Development of Maintenance Form Oracle FLEXCUBE Universal Banking Release 14.5.1.0.0 Part No. F45406-01 [June] [2021]



# Contents

1. Prefa	ıce	3
1.1	Audience	3
1.2	Related Documents	3
2. Intro	duction	
2.1	How to use this Guide	4
3. Over	view of Maintenance Screen	4
4. Scree	en Development	4
4.1	Header Information	4
4.2	Preferences	
4.3	Data Sources	
4.4	Data Blocks	12
4.5	Screens	
4.6	Field Sets	
4.7	LOV	
4.8	Attaching Call forms	
4.9	Adding Summary	
4.10	Amendable fields Maintenance	
	eration and Deployment of files	
	prated Units	
6.1	Front End Units	
6.1.1	Language xml	33
6.1.2	SYS JavaScript File	33
6.1.3	Release Type Specific JavaScript File	33
6.2	Data Base Units	
6.2.1	Static Scripts	
6.2.2	System Packages	
6.2.3	Hook Packages	34
6.3	Other Units	24
6.3.1		-
	nsible Development	
7.1	Extensibility in JavaScript Coding	
7.1	Extensibility in Backend Coding	
7.2		
7.4.1	C C	
7.2.2	i	
7.2.3	By passing Base Release Functionality	36

# 1. Preface

This document describes Maintenance Screens in FLEXCUBE and the process of designing a simple Maintenance form using Oracle FLEXCUBE Development Workbench for Universal Banking

## 1.1 Audience

This document is intended for FLEXCUBE Application developers/users that use development Workbench to develop various FLEXCUBE components.

Proficiency	Resources
FLEXCUBE Functional Architecture	Training programs from Oracle
	Financial Software Services.
FLEXCUBE Technical Architecture	Training programs from Oracle
	Financial Software Services.
FLEXCUBE Screen Development	04-Development_WorkBench _Screen_Development-I.docx
Working knowledge of Web based applications	Self Acquired
Working knowledge of Oracle Database	Oracle Documentations
Working knowledge of PLSQL & SQL	Self Acquired
Language	
Working knowledge of XML files	Self Acquired

To Use this manual, you need conceptual and working knowledge of the below:

## **1.2** Related Documents

<u>04-Development\_WorkBench \_Screen\_Development-I.docx</u> <u>05-Development\_WorkBench \_Screen\_Development-II.docx</u>

# 2. Introduction

## 2.1 How to use this Guide

The information in this document includes:

- <u>Chapter 2 , "Introduction"</u>
- Chapter 3 , "Overview of Call Form"
- <u>Chapter 4 , "Screen Development"</u>
- Chapter 5 , "Generated Units"
- <u>Chapter 5 , "Extensible Development"</u>

# 3. Overview of Maintenance Screen

Maintenance Function Id's are used for storing maintenance data which are required for processing of any contracts, batches or for any other maintenance which are dependent on this

Example: Customer maintenance screen

If any customer wants to use the service of a bank, details about the customer will have to be maintained in the system .This will be maintenance data which will be required for other maintenances (creating account for the customer) as well as for transaction processing (debiting of customer account)

Business logic for a maintenance function id would be provided by the Development Workbench generated files .Most of the cases, system provided logic would be sufficient .Extra validations can be coded in the hook packages by the developer.

# 4. Screen Development

Design and development of a Maintenance function id is similar to any other function Ids. This section briefs the steps in designing a Maintenance screen. STDCINF is sample function id used for demonstration in this document

For detailed explanation, refer the document: <u>4-Development\_WorkBench</u>

<u>\_Screen\_Development-I.docx</u>

## 4.1 Header Information

Provide the header information as shown in the figure.

DRACLE' FLEXCUBE Development Workb	ench for Universal Banking	DEMOU	SER
Browser .		Windows Options Sign	Out
unction Generation			-
		<b>』 × 国</b> ダ	Q 4
Action None -	Function Type Parent	Function Category Maintenance *	
Function Id	Parent Function	Header Template None -	
Save XML Path	Parent Xml	Footer Template None -	
ListOfvalues ListOfvalues ListOfvalues Screens FieldSets Cations Califorms LaunchForms Summary			

- For new screen select action As New.
- Enter Function ID  $\rightarrow$  STDCIFD
- Function Type  $\rightarrow$  Parent
- Function Category  $\rightarrow$  Maintenance
- Parent Function Id  $\rightarrow$  None
- Parent Xml  $\rightarrow$  None
- Header Template  $\rightarrow$  None (Only for Process flow screens)
- Footer Template  $\rightarrow$  Maint Audit

RACLE FLEXCUBE Development Workben	ch for Universal Banking	DEM0 Windows Options	OUSER
inction Generation			-
			Ø 🖬 🛛
Action New -	Function Type Parent	Function Category Maintenance - Save (CTRL +	5)
Function Id STDCIFD	Parent Function	Header Template None -	
Save XML Path DIRADTOOL	Parent Xml	Footer Template None -	
<ul> <li>Préférences</li> <li>DataSource</li> <li>ListOfvalues</li> <li>DataSlocks</li> <li>Screens</li> <li>FieldSets</li> <li>Adons</li> <li>Califorms</li> <li>LaunchForms</li> <li>Summary</li> </ul>			
	g 12.2: Save icon used for saving the		

User can save work at any point in time. Click the save icon on top right for the same .In order to work again with it select action as Load and load radxml from the hard disk path

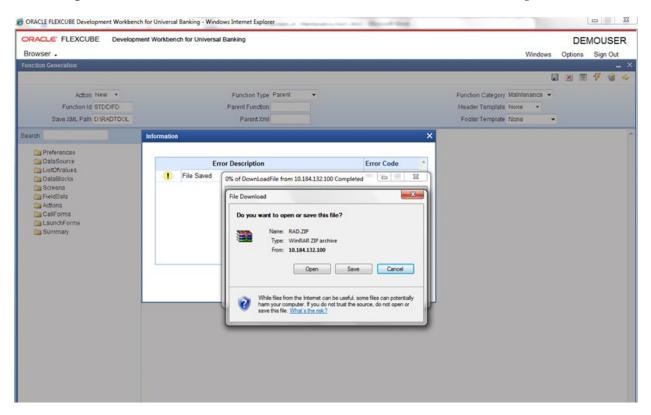


Fig 12.3: Saved File Information page

Note the following while providing header information for Maintenance screen

### i) Naming Convention:

The third letter of the function id has to be D. Ideally the function id name should have 8 characters.

### ii) Footer Template

Make sure that the master data source has the audit columns if footer template is provided as Maint log.

Refer <u>04-Development\_WorkBench\_Screen\_Development-I.docx</u> for detailed explanation

## 4.2 Preferences

- Details entered in Preferences are used in generating INCS for SMTB\_MENU, SMTB\_FUNCTION\_DESCRIPTION and SMTB\_ROLE\_DETAILS.
- **Control String** → Developer needs to select the actions which should be available for this screen in FLEXCUBE.

RACLE FLEXCUBE Devel	opment Workbench for Universal Banking				Windows		MOUSER Sign Out
action Generation							<b>7</b> a
Autor Manager		Too Decent				-	~ *
Action New • Function Id STDCIFD	Parent F	on Type Parent	•		Function Category Maintenance • Header Template None •		
Save XML Path D/RADTOOL		ent Xml	-			-	
Save AME Path D. PODTOOL		ent Ami			Pooter remplate None	•.);	
arch	Preferences						9
Preferences	P Head Office	e Function		Module	ST		
DataSource	U Logging R	equired		Module Description	Static Maintenance		
DataBlocks	V Auto Autho	rization		Branch Program Id			
Screens	💟 Tank Modi	fications		Process Code			
FieldSets	Field Log	Required		SVN Repository URL	Character Direct		
CallForms	Multi Bran	ch Access		Transaction Block Name	Choose Block •		
a LaunchForms	Excel Expo	at Required		Transaction Field	Choose Field .		
Canal Summary				Name			
						Control Strin	9+-
	E Function Id		Module *		Module Description		-
	STDCIFD	βT		/1	Static Maintenance		
							-

Note the following points while providing details in Preferences screen

i) Control String

REVERSE, ROLLOVER, CONFIRM, LIQUIDATE, HOLD operations are not applicable for maintenance screens.

