCRR          exchange rate
      MOVE *BLANKS     #PIDXN          index name
      MOVEVL#XIDXN     #PSPCL          space length
      Z-ADD$GLSL       #PSPCL          space length
      MOVEVL#SPGL      #PSPEC          application par

      CALL `XT0911Z1`          81
      -----
      PARM                  #PPARM
      PARM                  @GLN
  
```

Call functional server
XT0911Z1

```

User space description

      MOVEVL#SUAR      #SSPCD

Current user space offset

      Z-ADD$#ARBG     #SPCOF

Read record from user space

      CALL `QUSRTVUS` #PRTUS          81
      -----
  
```

Retrieve record from user
space.

```

Create Functional Server Objects for XT0311Z1

      CLEAR#PCRT
      MOVE ##AD      #PCRTF
      MOVE *BLANK    #PCRTN
      MOVEL'XT0311Z1'#PCRTN

      CALL 'X00991 '  ----- 81
      -
      PARM          #PCRT
    
```

Create user space and user index for XT0311Z1.

```

Create Functional Server Objects for XT0911Z1

      CLEAR#PCRT
      MOVE ##AD      #PCRTF
      MOVE *BLANK    #PCRTN
      MOVEL'XT0911Z1'#PCRTN

      CALL 'X00991 '  ----- 81
      -
      PARM          #PCRT
    
```

Create user space and use index for XT0911Z1.

Available Functional Servers

Case	Funct. Server	Description	Notes
	XT0006Z1	Cost Center Master	
	XT0101Z1	Address Book	
	XT0311Z1	Accounts Receivable	
	XT0311Z1E	Accounts Receivable	User Exit
	XT0411Z1	Accounts Payable	
	XT0411Z1E	Accounts Payable	User Exit
	XT0411Z2	Accounts Payable Check	
	XT06116Z1	Payroll Time Entry	
	XT0901Z1	Account Master	
	XT0911Z1	Journal Entry	
	XT0911Z1E	Journal Entry	User Exit
	XT4102Z1	Item Balance	



Exercises

See the exercises for this chapter.

Source Debugger

About Source Debugger

There are two types of programs that can be executed under the J.D. Edwards Source Debugger — interactive and batch. The only difference when running the Source Debugger on an Interactive program compared to a Batch program, is the initial execution statements. Once the Source Debugger has begun, all of the features are the same for both interactive and batch programs.

The J.D. Edwards Source Debugger is a tool designed to help you determine where a bug exists in your program. You can apply the Source Debugger to any program, whether it is in production or development. Since the Source Debugger displays source code, *you must have source on installed on your machine.*

The source code you see while running the Source Debugger is displayed in SEU Browse mode, so you can not change a line within the program. However, you may display and/or change the value of any field, variable, or indicator within the program. In addition, you can add or remove a breakpoint anywhere in the program.

Before You Begin

- If you are **not** accessing the J.D. Edwards training machine, you must recompile programs into your student object library or your client object library, CLTOBJ or DEVOBJ before executing JDEDDBG.

This ensures that the program is observable and therefore, accessible to the Source Debugger.

- If you are accessing the J.D. Edwards training machine, you may execute the JDEDDBG command on any of the following programs: P92801, P928011, P928200, P01051, J928401, and P928401. You may also recompile any desired program in JDFOBJ to run in the Source Debugger.

► **To initiate the J.D. Edwards Source Debugger**

1. Type the J.D. Edwards debug command (JDEDBG) and press F4.

```

Type choices, press Enter.

Program Name: . . . . . P01051      Name
Source File: . . . . . JDESRC      Name, *OBJECT, *SPLF
Library: . . . . . JDFSRC      Name

F3=Exit   F4=Prompt   F5=Refresh   F10=Additional parameters   F12=Cancel   Bottom
F13=How to use this display   F24=More keys
    
```

Field	Description
<i>Program Name</i>	Type your program name
<i>Source File</i>	Type the file name that contains the source code of your program. Generally, this is JDESRC.
<i>Library</i>	Type the name of the library that contains the source file. Generally, this is JDFSRC for your production environment or DEVSRC for your development environment.

2. Enter the correct values in the proper fields and press Enter to start the Source Debugger.

Now, any time the program being debugged is executed, the source code will display in *debug mode*, until you end the Source Debugger.

▶ To execute the program being debugged

Since it is an interactive program, you can either call the program from a command line or select the menu option that will execute the program.

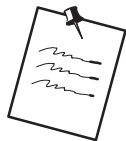
Call program name ('parameters')

Selection/Menu

After you have executed the program, the first thing you will see is the program source code.

```
3701          JDE Visual Debug          JDESRC          JDFSRC
Scan:          /0001          P01051
Current Breakpoint: /0001
01.00 H/TITLE P01051 - Address Book - Who's Who
02.00 H* -----
03.00 H*
04.00 H* Copyright (c) 1985,1986
05.00 H* J. D. Edwards & Company
06.00 H*
07.00 H* This unpublished material is proprietary to
08.00 H* J. D. Edwards & Company. All rights reserved.
09.00 H* The methods and techniques described herein are
10.00 H* considered trade secrets and/or confidential.
11.00 H* Reproduction or distribution, in whole or in part,
12.00 H* is forbidden except by express written permission
13.00 H* of J. D. Edwards & Company.
14.00 H* -----
15.00 H*
16.00 H*
17.00 F* PROGRAM REVISION LOG
18.00 F*

F2=JDE Command Line F5=ADDBKP F6=ADDBKP w/prompt F7=DSPPGMVAR
F8=CHGPGMVAR F13=Display Indicators F16/15=Scan Fwd/Bkwd F24=More
```



The source code is displayed in browse mode, so you cannot edit or change any code.

Using Debugger with a Batch Program

The program may exist in your production environment, your development environment, or both.

To use Debugger with a batch program you should complete the following tasks:

- Determine the program environment
- Initiate the J.D. Edwards Source Debugger
- Execute the program
- Set the break point
- Continue execution

▶ **To determine the program environment**

This step is the same as the first one for an interactive program.

1. Go to the Software Versions Repository and inquire on your program, to determine which environment the Source Debugger will be run against.

▶ **To initiate the J.D. Edwards Source Debugger**

This step is similar to debugging an interactive program. The difference is that you must enter the debug command **twice**.

The first time you initiate in J.D. Edwards Source Debugger (JDEDDBG — F4), the *Program Name* will be the CL Program.

1. Enter the correct values in the proper fields on the Debug Program form and press Enter.

```
Debug Program (JDEDBG)

Type choices, press Enter.

Program Name: . . . . . J928400      Name
Source File: . . . . . JDESRC       Name, *OBJECT, *SPLF
Library: . . . . . JDFSRC          Name

F3=Exit   F4=Prompt   F5=Refresh   F10=Additional parameters   F12=Cancel
F13=How to use this display   F24=More keys

Bottom
```

- 2. Enter the J.D. Edwards Source Debugger command (JDEDBG-F4) again, but this time change the *Program Name* will be the RPG Program Name.

The reason for this is, you cannot run the Source Debugger on a program that is submitted and executed in a subsystem. You must “trick” the Source Debugger into thinking that your batch program is actually an interactive program.

```
Debug Program (JDEDBG)

Type choices, press Enter.

Program Name: . . . . . P928400      Name
Source File: . . . . . JDESRC       Name, *OBJECT, *SPLF
Library: . . . . . JDFSRC          Name

F3=Exit   F4=Prompt   F5=Refresh   F10=Additional parameters   F12=Cancel
F13=How to use this display   F24=More keys

Bottom
```

▶ To execute the program

Since you are executing a batch program interactively, you must call the CL Program from a command line.

call CL program ('program name' 'version')

The CL Program source code appears.

```

93701                                     JDE Visual Debug      JDESRC      JDFSRC
Scan:                                     J928401
Current Breakpoint: /0001
0001.00 /******
0002.00 /*
0003.00 /* Program. . . . . J928401
0004.00 /*
0005.00 /* Description. . . . . Inventory by Cost Center
0006.00 /*
0007.00 /* Program Revision Log
0008.00 /*
0009.00 /*
0010.00 /*          Date          Programmer          Description
0011.00 /*          -----          -----          -----
0012.00 /*          11/10/93          PB908300          SAR # 00365595
0013.00 /*
0014.00 /******
0015.00 J928401: PGM          (&PSPID &PSVERS)
0016.00 /*
0017.00 /* ----- Define program file(s) and variable(s). -----
0018.00 /*

F2=JDE Command Line F5=ADDBKP F6=ADDBKP w/prompt F7=DSPPGMVAR
F8=CHGPGMVAR F13=Display Indicators F16/15=Scan Fwd/Bkwd F24=More

```



The source code is displayed in browse mode, so you cannot edit or change any code.

▶ To set the break point

Set a break point on the line testing the job type in order to change a variable in the CL. The variable &JOBTYPE normally edits against a batch program being executed by calling it from a command line.

1. Find the line of code that contains the variable &JOBTYPE.

```

93701          JDE Visual Debug          JDESRC          JDFSRC
Scan:          Current Breakpoint: /0001          J928401
0044.00 /*
0045.00 /* ----- Override Printer files to one spool file. ----- *
0046.00 /*
0047.00          OVRPRTF          FILE(R98COVER ) TOFILE(R928401) SHARE(*YES)
0048.00          OVRPRTF          FILE(R98RPTH ) TOFILE(R928401) SHARE(*YES)
0049.00          OVRPRTF          FILE(R928401)          SHARE(*YES)
0050.00 /*
0051.00 /* ----- Retrieve job name and submitting message queue. ----- *
0052.00 /*
0053.00          RTVJOBA          JOB(&JOBID) SBMSGQ(&PSMSGQ) TYPE(&JOBTYPE)
0054.00          IF          COND(&JOBTYPE='1') THEN(DO)
0055.00          SNDPGMSG          MSGID(JDE9991) MSGF(QJDEMSG) +
0056.00          MSGDTA('J928401') TOPGMQ(*EXT)

F2=JDE Command Line F5=ADDBKP F6=ADDBKP w/prompt F7=DSPPGMVAR
F8=CHGPGMVAR F13=Display Indicators F16/15=Scan Fwd/Bkwd F24=More
    
```

2. Press F5 anywhere on the line containing &JOBTYPE to set the breakpoint.

The line will highlight, indicating that a breakpoint has been set on that line.

▶ To continue execution

1. Allow your program to continue executing. Press F3 to continue to a breakpoint.

The line that you set the breakpoint on will display in reverse image. This indicates that the program has reached this point in the CL program and is ready to execute this line.

You must change the value of &JOBTYPE to something other than 1, and other than the value specified in the CL program.

2. To change the value of &JOBTYPE, press F8 to access the Change Program Variable form.

```

Change Program Variable (CHGPGMVAR)

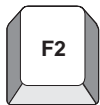
Type choices, press Enter.

Program variables:
Program variable . . . . . '&JOBTYPE'
-
- Basing pointer variable . . .
-
- + for more values
-
New value . . . . . '2'
Program . . . . . > J928401 Name, *DFTPGM

```

3. Complete the Change Program Variable form and press enter.
The value of &JOBTYPE is now changed to your specified value.
4. Press F3 to allow the CL program to continue processing.
The RPG program source is displayed next.

Features of the J.D. Edwards Source Debugger



F2 – J.D. Edwards Command Line Window

To display a J.D. Edwards command line window, press F2.



F3 – Continue processing

Once the program hits a breakpoint or when you first enter the source, F3 will allow the program to continue processing.



F5 – Add breakpoint

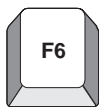
Position the cursor on an executable line and press F5 to add a breakpoint. You **cannot** add breakpoints to a comment line, only to executable lines. Once the breakpoint is set, the line will be highlighted. If the program executes a line with a breakpoint set on it, the line will appear in reverse image and the program will pause **before** executing the line.

```

93701          JDE Visual Debug          JDESRC          JDFSRC
Scan:                                     P01051
-----
Current Breakpoint: /0001
0319.00      C*
0320.00      C          $AUTO          CASEQ'1'          S003          24
0321.00      C*
0322.00      C          END
0323.00      C*
0324.00      C*          Begin normal program processing.
0325.00      C*          -----
0326.00      C*
0327.00      C          *INLR          DOWEQ'0'
0328.00      C*
0329.00      C*          If subfile page display not set, set subfile page display.
0330.00      C*
0331.00      C          #SFRNO          IFLE 0
0332.00      C          Z-ADD1          #SFRNO
0333.00      C          END
0334.00      C*
0335.00      C*          Write video screen.
0336.00      C*          @$MEMO determines which format is written

F2=JDE Command Line  F5=ADDBKP  F6=ADDBKP w/prompt  F7=DSPPGMVAR
F8=CHGPGMVAR  F13=Display Indicators  F16/15=Scan Fwd/Bkwd  F24=More

```



F6 – Add breakpoint with prompt

Position the cursor on an executable line and press F6 to add a breakpoint with a prompt. You **cannot** add breakpoints to a comment line, only to executable lines. Once the breakpoint is set, the line will highlight. If the program executes a line with a breakpoint set on it, the line will reverse image and the program will pause **before** executing the line.

```

                                Add Breakpoint (ADDBKP)

Type choices, press Enter.

Statement identifier . . . . . > 62100_____ Character value
      + for more values
Program variables:
  Program variable . . . . .  *NONE
-
-   Basing pointer variable . . .
-
-           + for more values
-
-           + for more values
Output format . . . . .  *CHAR_____ *CHAR, *HEX
Program . . . . .  > P01051_____ Name, *DFTPGM

                                More...
F3=Exit   F4=Prompt   F5=Refresh   F10=Additional parameters   F12=Cancel
F13=How to use this display   F24=More keys
  
```



F7 – Display Program Variable

Position the cursor on an executable line and press F7 to display the values of all of the variables on that line. Breakpoints within copy modules will stop at the correct source sequence number.

```
Display Program Variables

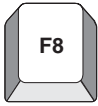
Program . . . . . : P01051
Recursion level . . . . . : 1
Start position . . . . . : 1
Format . . . . . : *CHAR
Length . . . . . : *DCL

Variable . . . . . : *IN99
Type . . . . . : CHARACTER
Length . . . . . : 1
*...+...1...+...2...+...3...+...4...+...5
'0'

Variable . . . . . : *IN93
Type . . . . . : CHARACTER
Length . . . . . : 1
*...+...1...+...2...+...3...+...4...+...5
'0'

Press Enter to continue.

F3=Exit  F12=Cancel
```

F8 – Change Program Variable

To change the value of a variable, press F8 and type the correct values in the prompt screen.

```

Change Program Variable (CHGPGMVAR)

Type choices, press Enter.

Program variables:
Program variable . . . . .
-
- Basing pointer variable . . .
-
- + for more values
-
New value . . . . .
Program . . . . . > P01051      Name, *DFTPGM

F3=Exit   F4=Prompt   F5=Refresh   F10=Additional parameters   F12=Cancel      Bottom
F13=How to use this display   F24=More keys

```

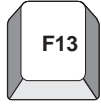


F10 – Move Line to Top of Page



F12 – Remove Current Breakpoint

From anywhere on the screen, press F12 to remove the current breakpoint. The line is no longer highlighted, indicating the line is no longer set as a breakpoint. The program will immediately continue processing.



F13 – Display Indicator Values

To display the current values of all indicators, press F13.

```

                                Display Program Variables

Program . . . . . : P01051
Recursion level . . . . . : 1
Start position . . . . . : 1
Format . . . . . : *CHAR
Length . . . . . : *DCL

Variable . . . . . : *IN
Lower/upper bounds . . . . . : (1,99)
Type . . . . . : CHARACTER
Length . . . . . : 1
Element -----Values-----
 1 '0' '0' '0' '0' '0' '0' '0' '0' '0' '0'
11 '0' '0' '0' '0' '0' '0' '0' '0' '0' '0'
21 '0' '0' '0' '0' '0' '0' '0' '0' '0' '0'
31 '0' '0' '0' '0' '0' '0' '0' '0' '0' '0'
41 '0' '0' '0' '0' '0' '0' '0' '0' '0' '0'
51 '0' '0' '0' '0' '0' '0' '0' '0' '0' '0'

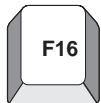
Press Enter to continue.

F3=Exit  F12=Cancel
    
```



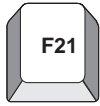
F15 – Scan Backward

Type in a value on the *Scan Line* at the top of the screen and press F15 to scan backward from the point you are at to the end of the source code. If a match is found, the line containing the matching value will be displayed. To continue scanning backward, press F15 again.



F16 – Scan Forward

Type in a value on the *Scan Line* at the top of the screen and press F16 to scan forward from the point you are at to the beginning of the source code. If a match is found, the line containing the matching value will be displayed. To continue scanning forward, press F16 again.



F21 – Command Line Window

To display a command line, press F21.

ENDDBG End Debug

To stop the J.D. Edwards Source Debugger, enter ENDDBG from a command line. You can not enter ENDDBG while displaying the source code of a program in debug. This command will end debug mode for all programs in the Debugger at that point.



You can remove a single program from debug mode by using the RMVPGM (remove program) command.



Exercises

See the exercises for this chapter.

Software Scan and Replace

About Software Scan and Replace

The Software Scan and Replace feature lets you scan source members to accomplish the following:

- Scan for a particular item and replace it with a new item
- Produce a list of all members that meet the search criteria
- Scan for a particular item and insert a source file after each occurrence

Because you can potentially replace source code across all systems, this job is submitted to batch and held in the job queue until you release it.

To Work with Software Scan and Replace

1. From the Computer Assisted Programming menu, select Developer's Workbench. From the Developer's Workbench menu, select Software Scan and Replace.