# ii) Defining Browser Menu Tree

Browser menu tree will be defined in the script generated for *smtb\_function\_description*.

The following labels has to be maintained for generation of proper script Main Menu: LBL\_{function id}\_MAIN\_MENU Sub Menu 1: LBL\_{function id}\_SUB\_MENU\_1 Sub Menu 2: LBL\_{function id}\_SUB\_MENU\_2 Description: LBL\_{function id}\_DESC *Example: For STDCIFD, following labels has to be maintained* LBL\_STDCIFD\_MAIN\_MENU, LBL\_STDCIFD\_SUB\_MENU\_1, LBL\_STDCIFD\_SUB\_MENU\_2, LBL\_STDCIFD\_DESC

Refer <u>Development\_WorkBench\_Screen\_Development-I.docx</u> for detailed explanation on preferences

### 4.3 Data Sources

- Right Click on Data Sources; click on Add. Add table window gets opened.
- If user knows the exact table name, he can enter name directly; else go to List Of values to get the list of tables available. Select the required table from the list.

Browser -	ment Workbench for Universal Banking	DEMOUSER Windows Options Sign Out
Function Generation		- × 
Action New • Function Id STDCIFD Save XML Path D/RADTOOL	Function Type Parent	Function Category Mainlenance  Header Template None  Fooler Templa
Search	AddTable	× *
Preferences DataSource DataSource DataSource DataStocks DataStocks Screens FieldSats Actions CaliForms LaunchForms LaunchForms	Table Name (STTM_CUSTOMER%)	areat Relation Type *
🤖 Summary	Table Name	
	STTM_CUSTOMER STTM_CUSTOMER_ALTERNATE_BRANCH STTM_CUSTOMER_CAT STTM_CUSTOMER_NAM_DETAIL STTM_CUSTOMER_NAM_MASTER STTM_CUSTOMER_PARAM STTM_CUSTOMER_PARAMA STTM_CUSTOMER_SOURCE_DETAILS STTM_CUSTOMER_SRO STTM_CUSTOMER_SRNO STTM_CUSTOMER_UNUSED STTM_CUSTOMER_VW	

Fig 12.5: Adding Data Sources for the Function id

- Select Master as Yes if added data source is Master Data Source for the screen. Every function id should have one master data source..
- **Primary Key columns** (i.e. Pk Cols ) and **Primary Types** (i.e. Pk Types) are mandatory. If it is already maintained in user schema in STTB\_PK\_COLS it will populated automatically otherwise user needs to enter values without fail. If user misses Pk cols and Pk Types package generation will fail. *Note: Master Data Source cannot have any parent.*

ORACLE FLEXCUBE Develop	ment Workbench for Univer	sal Banking					1	DEMO	DUS	ER
Browser -					Wind	lows	Optic	ons S	Sign O	at
Function Generation								<u></u>	يتعصيه	- ×
						G	×		3	9
Action New -		Function Type Parent			Function Category Maintenanc					
Function Id STDCIFD		Parent Function			Header Template None -					
Save XML Path DIRADTOOL		Parent Xml			Footer Template None					
Search	Data Source Details	3						4	- 6	9 *
Preferences DataSource TTM_CUSTOMER LISTOVAlues DataBlocks Screens FieldSets Actions CallForms CallForms Summary	Master Relation Type Multi Record	STTM_CUSTOMER Yes • One To One • No • CUSTOMER_NO VARCHAR2	Q	Parent Retation Where Clause Default Order By Type	Normat  Mandatory	•	000			

Fig 12.6: Providing master Data Source Properties

• Right Click on Added Table (STTM\_CUSTOMER) to add fields to the table. Popup window gets opened with available columns in data source. Select the required fields and click ok. Selected will get added to the Data Source Tree.

ORACLE FLEXCUBE Devel	opment Workbench for Unive	a sai banking					U	EMO	05	ER
Browser -					Window	vs (	Option	s Si	gn Ou	,t
Function Generation									- 4	- ×
							×	I 7	Q.	4
Action New -		Function Type Parent	•		Function Category Maintenance	•				
Function Id STDCIFD		Parent Function			Header Template None -					
Save XML Path DIRADTOOL		Parent Xml			Footer Template None	٠				
Search	Data Source Detai	ls						4	- 6	
Dreferences	Data Source	STTM_CUSTOMER		Parent						
DataSource STTM_CUSTOMER	Master	Yes -		Relation		000	2			
ListOfValues Add	Relation Type	One To One 📼		Where Clause		2	2			
DataBlocks	Multi Record	No 🔻		Default Order By		2				
Screens Delete	PK Cols	CUSTOMER_NO	2	Туре	Normal •					
FieldSets	PK Types	VARCHAR2			Mandatory					
Collins Collins	Upload Table									
CallForms LaunchForms Summary	Upload Table									

Fig 12.7: Including Data Source Fields for the Data Source

Addon New  Function 1 Street Parent Function Type Parent Function 1 STDC/FD Save XML Path C/RADTOXL Select Fields Select Fields Customere, NAME1 VARCHAR2 Customere, NAME VARCH	ions Sign Out	D	Windows				ent Workbench for Universal Banking	Browser -
Action New   Function Type Parent Function Type Parent Function Type Parent Function I STDCIFD Save 20LL Path DXRADTOOL Parent Function Preferences Customer	-							Function Generation
Function id STDC/FD     Parent Function       Save XML Path DXRADTOOL     Parent Xml         Preferences       DalasSource       Defense       CustoMER_NO       V ARCHAR2       DADRESS_LINE1       ADDRESS_LINE2       V ARCHAR2       Bountmany       Summany       Short_NAME       V ARCHAR2       Bountmany	₫ 🖗 🧃 «		Lai					
Save XML Pahr OXRADTOOL Parent Xm  Parent Xm						•		
Select Fields       X         Preferences       Customer_NO         DataBourds       Vanchar2         DataBlocks       Customer_NAME1         Vanchar2       Vanchar2         DataBlocks       Customer_NAME1         Vanchar2       Vanchar2         DataBlocks       Customer_NAME1         Vanchar2       Vanchar2         DataBlocks       Zoustomer_NAME1         Vanchar2       Vanchar2         Adones       Address_Line2         Address_Line2       Vanchar2         Vanchar2       Vanchar2         Short_NAME       Vanchar2								
Preferances DataSource STIM_CUSTOMER USCONARR CUSTOMER_INO CUSTOMER_TYPE CHAR CUSTOMER_TYPE CHAR CUSTOMER_INAME1 VARCHAR2 CUSTOMER_INAME1 VARCHAR2 CUSTOMER_INAME1 VARCHAR2 Additions Califorms Califorms Califorms Califorms Califorms Califorms Culiforms Cul		•	Foolsr Template Nons 👻				Parent Xmi	Save XML Palh D:(RADTOOL
DataSource     STM_CUSTOMER_NO     VARCHAR2     CUSTOMER_TYPE     VARCHAR2     CUSTOMER_TYPE     CUSTOMER_TYPE     VARCHAR2     CUSTOMER_TYPE     VARCHAR2     CUSTOMER_TYPE     VARCHAR2     CUNTRY     VARCHAR2     SHORT_NAME     VARCHAR2	+ - 59				×		Select Fields	Barch
Image: String Customer Information in the string of the				Parent				
DataBilockis     ✓     CUSTOMER_TYPE     CHAR       DataBilockis     ✓     CUSTOMER_TAME1     VARCHAR2       FeldSalts     ✓     ADDRESS_LINE1     VARCHAR2       Actions     ✓     ADDRESS_LINE3     VARCHAR2       LaunchForms     ADDRESS_LINE2     VARCHAR2       Summary     ADDRESS_LINE4     VARCHAR2       ✓     COUNTRY     VARCHAR2       ✓     SHORT_NAME     VARCHAR2		R		Relation	*	VARCHAR2	V CUSTOMER NO	
Databilocks     ✓     CUSTOMER_NAME1     VARCHAR2     Type     Normal ▼       Streens     ✓     ADDRESS_LINE1     VARCHAR2     Type     Normal ▼       Actions     ✓     ADDRESS_LINE3     VARCHAR2     Type     Mandalory       Califorms     ADDRESS_LINE3     VARCHAR2     ✓     Mandalory       Summary     ADDRESS_LINE4     VARCHAR2     ✓       ✓     COUNTRY     VARCHAR2       SHORT_NAME     VARCHAR2		2						ia ListOfvalues ia DalaBlocks
FieldSalts     IV     ADDRESS_LINE1     VARCHAR2     IV       AdDRESS_LINE3     VARCHAR2     IVARCHAR2     IVARCHAR2       CallForms     ADDRESS_LINE3     VARCHAR2       ADDRESS_LINE4     VARCHAR2       VARCHAR2     VARCHAR2       ADDRESS_LINE4     VARCHAR2       VARCHAR2     VARCHAR2       VARCHAR2     VARCHAR2       Short_NAME     VARCHAR2						VARCHAR2	CUSTOMER_NAME1	
CallForms ADDRESS_LINE3 VARCHAR2 LauxchForms ADDRESS_LINE2 VARCHAR2 ADDRESS_LINE4 VARCHAR2 COUNTRY VARCHAR2 SHORT_NAME VARCHAR2			F Mandalory	1700		VARCHAR2	ADDRESS_LINE1	TieldSals
LaunchForms Summary ADDRESS_LINE2 VARCHAR2 COUNTRY VARCHAR2 VARCHAR2 VARCHAR2 SHORT_NAME VARCHAR2						VARCHAR2	ADDRESS_LINE3	
ADDRESS_LINE4 VARCHAR2 COUNTRY VARCHAR2 SHORT_NAME VARCHAR2						VARCHAR2	ADDRESS_LINE2	aunchForms
SHORT_NAME VARCHAR2						VARCHAR2	ADDRESS_LINE4	Can Summary
						VARCHAR2	COUNTRY	
VARCHAR2						VARCHAR2	SHORT_NAME	
					Е	VARCHAR2	V NATIONALITY	
VARCHAR2						VARCHAR2	Z LANGUAGE	
Ok Cancel						Ok Cancel		

Fig 12.7: Selecting Data Source Fields for the Data Source

#### **Data Source Field Properties**:

Only max length can be modified by the developer in data source field properties. Rest will be defaulted from table definition

Browser -	ment Workbench for Unive	rsal Banking		Windows	1. 1.0000	MOUSER Sign Out
unction Generation						-
Action New  Function Id STDCIFD Save XML Path D1/RADTOOL		Function Type Parent   Parent Function Parent Xml		Function Category Maintenance + Header Template None +		₹ <b>7</b> @ 4
iearch	Data Source Field Column Name Block Name Field Name	Details CUSTOMER_NO CUSTNO	Data Type MaxLength Upload Table Column	VARCHAR2	Refr	esh = 9

Data model of a single function id would include multiple tables .All the tables needs to added in the function id. Note the following while adding child data sources

#### Adding Child Data Source:

- Select Multi Record value as Yes if child data source is Multi record table.
- Child Data Source should always be associated with a parent.
- Relation is mandatory between parent and child. While giving relation, parent data source should come in left side of the relation.

RACLE FLEXCUBE Developm	ent Workbench for Unive	rsal Banking				DE	MOUSER
Browser .					Windows	Options	Sign Out
unction Generation							7 Q .
(And a second seco							VW
Action New -		Function Type Parent		Function Category Ma			
Function Id STDCIFD		Parent Function		Header Template No			
Save XML Path D:\RADTOOL		Parent Xml		Footer Template No	ne 🝷	1	
arch	Data Source Detail	s					+ - 9
Preferences DataSource GROUP_JD GROUP_JD GROUP_JD GROUP_JD GUSTOMER_NO RELATIONSHIP LithOfValues DataBlocks Screens FieldSets Actions CallForms Summary	Master Relation Type Multi Record PK Cols *	STTM_CUST_GROUP No • One To Many • Yes • GROUP_ID-CUSTOMER_NO VRCHAR2-VARCHAR2	Parent Relation Where Clause Default Order By Type	STTM_CUSTOMER STTM_CUSTOMER CUST Normal • Mandatory	OMER_NO = S	000	

Fig 12.7: Providing properties for Child Data Source

#### Note: A data source cannot be parent to itself.

Note the following while adding data sources:

- i) If the data source is designed with relation type as 1: N with its parent, then it should have at least one more Pk col than its parent (assuming relationship is based on Pk cols).
- ii) Master data source needs to have the audit columns if footer template is Maint audit; but those should not be added to data source fields as system will handle it

Refer <u>Development\_WorkBench\_Screen\_Development-I.docx</u> for detailed explanation on data sources.

## 4.4 Data Blocks

• Block Name should start with BLK\_<short Name equivalent to data source but not exactly same as Data Source name>.

Add Block		×
Block Name	BLK_CUSTOMER	
	Ok Cancel	
Fig 12.8	: Creating a new Data Block	

- Select Parent block if added block is not Master Block.
- Select Multi Record (Yes/No) based on this value, available data sources will displayed in data source available text area.

ORACLE: FLEXCUBE Development Workbench for Universal Banking							
Browser .			Windows	Options	s Sig	n Out	
Function Generation				i 🗙 🛙	<b>·</b>	_ > 🧐 🔿	
Action New  Function Id STDCIFD Save XML Path D:RADTOOL Search	Block Properties	Function Type Parent  Parent Inction Parent Xml	Function Category Maintenance 👻 Header Template None 👻 Footer Template None	•	(	a 100	
<ul> <li>Preferences</li> <li>DataSource</li> <li>⇒ STTM_CUSTOMER</li> <li>⇒ STTM_CUSTOMER</li> <li>⇒ DataBlocks</li> <li>⇒ BLK_CUSTOMER</li> <li>⇒ Scenss</li> <li>⇒ FieldSets</li> <li>⇒ Actions</li> <li>⇒ CallForms</li> <li>⇒ LaunchForms</li> <li>&gt; Summary</li> </ul>	Block Name BLK Block Title Parent	K_CUSTOMER   IE TO ONE  Datasource Available  STTM_CUSTOMER	XSD Node Annotation Master Block Multi Record Block Type Obtasource Added				

• Select the required data source and click move button to attach Data Source to the block

ORACLE FLEXCUBE Development Workber	nch for Universal Banking - V	Vindows Internet Explorer	Name and Address	 and the local		1. 1.				x
ORACLE FLEXCUBE Develop	ment Workbench for Univ	ersal Banking						DEM	DUSE	ER
Browser .						Windows	Opti	ons S	Sign Ou	ıt
Function Generation										- ×
						6	<b>X</b>		۶ 🤘	4
Action New -		Function Type Parent	•		Function Category	Maintenance 👻				
Function Id STDCIFD		Parent Function			Header Template	None 👻				
Save XML Path D:\RADTOOL		Parent Xml			Footer Template	None -				
Search	Block Properties							4 -	x 4	) ^
Preferences DataSource B STM_CUSTOMER B STM_CUST_GROUP ListOfValues DataBlocks BLK_CUSTOMER Screens FieldSets CaliForms CaliForms LaunchForms Summary	Block Name Block Title Parent Relation Type Block PK Fields	BLK_CUSTOMER	e Available		Customer Yes V No V Normal V					

Fig 12.10: Attaching Data Sources to Data Block

### Adding multi record data source to data block:

User on selecting Multi record Yes in data block properties all the data sources with multi record Yes will be populated. *Multi Data Source once used to one block won't available for reuse where as single record data source can be used in multiple blocks* 

**Select Block Fields:** 

- Right click on added block. Select Fields window will get opened. Developer needs to check the right side check box to add the required fields.
- **Field Name**: It should not be the same as column name .Special characters are also not allowed in the field name (including underscore and space)
- Label Code: It will be automatically populated based on field name.