```
98810                Software Scan & Replace
System code. . . . . 55                (Blank = all)
Function code. . . . . RPG            (Blank = all)
Specific object. . . . .              (Generic = *)    (Blank = all)
File ID. . . . . JDESRC
Source library . . . . . DEVSRC       (Defaults to source libr in member master)
Scan argument:
  I00SC
  (If search argument contains imbedded blanks enclose argument with >.)
Replacement argument:
  I00RSC
  (If argument contains imbedded blanks enclose argument with >.)
Column replacement: Beginning column - ____ Ending column - ____
Replacement Overflow Code . . . . . _
Insert Source From: File. . ____ Libr. . ____ Member. ____
```

The previous screen illustrates how you replace the copy module I00SC with the copy module I00RSC for all RPG members coded to install system code 55.

2. Complete the form and press Enter.

The job submits to batch and a message displays. The job is held on the job queue.

3. When you are ready to process the job, go to the Work with Submitted Jobs form (hidden selection 33) and release the job.

Report

When the job completes, it produces a report that indicates those objects where the scan and replace occurred.

```
98810                                J. D. Edwards & Company                1
                                         Scan Software Source                4/01/91

      System 55
      Function: RPG
      Object:
      File: JDESRC
      Source Lib: DEVSRC
      Argument: "I00SC"
      Replace By: "I00RSC"
      Column End: 000
      Column End: 000
      Allow Ovrfl:
      Insert Frm- File:                Libr:                Memb:
      Action   : Replacement          Scan/Replace Characters= 05/06
      5501G    - Item Maintenance - Gregg                1st Occurrence at 010200
      P5501X   - Item Maintenance                1st Occurrence at 010200
      P55011X  - Item Information Update                1st Occurrence at 009200
```

Guidelines

If you leave the Replacement argument field blank, the utility produces a listing of all source members that meet the search criteria.

Because this job could be used to update all code across systems and could severely impact processing, it is automatically held.

Use this job to replace a copy module across systems or determine a listing of members that meet certain criteria. Use with caution.

Performance Issues

About Performance Issues

Following are some performance issues you should consider when executing J.D. Edwards software, changing current J.D. Edwards programs or writing new programs:

Purge your files on a regular basis to avoid excess, unnecessary records existing in files.

Minimize the number of open files in a program. If a file may not be used, define it as a User Controlled Open file.

Use User Spaces and User Indexes wherever possible.

Use File Servers and Functional Servers wherever possible.

Minimize the number of subroutine calls within your program.

Weigh the advantages of inter-program calls. Although this method is very modular in design, you should consider the effect on performance.

Substitute the comparison of a literal with the comparison of a variable.

For example: Use *ON and *OFF to set an indicator on and off rather than a 1 and 0.

Consider flexibility vs. performance when using User Defined Codes, Vocabulary Overrides, and loading Data Dictionary values extensively



Group Jobs

Objectives

- Work with the J.D. Edwards Group Job Window
- Work with J.D. Edwards group jobs
- Work with non-J.D. Edwards group jobs
- Work with the J.D. Edwards Attention MENU Window
- Use IBM Pass-Through with group jobs

About Group Jobs

The Group Jobs window allows you to perform a number of tasks from a single window, saving you both time and effort. You can perform the following functions from this window:

- Run up to 16 jobs under a single signon
- Execute (or run) CL and fast path commands from a single command line
- Execute (or run) J.D. Edwards Hidden Selections

In addition to the added convenience, the Group Jobs function keeps the files for each of the jobs selected opened, whether they are currently active or not.

Perform the following tasks:

- Access the J.D. Edwards Group Job Window
- Create New Group Jobs
- Activate Suspended Group Jobs
- Terminate Job Groups
- Change to Non-Group Mode
- Sign Off with Suspended Group Jobs



Work with the J.D. Edwards Group Job Window

About Working with the J.D. Edwards Group Job Window

You can perform several operations using the J.D. Edwards Group Jobs Window, including:

- Create new group jobs
- Activate suspended group jobs
- Terminate group jobs
- Change to non-group mode
- Sign off with suspended group jobs

Before You Begin

In order for a user to access the J.D. Edwards Group Job Window at any time, the ATTN key program should be set to call the J. D. Edwards Group Job Window program (P98GRP).

▶ To set the ATTN key program

1. Select User Information from the Security Officer Menu

```

0092                User Information                Action Code. . . . . I

User ID. . . . . TEACH
Library List . . . . . QTEMP JDFOBJ COMMON PRODDATA JDFSRC OGPL

User Security:
  User Key . . . . . A J K DP F
  Initial Menu to Execute. . . . . A
  Initial Program to Execute . . . . .
  Menu Level. . . . . -
  User Type. . . . . TEACHER
  User Class/Group . . . . .
  Batch Job Queue. . . . . QBATCH
  Job Scheduling Priority. . . . . 5 5
  Logging(level/severity/messages) . . . . . 4 00 *NOLIST
  Output Queue . . . . . P4B
  Optional Printer File Library. . . . .
  Current Library. . . . .
  Employee Address Number (PPAT) . . . . .
  Set Attention Program . . . . . P98GRP
F6=Display/Lang Pref  F9=Library Inquiry  F21=Print Lib List  F24=More Keys
    
```

2. Enter the J.D. Edwards Group Job Window program ID (P98GRP) in the *Set Attention Program* field.

Accessing the J.D. Edwards Group Job Window

After the ATTN Key program has been set up in the J.D. Edwards software you can access the Group Job Window.

▶ **To access the J.D. Edwards Group Job Window**

1. Sign off and sign back on to reset the ATTN key program within the J.D. Edwards Menu Driver.
2. Press the ATTN key and the following will be displayed.

```

G0                                J.D. Edwards & Company
                                General Business Systems

... GENERAL BUSINESS SYSTEMS
 2. Address Book
 3. General Accounting
 4. Accounts Payable
 5. Accounts Receivable
 6. Financial Reporting 98GRP-----Group Jobs-----E
 7. Modeling & Allocatio Q  Description      Group Job  Status
 8. Fixed Asset          -          GROUP01  Active
 9. Payroll              -
10. Human Resources     -
11. Electronic Mail     -

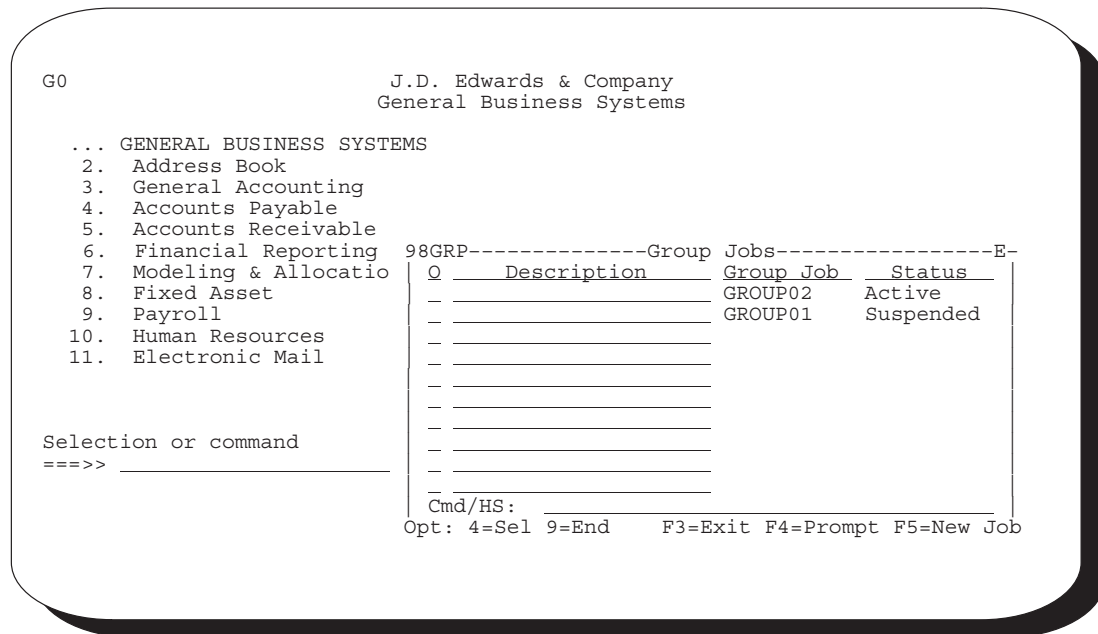
Selection or command
====> _____

                                Cmd/HS: _____
                                Opt: 4=Sel 9=End   F3=Exit F4=Prompt F5=New Job
    
```

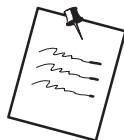
Creating New Group Jobs

► To create new group jobs

1. Press F4 on the Group Jobs form for New Job.
2. When the J.D. Edwards Menu Driver is displayed, press the ATTN key and the following will be displayed.



The new group job GROUP02 is now in process. The group job GROUP01 was suspended when the function key F5 was pressed.



If you are set up to access J.D. Edwards software by J98INITA, your library list selection list will appear. Select an environment and then you will be able to display the J.D. Edwards Group Job Window.

Signing Off With Suspended Group Jobs

You may use two different methods to sign off with suspended group jobs.

▶ **To sign off with suspended group jobs**

Select one of the following methods:

Press F18 within the J.D. Edwards Group Job Window.

Enter SIGNOFF, 90, or '.' on any J.D. Edwards Menu.



Since group jobs are created under one signon, all group jobs are terminated when the signoff command is executed.

Work with Non-J.D. Edwards Group Jobs

► To work with non-J.D. Edwards group jobs

To create group jobs that call a program outside the J.D. Edwards software, the J.D. Edwards Group Job Window allows an external program to be executed. In addition, the ATTN Key can be pressed within the external program and still allow access to the J.D. Edwards group jobs.

1. Press F11 within the J.D. Edwards Group Job Window to call an external program.

The following illustrates what will be displayed when F11 is pressed.

```

Change Library List (CHGLIBL)

Type choices, press Enter.

Libraries for current job . . . > QTEMP          Name, *SAME, *NONE
                                > TCA302OBJ
                                > JDFOBJ
                                > TCA302DTA
                                > A3SHARE
                                > TRNSHARE
                                > TCA302SRC
                                > JDFSRC
                                > VAPAY2JLIB
                                > VBPAY2JLIB
                                > VCPAY2JLIB
                                > VPAYLIB
                                > QPRT5225
                                + for more values > QGPL
Current library . . . . . *SAME          Name, *SAME, *CRTDFT

Bottom
F3=Exit  F4=Prompt  F5=Refresh  F12=Cancel  F13=How to use this display
F24=More keys
    
```

2. Complete the Change Library List form.

You may enter libraries related to the external program. Libraries currently in the library list can be removed if desired. However, the following libraries *must* be left in the library list in order to retain the link to the J.D. Edwards group jobs:

QTEMP

Library containing F9220 (J.D. Edwards Group Job Window Vocabulary Overrides)

Library containing F0090 (J.D. Edwards Hidden Selections)

Library containing F0092 (J.D. Edwards User Information)

Library containing J.D. Edwards Objects (i.e. RPG, CL, DSPF)

After the CHGLIBL command has been executed, the CALL command prompt is displayed.

3. Enter the external program.

The following illustrates the CALL command prompt.

```
Call Program (CALL)

Type choices, press Enter.

Program . . . . . _____ Name
Library . . . . . *LIBL Name, *LIBL, *CURLIB
Parameters . . . . . _____

+ for more values _____

F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
F24=More keys
```

When the CALL command is executed, the external program will be executed.

To work with a J.D. Edwards group job, the ATTN Key can be pressed to display the J.D. Edwards Group Job Window.

Any suspended group job can be activated from the J.D. Edwards Group Job Window.

Advanced Functions of the J.D. Edwards Group Job Window

J.D. Edwards Hidden Selections

Most J.D. Edwards Hidden Selections (31+) can be executed from the command line at the bottom of the J.D. Edwards Group Job Window.

The J.D. Edwards Hidden Selection Window (HS) can be used to display and execute hidden selections.

J.D. Edwards Hidden Selection Security is used when users execute hidden selections.

No J.D. Edwards Menus or J.D. Edwards Hidden Selection related to menus are allowed.

Entering Commands

Any command can be entered on the command line at the bottom of the J.D. Edwards Group Job Window.

F4 can be used to prompt a command.

A '?' can be placed in front of a command to prompt.

F9 can be used to retrieve previous commands.

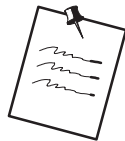
Parameters entered while in prompt mode will not be retrieved.

The last 10 previous commands are saved.

Only successfully executed commands are saved.

Previous commands are lost when user exits window F3.

J.D. Edwards Fast Path Commands from User Defined Code 00/FP can be executed. F13 to display all Fast Path Commands.



To retain *all* commands entered and retrieve parameters entered in prompt mode, access the IBM Command Entry Screen from the J.D. Edwards Group Job Window (i.e. J.D. Edwards Hidden Selection 36) and enter commands.

Commands can only be executed if there is a value of 'Y' or ' ' in the *Allow Command Entry (Y/N)* field defined in the J.D. Edwards User Information option found on A94.

J.D. Edwards Group Job Window Summary

The program allows you to:

Create up to 16 jobs per signon

Execute commands, J.D. Edwards hidden selections, J.D. Edwards Fast Path Command, and J.D. Edwards Fast Path Menu Execution

Available Function Keys

F3 = Exit the J.D. Edwards Group Job Window

F4 = Prompt a command

F5 = Create a new J.D. Edwards group job

F6 = Submit job to batch

F8 = J.D. Edwards Menu Word Search

F9 = Retrieve previous command

F11 = Create a new Non-J.D. Edwards group job

F13 = Display all fast path commands

F18 = SIGNOFF all group jobs

Available Selection Exits

4 = Activate a suspended group job

9 = End a group job

J.D. Edwards Group Job Window is **not** accessible when using

SysReq (Source Machine Only)

A program that has reset the ATTN Key program (i.e. OFFICE/400)

Work with the Attention MENU Window

About the Attention MENU Window

The J.D. Edwards Attention Menu Window program is a generic program that allows you to access up to 15 predefined programs via the ATTN Key. The 15 predefined programs are associated with options on a J.D. Edwards Menu.

Each user can be assigned a different J.D. Edwards Menu

The program was available in Release A4.1 PTF001

Before You Begin

To access the J.D. Edwards Attention Menu Window at any time, the ATTN Key program should be set to call some other J.D. Edwards Menu. For example G92.

The following illustrates how the ATTN Key program is set in the J.D. Edwards software. The User Information screen can be accessed from the Security Officers Menu).

```

0092                User Information                Action Code. . . . . I

User ID. . . . . TEACH
Library List . . . . . QTEMP JDFOBJ COMMON PRODDATA JDFSRC OGPL

User Security:
  User Key . . . . . A J K DP F
  Initial Menu to Execute. . . . . A
  Initial Program to Execute . . . . .
Menu Level. . . . .
User Type. . . . . TEACHER
User Class/Group . . . . .
Batch Job Queue. . . . . QBATCH
Job Scheduling Priority. . . . . 5 5
Logging (level/severity/messages) . . . . . 4 00 *NOLIST
Output Queue . . . . . P4B
Optional Printer File Library. . . . .
Current Library. . . . .
Employee Address Number (PPAT) . . . . .
Set Attention Program. . . . . G92
F6=Display/Lang Pref  F9=Library Inquiry  F21=Print Lib List  F24=More Keys
  
```



An *(asterisk) must precede the menu name.

Accessing the J.D. Edwards Attention Menu Window

After the ATTN Key program has been setup for you the J.D. Edwards software you can access the J.D. Edwards attention menu window.

► **To access the J.D. Edwards attention menu window**

1. Sign off and sign back on to reset the ATTN key program within the J.D. Edwards Menu Driver.

SETATNPGM PGM(P00AMNU) SET(*ON).

2. Press the ATTN key and the menu options for the menu will be displayed as follows.

```

G0                               J.D. Edwards & Company
                                General Business Systems

... GENERAL BUSINESS SYSTEMS
2. Address Book
3. General Accounting
4. Accounts Payable
5. Accounts Receivable
6. Financial Reporting
7. Modeling & Allocatio
8. Fixed Asset
9. Payroll
10. Human Resources
11. Electronic Mail

Selection or command
====>> _____

                                00AMNU-----Group Jobs -----JDED'
                                O  Description                Status
                                Original Job                Active
                                - Software Versions Repository
                                - Data Dictionary
                                - CASE Profiles
                                - Function Key Definitions
                                - Vocabulary Overrides
                                - Processing Options
                                - Help Instructions

                                Cmd/HS: _____
                                Opt: 4=Sel 9=End F3=Exit F24=More Keys
    
```

Original Job refers to the current job that has been converted to a group job. The remaining jobs refer to the first 15 interactive programs on the menu which the user is authorized to.

Summary of J.D. Edwards Attention Menu Window Functions

The program allows you to:

Access 15 predefined programs via the ATTN Key

Execute commands, J.D. Edwards Hidden Selections, J.D. Edwards Fast Path Commands, and J.D. Edwards Fast Path Menu Executions

Available Function Keys

F3 = Exit the J.D. Edwards Attention Menu Window

F4 = Prompt a command

F6 = Submit a job to batch

F8 = J.D. Edwards Menu Word Search

F9 = Retrieve previous command

F13 = Display all fast path commands

F18 = SIGNOFF all group jobs

Available Selection Exits

4 = Activate a group job

9 = End a group job

J.D. Edwards Attention Menu is **not** accessible while using

SysReq (Source Machine Only)

a program that has reset the ATTN Key program (i.e. OFFICE/400)

Work with IBM Pass-Through

About Working with IBM Pass-Through

To create group jobs on remote locations and still retain a link to the group jobs created on the source machine, use IBM Pass-Through. Perform the following tasks:

- Set up access to remote locations
- Use IBM Pass-Through with Group Jobs

Setting Up Access to Remote Locations

▶ **To setup access to remote locations**

1. To setup access to remote locations, go to the DREAM Writer versions list for Form ID P98GRP5.

98300 Versions List Form P98GRP5

Skip to Version:

<u>O</u>	<u>Version</u>	<u>Description</u>	<u>User</u>	<u>Chg Date</u>
—	XJDE0001	Denver A	DEMO	08/23/93
—	XJDE0002	Denver C	DEMO	08/23/93
—	XJDE0003	Denver D	DEMO	08/23/93
—	XJDE0004	Denver E	DEMO	08/23/93
—	XJDE0005	Denver I	DEMO	08/23/93
—	XJDE0006	Atlanta	DEMO	11/13/91
—	XJDE0007	Chicago	DEMO	11/13/91
—	XJDE0008	New York	DEMO	11/13/91
—	XJDE0009	Dallas	DEMO	11/13/91
—	XJDE0010	Houston	DEMO	11/13/91
—	XJDE0011	San Francisco	DEMO	11/13/91
—	XJDE0012	Washington DC	DEMO	11/13/91

Opt: 1=Run 2=Chg 3=Add 4=Rpt Dist 5=Cover 6=Prt Ovr 8=Repair 9=Dlt F13=Form

The processing options for each version provides setup on exactly how to access the remote location. The following illustrates the processing options.

```

98312                      Processing Options Revisions  Form ID. . . . P98GRP5
                                Version. . . . 0002
Denver C

This job has various options described below. Enter the desired values and
press ENTER to continue.

Destination Virtual Control Unit                V5251

Enter ONE of the following:

1) Destination Location:                        JDEC
   (If APPN routing can be used.)

2) APPC Device(s):
   Communication Device 1:
   Communication Device 2:

   (If S/38's are involved, an APPN
   cannot be used.)

                                Bottom                                +

                                F5=Printer Overrides
  
```

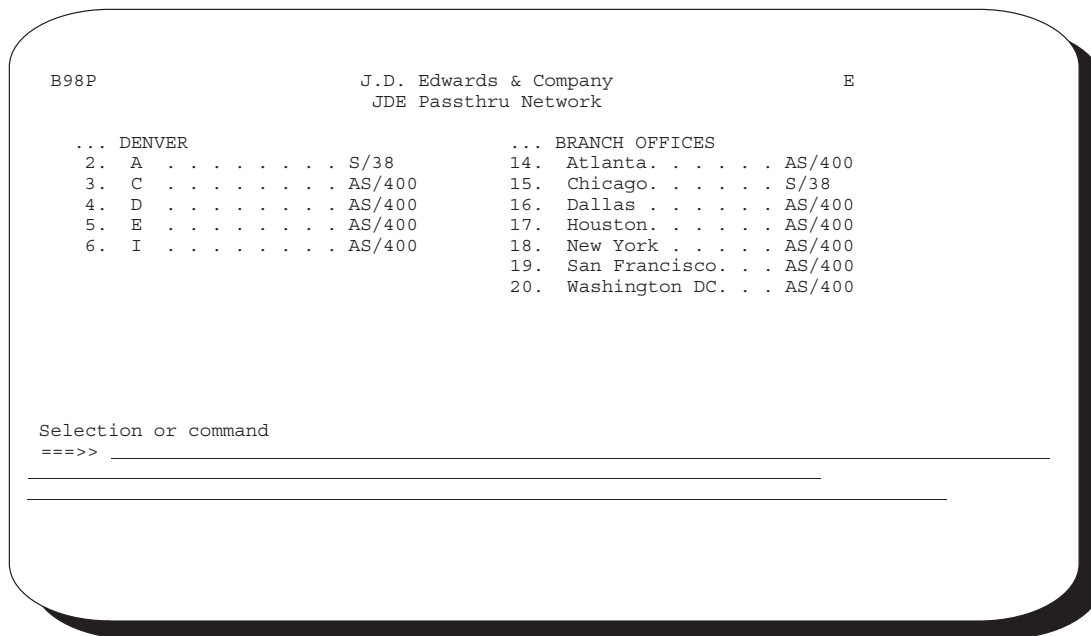
Option	Description
<i>Destination Virtual Control Unit</i>	This is the control unit that the user will connect to at the remote location. The first available device on the control unit will be selected.
<i>Destination Location (Used in AS/400 Environment)</i>	This is the APPN network name for the remote location.
<i>APPC Device(s) (Used in S/38 Environment)</i>	These are the APPC devices that identify the route to the remote location. Only one intermediate node is supported.

Using IBM Pass-Through with Group Jobs

▶ **To use IBM Pass-Through with Group Jobs**

1. Use the J.D. Edwards menu B98P to start an IBM Pass-Through session to a remote machine.
2. Use the J.D. Edwards Menu Design Aid (G92) to attach your user defined DREAM Writer Form ID P98GRP5 versions to menu B98P.

When an option is selected on the menu, the IBM Start Pass-Through command will be executed to the remote machine, and still retain a link to the source machine group jobs.



The mechanism used to attach remote locations to the J.D. Edwards Group Job Window on the source machine is a parameter on the STRPASTHR (Start Pass-Through) command. The following illustrates the link to the source machine.

```

                                Start Pass-Through (STRPASTHR)

Type choices, press Enter.

Remote location . . . . . _____ Name, *CNNDEV
APPC device . . . . . *LOC _____ Name, *LOC
+ for more values
Virtual controller . . . . . *NONE _____ Name, *NONE
Virtual display device . . . . . *NONE _____ Name, *NONE
+ for more values
Mode . . . . . *NETATR _____ Name, *NETATR
Local location . . . . . *LOC _____ Name, *LOC, *NETATR
Remote network identifier . . . . . *LOC _____ Name, *LOC, *NETATR, *NONE
System request program . . . . . *SRQMNU _____ Name, *SRQMNU
Library . . . . . _____ Name, *LIBL, *CURLIB

                                                                    Bottom
F3=Exit   F4=Prompt   F5=Refresh   F10=Additional parameters   F12=Cancel
F13=How to use this display   F24=More keys

```

The SRQ10PGM (SysReq 10) parameter allows a program to be called on the source machine from the remote location. By entering the J.D. Edwards Group Job Window program (P98GRP) in this parameter, the J.D. Edwards Group Job Window can be displayed on the remote location by pressing SysReq 10, NOT the ATTN Key.

This allows access to **all** suspended group jobs on the source machine and other remote locations.

Universal File Converter

Objectives

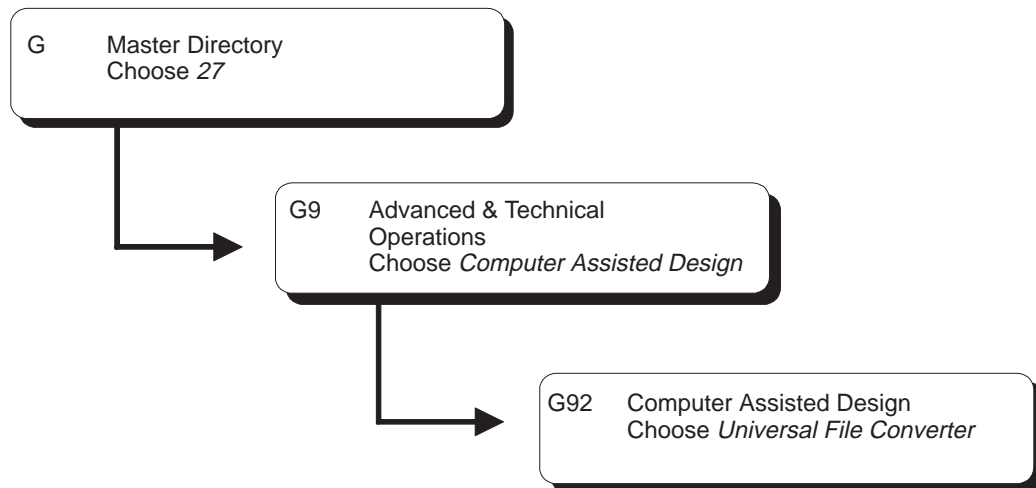
Initially convert existing client files to J.D. Edwards data files

Create recurring interfaces or bridges between J.D. Edwards and non-J.D. Edwards application systems

About Universal File Converter

There is constant change in data processing. For example, when you upgrade your J.D. Edwards software, you are changing several pieces of the software. Your data files may be greatly impacted when you upgrade. J.D. Edwards Universal File Converter will assist you in converting your data files.

Universal File Converter allows you to store conversion information for future conversions. It automatically matches data fields to be converted together.

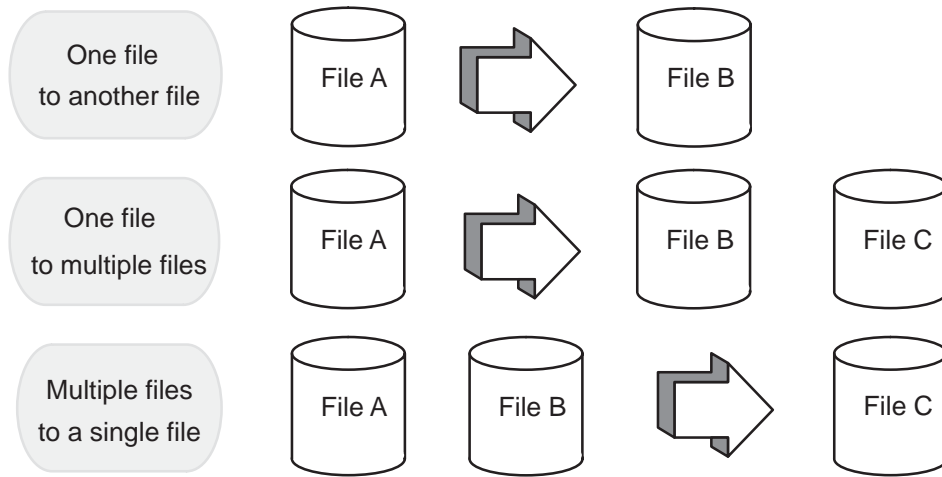


J.D. Edwards Universal File Converter accesses standing instruction files and transfers data in fields:

- From one file to another file
- From one file to multiple files
- From multiple files to a single file



The instruction file defines the association between two files and includes data field information.



Step 1

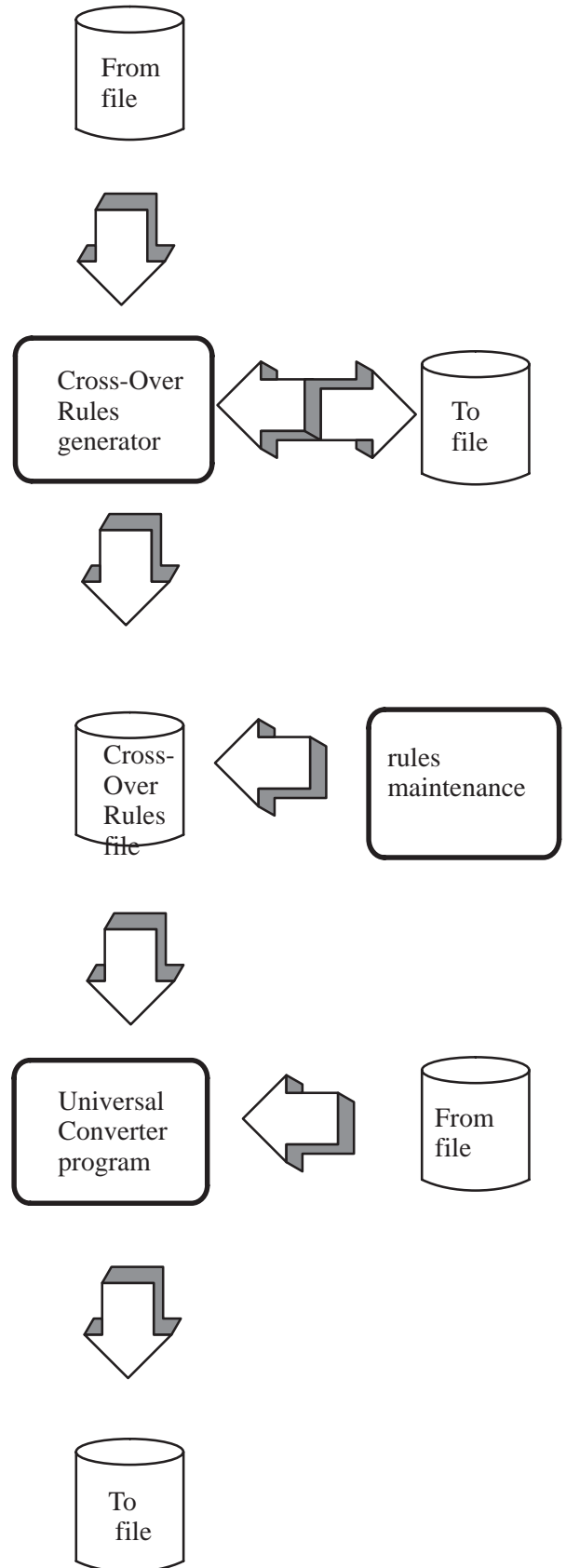
You specify *From* files and *To* files through DREAM Writer processing options. You can specify up to four *To* files. If you require multiple *From* files, specify a join logical as the *From* file in the DREAM Writer “based on” file. The system returns file field information and pre-loads the Cross-Over Rules file with field name, length, size, type and reference (data dictionary name). The system pre-loads information in the Cross-Over Rules file for all fields that have the same reference (data dictionary field name) as the *From* file.

Step 2

You must manually associate the fields that were not automatically loaded in the Cross-Over Rules file. If you need special calculations for a field, you can specify special processing key words in the Conversion Rule field. You can also add the calculations into an external program that can be called from the converter program. The external program needs several parameters that are sent and passed back to the converter program. These parameters are: data, error, *From* field name, *To* field name, and number of *To* file records. You must specify the external program in the Conversion Rule field in the Cross-Over Rules file.

Step 3

In this step you specify the form ID and the version you selected in the first step. The *From* and *To* files should be the same (or exact equivalent) as the files specified in Step 1. The converter program accesses the cross-over instructions for the “*From/to*” combination and loads the information to arrays. The system then processes the arrays for each field that has an association. Finally, the system transfers the value in the *From* file to the *To* file.



Special Processing

Special processing procedures are available to help you in the conversion of one field to another.

To execute any of the special processing procedures listed below, you must type the appropriate key word into the From or To Conversion Rule field. This is explained in *Detail Cross Over Rules*, later in this guide. There are special keywords for the following.

Dates	The converter uses a keyword to decide what date translation is necessary.
Numeric Fields	The converter translates non-packed numeric data to packed data or vice versa, depending on your need. It also maintains decimal alignment, performing rounding or zero padding if required. Alphanumeric representations of numeric fields can be translated to numeric fields. Numeric fields can be translated into alphanumeric fields.
Business Unit	The converter processes the field through the Business Unit scrub routine. This routine right adjusts and fills the field with blanks.
Data Dictionary Default	The converter uses the reference field in the To file to access the data dictionary and retrieve the default value for the field.
Initialization	Fields in the To file are initialized to blanks for alphanumerics and zeros for numerics if no fields are defined to map to them.
Next Number	You can specify to have a next number value assigned to a field.
Check Data Dictionary	You can specify to have the value of the field validated against the data dictionary values, ranges, and user defined codes.
User Defined Code Lookup	Use the fields in the From file to look up a user defined code (UDC) and return the associated value in the Description 1 field as the To field value.

Default Constant

Specify constant value, up to six characters, for the To field value.

Database Considerations

The system creates new records in the Cross-Over Rules file for each version of cross-over rules you specify. This file contains information explaining the fields in the From file and the To file and how the two files are associated.

If the field lengths or characteristics of the files that the cross-over rules have been built upon change, you must redefine the cross-over rules. Otherwise, the rules are based on the erroneous descriptions.

The system handles extra calculations through called programs specified in the Cross-Over Rules file for each field.

User Responsibilities

You are responsible for developing and maintaining the cross-over instruction rules. If the From file or To file definition of the cross-over instructions changes, you must revise the Cross-Over Rules.

Perform the following tasks:

- Set Up Universal File Converter
- Work with Crossover Rules
- Work with File Conversion
- Print a Report
- Create Conversion Forms
- Work with the Data Dictionary Glossary by File

Set Up Universal File Converter

About Setting Up Universal File Converter

If you have more than one file to convert, you can set up a separate version for each type of conversion required. The Universal File Conversion Setup program loads information to the Crossover Rules file (F0031) about the fields in the files you are converting.

The system uses the information in the Crossover Rules file to transfer the data from a field in one file to a field in another file, or to a field in multiple files.

This program also has processing options that let you convert data from both J.D. Edwards and non-J.D. Edwards files.

Before You Begin

- Before you run the setup procedure make sure the To files exist.



Do not attempt to use the Universal File Converter on a file that contains “double byte” data. The converter program may corrupt the integrity of the bracketing “shift in” and “shift out” characters that are automatically inserted by double byte terminals.

Understanding the Universal File Converter Setup

The setup program is the first part of a three-part conversion process. Specify a From file and a To file through the DREAM Writer processing options. You can specify up to four To files. If you require multiple From files, specify a join logical as the From file. This join logical is over all the files you select for the From file. Use the name of the join logical in the first processing option.

The program retrieves field information for all fields in the From file and loads this information to the Crossover Rules file.

The program then retrieves field information for the To files. If the Reference (data dictionary) field in the To file matches the From file Reference field, the program makes an association between the two fields. The system writes information for the To file to the record in the Crossover Rules file associated with the From file field.

**FILLER conversions are automatically generated for From file fields with no corresponding To file fields and for To file fields with no corresponding From file fields. You can override a **FILLER entry with the appropriate field name, position, and characteristics if the field exists in the file but has a different field name.

If there are any other associations you need, do them manually using the Crossover Rules selection on the menu.

Setting Up Universal File Converter