ACLE FLEXCUBE Develo	pment	Workbench for Universal E	Banking					DE	MOUSE
wser -							Window	s Options	Sign Out
tion Generation									
									7 🌖
Action New 👻			Function Type Parent	*			Function Category Mainlenance	*	
Function Id STDCIFD			Parent Function				Header Templale None 👻		
Save XML Pain D:\RADTOOL			Parent Xmi				Fooler Template None	*	
2	∧ Se	elect Fields & Add Ul Fields					×	4	. = 📧 🕻
Preferences		DataSource fields UI Field							
DalaSource						_	omer		
I I STTM_CUSTOMER		Datasource STT	M_CUSTOMER -				•		
STTM_CUST_GROUP     ListOfValues	J	Column Name	Field Name	Label Code	*		*		
DalaBlocks	<b>V</b>	CUSTOMER_NO	CUSTNO	LBL_CUSTNO			mal 💌		
BLK_CUSTOMER	<b>V</b>	CUSTOMER_TYPE	CUSTTYPE	LBL_CUSTTYPE					
Screens FieldSols	<b>V</b>	CUSTOMER_NAME1	CNAME	LBL_CNAME			led		
Actions		ADDRESS_LINE1	ADDR1	LBL_ADDR1					
CallForms		COUNTRY	CNTY	LBL_CNTY					
LaunchForms Summary		NATIONALITY	NLTY	LBL_NLTY					
_ 52(((),(0))	-	LANGUAGE	LANG	LBL_LANG					
	V								
	511								
					-				
						Ok Cance			

Fig 12.11: Adding Block Fields to Data Block

Refer <u>Development\_WorkBench\_Screen\_Development-I.docx</u> for detailed explanation on data blocks and block field properties

### 4.5 Screens

- Right click on Screens node to add a new screen
- Screen Name should start with CVS\_<Name>...
- By default screen are divided into 3 parts.
- One Main Screen is Mandatory.
- Tabs can be defined on any of the screen portions as required
- User can add sections to tabs.
- Each section can be divided into partitions.

ORACLE FLEXCUBE Development Workber	ench for Universal Banking - Windows Internet Explorer					х
ORACLE' FLEXCUBE Develop	opment Workbench for Universal Banking		D	ЕМО	JSE	R
Browser .	Wind	ows	Options	s Sig	n Out	(
Function Generation					-	- ×
			×	14	4	4
Action New -	Function Type Parent   Function Category Maintenance	е 🔻				
Function Id STDCIFD	Parent Function Header Template None					
Save XML Path D:\RADTOOL	Parent Xml Footer Template None	•				
Search	Screen Details		-	- Aï	<b>J</b> 🌖	^
Preferences DataSource ListOfValues DataBlocks Creens CVS_MAIN DataBlocks CVS_MAIN DataBlocks CVS_MAIN DataBlocks DataBlock DataBlocks Da	Screen Name CVS_MAIN  Screen Screen Titte LBL_CUST Screen Size Small Exit Button Type Default Cancel			+	-	
POTER     FOOTER     FieldSets     CallForms     LaunchForms     Summary	Argument Name     Source Block     Source Field     Argument Value     Target Block     Target Field	eld	Acti	ve	~	

### Fig 12.12: Providing properties to new Screen

	nent Workbench for Universal Banking	DEMOUSER
Browser - Function Generation		Windows Options Sign Out
Action New  Function Id STDCIFD Save XML Path DNRADTOOL	Function Type Parent  Parent  Parent  Parent  Parent Xmi	Function Category Mainlenance  Function Category Mainlenance  Header Template None  Fooler Template None Fooler Fooler Fooler Template None Fooler Fool
Search	Tab Details	Dependent Fields 🌵 📟 🔜 🗐
Preferences DataSource ListOvAlues DataBlocks Greens CovS MAN District HeADER TAB_HEADER DOCY District HeADER	Screen Name CVS_MAIN  Tab Name TAB_MAIN Tab Label Tab Type Add Section Section Name SEC_CUST	×
TAB_MAIN TAB_FOOTER FieldSets Califorms LauchForms Summary	Ok Cancel	
	Fig 12.12: Creating new costion in TAP, MAIN in t	

Fig 12.13: Creating new section in TAB\_MAIN in the body of screen CVS\_MAIN

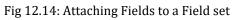
	ent Workbench for Universal B	anking			DEMOUSE
owser 🗸				Windows Op	tions Sign Out
ction Generation					
				🔚 ≥	4 🗏 🎸 🧐
Action New -		Function Type Parent -		Function Category Maintenance 👻	
Function Id STDCIFD		Parent Function		Header Template None 👻	
Save XML Path D:\RADTOOL		Parent Xml		Footer Template None 🔻	
rch	Section Details				- 🔊
Preferences	Section Name SEC.	CUST	Visible		
DataSource		SECT	Collapse		
ListOfValues		· · · · ·			
i DataBlocks					
CVS_MAIN	Partition Details				+ -
HEADER TAB HEADER	Partition SI No	F	Partition Name	Width Sub-partiti	ons
	1	PART1		50 👻 👻	
🖃 🚞 TAB_MAIN	2	PART2		50 -	
EC_CUST					
TAB_FOOTER					· ·
FieldSets					
actions					
CallForms					
LaunchForms					
🛅 Summary					

## 4.6 Field Sets

A group of fields can be grouped together in a Field set which can be placed together in the screen

- Field Set Name should start with FST\_<>.
- Select the Block adding to field set.
- All fields available to the block will be displayed in to the data block fields text area. Move fields from data block fields to Field set fields.
- The order of fields in *field set fields* will reflect in the screen as well

ORACLE FLEXCUBE Development Workbenc	h for Universal Banking - Windows Internet Explorer	states. Manual Red		
ORACLE' FLEXCUBE Developm Browser - Function Generation	ent Workbench for Universal Banking		Wi	DEMOUSER ndows Options Sign Out
				- - 🔋 🗵 🗐 🗸
Action New  Function Id STDCIFD Save XML Path D:RADTOOL	Function Type Parent  Parent Function Parent Xml Fieldset Properties		Function Category Maintena Header Template None Footer Template None	•
Search  Preferences DataSource ListOvAlues Screens FellOsts FFICUST1 FFT_CUST1 FFT_CUST2 Actions CallForms CallForms Summary	Fieldset Name Fieldset Label Data Block Multi Record View Type Fieldset Height CUSTNO C	Screen Name CVS_ Screen Portion Tab Name Section Name Parttion Name Number Of Rows	MAIN	<ul> <li>Invisor a Fieldset</li> <li>ReadOnly</li> <li>Navigation Button</li> <li>Visible</li> </ul>



DRACLE' FLEXCUBE Develop	nent Workbench for Universal Banking	DEMOUSE Windows Options Sign Ou
nction Generation		· · · · · · · · · · · · · · · · · · ·
Action New  Function Id STDCIFD Save XML Path D:RADTOOL arch	Function Type Parent  Parent Function Parent Xml Fieldset Properties	Function Category Maintenance  Header Template None  Footer Template None
<ul> <li>Preferences</li> <li>DataSource</li> <li>ListOfValues</li> <li>CataBlocks</li> <li>Screens</li> <li>FieldSets</li> <li>FST_CUST1</li> <li>FST_CUST2</li> <li>Actions</li> <li>CallForms</li> <li>LaunchForms</li> <li>Summary</li> </ul>	Fieldset Name Fieldset Label Data Block Multi Record View Type Fieldset Height CNTY LANG	Screen Name       CVS_MAIN <ul> <li>Horizontal Fieldset</li> <li>ReadOnly</li> <li>Navigation Button</li> <li>Section Name</li> <li>Partition Name</li> <li>Visible</li> <li>Visible</li> <li>CUSTNO</li> <li>CUSTYPE</li> <li>CADR1</li> <li>ADDR1</li> <li>Image: Control of the section of the section</li></ul>

• Select the screen portion (Header/Body/Footer) where this field set has to be placed. Select remaining details like tab, section and partition.