```
G9841                J.D. Edwards & Company          JDEG
Programmers          Universal File Converter
... DATA FILE CONVERSION
  2. Version Setup
  3. Crossover Rules
  4. File Conversion
  5. Report

Selection or command
====>
```



```

98312                Processing Options Revisions  Form ID. . . . P00120
                                                Version. . . . APCS
Generate Cross Over Instructions
This job has various options described below. Enter the desired values and
press ENTER to continue.
FILE SPECIFICATION:
1. Enter the name of the file to                F92801
   convert the data from.
   JDE File?                                   Y
2. Enter the name of the file OR files
   to convert the data to.
   File 1                                     F92801U
   JDE File?
   File 2
   JDE File?
   File 3
   JDE File?
   File 4
   JDE File?
                                                +
F5=Printer Overrides
    
```

Option	Description
<i>Enter the name of the file</i>	The name of the <i>From</i> file to convert the data from.
<i>JDE File?</i>	Y if the <i>From</i> file is a JDE file, or N if it is not
<i>Enter the name of the file OR files to convert the data to.</i>	The name(s) of the <i>To</i> file(s) in the spaces provided
<i>JDE File?</i>	Y if the <i>To</i> file is a JDE file, or N if it is not

```

98312                      Processing Options Revisions  Form ID. . . . P00120
                                                Version. . . . APCS

Generate Cross Over Instructions
This job has various options described below. Enter the desired values and
press ENTER to continue.
3. Enter the library containing the                DEMO
   "from" file. If left blank the
   library list will be searched for
   the "from" files.
4. Enter the library containing the                DEMO6
   "To" file. If left blank the
   library list will be searched for
   the "To" file.

                                F5=Printer Overrides
  
```

Option	Description
<i>Enter the library containing the from file.</i>	The name of the <i>From</i> file library, or leave blank to search your library list
<i>Enter the library containing the to file.</i>	The name of the <i>To</i> file library, or leave blank to search your library list

Work with Crossover Rules

The Crossover Rules form lets you add, change, and delete crossover rules used in the Universal File Converter process. Use this form to set up or maintain associations between fields in the From file and The To file.

Using filler fields you can view From file fields with no corresponding To field fields. You can also view To file fields with no corresponding From file fields.

Working with the Crossover Rules Form

► **To work with the Crossover Rules form**

1. From the Universal File converter menu, select Crossover Rules.

```

0031                                Crossover Rules
Action Code . . . . . I
Form Id . . . . . P00120           From File . . . . F4001Z
Version . . . . . 0001
To File Name . . . . F4011Z
Skip to . . . . . From . . . . . To . . . . .

  From File . . . . .
Field      T Begin  ... Field ...
Name       - Pos   Bytes Dig Dec
**FILLER  A   1    1  00 00
**FILLER  A   1    1  00 00
**FILLER  A   1    1  00 00
**FILLER  A   1    1  00 00
**FILLER  A   1    1  00 00
**FILLER  A   1    1  00 00
**FILLER  A   1    1  00 00
**FILLER  A   1    1  00 00
**FILLER  A   1    1  00 00
**FILLER  A   1    1  00 00
**FILLER  A   1    1  00 00
**FILLER  A   1    1  00 00
**FILLER  A   1    1  00 00
**FILLER  A   1    1  00 00
**FILLER  A   1    1  00 00

  To File . . . . .
Field      T Begin  ... Field ...
Name       - Pos   Bytes Dig Dec
SZACOM     A   988    1  00 00
SZAEXP     P   593    8  15 02
SZAID      A  1039    8  00 00
SZAISL     A  1131    8  00 00
SZAITM     A   316    25  00 00
SZANI      A  1010    29  00 00
SZAOPN     P   601    8  15 02
SZAPTS     A   755    1  00 00
SZATXT     A   750    1  00 00
SZBIN      A  1139    8  00 00
SZCADC     P   685    4  07 03
SZCDCD     A   756    15  00 00

Opt:  9=Del  F4=Del1  F6=Add  F8=From Fill  F9=To Fill  F13=File  F14=Text
  
```

The screen above displays illustrative data only. The From files appear on the left. The To files display on the right.

2. Complete the Crossover Rules form.

F8 and F9 are toggles. Press them to suppress or activate the display of the **FILLER fields in the From and To files.

F14 is cursor-sensitive. If you are on a From file field, press F14 to enter text for that field. When the cursor is on a To file field name, press F14 and the Generic Text Window opens for that To file field name. You can also enter text for the From file and To file by placing the cursor on the appropriate field. The field name is highlighted on V0031 if generic text exists. For additional information refer to the *Advanced Functions Reference Guide*.

Press F4 to display detail information in the fold area.

Field	Explanation
Form Id	Type the DREAM Writer Form Id you specified in the initial setup. Defaults to P00120.
Version	The Form Id version. Required for an inquiry.
To File Name	Type name of the file you are converting data to. This field defaults if you have a successful inquire.
Skip to (From/To)	Allows you to skip to a field in either the <i>From</i> file or the <i>To</i> file. Pressing F1 in one of these two fields will display the File Field Descriptions Window.

```

0031                                Crossover Rules
Action Code. . . . . I
Form Id. . . . . P00120      From File . . . . F92801
Version. . . . . APCS
To File Name . . . . F92801U
Skip to . . . From . . . . . To. .

      From File . . . . .          To File . . . . .

Field      T Begin  ... Field ...      Field      T Begin  ... Field ... O
Name      _ Pos   Bytes Dig Dec      Name      _ Pos   Bytes Dig Dec  -
OXXCC    _ A    47    12  00  00      OXXCC    _ A    47    12  00  00  -
Desc Bus Unit Conv Rule
Key Pos  _ Ref XCC          Array N      Key Pos  00 Ref XCC          Array N
OXXDS    _ A     9     30  00  00      OXXDS    _ A     9     30  00  00
Desc Descriptio Conv Rule
Key Pos  _ Ref XDS          Array N      Key Pos  00 Ref XDS          Array N
OXXDT    _ S    41     6   06  00      OXXDT    _ S    41     6   06  00  -
Desc Date Last Conv Rule
Key Pos  _ Ref XDT          Array N      Key Pos  00 Ref XDT          Array N
OXXIT    _ S     1     8   08  00      OXXIT    _ S     1     8   08  00
Desc Item ID. . Conv Rule
Key Pos  _ Ref XIT          Array N      Key Pos  00 Ref XIT          Array N
OPT: 9=Del F4=Detail F6=Add F8=From Fill F9=To Fill F13=File F14=Text
    
```

Field	Explanation
<i>Field Name</i>	The name of the field the data is being transferred from or to.
<i>T (Type)</i>	The data dictionary data type.
<i>Begin Pos (Beginning Position)</i>	The number of the beginning position of the field.
<i>Field Bytes</i>	Number of bytes in the field.
<i>Field Dig (Field Digits)</i>	Actual number of digits in the field. In a non-packed field, this number is the same as the number of bytes.
<i>Field Dec (Field Decimals)</i>	Number of decimal positions in the field. (Future Use)
<i>O (Option)</i>	Option 9 = delete the line.
<i>Desc (Description)</i>	The description of the file field.
<i>Conv Rule (Conversion Rule)</i>	<p>Allows you to specify a keyword or external program used for special calculations to the <i>from</i> file before transfer of data to the <i>to</i> file.</p> <p>You must type keywords into both the <i>from</i> and <i>to</i> file <i>Conversion Rule</i> field. F1 will display a list of valid keywords:</p> <ul style="list-style-type: none"> Dates – *MDY, *DMY, *YMD, *JUL, *SYSVAL Business Unit – *RAB Initialize – *ZEROES, *BLANKS Data Dictionary Default – *DEF User Defined Code Lookup – *UDC (System) (code type) Default Constant – *DFT (constant) Next Number – *NN(system)(number) Check Data Dictionary – CHK, will edit field for DD values/ranges Alpha Translation – *TRAN (language to translate to) <p>In addition to the predefined keywords, user-developed programs can be specified. These external programs will be discussed later in this chapter.</p>
<i>Key Pos (Key Position)</i>	Specifies the position in the key list for the key list for the field in the file. (Future Use)
<i>Ref (Reference)</i>	The field name in the file with the prefix removed. The system uses this field to automatically pre-load the associations between the <i>from</i> and <i>to</i> file fields. You can also use this field for the *DEF keyword for the Data Dictionary defaults.
<i>Array</i>	Designates the field as part of an array. (Future Use)

Field	T	Begin	...	Field	...	Field	T	Begin	...	Field	...	O						
Name	___	Pos	___	Bytes	Dig	Dec	___	___	___	Bytes	Dig	Dec	___					
**FILLER	A	___	1	___	1	00	00	___	___	SZACOM	A	___	988	___	1	00	00	___
Desc	FILLER	___	Conv	Rule	___	___	___	___	___	Desc	Apply	Comm	Conv	Rule	___	___	___	___
Key Pos	___	Ref	FILLER	___	Array	N	___	___	___	Key Pos	00	Ref	ACOM	___	Array	N	___	___

The left side of the screen contains information about the From file.

The right side of the form contains information about the To file fields. If the setup program made associations with the To file fields, they display in the right columns when you inquire on a Form ID. Otherwise, these columns contain **FILLER information.

What You Should Know About

To review a specific set of crossover rules, enter the DREAM Writer version you used to create the rules.

To update information on Crossover Rules form, enter the To file field, type, beginning position, number of bytes, and number of digits and decimals, if applicable. Required information is name, type, beginning position and number of bytes.

Two “skip to” capabilities are available on this form. You can skip to a field in either the From file or the To file.

Displaying Field Descriptions

► To display field descriptions

1. Press F13 in the Field Name column for the From or To file.

The File Field Descriptions window appears, as shown below.

```

98FFD          File Field Descriptions          S/FMT
File and Libr: F4011Z  PGFDTA71  PF
- I4011Z      - Batch Receiver File - Order De
- SZEDTY      Record Type. . . . . A      1      1
- SZEDSQ      Record Sequence. . . . P      2 0      2
- SZEKCO      Document Key Company A      5      4
- SZEDOC      Document Number. . . . S      9 0      9
- SZEDCT      Document Type. . . . . A      2      18
- SZEDLN      Line Number. . . . . P      7 0      20
- SZEDST      Transaction Set. . . . . A      6      24
- SZEDFT      Translation Format . A      10     30
- SZEDDT      EDI - Transmission D S      6 0      40
Opt: 2=Dictionary 4=Sel F15=Resequenece F3=Return
    
```


When you use option 4 to select a field from the window, the program returns the name, type, number of bytes, number of decimals, number of digits, description, reference, and key position to the appropriate fields on the screen. For Crossovers on the File Field Descriptions window, refer to the *Computed Assisted Design Reference Guide*.

For details on the Data Dictionary Repository screen, the Glossary screen, and the Cross Reference options on the File Field Description window, refer to the *Advanced Functions Reference Guide*.

- 2. Enter 4 in the option field. The program returns the field description to the associated field as shown in this example.

```

0031                                Crossover Rules
Action Code. . . . . I
Form Id. . . . . P00120      From File . . . . F4001Z
Version. . . . . 0001
To File Name . . . . F4011Z
Skip to . . . . From . . . . To. . . .

      From File . . . . .          To File . . . . .

Field      T Begin  ... Field ...      Field      T Begin  ... Field ...  O
Name       Pos    Bytes Dig Dec      Name       Pos    Bytes Dig Dec  -
**FILLER  A    1    1  00  00      SZACOM     A    00004  00001  00  00  -
**FILLER  A    1    1  00  00      SZAEXP     P    593    8  15  02  -
**FILLER  A    1    1  00  00      SZAID      A   1039    8  00  00  -
**FILLER  A    1    1  00  00      SZAISL     A   1131    8  00  00  -
**FILLER  A    1    1  00  00      SZAITM     A    316   25  00  00  -
**FILLER  A    1    1  00  00      SZANI      A   1010   29  00  00  -
**FILLER  A    1    1  00  00      SZAOPN     P    601    8  15  02  -
**FILLER  A    1    1  00  00      SZAPTS     A    755    1  00  00  -
**FILLER  A    1    1  00  00      SZATXT     A    750    1  00  00  -
**FILLER  A    1    1  00  00      SZBIN      A   1139    8  00  00  -
**FILLER  A    1    1  00  00      SZCADC     P    685    4  07  03  -
**FILLER  A    1    1  00  00      SZCDCD     A    756    15  00  00  -
Opt:  9=Del  F4=Del1  F6=Add  F8=From Fill  F9=To  Fill  F13=File  F14=Text

```

Adding Fields

► **To add a field**

1. Press F6 to open the Add Crossover Instructions window.

```
00312          Add Crossover Instructions
          From File. . . F4001Z
          Field Name . . . _____
          Field Data Type. . _
          Field Begin Pos. . _____
          Number of Bytes. . _____
          Number of Digits . _____
          Field Dec Pos. . . _____
          Field Description _____
          Conversion Rule . _____
          To File. . . . F4011Z
          Field Name . . . _____
          Field Data Type. . _
          Field Begin Pos. . _____
          Number of Bytes. . _____
          Number of Digits . _____
          Field Dec Pos. . . _____
          Field Description _____
          Conversion Rule . _____

          F3=Exit
```

2. With the cursor in the Field Name field, press F13 to open the File Field Descriptions window.
 - After you press Enter, the program returns field information to the Field Name when you exit the window.
 - The required fields for adding a field are:
 - From field name, type, number of bytes, and beginning position
 - To field name, type, number of bytes, and beginning position

The add function is available to associate a single field in the From file with multiple fields in the To file and to break apart a From field into multiple fields.

A field can exist in the To file and have nothing associated with it in the From file. In this case, the To file field is initialized as described in the section *Special Processing* in the *Introduction* of this guide.

Deleting Records

▶ To delete a record

Select option 9 to delete records from the Crossover Rules file.

This cancels the From/To relationship so that no conversion takes place.

If you blank out the To file field name, the program does not delete the record from the Crossover Rules file, but only clears the To file field information. The converter program looks only at records that have both a From and To file field name.

NOTE: You do not need to delete lines with blank (**FILLER) To file field names, they are automatically omitted.

Keywords

Keywords in the Conversion Rule field (in the fold area) trigger special processing for a field before the data is transferred. Following are the keywords that are available and a brief explanation of what processing they trigger.



With the exception of the date keywords listed below, specify conversion rules for either From field or To field, never for both.

Dates – *MDY, *DMY,
*YMD, *JUL, *SYSVAL

These keywords activate a date conversion between the From file field and the To file field. You must type keywords into both the From file Conversion Rule field and the To file Conversion Rule field. Each keyword on the From field specifies how the field is stored in the From file. The keyword on the To field conveys the output format on the To field. NOTE: This does not work on packed fields.

Business Unit – *RAB.

This keyword activates the business unit scrub of right adjust/blank fill to the From file field before moving it to the To field.

Initialize – *ZEROES,
*BLANKS

These keywords move either zeroes or blanks to the From file field before it is transferred. With the initialization rules, these keywords are not required unless you want to initialize an alphanumeric field to zeroes.

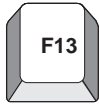
- Data Dictionary Default – *DEF** This keyword retrieves the Data Dictionary default for the To file field, using the Reference field in the Data Dictionary, and loads it to the From file field before it is transferred.
- User Defined Code Looiup – *UDC*ssrr*** This keyword retrieves the definition of the user defined code used in a specific system and loads it to the To field. When typing your request, *ssss* is the system and *rr* is the user defined code.
- Default Constant - *DFT*cccc*** This keyword loads a default constant to the To field. When typing your request, *cccc* is the default constant.
- Terminal ID – *TID** This keyword loads the terminal ID to the To field.
- Next Number - *NN*ssssxx*** This keyword computes a next number and loads it to the To field. When typing your request, *ssss* is the system and *xx* is the number.
- Check Data Dictionary - *CHK.** This keyword lets you edit a field against Data Dictionary values and ranges. The results of the edit print on the File Conversion report whenever any errors are detected.

About the Conversion Rule Program

Besides specifying the use of keywords in the conversion rule, you can specify an external program that runs before the data is transferred to the To file field. You must name the external program beginning with an X. For example, use an “X” program to determine a range of valid values in a From file field, excluding records based on a given field. Other examples include writing multiple To file records based on a single From file record, or manipulating the data before it is transferred.

The external program requires five parameters:

First parameter	Must be 50 bytes and contains the value of the field being processed. Use it to pass back the value to the converter program when the “X” program is done with it.
Second parameter	<p>One-byte error flag. If the error flag returns blank, the data in parameter 1 from the “X” program is placed in the To file.</p> <p>If the error flag returns with 2, the <i>data</i> in parameter 1 is not transferred to the To file. Use this error if you are writing multiple To file records and different From file fields are used for a single field in the To file.</p> <p>If the error flag returns with 3, a <i>record</i> will not be written to the To file. Use this error if you do not want to write a record when the value of a certain field in parameter 1 is blank, zero, or not valid for your purposes.</p>
Third parameter	Four-byte alphanumeric field for the number of the To file records. The field always has numeric characters and is zero-filled. This lets your “X” program know which record the converter program will write when you are writing multiple To file records.
Fourth parameter	Ten-byte field for the From file field name. This lets your “X” program know which field you are processing if multiple fields in the From file are updating a single To file field.
Fifth parameter	Ten-byte field for the To file field name. This lets your “X” program know which field you are processing if multiple fields in the From file are updating a single To file field.



F13 – File Field Description

Place cursor on any *Field Name* field and press F13 to display the File Field Description window.



F14 – User Defined Text

This allows text to be entered about information on this screen. The field will highlight to indicate that there is generic text associated with this field.

Press F14 in the top area of the screen to enter text about the conversion.

Press F14 in the *From Field* area (left side of the screen) to enter text describing the *From Field*.

Press F14 in the *To Field* area (right side of the screen) to obtain text describing the *To Field*.

The field will highlight to indicate that there is generic text associated with this field.

Option 9 – Delete Records

To delete records so that no conversion takes place, enter Option 9. If you blank out the *To File* Field Name, the program does not delete the record from the Cross Over Rules file (F0031), but only clears the *To File* Field information. The converter program will only look at records that have both a *from* and *to file* field name.

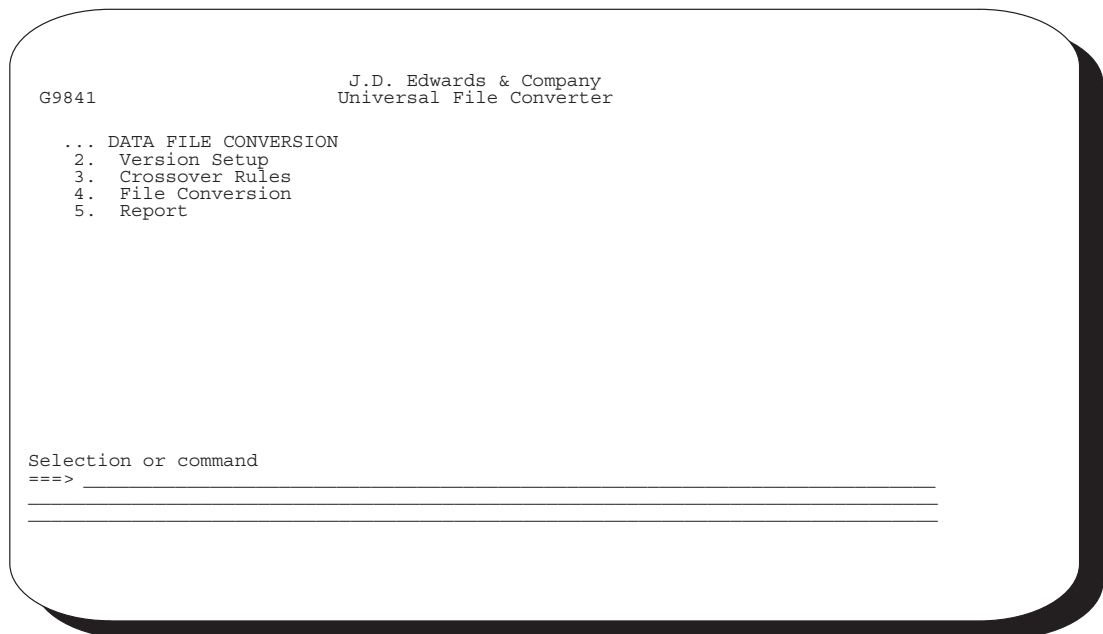
Work with File Conversion

Working with File Conversion

The File Conversion program accesses the Crossover Rules file (F0031) and transfers data fields from one file to another, from one file to multiple files, or from multiple files to one file.

▶ To run File Conversion

1. From the Universal File Converter menu (G9841), select File Conversion.



```
G9841                                J.D. Edwards & Company
                                         Universal File Converter

... DATA FILE CONVERSION
2.  Version Setup
3.  Crossover Rules
4.  File Conversion
5.  Report

Selection or command
===> _____
_____
```



When creating an execution form, be sure the Based on File and the Format Name fields contain your *From File* name. In addition, the Data Selection and Data Sequence screens should display fields from your *From File*.

2. Add your own version from a Demo version and go to the processing options of your new version.

```

98312                Processing Options Revisions  Form ID. . . . P00111
Execute File Conversion - Sample                      Version. . . . APCS

This job has various options described below. Enter the desired values and
press ENTER to continue.

FILE SPECIFICATION:
1. Enter the name of the Form ID and
   version containing the conversion
   specifications.
   Form ID                               P00120
   Version                               APCS

2. Enter the name and library of the
   "from" file, if different than the
   Form ID and version containing the
   conversion specifications.
   From File name
   From File library
** Caution - file must be the same field
format as file used to generate rules.
+

F5=Printer Overrides

```

Option	Explanation
<i>Enter the name of the Form ID and version containing the Initial Setup step.</i>	Type your Form ID and version from the conversion specifications.
<i>Enter the name and library of "from" file, if different than the Form ID and version specified.</i>	Type the name of the From file and library, if it is different than the From file and library in the Form ID and version specified above.

```

98312                Processing Options Revisions  Form ID. . . . P00111
Execute File Conversion - Sample                    Version. . . . APCS

This job has various options described below. Enter the desired values and
press ENTER to continue.

3. Enter the name of the file OR files             -
   to convert the data to. Leave blank
   to convert all files in setup
   specifications.

   File 1 _____
   File 2 _____
   File 3 _____
   File 4 _____

4. Enter the library the "to" files are
   in. If left blank, the library list
   will be searched for the "to" files.           _____

                                                    +

F5=Printer Overrides
    
```

Option	Explanation
<i>Enter the name of the file OR files to convert the data to.</i>	Type the name(s) of the <i>To</i> file(s). Up to four files can be specified. If these fields are left blank, all files entered in the setup version are converted.
<i>Enter the library the to files are in.</i>	Type the name of the library containing the <i>To</i> file(s), or leave blank to have the library list searched.

```

98312                Processing Options Revisions  Form ID. . . . P00111
Execute File Conversion - Sample                    Version. . . . APCS

This job has various options described below. Enter the desired values and
press ENTER to continue.

File Preparation:
5. Enter a '1' to clear the file data             -
   is being transferred to.                      _____

TO FILE FORMAT:
6. Enter the number of "to" file
   records to be created for each
   "from" file record. If left blank,
   a single "to" file record will be
   created for each "from" file record.
   File 1 _____
   File 2 _____
   File 3 _____
   File 4 _____

                                                    +

Bottom

F5=Printer Overrides
    
```

Option	Explanation
<i>Enter a '1' to clear the file data is being transferred to.</i>	Enter '1' to clear the <i>To</i> file. The <i>To</i> file will be filled only with converted records. If this field is left blank, the converted data records are added to the <i>To</i> file.
<i>Enter the number of to file records to be created for each from file record.</i>	Enter the number of <i>To</i> file records you want to create for each <i>From</i> file record. If this field is left blank, only a single <i>To</i> file record will be created for each <i>From</i> file record.



If you are using multiple *From* file(s), remember to create a join logical over all the *From* files you wish to use.

When adding a new version, you should check to see that the format name under Additional Parameters is correct for the based on file.

3. Enter the correct values on Processing Options and submit your version to complete the conversion process.

What You Should Know About

If you are using multiple *From* files, remember to create a join logical over all the *From* files you want to use.

When adding a new version, check to see that the format name for the based-on file is correct for the file. The default is `lxxxx` and may not be appropriate.

The *From* file name and the *To* file names should be the same as used to set up the conversion rules in Step 1.

You can use DREAM Writer data selection to specify which records in the *From* file are to be converted. For example, convert one branch or one company only.

A printed report lists error conditions detected by `*CHK` keyword and lists the total number of records read and number of records converted. The report lists the description of the errors. Depending on the error condition, you may need to correct the values in the incoming data and rerun the conversion.


```

98312                Processing Options Revisions  Form ID. . . . P0031P1
File Converter Report                               Version. . . . 0001

This job has various options described below. Enter the desired values and
press ENTER to continue.

1) Enter a "1" to print Data Dictionary          1
   Glossary for each item. Leave blank
   to not print the Data Dict. Glossary.
   (Prints for "TO" fields only)

2) Enter a "1" to print File Specific          1
   Glossary for each data item. Leave
   blank to not print. (Prints for "TO"
   fields only)

3) Enter a "1" to print the Generic           1
   Text Instructions for each data item.
   Leave blank to not print the Generic
   Text. (Prints for both "FROM" and
   "TO" fields)                                Bottom
                                                    +

F5=Printer Overrides
    
```

3. Select one of the following print options.

Field	Explanation
<i>Enter a '1' to print Data Dictionary Glossary for each item.</i>	Prints Data Dictionary Glossary for each To field.
<i>Enter '1' to print File Specific Glossary for each item.</i>	Prints file specific glossary from Generic Text file (F00163) for each To file.
<i>Enter '1' to print generic text instructions for each item</i>	Prints any generic text associated with either To fields or From fields.

Create Conversion Forms

Creating Conversion Forms

The Universal File Converter helps you create conversion forms that you may want to use for planning purposes when you convert your non-JDE files into JDE files.

Start by creating a form that specifies the major file in the “Convert to” file. The name of the file you convert from is intentionally left blank. This lets you create a blank set of conversion rules which you can print using the Report selection.

JDE supplies a special data dictionary glossary relating to specific fields in specific files in your JDE data dictionary text. You can also create new field descriptions that better correspond to your system by pressing F14 for generic text in the crossover rules revisions.

If you decide to use the blank version (described above) for actual file conversion, type the From file specifications corresponding to the appropriate To field using the Crossover Rules. Be sure to override the From file before you execute the conversion program.

Creating Conversion Forms

► **To create a conversion form**

1. From the Universal File Converter menu, select either Versions Setup or Report.

```

98312                Processing Options Revisions  Form ID. . . . P00120
                                                Version. . . . XJDE0001
Generate Cross Over Instruction - Sample      Display Level. 2

This job has various options described below. Enter the desired values and
press ENTER to continue.

FILE SPECIFICATION:
1. Enter the name of the file to
   convert the data from.
   JDE File?
2. Enter the name of the file OR files
   to convert the data to.
File 1
   JDE File?
File 2
   JDE File?
File 3
   JDE File?
File 4
   JDE File?

```

+

F5=Printer Overrides

2. Complete the Processing Options Revisions form

If you selected Versions Setup, be sure to leave the first processing option blank under File Conversion.

In the second option, type the name of the files you want to convert, and then Y if they are JDE files or N if they are not.

```

98312                Processing Options Revisions  Form ID. . . . P0031P1
                                                Version. . . . XJDE0001
File Converter Report      Display Level. 2

This job has various options described below. Enter the desired values and
press ENTER to continue.

1) Enter a "1" to print Data Dictionary
   Glossary for each item. Leave blank
   to not print the Data Dict. Glossary.
   (Prints for "TO" fields only)
2) Enter a "1" to print File Specific
   Glossary for each data item. Leave
   blank to not print. (Prints for "TO"
   fields only)
3) Enter a "1" to print the Generic
   Text Instructions for each data item.
   Leave blank to not print the Generic
   Text. (Prints for both "FROM" and
   "TO" fields)

```

+

F5=Printer Overrides

If you select Report, type 1 next to all three options as shown above.

Work with the Data Dictionary Glossary by File

About Working with the Data Dictionary Glossary by File

When using the Universal File Converter, small details often differ for each file. Keeping these details clear, especially when the conversion form might be used by another department, is a potential problem. To remedy this, J.D. Edwards has made it possible to attach data dictionary glossary text to each data item that explains the details particular to that specific file.

To work with the Data Dictionary Glossary by file perform the following tasks:

- Access the Data Dictionary Glossary by file
- Add a file specific glossary item
- Print the Data Dictionary Glossary information

Accessing the Data Dictionary Glossary by File

► To access the Data Dictionary Glossary by file

1. From the Universal File Converter menu, type DD and press Enter.

The Data Dictionary Repository screen appears.

```

9201                               Data Dictionary                               Rls Last Chg A61
Action Code. . . . . I                               Item Parent.
Data Item. . . . . MCU
Glossary Group . . . D
-----
                               General Information                               -----
Alpha Desc . . . . Business Unit
Reporting System . 09
System Code. . . . 09      Type . A  Size . 12      Data File Decimals ___
Data Item Class. . COSTCTRSEC  Item Occurrences ___      Display Decimals . _
-----
                               Descriptions                               -----
Row Description. . Business Unit
Column Title . . . Business
                               Unit
-----
                               Default and Display/Edit Rules                               -----
Default Value. . .
Data Display Rules *RAB                               Justify. _
Data Edit Rules. . SERVER X0006
-----
Search Program . .
Next Nbr System. . ___      Next Number Index . . ___

F4=Search  F8=UDC  F9=Prev  F10=Glossary  F11=Descriptions  F15=Where Used
    
```

2. Press F10 to display the glossary definition of the data item you selected.

```

92001                               Data Item Glossary Revisions                               Language . ___
                               Applic Override   ___
                               Scrn/Rpt . F4102
Action Code. . . . . I
Data Item. . . . . MCU      Desc Business Unit
System Code. . . . 09      Reporting System Code. 09
Glossary Group . . . D

Identifies a separate entity within a business for which you wish to track
costs, for example, a warehouse location, job, project, work center, or
branch/plant. The business unit field is alphanumeric.
-----
You can assign a business unit to a voucher, invoice, fixed asset, and so forth,
for responsibility reporting. The system provides reports of open A/P and A/R
by business units, for example, to track equipment by responsible department.
-----
Business Unit security can prevent you from inquiring on business units for which
you have no authority.
-----
In the Inventory Management System, MCU represents a branch or plant
-----
-----
F4=Search  F9=Redisplay Prev  F19/F20=Prev/Next Item  F24=More
    
```

Use the Data Item Glossary Revisions form to change the glossary text for a Data Dictionary item or to add a File-Specific glossary item.

Adding a File Specific Glossary Item

▶ To add a File Specific glossary item

1. Type A in the Action Code field.
2. Type the file name in the Scrn/Rpt field.
3. Type the new text and press Enter.

```

98312                Processing Options Revisions  Form ID. . . . P0031P1
                                                Version. . . . XJDE0001
File Converter Report  Display Level. 9

This job has various options described below. Enter the desired values and
press ENTER to continue.