ORACLE FLEXCUBE Development Workbenc	h for Universal Banking - Windows Internet Explorer	on Ann. Marcol Mad.		
ORACLE' FLEXCUBE Developm	ent Workbench for Universal Banking			DEMOUSER
Browser -			Window	vs Options Sign Out
Function Generation				-
				🔚 🗶 🗏 7 🧐 🗧
Action New -	Function Type Parent	Functio	n Category Maintenance	•
Function Id STDCIFD	Parent Function		r Template None 🔻	
Save XML Path D:\RADTOOL	Parent Xml		r Template None	-
Search	Fieldset Properties	~		- 🛛 🌍
<ul> <li>Preferences</li> <li>DataBlocks</li> <li>DataBlocks</li> <li>FieldSets</li> <li>FieldSets</li> <li>Actions</li> <li>CallForms</li> <li>Summary</li> </ul>	Fieldset Name FST_CUST1  Fieldset Label FST_CUSTOMER  Multi Record No  View Type Single  Fieldset Height  Data Block Fields  CNTY NLTY LANG	Screen Name CVS_MAIN Screen Portion Body Tab Name BSc_CUST Partition Name SEC_CUST Partition Name CARCE PART1 Number Of Rows V Field Set Fields CUSTNO CUSTNO CUSTYPE ADDR1 44	Subpartition Name	☐ Horizontal Fieldset ☐ ReadOnly ☐ Navigation Button ☑ Visible

Fig 12.15: Providing details where Field Set has to be placed

Once fields are added to field set, developer can check the preview of the designed screen. Right click on Screen Name and click on Preview.

🔶 Main		
🖹 New 🦻 Enter Query		
Customer No		
Name		
Туре		
Address		
Maker	Date Time:	
Checker		
	Date Time:	Exit
Mod No	Record Status	
MOGINO	Authorization Status	

Fig 12.16: Preview of the designed Screen

### Adding Multi entry block to field set.

- On selecting a multiple block, Multi Record Property will be defaulted to Yes..
- In case of Multi record, View type can be either Single or Multiple (By Default).

E New P Enter Query Customer No		1	
Customer No			
Name Type Address			
I	Go to Page		+ - =
Group Id	Customer No	Relation	
Maker Checker		Date Time: Date Time:	
Mod No		cord Status tion Status	Exit

### Below image shows a multiple view multi record field set



# • For multi record single view navigation button should be checked.

ORACLE FLEXCUBE Development Workben	ch for Universal Banking - W	indows Internet Explorer	na familia di	and the state			
	nent Workbench for Unive	rsal Banking					DEMOUSER
Browser -						Window	vs Options Sign Out
Function Generation							_ ×
							📱 🗶 🗏 7 🧃 🔿
Action Load -		Function Type Parent			Functio	n Category Maintenance	<b>*</b>
Function Id STDCIFD		Parent Function				r Template None 👻	
							_
Save XML Path STDCIFD_RAI	BROWSE	Parent Xml			Foot	r Template Maint Audit	•
Search	Fieldset Properties						- R 🥱 🔺
Carl Preferences	Fieldset Name	FST_CUST2	So	reen Nam	CVS_MAIN	•	Horizontal Fieldset
DataSource	Fieldset Label	×=	Sci	een Portio	Body	<b>•</b>	ReadOnly
	Data Block	BLK_GROUP -		Tab Name	TAB_MAIN	•	Navigation Button
CUSTOMER_NO CUSTOMER_TYPE	Multi Record	Yes 🔻	0.0	ction Name		-	Visible
CUSTOMER_NAME1	View Type	Single -				-	• VISIBIC
address_Line1				tition Nam			
COUNTRY	Fieldset Height		Numb	per Of Rows			
D NATIONALITY							
🚞 LANGUAGE							_
STTM_CUST_GROUP		Data Block Fields			FieldSet Fields	Subpartition Name	
CROUP_ID				GROU	IP ID	▼	
CUSTOMER_NO					-		
RELATIONSHIP					_		
ListOfValues DataBlocks			44	E RELA	TION	▼	
BLK_CUSTOMER							
			44				
Screens							
CVS_MAIN							
🖃 🚞 BODY							
🖃 🧰 TAB_MAIN							-
Disc_CUST							
SEC_GROUP							
FieldSets							
FST_CUST1 FST_CUST2							
FSI_CUSI2							

#### Fig 12.18: Properties for Single View Multi Record Field set

🔶 Main		X X X X X X X X X X X X X X X X X X X
🗗 New 🤄 Enter Query		
Customer No Name Type Address		
Group Id Customer No Relation		
Maker Checker	Date Time: Date Time:	
Mod No	Record Status Authorization Status	Exit

Below figure shows the preview of a single view multi record field set

Fig 12.18: Preview for Single View Multi Record Field set

## 4.7 LOV

List Of values can be defined for the function id using LOV node

- To add LOV right click on List of Values Node. LOV Name should start with LOV\_<name>. *Example: LOV\_COUNTRY.*
- Enter valid query and click on populate button

Action Loa Action Id STDC/FD Parent Function Type Parent Function Field Type Reduction/Column Label Function Field	_ >							
					🔚 🗶	] 🔳 1	۶ 📢	] 🔿
Action Load 👻	Function Type	Parent -		Function Catego	Maintenance 👻			
Function Id STDCIFD	Parent Function			Header Templa	ite None 👻			
Save XML Path STDCIFD_RAI	BROWSE Parent Xml			Footer Templa	te Maint Audit 👻			
Search	List Of Values Details					-	A	<b>b</b>
DataSource     STTM_CUSTOMER     DataSource     DataSource     DataSource     DataSource     DataSource     DataSource		escription from sttm	i_country where auth_stat =	'A' and record_stat = 'O'		Pop	oulate	1
	Query Columns Data Typ	e Visible	Reduction Field	Reduction Field Type	Reduction/Column Lal	bel	*	
							-	
CallForms								

LOV Query	×
select country_code,description from sttm_country where auth_stat = 'A' and record_stat = 'O'	
Ok Cancel	]

Fig 12.20: Providing LOV query

Function Generation					Function Category Maintenance  Header Template None  Footer Template Maint Audit  Footer Template Maint							
									×	= 1	3	⇔
Action Load + Function Id STDCIFD Save XML Path STDCIFD_RAI		ent Function Parent Xml				Head	er Template None 👻	<ul><li>▼</li></ul>				
Search	List Of Values Details									-	Aï 🗳	) ^
Preferences     DataSource     DataSource     Distrin_cOUSTOMER     Distrin_cOUST_GROUP     ListOfValues     LoV_CCUNTRY	LOV Name * LOV_OCI LOV Query Select cou		from sttm_co	untry where auth_stat :	= 'A' and record	_stat = 'O'	]		(	Рор	ulate	
DataBlocks	Query Columns	Data Type	Visible	Reduction Field	Reduction	n Field Type	Reduction/Colu	mn La	bel		^	
Greens     FieldSets	COUNTRY_CODE	VARCHAR2 -	Yes 🔻	Yes 👻	TEXT	- /	LBL_CNTRY		<b>×</b> E			
CallForms CallForms LaunchForms Summary	DESCRIPTION	VARCHAR2 -	Yes 🔻	Yes -	TEXT	• (	LBL_COUNTRYCD		*=		Ŧ	

Fig 12.21: Providing LOV details

- Redn/Col Labels are mandatory. If user won't provide will get error on click of LOV button after deployment in FLEXCUBE
- After defining LOV go to block and corresponding field where the LOV has to be attached.

### **Block Field Properties to attach LOV to the field**

- **Display Type:** Select display type as Lov.
- Lov Name: Select the required Lov name from the list of all defined LOV's.
- Click on return fields tab. The result fields maintained in the LOV query will be populated on click of *Default from Lov Definition* button

- Select the desired field ( and its block )to which the result of the LOV query should be defaulted
- If return field is not required to be defaulted to any field in the screen, return field value can be left blank

Function Generation		-
		📰 🗵 🗐 7 🤢
Action Load -	Function Type Parent	Function Category Maintenance
Function Id STDCIFD	Parent Function	Header Template None 👻
Save XML Path STDCIFD_RAI	BROWSE Parent Xml	Footer Template Maint Audit 👻
Search	Block Field Properties	- N 📮 🎙
Preferences DataSource DataSource STTM_CUSTOMER DataBlocks DataBlocks BLK_CUSTOMER CUSTNO CUSTNYE CUSTNYE CUSTYPE CNAME ADDR1 CNTY LANG DUB	Field Name CNTY Field Label EL_CNTY FE DataSource STTM_CUSTOMER Column Name COUNTRY Data Type Varchar2 ~ Display Type Lov ~ Item Type Database Item ~ Parent Field Related Block ~ Related Field LOV Name COUNTRY ~	XSD Tag       CNTY       Required         XSD Annotation       Visible       Read Only         Field Size       Calender Text       Calender Text         Maximum Value       Oppercase Only       Uppercase Only         Maximum Decimals       VISUAL       Oppercase Only         TextArea Rows       Input by LOV Validation       Required         TextArea Columns       Input by LOV Only       Not Required In Xsd         Preview Value       FE       Report Parameter
a) BLK_GROUP b) Screens b) Fieldsts c) CallForms c) CallForms c) Summary b)	Fieldset Name Custom Attributes Events Bind Variable Return Fields Mapping COUNTRY_CODE BLK_CUSTOMER DESCRIPTION BLK_CUSTOMER Fig 12.22: Attaching LC	Block Name Return Field Name

### Use of Bind Variable

If the list of values should be based on any other field value from the screen, bind variables can be used.

### Example:

Define lov as shown in below query; where clause should contain condition with '?'.

SELECT cust\_ac\_no, branch\_code, ccy from sttms\_cust\_account where cust\_no = ? and record\_stat = 'O' and once\_auth = 'Y' and ac\_stat\_de\_post = 'Y'

In the block field, after selecting return fields, click on bind variables tab. Click on **Default from Lov Definition** button. New rows will be created depending on the number of bind variable provided in the LOV query. Select the bind filed in the screen (and its block) for the LOV. Data type of the field has also to be selected.

Action Load (w)	Function Type Farent	-	Function Category Mai	nternance (w)			
Function Id STDCINF	Parent Function		Header Template Nor				
Save XML Path DIRADTOOLI	Parent Xml		Footer Template Mai				
arch	Block Field Properties					- 80	9
Preferences DataSource DataSource DataSource LoV_COUNTRY LOV_ACCOUNT OutaBlocks CUSTNO CUSTNO CUSTNO CUSTNO CUSTNO LANG ADDRLN1 COUNTRY LANG ADDRLN1 CUNTRY LANG CUSTNO CUSTNO CUSTNO CUSTNO CUSTNO RELATON	Field Name CUSTNO     Field Label LBL_CUSTNO     XSD Tag CUSTNO     Display Type Text     Mem Type Database item      Parent Field     Met Annual State State     Inn Val     Max Decimals     LOV_ACCOUNT Fieldset Name FST_GROUP		Data Tipe Varchar2     Data Source STTMS_CUST_     MaxLength 9     Field Ste     Column Name CUSTOMER_N     Default Value     Preview Value     Accessivey Code     TertArea Cols     MaxVal     MaskId     OffLine LOV Name     Image Source		Popup Edit Reg3 Required Visible Input by LOV Only Calender Text Select Nutlsple Uppercase Only LOV Validation Reg3 Not Reg in Xs3 Report Parameter Res3 Only		
Screens FieldSets Actions Calif coms LaunchForms Summary	Custom Attributes Events Bind Variables Bind Variables Mapping Block Name BLK_CUSTOMER	Return Fields	Bind Variable CUSTNO	elsuit Som LoV definitio Detatype STRING			

Fig 12.23: Defining bind variable for the LOV

# 4.8 Attaching Call forms

Maintenance Call forms can be attached to a maintenance screen. Refer the document <u>14-</u> <u>Development of Call Form.docx</u> for developing call forms

### Attaching Call forms

- Add button to block to launch call form on button click.
  - Right click on Block
  - Select Add fields. Select fields and Add UI field's window will be launched
  - Select UI Fields tab. Click add row button. Enter button name and click ok.
  - Select display type as button and enter field label.

Select Fields & Add UI Fields	×
DataSource fields UI Fields	
Field Name Data Type	^
BTM_MIS -	
	-
	Canad
Ok	Cancel

Fig 12.24: Defining Button field

• Add Call form details to Call form node

						E 7 🧐
Action Load -		Function Type Parent		Function Category Main	tenance 👻	
Function Id STDCIFD		Parent Function		Header Template None	e 🔻	
Save XML Path STDCIFD_RAI	BROWSE	Parent Xml		Footer Template Main	t Audit 🔻	
arch	Call Form Details					9
Preferences						
B D STTM_CUSTOMER				Screen Arguments	Dependent	Fields+-
TTM_CUST_GROUP     ListOfValues	Function ID	Parent Data Block Parent Data	Source Relation	Relation Type	Callform Screen	Display 1 ^
LOV_COUNRTY	MICCUSTM	BLK_CUSTOMER - STTM_CUS		ER_NO = 💭 One To One 🔻	-	Button
CNTY LANG LANG TM_MIS LANG ETM_MIS EXCreans FieldSets Adions CallForms LaunchForms Summary						
	٢		III			*

Fig 12.25: Defining details of the Call form to be attached in call form node

- Add event to button.
  - On selecting event type as call form or launch form or sub screen button will be displayed on bottom of the screen.
  - If user needs to place button position in desired place on the screen, event type should be Normal .User has to write code in release specific JavaScript file to launch the screen

Function Generation					-
					🖫 🗵 🗏 🚱
Action Load	Function Type	Parent	-	Function Categor	y Maintenance 💌
Function Id STDCIFD	Parent Function			Header Templat	e None 🔻
Save XML Path STDCIFD_RAI	BROWSE Parent Xml			Footer Templat	e Maint Audit 👻
Search	Block Field Properties				- 🛛 📮 🌍
Preferences  Control Control  Preferences  Strun_CUSTOMER  Control  Contro  Control	Field Name + BTM_MIS Field Label BL_MIS DataSource Column Name + Data Type + - Display Type Parent Field Related Field LOV Name	#	XSD Tag XSD Annotation Field Size * Maximum Length Minimum Value Maximum Value Maximum Decimals TextArea Rows TextArea Columns Default Value Preview Value Mask Id	MIS MIS  MIS	Read Only Calender Text Popup Edit Required Uppercase Only LOV Validation Required Input by LOV Only Not Required In Xsd Report Parameter
LANG     BTM_MIS     BLK_GROUP     GROUP     G    CV_MAIN     B    HEADER     BODY	Fieldset Name Custom Attributes Events Related Field	oction Name		tton Screen CallForm N MAIN    MICCUSTM	ame Screen Name
THE MAIN  TSEC_CUST  SEC_COUT  SEC_COUT  FOOTER  FieldSets  Califorms  Califorms  Summary  FieldSet	2.26: Defining event to t				

• Check the preview.

🔶 Main				×
🖹 New 🦻 <u>Enter Query</u>				
Customer No Name Type Address				
I≪ 1 of 1 ▶ ▶	Go to Page		+ - =	
Group Id	Customer No	Relation	<b>^</b>	
			Ψ	
•			4	
MIS   Change Log				<b></b>
Maker	I	Date Time:		
Checker		Date Time:	E	xit
Mod No		ord Status		
	Authoriza	tion Status		

Fig 12.27: Preview of the screen with the Call Form button

# 4.9 Adding Summary

1) Add entry in Preferences node for Summary screen

earch Preferences DataSource STM_CUSTOMER	Fundion Typ Parent Fundio BROWSE Parent Xr Preferences V Head Office Fun V Logging Require Auto Authorization	on	Static Maintenance
B STTM_CUST_GROUP  C Stablocks BLK_CUSTOMER CUSTNO CUSTTYPE COAME	i Addo Addinatada i Tank Modificatio i Field Log Requi □ Multi Branch Acc □ Excel Export Rei	Ins Process Codi Ired SVN Repository URL cess Transaction Block Name	Choose Fleid
🚞 LANG 🛅 BTM_MIS	Function Id	Module *	Module Description
BLK_GROUP	STDCIFD	ST	Static Maintenance
Greens     CVS_MAIN     CVS_MAIN     FieldSets     Actions     CallForms     LaunchForms     Summary	STSCIFD	57 78	Static Maintenance

- 2) Click on Summary Node.
  - Enter Summary title .Select label code from lov.
  - Select Data Block master block and summary blocks will be displayed. Select required block from drop down list.
  - Select Data Source for summary.
  - Select Summary Type.
  - Select Summary Screen size.
  - Enter if any where clause is required.
  - Enter Default order by if required.
  - Enter Multi Branch where clause if required.
  - Attach the fields required in the summary result grid
  - If the field is required as part of filtering, query has to be checked for the particular field
  - Provide the position of fields in Result grid and Summary Query set .