1) Enter a "1" to print Data Dictionary          1 _____
   Glossary for each item. Leave blank
   to not print the Data Dict. Glossary.
   (Prints for "TO" fields only)

2) Enter a "1" to print File Specific           1 _____
   Glossary for each data item. Leave
   blank to not print. (Prints for "TO"
   fields only)

3) Enter a "1" to print the Generic             1 _____
   Text Instructions for each data item.
   Leave blank to not print the Generic
   Text. (Prints for both "FROM" and
   "TO" fields)                                Bottom
                                                +

F5=Printer Overrides
    
```

Printing the Data Dictionary Glossary Information

▶ To print the Data Dictionary glossary information

1. Select Report.
2. Complete the Processing Options Revisions form.

Type 1 next to all three options to print the Data Dictionary glossary.

Option 2 prints the File-Specific glossary text.

Appendices

Appendix A — Common & Production Library Files

This appendix lists the files that are automatically created in the common and production libraries during the installation process.

Chart A – Common Library Files Automatically Created by J.D. Edwards Build Programs

The following chart contains files automatically generated as a result of a build program that J.D. Edwards offers from a menu. It is recommended that these files be maintained in your common library.

File Name	File Description	System Code
F98FRF@	Field Reference – '@' Data Items	98
F98FRF\$	Field Reference – '\$' Data Items	98
F98FRFA thru	Field Reference – 'A' Data Items through	98
F98FRFZ	Field Reference – 'Z' Data Items	98

Chart B – Physical and Logical Files Created in a Common Library

The following chart shows the physical and the logical files that were created in a Common Library if one was specified for the Create User Data Libraries selection on menu A9645. Logical Files contain no data. Therefore, data copied is N.

File Name	File Description	Copy Data
F0002	Next Numbers – Automatic	Y
F0004	User Defined Code Types	Y
F0004D	User Defined Codes – Alternate Language Desc	Y
F0005	User Defined Codes	Y
F0005D	User Defined Codes – Alternate Language Desc	Y
F0005LA	LF – System Code, Desc Title Type, Desc., Desc Title	N
F0016	Generic Text File	N
F00161	Generic Text Window Definition File	Y
F00162	Generic Text Key Definition File	Y
F00163	Generic Text Key Index File	N
F00163LA	Generic Text Key Index File – LF By Key Serial Number	N
F00164	Generic Text Key Index File (120 character key)	N
F00164LA	Generic Text Key Index File – LF by Key Serial Number	N
F0082	Menu Master	Y
F00821	Menu Selection Detail	Y
F0083	Menu Selection Text	Y
F0082H	Menu Selection History	N
F0090HL@	LF – Combined Sequences	N
F0090L@	LF – Job To Execute	N
F009141	Word Search Occurrences Master	Y
F009141S	Word Search Occurrences Master – Dist Supplemental	N
F009190	Word Search Occurrences Master	Y
F009191	Question & Answer Search Occurrence Master	Y
F009198	Question & Answer Search Occurrence Master	Y
F0095	Open File Directory	Y
F009690	Menu Word Search Master	Y

Appendix A — Common & Production Library Files

File Name	File Description	Copy Data
F009690LA	LF – By Key and Search Word	N
F009691	Question & Answer Word Search Master	Y
F009691LA	LF – By Key and Search Word	N
F009698	Word Search Master – Question and Answer Data Base	N
F009698LA	LF – By Key and Search Word	N
F009790	Word Search Verbs	Y
F0098	ASI Master File	Y
F0098LA	LF – System Code, Job to Execute	N
F0098LB	LF – Release, Type, System Code	N
F12601	WF – STAR	Y
F12601LA	LF – SK01 through SK09	N
F12601LB	LF – STAR Logical Over Workfile	N
F12603	STAR General Specifications Master File	Y
F12603LA	LF – STAR General Specifications Master File	N
F12604	STAR – Column Specification Master File	Y
F12605	STAR – Row Specifications Master File	Y
F12606	STAR – Cell Specifications Master File	Y
F12607	STAR – Row Creation File	Y
F12608	WF – STAR – Balance Auditor	Y
F12609	STAR – Print Image File	Y
F81900	DREAM Writer – Performance Statistics Master	Y
F81900LA	DREAM Writer – Performance Statistics	N
F81901	DREAM Writer Statistics Detail	Y
F81901LA	LF – File and Keys	N
F81902	DREAM Writer – Statistics Detail Accumulator	Y
F83JOIN	FASTR – Format File for Open Query Dynamic Join	Y
F83JOINA	FASTR – Format File for Open Query Dynamic Join	Y
F83JOINB	FASTR – Format File for Open Query Dynamic Join	Y
F83WORK	FASTR – Work File Save Data	Y
F83WORKB	FASTR – Work File Save Data	Y

Advanced Programming Concepts and Skills

File Name	File Description	Copy Data
F8301	WF – FASTR	Y
F8302	WF – Level of Detail	Y
F8303	FASTR General Specifications Master File	Y
F8303LA	LF – FASTR General Specifications Master File	N
F8304	FASTR – Column Specifications Master File	Y
F8305	FASTR – Row Specifications Master File	Y
F8306	FASTR – Cell Specifications Master File	Y
F8307	FASTR – Row Creation File	Y
F8308	WF – FASTR – Balance Auditor	Y
F8309	FASTR – Print Image File	Y
F8310	WF – FASTR – Balance Auditor	Y
F8350	FASTR – Cost Center Organizational Chart	Y
F8410	DDP Routing Master	Y
F8415	DDP Transfer File Setup	Y
F9200	Data Item Master	Y
F9200JA	JF – Data Item (F9203 F9200)	N
F9200JB	JF – Data Item (F9200 F9205) Error Messages Only	N
F9200JC	JF – Data Item (F9203 F9200)	N
F9200JD	JF – Data Item (F9201 F9200)	N
F9200LA	LF – Glossary Group, Data Item	N
F9200LB	LF – System Code, Data Item	N
F9201	Data Field Specifications	Y
F9201JA	JF – Data Item (F9202 F9201)	N
F9201LA	LF – Data Edit Rule, ER Spec 1, ER Spec 2	N
F9201LB	LF – Data Item Class, Data Item	N
F9202	Data Field Display Text	Y
F9203	Data Item Alpha Descriptions	Y
F9204	Data Item Aliases	Y
F9204LA	LF – Alias Type, Alias, Data Item	Y
F9205	Data Dictionary – Error Message Program ID	Y

Appendix A — Common & Production Library Files

File Name	File Description	Copy Data
F9220	Screen/Report Text Master	Y
T9220	Screen/Report Text Master	Y
F92710	Action Diagramming Translation Master	Y
F93000	Model Program Definition Master	Y
F93000LA	LF – Model Program Definition – X-Ref	N
F93001	Source Code Inventory Master	Y
F93001LA	LF – Primary Source Key	N
F93002	Additional Help/Modifications Master	N
F93002LA	LF – Primary, Secondary and Serial Number	N
F93003	WF – Source Merge Monitor	N
F93004	User Defined Entry Point Source Code Master	Y
F93101	General Purpose/Type Parameters	N
F93101LA	LF – Program ID by Program Type	N
F93102	File Specifications	N
F93103	Data Base Format Parameters	N
F93103LA	LF – Program ID, Format Name, File Name	N
F93104	Program Exit Parameters	N
F93105	Detail Program Logic Parameters	N
F93105LA	LF – Program ID, Data Field Name	N
F93105LB	LF – Program ID, File Name, Key Position	N
F93105LC	LF – Program ID, Clear After, Field Name	N
F93105LD	LF – Program ID, Field Type, Field Name	N
F93105LE	LF – Program ID, Data Field Name	N
F93105LF	LF – Program ID, Data Field Name	N
F93105LG	LF – Program ID, Data Field Name	N
F93105LH	LF – Data Field Parameters LF – #DDICT, #DDFTY	N
F93105LI	LF – Program ID, Parameter Sequence	N
F93105LJ	LF – Program ID, Field Name	N
F93105LK	LF – Program ID, Field Name, File Name	N
F93105LL	LF – Program ID, Data Item	N

Advanced Programming Concepts and Skills

File Name	File Description	Copy Data
F93106	Automatic Accounting Instruction Parameters	N
F93107	Print Control Parameters	N
F93108	Operation Code to Logic Module X-Ref	Y
F93109	User Defined Procedures	N
F93110	User Defined Procedures Detail	N
F93111	User Defined Procedures Work Field Definition	N
F93112	User Defined Entry Point Definition	N
F93201	Key List File Maintenance	Y
F9501	Unattended Operations Scheduling Master	N
F9501LA	LF – System, Pgm ID, Library, User	N
F9501LB	LF – Pgm ID, Library, User	N
F9501LC	LF – Library, Pgm ID, User	N
F9501LD	LF – User, Pgm ID, Library	N
F9501LE	LF – Execution Date, Execution Time	N
F9601	Function Key Translation Master	Y
F9601D	Function Key Definitions – Alternate Language Desc	Y
F9611	Function Key Translation Detail	Y
F9611LA	LF – Function Key Field Name, Screen Name	N
F9612	Function Key Security	N
F9612LA	LF – Function Key Security	N
F9620	Cursor Sensitive Control Master	Y
F9620LA	LF – File, Field, and Format	N
F9620LB	LF – File, Format, and Field	N
F9621	Cursor Control Format Master Maintenance	Y
F9621LA	LF – By Formats	N
F9701	ASI SAR Information Master File	Y
F98HELP	Help Instructions Master File	Y
F98HEPLA	LF – Help Instructions Master File	N
F9800Y	Data Dictionary (Field Reference)	Y
F98001	Cross-Reference Relationships	N

Appendix A — Common & Production Library Files

File Name	File Description	Copy Data
F98001LA	LF – Cross–Reference Relationships	N
F98001LB	LF – Cross–Reference Relationships	N
F98001LC	LF – Cross–Reference Relationships	N
F98001LD	LF – Cross–Reference Relationships	N
F98002	Cross–Reference File Information	N
F98002LA	LF – Cross–Reference Relationships	N
F98002LB	LF – Cross–Reference Relationships	N
F98002LC	LF – Cross–Reference Relationships	N
F98003	Cross–Program Field Information	N
F98003LA	LF – Cross–Reference Program Field Information	N
F98003LB	LF – Cross–Reference Program Field Information	N
F98003LC	LF – Cross–Reference Program Field Information	N
F98009	CASE Profiles File	N
F9801	Software Versions Repository Master	Y
F9801JA	JF – Member ID (F9801, F9802)	N
F9801L@	LF – Functional Usage/System/Function/Member ID	N
F9801LA	LF – Future Planning – Software Inventory Master	N
F9801LB	LF – Functional Usage/System/Function/Member ID	N
F9801LC	Software Inventory Master Logical–Sys, Base, MID	N
F9801LD	LF – Function Code, Member ID	N
F9801LE	LF – File Prefix, Member ID	N
F9801LF	LF – Function Code, System Code, Member ID	N
F9801LG	LF – Member ID	N
F9801LH	LF – Member Suffix, Member ID	N
F9801LI	LF – Reporting System, Member Suffix, Member ID	N
F9801LJ	LF – Member ID (System Code=2 bytes)	N
F98012	SVR Member Category Codes	N
F98013	SVR Member Parm/Key List	N
F9802	Software Versions Repository Detail	Y
F9802LA	LF – SAR/MID	N

Advanced Programming Concepts and Skills

File Name	File Description	Copy Data
F9802LB	LF – Version/Type	N
F9805	Printer File Creation Parameters	Y
F98100	Report Writer Combined Versions List	Y
F9816	Data Dictionary Generic Text File	N
F98163	Data Dictionary Generic Text Key Index File	N
F98163LA	DD Generic Text Key Index File – LF by Key Serial Num	N
F98200	Report Writer Version Selection Definition	Y
F98301	DREAM Writer Master Parameter	Y
F98301LA	LF – Record Type, Program, Version and Sequence No	N
F98301LB	LF – Program ID, Version, Type, Prompt Line – Window	N
F98301LC	LF – Program ID, Version, Option #	N
F98301LD	LF – Key on Form Id & FldName	N
F98302	DREAM Writer – Processing Options (Language Pref)	Y
F98302LA	DREAM Writer – Processing Options (Language Pref)	Y
F98303	DREAM Writer – Version Headings (Language Pref)	Y
F9831	DREAM Writer Values Parameter	Y
F98311	DREAM Writer – Headings File	Y
F98312	DREAM Writer – Printer Overrides	Y
F98501	Dialogue Description Master	Y
F98501LA	LF – Dialogue Type, Member, Data Item	N
F98501LB	LF – Data Item, Member ID	N
F98510	Dialogue Question Master	Y
F98511	Dialogue Question Responses	Y
F98511LA	LF – Keys: Mid, Dtai, Nxts	N
F98519	Dialogue *LIST Responses	Y
F98520	Quiz History Master	N
F98521	Quiz History Detail	N

Chart C – Physical and Logical Files Created in Production Library with Data

The following chart shows the physical and the logical files that were created in Production Library with data. Logical files contain no data, therefore data copied is N.

File Name	File Description	Copy Data
F0009	General Constants	Y
F0010	Company Constants	Y
F0012	Automatic Accounting Instructions Master	Y
F0012LA	LF – Sequence No., Item No., Company	N
F0012LB	LF – System, Sequence No., Item No., Com	N
F06211	Payroll Cycle Version File	Y
F063920	Payroll Archive Version File	Y
F06723	W-2 Audit Report File	Y
F06723LA	W-2 Audit Report File (vers)	Y
F069016	Tax Area Constant	Y
F069016A	LF – Tax Area Code	N
F069016B	LF – Tax Area Code	N
F069016C	LF – Statutory Code, Tax Type	N
F069027	Table Unit of Measure File	Y
F06917	Tax Payment Schedule File	Y
F126JOIN	STAR – Join format file for F1201 & F1202	Y
F1510	Property Management Constants	Y
F200001	Energy Constants Revisions	Y
F200002	Interest Type Constants	Y
F200003	Product Codes Constants	Y
F200004	Revenue/Prod Trans Typ Constants	Y
F230001	WPT Inflation Factor Constants	Y
F230002	Tax and Deduction Profile Constants	Y
F230003	Tax Rates Constants	Y
F230003A	LF – Tax Code, Effective Date	N
F230004	Sliding Scale Tax Rates Constants	Y

File Name	File Description	Copy Data
F40096	Default Print Queues	Y
F40105	Subsystem Control Parameters	Y
F4090	Distribution/Manufacturing – AAI Master File	Y
F4091	Category Code Key Position File	Y
F48090	Work Order Supplemental Data Types	Y
F4849	Available Data Items	Y
F4849LA	Available Data Items	Y
F4849LB	Available Data Items	Y
F4857	Retrieval Code Definition	Y
F5192	Inquiry Columns	Y
F5193	Inquiry Formats	Y
F5194	Inquiry Paths	Y
F82013	World Writer Multi-Currency File	Y
F82100	Query Header File	Y
F82101	Query Data File Selections	Y
F82102	Query Data File Join Fields	Y
F82103	Query Output Print Fields	Y
F82104	Query Output Print Field Calculations	Y
F82105	Query Data Selection Fields	Y
F82106	Query Data Selection Values	Y
F82107	Query Sort Fields	Y
F82108	Query Field Summary Functions	Y
F82109	Query File Update Specifications	Y

Appendix B – Upgrading Customized Source Code

J.D. Edwards provides you access to several complementary products. If you have customized J.D. Edwards source code, the following products will help you upgrade your source code.

S/Compare

Overall, S/Compare is a valuable aid used to:

- Identify differences between any two programs

- Simplify the task of documenting program changes

- Simplify the task of consolidating your custom changes into new releases of programs

- Identify differences between the names of the programs in two different files to quickly locate added or deleted programs in the new release

The S/Compare utility is specifically designed to compare two versions of source code. It will locate inserted, deleted, changed, or moved records in a source program. Processing options are provided to include or exclude comment lines, blank lines, and formatting differences. S/Compare's output clearly identifies differences between two source members on a composite list of both programs. An option allows the records that are the same in the programs to be omitted from the listing to produce a report of only the differences between the files. This option also allows a given number of matching records on each side of a mismatch to be listed to help in identifying the section of source code.

Features of S/Compare

Some of the features and capabilities of S/Compare are:

Flags are used in the composite listing to clearly mark statements or blocks of statements that have been inserted, deleted, or moved.

Records that are moved from one location in the original file to another in the new program are indicated by source and target locations.

Printing large blocks of identical code can be eliminated by a processing option. Only the differences will be printed and you can control the number of matching lines that are listed before and after each block of mismatched code.

Differences between your program and the new program can be listed in an edit program.

There is a processing option that can eliminate mismatches being printed because of spacing between words.

Harmonizer

Harmonizer adds to the capabilities of S/Compare by allowing the comparison of 3 to 16 program versions. Like S/Compare, the comparison results are written in a format that clearly depicts the differences between source members. In addition, Harmonizer has the capability of merging program versions to generate a composite source member. You can control what is written to the composite source member when potential conflicts are found.

Features and Capabilities of Harmonizer

Some of the features and capabilities of Harmonizer are:

The comparison of 3 to 16 versions of a program.

Two report formats are available. The MULTI-Compare report compares 3 to 16 programs. The TRI-Compare report is specifically designed for 3 programs.

Statements from the original file that have been replaced, inserted, or deleted are noted on the comparison reports.

All of the features of S/Compare are supported by Harmonizer when 3 programs are being compared, except the creation of an edit program which has been replaced by the creation a composite output program.

The composite program may be compiled immediately or it may be edited. The ScmpEdit utility can be used to remove specified code in the composite program.

The HARMONIZER command can be used to execute S/Compare and Harmonizer making the utilities easier to use.

Harmonizer Added to S/Compare

You can incorporate your program changes into new releases easier. Harmonizer can compare the J.D. Edwards original program, the J.D. Edwards new release, and your customized program to produce a composite source file and a composite report. The composite report notifies you of discrepancies in the replacement, insertion, or deletion of code.

The Source File Synopsis report produces a comparison of the program names in the J.D. Edwards original source file, the J.D. Edwards new source file, and your source file to determine any additions or deletions of programs.

You can merge the development work of several programmers working on the same program.

About Harmonizer Plus

Harmonizer Plus adds to the capabilities of S/Compare and Harmonizer by helping you manage the ENTIRE process of building a new software release.

About the Project Manager Feature

The Project Manager feature will display an up-to-the-minute status of every program in your upgrade project. It shows:

- Which merged objects need a programmer review due to conflicts between local changes and vendor changes.

- Modified objects that are already created and ones that need to be created.

- Objects that are ready for production.

- Unmodified objects that must be recreated because they are dependent on modified objects.

- Objects that must be present before the object you are working with can be created.

Additional Functions

Harmonizer Plus provides a workbench for programmers to perform a variety of functions. Given the proper authority, a programmer can:

- Directly access SEU for editing programs.

- Mass compile entire groups of programs.

- Selectively compile individual programs.

- Selectively create all objects dependent on a modified object.

- Add or delete programs from the new production version.

Harmonizer Plus identifies unchanged modules that must be recompiled due to changes in prerequisite objects. For example, if you have modified DDS, Harmonizer Plus can identify programs that reference the related files. It can then recompile those programs. All you need to do is test and move the new libraries into production.

Appendix C – CL Models

J98MODEL1 – Interactive Video

```
9801                               Software Versions Repository
Action Code. . . . I
Member ID. . . . J98MODEL1
Description. . . . Model CL Program - Interactive Video
Function Code. . . CLP   CL Programs
Function Use. . . . 198   Model Source Member
System Code. . . . 98    Technical Tools
Reporting System 98    Technical Tools
Base Member Name J98MODEL1
Maint/RSTDSP . . . Omit Option. . . O  Generation Sev. . .
Copy Data (Y/N). N   Optional File. . N  Common File. . . N

O Source      Object      Source      SAR      Version    S D      User      Date
P Library     Library     File        Number   ID         C P      ID        Modified
-- JDFSRC73   JDFOBJ73   JDESRC      981283  A73       1 -     BECK      07/07/95
```

Opt: 1=Browse 2=Edit 3=Copy 5=SAR 8=Print 9=Dlt 10=Design 14=Crt

J98MODEL2 – Batch DREAM Writer without Printer File

```

9801                               Software Versions Repository

Action Code. . . I
Member ID. . . . J98MODEL2
Description. . . Model CL Program - Batch DREAM Writer without Printer File
Function Code. . CLP   CL Programs
Function Use . . 198   Model Source Member
System Code. . . 98   Technical Tools
Reporting System 98   Technical Tools
Base Member Name J98MODEL2           File Prefix. . . ___
Maint/RSTDSP . . ___ Omit Option. . . O Generation Sev . ___
Copy Data (Y/N). N   Optional File. . N Common File. . . N

O Source      Object      Source      SAR      Version    S D      User      Date
P Library     Library     File        Number   ID         C P      ID        Modified
___ JDFSRC73   JDFOBJ73   JDESRC     867923   A73       1  _     BECK      07/07/95

Opt:  1=Browse  2=Edit  3=Copy  5=SAR  8=Print  9=Dlt  10=Design  14=Crt
    
```

J98MODEL3 – Interactive Video Prompt

```

9801                               Software Versions Repository

Action Code. . . I
Member ID. . . . J98MODEL3
Description. . . Model CL Program - Interactive Video Prompt
Function Code. . CLP   CL Programs
Function Use . . 198   Model Source Member
System Code. . . 98   Technical Tools
Reporting System 98   Technical Tools
Base Member Name J98MODEL3           File Prefix. . . ___
Maint/RSTDSP . . ___ Omit Option. . . O Generation Sev . ___
Copy Data (Y/N). N   Optional File. . N Common File. . . N

O Source      Object      Source      SAR      Version    S D      User      Date
P Library     Library     File        Number   ID         C P      ID        Modified
___ JDFSRC73   JDFOBJ73   JDESRC     867923   A73       1  _     BECK      07/07/95

Opt:  1=Browse  2=Edit  3=Copy  5=SAR  8=Print  9=Dlt  10=Design  14=Crt
    
```


J98MODEL4 – Interactive/Batch with Processing Options

```

9801                               Software Versions Repository

Action Code. . . . I
Member ID. . . . J98MODEL4
Description. . . . Model CL Program - Interactive/Batch with Processing Options
Function Code. . . CLP   CL Programs
Function Use . . . 198   Model Source Member
System Code. . . . 98   Technical Tools
Reporting System 98   Technical Tools
Base Member Name J98MODEL4                               File Prefix. . . .
Maint/RSTDSP . . . Omit Option. . . Q   Generation Sev . . .
Copy Data (Y/N). N   Optional File. . N   Common File. . . N

O Source      Object      Source      SAR      Version      S D      User      Date
P Library     Library     File        Number   ID           C P      ID        Modified
-- JDFSRC73   JDFOBJ73   JDESRC      867923  A73          1 -     BECK      07/07/95

Opt:  1=Browse  2=Edit  3=Copy  5=SAR  8=Print  9=Dlt  10=Design  14=Crt
    
```

J98MODEL5 – Batch Report Writer – No DDS File

```

9801                               Software Versions Repository

Action Code. . . . I
Member ID. . . . J98MODEL5
Description. . . . Model CL Program - Batch Report Writer - No DDS File
Function Code. . . CLP   CL Programs
Function Use . . . 198   Model Source Member
System Code. . . . 98   Technical Tools
Reporting System 98   Technical Tools
Base Member Name J98MODEL5                               File Prefix. . . .
Maint/RSTDSP . . . Omit Option. . . Q   Generation Sev . . .
Copy Data (Y/N). N   Optional File. . N   Common File. . . N

O Source      Object      Source      SAR      Version      S D      User      Date
P Library     Library     File        Number   ID           C P      ID        Modified
-- JDFSRC73   JDFOBJ73   JDESRC      867923  A73          1 -     BECK      07/07/95

Opt:  1=Browse  2=Edit  3=Copy  5=SAR  8=Print  9=Dlt  10=Design  14=Crt
    
```

J98MODEL6 – Batch Report Writer OPNQRYF

```

9801                               Software Versions Repository

Action Code. . . I
Member ID. . . . J98MODEL6
Description. . . Model CL Program - Batch Report Writer OPNQRYF
Function Code. . CLP   CL Programs
Function Use . . 198   Model Source Member
System Code. . . 98   Technical Tools
Reporting System 98   Technical Tools
Base Member Name J98MODEL6           File Prefix. . .
Maint/RSTDSP . . _   Omit Option. . . O Generation Sev . .
Copy Data (Y/N). N   Optional File. . N Common File. . . N

O Source      Object      Source      SAR      Version    S D      User      Date
P Library     Library     File        Number   ID         C P      ID        Modified
_ JDFSRC73    JDFOBJ73    JDESRC      867923  A73        1 _      BECK      07/07/95

Opt:  1=Browse  2=Edit  3=Copy  5=SAR  8=Print  9=Dlt  10=Design  14=Crt
    
```

J98MODEL7 – Batch Report Writer OPNQRYF w/OQF Reset

```

9801                               Software Versions Repository

Action Code. . . I
Member ID. . . . J98MODEL7
Description. . . Model CL Program - Batch Report Writer OPNQRYF w/OQF Reset
Function Code. . CLP   CL Programs
Function Use . . 198   Model Source Member
System Code. . . 98   Technical Tools
Reporting System 98   Technical Tools
Base Member Name J98MODEL7           File Prefix. . .
Maint/RSTDSP . . _   Omit Option. . . O Generation Sev . .
Copy Data (Y/N). N   Optional File. . N Common File. . . N

O Source      Object      Source      SAR      Version    S D      User      Date
P Library     Library     File        Number   ID         C P      ID        Modified
_ JDFSRC73    JDFOBJ73    JDESRC      867923  A73        1 _      BECK      07/07/95

Opt:  1=Browse  2=Edit  3=Copy  5=SAR  8=Print  9=Dlt  10=Design  14=Crt
    
```

J98MODEL8 - Control File Driven Batch Process

```

9801                               Software Versions Repository

Action Code. . . . I
Member ID. . . . J98MODEL8
Description. . . . Model CL Program - Control File Driven Batch Process
Function Code. . . CLP CL Programs
Function Use . . . 198 Model Source Member
System Code. . . . 98 Technical Tools
Reporting System 98 Technical Tools
Base Member Name J98MODEL8 File Prefix. . . .
Maint/RSTDSP . . . Omit Option. . . Q Generation Sev . .
Copy Data (Y/N). N Optional File. . N Common File. . . N

O Source      Object      Source      SAR      Version     S D      User      Date
P Library    Library    File        Number   ID          C P      ID        Modified
-- JDFSRC73  JDFOBJ73  JDESRC      867923  A73        1 -      BECK     07/07/95