									×	<b>I</b> 📝	<ul> <li>§</li> </ul>	
Action Load		Eurotian Tune Paran	_			Function (	Category Maintenance		_		-	
							emplate None -	<u> </u>				
Save XML Path STDCIFD_RA	AL BROWSE	Parent Xml				Footer T	emplate Maint Audit	•				
irch	Summary Deta	ails									<b>Q</b>	9
		Title			Default Where Clause			5				
Action Load ·       Function Type Parent ··         Function Id STDC/FD       Parent Function         Save XML Path STDC/FD_RAI       BROWSE         Parent Xml       Parent Xml         ************************************	•		Default Order By			1						
	Data So	urce STTM_CUSTOMER	•		Multi Branch Where			1				
	Summary T	Type Summary	•		Clause							
			•		Main Summary Screen							
						WebServie     Required	ces					
	2		-			rtequireu						
	Data Block Fields	Custom Buttons Fields Orderin	ng									
Function Id STDCIFD     Parent Function       Save XML Path STDCIFD_RAI     BROWSE     Parent Xml       Search     Summary Details       Image: DataSource     Title       Image: DataSource     Title       Image: DataSource     Title       Image: DataSource     Title       Image: DataSource     Data Blocks       Image: DataSource     StTM_CUSTOMER       Image: DataSource     Summary Type       Image: DataBlocks     Summary Streen Size       Image: DataBlocks     Data Block Fields       Image: DataBlock     Data Block Fields												
ADDR1												
DDR1 CNTY NLTY		Data Block Fields			Fields Selected	Query	LOV Name					
□ ADDR1 □ CNTY □ NLTY □ LANG		Data Block Fields				Query	LOV Name	•				
Action Load       Function Type Parent         Function Id       STOCIFD         Save XML Path STDCIFD_RAI       BROWSE         Preferences       DataBlocks         STTM_CUSTORER       Data Blocks         STIM_CUSTOMER       Data Blocks         STIM_CUSTOMER       Summary Type         DataBlocks       Stimary         BLK_CUSTOMER       Summary Type         SUMMary Type       Summary         CUSTNYPE       Summary Screen Size         CUSTTYPE       Custom Buttons         CUSTYPE       Data Block Fields         CUSTYPE       Data Block Fields         CUSTYPE       Data Block Fields         CUSTYPE       Data Block Fields         CUSTOR       BLK_GROUP         Screens       CVS, MANN         FieldSets       Cutons					LOV Name	•						
ADDR1     CNTY     CNTY     LANG     BTM_MIS     BK_GROUP     Screens		Data Block Fields			CUSTNO CNAME		LOV Name	• •				
ADDR1     CNTY     CNTY     LANG     BTM_MIS     BLK_GROUP     Screens     CVS_MAIN		Data Block Fields		Г	CUSTNO CNAME CUSTTYPE		LOV Name	• • •				
ADDR1 CNTY NLTY LANG BTM_MIS B.BLK_GROUP Screens D.CVS_MAIN FieldSets		Data Block Fields			CUSTNO CNAME CUSTTYPE ADDR1		LOV Name	¥ ¥				
ADDR1     CNTY     CNTY     LANG     BTM_MIS     BTM_MIS     Screens     CVS_MAIN     FieldSets     Actions		Data Block Fields		ר ר ר ר •••	CUSTNO CNAME CUSTTYPE ADDR1 CNTY		LOV Name	• • •				
ADDR1     CNTY     CNTY     LANG     BTM_MIS     BLK_GROUP     Screens     CVS_MAIN     FIddSets     Actions     Califorms		Data Block Fields			CUSTNO CNAME CUSTTYPE ADDR1 CNTY		LOV Name	• • •				
Parent Function       Save XML Path STDCIFD_RAI     Parent Function       Save XML Path STDCIFD_RAI     BROWSE     Parent Function       Save XML Path STDCIFD_RAI     BROWSE     Parent Function       Search     Summary Details       Image: DataSource     Title       DataSource       Image: DataSource       Summary CustomER       Summary Screen Size       DataBlocks       DataBlocks       Data Block Fields       Custom       Data Block Fields       Custom Buttons       Data Block Fields       Custom Buttons       Data Block Fields       Custom Buttons       Data Block Fields       Data Block Fields       Custom Buttons       Data Block Fields       Data	Data Block Fields		ר ר ר ר •••	CUSTNO CNAME CUSTTYPE ADDR1 CNTY NLTY		LOV Name	V V V V					

#### **Summary Preview**

Right click on summary node and click on preview.

🔷 🛃 Exe	ecute Query 💓 Advance	ed Search 🏼 🏟 Res	et 🖓 Clear All							×
Authorization Status Customer No				Record Status			•	-		
Reco	rds per page 15 🔻 🚺	🛯 1 of 1 🕨 🔰		e						*
	Authorization Status	Record Status	Customer No	Name	Туре	Address	Country	Nationality	Language	
										=
										-
•									•	•
									Exit	

Fig 12.29: Summary Screen Preview

## 4.10 Amendable fields Maintenance

#### Amendable Fields

If user needs to modify data of a particular field on unlock, in Workbench developer has to maintain fields as amendable.

- Click ACTIONS node.
- Click on Amendables button next to the action for which the field has to be made amendable
- Select the fields in each block which user can modify for the selected action.

ndable DetailsQUERY		
Data Blocks	DataBlock Fields	;
JSTOMER ROUP	New Allowed Delete Allowed All I	Records 🔲 Mandatory
	Field Name	Amendable
	CUSTNO	
	CUSTTYPE	
	CNAME	
	ADDR1	
	CNTY	
	NLTY	
	LANG	
	BTM_MIS	
		Ok Cance

Fig 12.30: Maintaining amendable fields

# 5. Generation and Deployment of files

### **Generate Files**

• Click on generate button select the required files to generate and click on Generate button.

ation		×	4	lela Data	Others		
Error Description  Request successfully Processed				Menu Details     Datasource Details     Datasource Details     Datasource Details     Datasource Details     Dov Details     Dov Details     Sectore Details     Nythtcshon Details		V Xsds Xsd Wilh Annotations Screen Html V Upload Table Trigger V Upload Tables Delinition	
		0% of DownLoadFile from 10.184	.132.100 Completed	nction Parameters	Archive Table Definition		
		File Download		X Hyb Levens			
		Do you want to open or sa	ve this file?				
		Name: RAD.ZIP Type: WinRAR ZIP archive		ые Туре	Status		
					Generated 👻		
		From: 10.184.1	32.100		Generaled *		
		Op	oen Save Cancel		Generated 👻		
					Generaled *		
5         STDCIFD_CVS_MAIN_TAB_FOOTER.html           6         slpks_stdolfd_main.spc           7         stpks_sidclfd_kernel.spc		While files from the Internet can be useful, some files can potentially harm your computer. If you do not trust the source, do not open or save this file. What's the risk?		ally	Generated 👻		
				x'	Generaled *		
					Generated 👻		
	slpks_stdcifd_main.sql		SQL	-	Generaled *		
	stpks_sldclfd_kernel.sql		SOL		Generated 👻		
	CSTB_FIELD_LABELSSTDCIFD.INC		INC		Generaled +		
	CSTB_OTHER_LABELSSTDCIFD INC		INC		Generated 👻		
	CSTB_FID_CALLFORMSSTOCIFD.INC		INC		Generaled *		

Fig 12.30: Generation of Files

### **Deploy files**

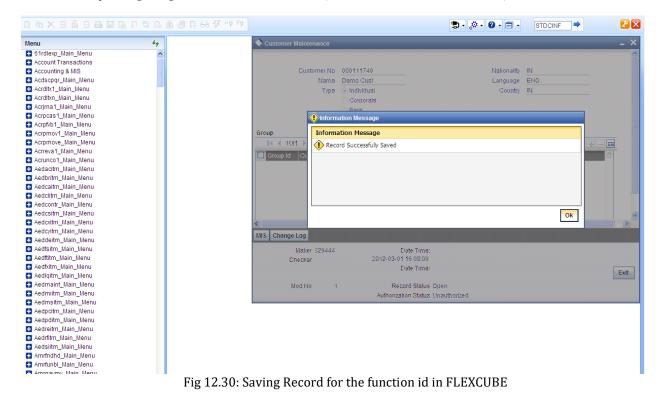
• Click on deploy button select the required files to deployed to server and click on deploy. On successful deployment status will be displayed as Deployed.