Opt:  1=Browse  2=Edit  3=Copy  5=SAR  8=Print  9=Dlt  10=Design  14=Crt
    
```


Glossary

Glossary

This glossary defines terms in the context of your use of J.D. Edwards systems and the accompanying user guide.

AAI. See Automatic Accounting Instructions.

access. To get to the information or functions provided by the system through menus, screens, and reports.

activity levels. The activity level of a storage pool is the number of jobs that can run at the same time in a storage pool. The machine manages the control of this level. Often during processing in a job, a program waits for a system resource or a response from a work station user. During such waits, a job gives up its use of the storage pools in order that another job that is ready to be processed can take its place.

A/D Cycle. Application Development Cycle.

advanced operating system. A single integrated operating system which contains: relational database, display manager, storage manager, communication manager, work manager, security manager and other managers.

AEC. Architectural, Engineering and Construction group.

allocating pools. If the system cannot allocate all the requested storage, it allocates as much storage as is available and allocates all the other as storage becomes available.

alphabetic character. Represents data by using letters and other symbols from the keyboard (such as *&#). Contrast with *numeric character*.

alphanumeric character. Represents data in a combination of letters, numbers, and other symbols (such as *&#).

ANSI. American National Standards Institute.

answers. Remember the online education system on the AS/400. All you need to remember is the command, *GO SUPPORT*.

AP. Accounts Payable.

APD. Application Program Driver.

API. An application programming interface describes the means by which a programmer can access the features provided by the interfaced object.

APPC. Advanced Program to Program Communications.

application. A collection of computer programs that allows you to perform specific business tasks. Some examples of applications are accounts payable, inventory, and order processing. Synonymous with *system*.

APPN. Advanced Peer-to-Peer Networking.

AS/400. Application System/400.

AS/400 Office. An IBM word processing program.

ASCII. American Standard Code for Information Interchange.

ASPs. Auxiliary Storage Pools.

attributes. To regard as belonging.

attribute byte. First character on a display field. This character controls how the field is displayed.

audit trail. The detailed, verifiable history of a processed transaction. The history consists of the original documents, transaction entries, and posting of records, and usually concludes with a report.

authority. The right to do some thing on the system or to use an object in the system, such as a file or a program.

automatic accounting instruction (AAI). A code that points to an account in the chart of accounts. AAIs define rules for programs that automatically generate journal entries. This includes interfaces between Accounts Payable, Accounts Receivable, and Financial Reporting and the General Accounting system. Each

system that interfaces with the General Accounting system has AAIs. For example, AAIs can direct the Post to General Ledger program to post a debit to a certain expense account and an automatic credit to a certain accounts payable account.

autostart job entry. A job is automatically started each time the subsystem is started.

ATC. Area Training Coordinator.

AR. Accounts Receivable.

backup copy. A copy of original data preserved on a magnetic tape or diskette as protection against destruction or loss.

BAPR. Approved Budget Field Description.

BASIC. Beginners Application Software Introduction Class.

batch. A group of like records or transactions that the computer treats as a single unit during processing. For identification purposes, the system usually assigns each batch a unique identifier, known as a "batch number."

batch header. Information the computer uses as identification and control for a group of transactions or records in a batch.

batch job. A task or group of tasks you submit for processing that the system treats as a single unit during processing, for example, printing reports and purging files. The computer performs these tasks with little or no user interaction.

batch processing. A method by which the computer selects jobs from the job queue, processes them, and writes output to the outqueue. Contrast with *interactive processing*.

batch type. A code that designates which J.D. Edwards system the associated transactions pertain to, thus controlling what records are selected for processing. For example, in the Post General Journal process, only unposted transaction batches with a batch type of G for General Accounting are selected for posting.

bit. Binary digit. Either a zero or a one at the MI level.

Bomb. Fail.

Boolean logic operand. In J.D. Edwards DREAM Writer, the parameter of the Relationship field. The Boolean logic operand tells the system to perform a mathematical calculation on certain records or parameters.

Available operands are:

EQ = Equal To

LT = Less Than

LE = Less Than or Equal To

GT = Greater Than

GE = Greater Than or Equal To

NE = Not Equal To

NL = Not Less Than

NG = Not Greater Than

BORG. Original/Beginning Budget Field BPC v. Budget Pattern Code.

BREQ. Requested Budget Field Description.

B/S. Balance Sheet.

buffer. A reserved memory area used for performing input/output operations.

business unit. Formerly cost center.

Caching. Refers to the use of a technique to locally store the results of input and output operations to minimize the use of slower accesses to disk drives and other storage devices.

CAD/CAP. Computer Assisted Design/Computer Assisted Programming. A set of automated programming tools for designing and developing applications. These tools automate system design, generate source code and documentation, enforce design standards, and help to ensure consistency throughout all J.D. Edwards systems.

category code. In user defined codes, a temporary title for an undefined category. For example, if you are adding a code that designates different sales regions, you could change *category code 4* to *Sales Region*, and define E (East), W (West), N (North), and S (South) as the valid codes. Category codes were formerly known as *reporting codes*.

CC. Cost center. *Now known as Business Unit.*

CC.OBJ.SUB. Cost Center.Object.Subsidiary (J.D. Edwards Account Code Structure).

character. Any letter, number, or other symbol that a computer can read, write, and store.

character, special. Representation of data in symbols that are neither letters nor numbers. Some examples are: *&#/.

CLONE. Crazy Logic Only Nerds Enjoy. (Old term for the Program Generator.)

COBOL. Common Business Oriented Language.

Column. *See field.*

command. A character, word, phrase, or combination of keys you use to tell the computer to perform a defined activity.

compile. To change source code into computer readable code.

constants. Parameters or codes that rarely change. The computer uses constants to standardize information processing by an associated system. Some examples of constants are allowing or disallowing out-of-balance postings and having the system perform currency conversions on all amounts. Once you set constants such as these, the system follows these rules until you change the constants.

Core. The central and foundational systems of J.D. Edwards software, including General Accounting, Accounts Payable, Accounts Receivable, Address Book, Financial Reporting, Financial Modeling and Allocations, and Back Office. Now called Financials.

CPG. Complementary Products Group.

CRP. Capacity Requirements Planning.

CRP. Conference Room Pilot. A simulation of the client's business in a conference room environment.

CUA. Common User Access. IBM's specification of a user interface definition across applications.

CUM. A representation of changes to J.D. Edwards software, which your organization receives on magnetic tapes or diskettes.

current library. Specifies a single library that is searched before any other user libraries in the library list. A current library is optional and can be different for each user or job. On displays, the current library is represented by the value *CURLIB.

cursor. The blinking underscore or rectangle on your screen that indicates where the next keystroke appears.

cursor sensitive help. *See field help.*

data. Numbers, letters, or symbols that represent facts, definitions, conditions, and situations, that a computer can read, write, and store.

data item. A code which represents a field, file, program, menu message, error message or help text stored in the data dictionary. Each piece of information within the database is defined by a data item. Data item name definition is limited to four characters in the J.D. Edwards systems to allow for program manipulation of the item.

database. A continuously updated collection of all information a system uses and stores. Databases make it possible to create, store, index, and cross-reference information online.

data character. A pattern of 8 bits.

data dictionary. A database file consisting of the definitions, structures, and guidelines for the usage of fields, messages, and help text. The data dictionary file does not contain the actual data itself.

data field. A collection of data characters.

data Integrity. Refers to checking the relationships between data items (fields) and being sure that values correlate correctly.

data validation. Determining if data is correct when compared to a set of conditions.

DDE. Dynamic Data Exchange.

DDM. Distributed Data Management.

DDP. Distributed Data Processing.

DDS. Data Description Specifications.

default. A code, number, or parameter the system supplies when you do not enter one. For example, if an input field's default is N and the you do not enter something in that field, the system supplies an N.

descriptive title. See *user defined code*.

detail. The individual pieces of information and data that make up a record or transaction. Contrast with *summary*.

DFU. Data File Utility. An IBM product.

DIF. Data Interchange Format.

display. (1) To cause the computer to show information on a terminal's screen. (2) A specific set of fields and information that a J.D. Edwards system might show on a screen. Some screens can show more than one display when you press a specified function key.

display field. A field of information on a screen that contains a system-provided code or parameter that you cannot change. Contrast with *input field*.

DMA. Direct Memory Access.

DNS. Do Not Spread.

DOS. Disk Operating System.

DREAM Writer. Data Record Extraction And Management Writer. A flexible data manipulator and cataloging tool. You use this tool to select and sequence the data that is to appear on a programmed report.

DRP. Distribution Requirements Planning.

Dynamic. Is constantly changing.

DASD. Data Auxiliary Storage Device.

ECS. Electronic Customer Support.

edit. (1) To make changes to a file by adding, changing, or removing information. (2) The program function of highlighting fields into which you have entered inadequate or incorrect data.

EDI. Electronic Data Interchange. The transmission of business documents among computers of independent organizations.

EFT. Electronic Fund Transfer.

EIS. Executive Information System.

Engagement letter. A letter identifying the mutual understandings and initial expectation of the client and J.D. Edwards.

environment. The list of files required by a user to perform certain tasks. For example, a programmer has access to a test environment and an environment which includes live data. Each environment utilizes a different set of files.

execute. See *run*.

exit. (1) To interrupt or leave a computer program by pressing a specific key or a sequence of keys. (2) An option or function key displayed on a screen that allows you to access another screen.

facility. A collection of computer language statements or programs that provides a specialized function throughout a system or throughout all integrated systems. Some examples DREAM Writer and FASTR.

Fast Path Mnemonics. A method of using a UDC to define execution to a J.D. Edwards program.

FASTR. Financial Analysis Spreadsheet Tool and Report Writer. A report writer that lets you design your own report specifications using the general ledger database.

FDA. File Design Aid. A J.D. Edwards design tool.

field. (1) An area on a screen where you type in data, values, or characters. (2) A defined area, usually within a record, which can contain a specific piece of information such as name, document type or amount. For example, a vendor record consists of the fields Vendor Name, Vendor Address and Telephone Number. The field Vendor Name contains only the name of the vendor. See *input field* and *display field*. Also known as *column*.

field help. J.D. Edwards online Help function, which lets you view a description of a field, its purpose and, when applicable, a list of the valid codes that you can enter. You access this information by pressing F1 with the cursor positioned in the field.

file. A collection of related data records organized for a specific use and electronically stored by the computer. *Also known as table.*

financial systems. The central and foundational systems of J.D. Edwards software, including General Accounting, Accounts Payable, Accounts Receivable, Address Book, Financial Reporting, Financial Modeling and Allocations, and Back Office. *Previously known as core.*

fold area. An area of a screen, accessed by pressing F4, that displays additional information associated with the records or data items displayed on the screen.

function. A separate feature within a facility that allows you to perform a specific task, for example, the field help function.

function key. A key you press to perform a system operation or action. For example, you press F4 to have the system display the fold area of a screen.

Form. One World term for video.

glossary. The collection of text related to specific data items. The glossary contains help text and message text.

GL. General Ledger.

GA. General Accounting.

GST. Goods & Service Tax.

GUI. Graphical User Interface.

hard code. Program instructions which can only be altered by a programmer. The altered instructions must then be recompiled so the computer can understand them.

hard copy. A presentation of computer information printed on paper. Synonymous with *printout*.

header. Information at the beginning of a file. This information is used to identify or provide control information for the group of records that follows.

help instructions. Online documentation or explanations of fields that you access by pressing the Help key or by pressing F1 with your cursor in a particular field.

helps. See *help instructions*.

hidden selections. Menu selections you cannot see until you enter HS in a menu's Selection field. Although you cannot see these selections, they are available from any menu. They include such items as Display Submitted Jobs (33), Display User Job Queue (42), and Display User Print Queue (43). The Hidden Selections window displays three categories of selections: user tools, operator tools, and programmer tools.

HMC. Horizontal Microcode.

HS. J.D. Edwards Hidden Selections.

ICCC. InterCompany Cost Center. *Now known as business unit.*

ICF. Intersystem Communication Function.

ICH. InterCompany Hub.

IDDU. Interactive Data Definition Utility – IBM Product.

IMP. Internal Microprogram Load.

IMPI. Internal Microprogramming Interface.

Implementation Methodology. Nine steps to provide J.D. Edwards consulting staff with a guide for implementing the software in a thorough and consistent manner.

input. Information you enter in the input fields on a screen or that the computer enters from other programs, then edits and stores in files.

input field. An area on a screen, distinguished by underscores (_ _), where you type data, values, or characters. A field

represents a specific type of information such as name, document type, or amount. Contrast with *display field*.

install system code. The four-character identifier of a J.D. Edwards system. For example, 01 for the Address Book system, 04 for the Accounts Payable system, and 09 for the General Accounting system. *Now known as system code.*

integrity. Soundness, completeness.

interactive job. An interactive job starts when a user signs on a display station and ends when the user signs off. During the job, the user interacts with the system.

interactive processing. A job the computer performs in response to commands you enter from a terminal. During interactive processing, you are in direct communication with the computer, and it might prompt you for additional information during the processing of your request. See *online*. Contrast with *batch processing*.

interface. A link between two or more J.D. Edwards systems that allows these systems to send information to and receive information from one another.

I/O. Input/Output.

IPL. Initial Program Load.

ITF. Interactive Terminal Facility.

JDE. Jack, Dan and Ed. Founders of JD Edwards & Co.

jargon. A J.D. Edwards term for system-specific text. You base your jargon help text on a specific reporting code you designate in the Data Dictionary Glossary. You can display this text as part of online help. You create your jargon text descriptions and titles for data items through the Data Dictionary, menu and vocabulary overrides record using a reporting system code. Jargon text descriptions and titles for data items display on screens as field names.

job. A single identifiable set of processing actions you tell the computer to perform. You start jobs by choosing menu selections, entering commands, or pressing designated function keys. An example of a computer job is check printing in the Accounts Payable system.

job description. An object consisting of a set of specifications about a computer job and its executing environment.

job log . A job log is a record of requests (such as commands) submitted by the system by a job, the messages related to the requirements and the actions performed by the system on the job.

job queue. A group of jobs waiting to enter a subsystem.

Join logical file. Presents composite records consisting of fields extracted from two or more physical records from two or more physical files.

justify. To shift information you enter in an input field to the right or left side of the field. Many of the facilities within J.D. Edwards systems justify information. The system does this only after you press Enter.

KBG. Knowledge-Based Generator. See *program generator*.

key field. A series of identifying or controlling characters a computer uses to retrieve related information tied to the key. An employee number, for example, is a key field consisting of references to other files in the system that contain information about the given employee.

Key General Ledger Account (Key G/L). See *automatic accounting instructions*.

LAN. Local Area Network.

leading zeros. A series of zeros that certain facilities in J.D. Edwards systems place in front of a value you enter. This normally occurs when you enter a value that is smaller than the specified length of the field. For example, if you enter 4567 in a field that accommodates

eight numbers, the facility places four zeros in front of the four numbers you enter. The result would look like this: 00004567.

level check. A mechanism of the OS/400 that assures that a file version and program using that file are in sync with one another.

level of detail. (1) The degree of difficulty of a menu in J.D. Edwards software. The levels of detail for menus are as follows:

A=Major Product Directories

B=Product Groups

1=Daily Operations

2=Periodic Operations

3=Adv/Tech Operations

4=Computer Operations

5=Programmers

6=Advanced Programmers

Also known as *menu levels*. (2) The degree to which account information in the General Accounting system is summarized. The highest level of detail is 1 (least detailed) and the lowest level of detail is 9 (most detailed).

library. A library groups objects. A library is an object itself. Similar to directory on a PC.

library list. An ordered list of libraries used for locating objects. Similar to path on a PC.

LIOM. Line Input/Output Manager.

LOD. Level of Detail.

logical file. Contains no data, but provides a view of one or more physical files upon which it is based.

master file. A computer file that a system uses to store data and information which is permanent and necessary to the system's operation. Master files might contain data or information such as paid tax amounts and vendor names and addresses.

MDA. Menu Design Aid. A J.D. Edwards design tool.

menu. A screen that displays numbered selections. Each of these selections represents a program. To access a selection from a menu, type the selection number and then press Enter.

menu levels. See *level of detail*.

menu masking. A security feature of J.D. Edwards systems that allows you to prevent individual users from accessing specified menus or menu selections. When this security is in effect for a user, the selections that have been secured do not appear on the screen.

menu message. Text that appears on a screen after you make a menu selection. It displays a warning, caution, or information about the requested selection.

menu traveling. A method of moving between menus by typing the menu identifier in the selection field of the screen.

MI. Machine Interface.

MRP. Manufacturing Resource Planning.

MRPx. J.D. Edwards Manufacturing Software.

MVS. Multiple Virtual Storage.

next number facility. A J.D. Edwards software facility you use to control the automatic numbering of such items as new G/L accounts, vouchers, and addresses. It lets you specify your desired numbering system and provides a method to increment numbers to reduce transposition and typing errors.

non-join logical file. Presents records that are composed of fields extracted from just one physical record, but can effectively merge two or more physical files.

numeric character. Represents data using the numbers 0 through 9. Contrast with *alphabetic character* and *alphanumeric character*.

object. A discrete entity.

object existence. The right to delete an object from the system.

object management. The right to change the name or library of an object, for physical files, the right to create a logical file over it.

object operational. The right to display the description of an object and the right to the general use of that object.

object orientation. Everything on the AS/400 system that can be stored or retrieved is contained in an object.

offline. Computer functions that are not under the continuous control of the system. For example, if you were to run a certain job on a personal computer and then transfer the results to a host computer, that job would be considered an offline function. Contrast with *online*.

One Step Install. A method developed to make our software easier to install.

online. Computer functions over which the system has continuous control. Each time you work with a J.D. Edwards system-provided screen, you are online with the system. Contrast with *offline*. See *interactive processing*.

online information. Information the system retrieves, usually at your request, and immediately displays on the screen. This information includes items such as database information, documentation, and messages.

Open Application Architecture. An architecture that uses a functional server to allow the various blocks of user interface logic to **access** the same block of data integrity logic.

operand. See *Boolean logic operand*.

option. A numbered selection from a J.D. Edwards screen that performs a particular function or task. To select an option, you enter its number in the Option field next to the item you want the function performed on. When available, for example, option 4 lets you return to a prior screen with a value from the current screen.

OS/400. Operating system for the AS/400.

OS/2. Operating system for the IBM personal computer.

OSI. Open Systems Interconnection.

output. Information the computer transfers from internal storage to an external device, such as a printer or a computer screen.

output queue. A group of spool files waiting to be attached to a writer.

override. The process of entering a code or parameter other than the one provided by the system. Many J.D. Edwards systems offer screens that provide default field values when they appear. By typing a new value over the default code, you can *override* the default. See *default*.

PACO. Posted After Cutoff.

parameter. A number, code, or character string you specify in association with a command or program. The computer uses parameters as additional input or to control the actions of the command or program.

password. A unique group of characters that you enter when you sign on to the system that the computer uses to identify you as a valid user.

PBCO. Posted Before Cutoff.

PC. Personal computer.

PDM. Program Development Manager. IBM design tool.

PDM. Product Data Management – a module of J.D. Edwards software.

physical file. A file that contains actual data records. Has a maximum record length of 32K, maximum fields per record is 8000.

Plug-&-Go. A 2/18/92 announcement where J.D. Edwards selects PROGRESS to develop client applications for the AS/400. The plug-&-go format offers clients the J.D. Edwards Core financial solutions on the IBM AS/400 E series model.

PPAT. People, Places and Things.

printout. A presentation of computer information printed on paper. Synonymous with *hard copy*.

print queue. A group of items waiting to be printed. See *output queue*.

processing options. A feature of the J.D. Edwards DREAM Writer that lets you supply parameters to direct the functions of a program. For example, processing options allow you to specify defaults for certain screen displays,

control the format in which information gets printed on reports, change the way a screen displays information, and enter “as of” dates.

product library. A library containing programs and related data needed for IBM licensed programs that are installed on your system.

production library. A production library is a library you create to contain your live J.D. Edwards data files.

production environment. A list of libraries that contains “live” programs and data.

program. A collection of computer statements that tells the computer to perform a specific task or group of tasks.

Progress. A software corporation that is a partner with J.D. Edwards. They are a leading supplier of 4th generation application development systems.

program generator. The World CASE system of programs which create a new program based upon user specifications.

program help. J.D. Edwards online facility which displays information about a program’s use and functionality.

program-specific help text. Glossary text written to describe the function of a field within the context of the program.

prompt. (1) A reminder or request for information displayed by the system. When a prompt appears, you must respond in order to proceed. (2) A list of codes or parameters or a request for information provided by the system as a reminder of the type of information you should enter or action you should take.

PTF. *See CUM.*

purge. The process of removing records or data from a file.

PYEB. Post Year End Balance.

P&L. Profit and Loss Statements.

PG. Program Generator.

QA. Quality Assurance.

QJDF data area. A space within the system to hold the system values information for the J.D. Edwards software. This area is referenced at sign-on and during installs and reinstalls for critical system information, such as security codes and initial libraries.

QSECOFR. The security officer of the AS/400.

query. A fast means to select and display (or print) information from a database. An IBM utility for databases.

queue. A list of things to be used in an order. *See job queue, output queue, and print queue.*

RAID. Redundant Array of inexpensive disks.

RAM. Random Access Memory.

RDA. Report Design Aid. A J.D. Edwards design tool.

read only. A type of access to data that allows it to be read but not copied, printed or modified.

rebuild. The process of sequencing files, integrating recently added data.

record. A collection of related, consecutive fields of data the system treats as a single unit of information. For example, a vendor record consists of information such as the vendor’s name, address, and telephone number. *Also known as row.*

record format. The definition of how data is structured in the records contained in a file.

record level locking. Prevents two people from simultaneously updating the same data base information.

REP. Rapidly, Economically and Predictably.

reply list. A system wide automatic message handler for the system.

recursive. In DREAM Writer, the ability to create a unique version from the original, process the new version and delete it, leaving the original intact.

re-engineering modules. Programs written for the purpose of changing many existing programs in mass.

reporting system code. The four-character identifier of a J.D. Edwards system that uses an object for reporting.

REQIO. Request Input/Output.

reverse image. Screen text that displays in the opposite color combination of characters and background from what the screen typically displays (for example, black on green instead of green on black).

RIBA. Ricevuta Bancaria Elettronica — common way for vendors to receive payments from their customers in Italy.

ROM. Read Only Memory.

ROW. *See record.*

RPG. Report Program Generator. A programming language developed by IBM.

Rumba. A PC Emulator for the AS/400.

run. To cause the computer to perform a routine, process a batch of transactions, or carry out computer program instructions.

SAA. Systems Application Architecture.

SAR. *See Software Action Request.*

server. A program that speeds the flow of data between screens, reports and the data files. These programs can also be used to edit data fields.

scroll. To use the roll keys to move screen information up or down a screen at a time. When you press the Rollup key, for instance, the system replaces the currently displayed text with the next screen of text if more text is available.

SDA. Screen Design Aid Utility. An IBM product.

selection. Found on J.D. Edwards menus, selections represent functions that you can access from a given menu. To make a selection, you type its associated number in the Selection field and press Enter.

SEU. Source Entry Utility.

SIC. Standard Industry Code.

SIOM. Station Input/Output Manager.

Ski Slope. Reflects the analogy between the diverse nature of a ski slope and the diverse nature of our software. S levels: Basic, Intermediate, Advanced, Computer Operations and Program Modifications.

SNA. Systems Network Architecture.

SNADS. Systems Network Architecture Distribution Services.

Sleeper. A subsystem which activates jobs set to run during off-peak hours.

softcoding. A J.D. Edwards term that describes an entire family of features that lets you customize and adapt J.D. Edwards software to your business environment. These features lessen the need for you to use computer programmers when your data processing needs change.

software. The operating system and application programs that tell the computer how and what tasks to perform.

Software Action Request. A record which identifies an activity, such as the development of a new program or maintenance of an existing program.

Software Security Code. A code that restricts user access to software.

special character. Representation of data in symbols that are neither letters nor numbers. Some examples are * & # /.

spool. Simultaneous Peripheral Operations On Line. The function by which the system puts generated output into a storage area to await printing or processing.

spooled file. A holding file for output data waiting to be printed or input data waiting to be processed.

SQL. Structure Query Language.

STAR. Spreadsheet Tool for Asset Reporting.

subfile. An area on the screen where the system displays detailed information related to the header information at the top of the screen. Subfiles might contain more information than the screen can display in the subfile area. If so, use the roll keys to display the next screen of information. See *scroll*.

submit. See *run*.

subsystem. An operating environment where jobs are run.

summary. The presentation of data or information in a cumulative or totaled manner in which most of the details have been removed. Many of the J.D. Edwards systems offer screens and reports that are summaries of the information stored in certain files.

SVR. Software Versions Repository.

system. A collection of computer programs that lets you perform a specific business function, such as Accounts Payable, Inventory, or Order Processing. Synonymous with *application*.

system library. Lists libraries containing objects, such as user profiles, that are used by the system. This part of a library list is defined by the system value QSYSLIBL and is usually the same for all jobs.

Simplified Install. J.D. Edwards new way to install J.D. Edwards software. Also called one step Install.

SME. Subject Matter Expert.

T/B. Trial Balance.

Table. One World term for a file.

UNIX. A multi-user, multi-tasking operating system.

Unscheduled PTF. A form of PTF that includes fixed for a particular system.

UPS. Uninterruptible power source.

user class/group. Place to enter group profiles associated with J.D. Edwards Users.

user defined code. The individual codes you create and define within a user defined code type. Code types are used by programs to edit

data and allow only defined codes. These codes might consist of a single character or a set of characters that represents a word, phrase, or definition. These characters can be alphabetic, alphanumeric, or numeric. For example, in the user defined code type table ST (Search Type), a few codes are C for Customers, E for Employees, and V for Vendors.

user defined code (type). The identifier for a table of codes with a meaning you define for the system (for example, ST for the Search Type codes table in Address Book). J.D. Edwards systems provide a number of these tables and allow you to create and define tables of your own. User defined codes were formerly known as *descriptive titles*.

user index. An object that stores data, allows search functions, and automatically sorts data based upon a key value.

user identification (user ID). The unique name you enter when you sign on to a J.D. Edwards system to identify yourself to the system. This ID can be up to 10 characters long and can consist of alphabetic, alphanumeric, and numeric characters.

user library. A libraries that contains objects, such as files and programs used by the user.

user profile. A file of information which identifies the user to the J.D. Edwards system. This file is used to validate the users authority within the system.

user space. An object made up of a collection of bytes used for storing user-defined information.

user type. A code which identifies a list of files which remain open while the user is signed on to the system.

valid codes. The allowed codes, amounts, or types of data that you can enter in a specific input field. The system checks, or edits, user defined code fields for accuracy against the list of valid codes.

version. A specific release of software. Usually numbered in ascending order.

VCS. Version Control System.

Vertex. Callable routines and tables that calculate US PIR taxes.

video. The display of information on your monitor screen. Normally referred to as the *screen*.

VM. Virtual Machine.

VMC. Vertical Microcode.

vocabulary overrides. A J.D. Edwards facility that lets you override field, row, or column title text on a screen-by-screen or report- by-report basis.

WACO. Way After Cutoff.

WAN. Wide Area Network.

window. A software feature that allows a part of your screen to function as if it were a screen in itself. Windows serve a dedicated purpose within a facility, such as searching for a specific valid code for a field.

writer. A J.D. Edwards printer attached to an outqueue.

World Vision. A complementary product that converts graphical user interfaces to J.D. Edwards business applications for the AS400.

World VISTA. A windows-based direct access to J.D. Edwards data on the AS/400.

WW. World Writer. A J.D. Edwards software product.

XREF. Cross reference tool for J.D. Edwards software.

YTD. Year to Date.

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