Front-End Files	System Packages	Hook Packages		Meta Data	Others	
] RadXML ∄ Screen Xml ∄ System JS	Main Package Spec     Main Package Body     Notification Triggers     Upload Package Spec     Upload Package Body	Kernel Package Spec Kernel Package Body Cluster Package Spec Cluster Package Body Custom Package Spec Custom Package Body	Menu Details     Datasource Details     Dotasource Details     Block Details     Srcren Details     Amendable Details     Call form Details     Summary Details	Label Details     Jeoc PK Colun     Function Call Fi     Gateway Detail:     Notification Det     Function Param     Purge Details	orms Screen Html s Dyload Table Trig ails Dyload Tables De	ger finition
	CSTB_FIELD_LABELSSTDCIFD.INC		INC	0	Deployed -	^
	CSTB_OTHER_LABELSSTDCIFD.INC		INC	C	Deployed 👻	
	CSTB_SUMMARY_INFOSTDCIFD.INC		INC	0	Deployed 👻	
	STTB_AUDIT_PK_COLSSTDCIFD.INC		INC	C	Deployed -	
	CSTB_FID_DATA_BLOCKSSTDCIFD.INC		INC	0	Deployed 👻	
	CSTB_FID_DATA_SOURCESSTDCIFD.INC		INC	C	Deployed 👻	
	CSTB_FID_SCR_TABSSTDCIFD.INC		INC	C	Deployed 👻	-
0	CSTB_FID_SCREENSSTDCIFD.INC		INC	C	Deployed -	
1	SMTB_MENUSTDCIFD.INC		INC	0	Deployed 👻	
2	SMTB_ROLE_DETAILSTDCIFD.INC		INC	0	Deployed -	
3	SMTB_FUNCTION_DESCRIPTIONSTDCIFD.	INC	INC	C	Deployed 👻	
4	SMTB_FCC_FCJ_MAPPINGSTDCIFD.INC		INC	0	Deployed -	
5	STDCIFD RAD.xml		RA	DXML	Generated ~	-

Fig 12.30: Deployment of Files

### Testing

- Launch the screen from FLEXCUBE
- Try sample operations on the screen (NEW, MODIFY, QUERY etc)



# 6. Generated Units

The following units will be generated for a Maintenance screen.

Refer document <u>Development\_WorkBench\_Screen\_Development-II.docx</u> for detailed explanation on the same

## 6.1 Front End Units

### 6.1.1 Language xml

This file is an XML markup of presentation details, for the designed Call Form specific to a language.

### 6.1.2 SYS JavaScript File

This JavaScript file mainly contains a list of declared variables required for the functioning of the screen

### 6.1.3 Release Type Specific JavaScript File

This file won't be generated by the Tool. It has to be manually written by the developer if he has to write any code specific in that release

## 6.2 Data Base Units

### 6.2.1 Static Scripts

The following static scripts generated are required for the proper functioning of a Call Form screen. Refer document on generated units for detailed explanation

i) Menu Details

*Scripts for SMTB\_MENU and SMTB\_FCC\_FCJ\_MAPPING, SMTB\_ROLE\_DETAIL, SMTB\_FCC\_GCJ\_MAPPING are required for the functioning of Maintenance screen* 

- ii) Lov Details
- iii) Amendable Details
- iv) Label details
- v) Screen Details
- vi) Block details
- vii) Data Source Details
- viii) Call form details
- ix) Summary Details

### 6.2.2 System Packages

The Main Package contains the basic validations and backend logic for the Maintenance function id. The Main package contains the mandatory checks required. It will also contain function calls to the other packages generated by Workbench.

The main package has the below stages for a maintenance form:

- Converting Ts to PL/SQL Composite Type
- Checking for mandatory fields
- Defaulting and validating the data
- Writing into Database
- Querying the Data from database

• Converting the Modified Composite Type again to TS

Each of these stages has a 'Pre' and 'Post' hooks in the Kernel, Cluster and Custom Packages. And these Hooks are called from the Main Package itself

Main Package has the system-generated code and should not be modified by the developer Kernel, Cluster and Custom Packages are the packages where the respective team can add business logic in appropriate functions using the Pre and Post hooks available

## 6.2.3 Hook Packages

Release specific packages will be generated based on the release type (KERNEL.CLUSTER or CUSTOM). Developer can add his code in the release specific hook package.

The Main Package has designated calls to these Hook Packages for executing any functional checks and Business validations added by the user. The structure for all the Hook Packages are the same, like:

Fn\_Post\_Build\_Type\_Structure Fn\_Pre\_Check\_Mandatory Fn\_Post\_Check\_Mandatory Fn\_Pre\_Default\_and\_Validate Fn\_Post\_Default\_and\_Validate Fn\_Pre\_Upload\_Db Fn\_Post\_Upload\_Db Fn\_Pre\_Query Fn\_Post\_Query

These Functions are called from the Main package using the Pre and Post Hooks available in the Main Package. The 3 Hook Packages namely Kernel, Cluster and Custom Packages have similar structure and are for the respective teams to work on.

# 6.3 Other Units

## 6.3.1 Xsd

Xsd 's will be generated if gateway operations are required for the particular function id. Maintenance for the same has to be done in *Actions* node

# 7. Extensible Development

Developer can add his code in hook packages and release specific JavaScript file.

# 7.1 Extensibility in JavaScript Coding

For release specific JavaScript coding, code has to be written in release specific JavaScript

file.

It follows the naming convention as : (Function Id)\_(Release Type).js *Example: Code in STDCIFD\_CLUSTER.js is exclusive to cluster release* 

This JavaScript file allows developer to add functional code and is specific to release.

The functions in this file are generally triggered by screen events. A developer working in cluster release would add functions based on two categories:

- Functions triggered by screen loading events *Example: fnPreLoad\_CLUSTER(), fnPostLoad\_CLUSTER()*
- Functions triggered by screen action events *Example: fnPreNew\_ CLUSTER (), fnPostNew\_ CLUSTER ()*

# 7.2 Extensibility in Backend Coding

Release specific code has to be written in the Hook Packages generated.

## 7.2.1 Functions in Hook Packages

Different functions available in the Hook Package of a Maintenance Form are:

- 1) Skip Handler : Pr\_Skip\_Handler This can be used to skip the logic written in another release. *Example: logic written in KERNEL release can be skipped in CLUSTER release*
- 2) Fn\_post\_bulid\_type\_structure If any change has to be made in the field values obtained from the form befor start of processing, code can be written here
- 3) Fn\_pre\_check\_mandatory
- 4) Fn\_post\_check\_mandatory

Any extra mandatory checks on the field values from the screen can be written here.

- 5) Fn\_pre\_query
- 6) Fn\_post\_query

Any specific logic while querying can be written in these functions. It is called from fn\_query of the main package

- 7) Fn\_pre\_upload\_db
- 8) Fn\_post\_upload\_dbAny logic while uploading data to tables can be written here .

### 9) Fn\_pre\_default\_and\_validate

### 10) Fn\_post\_default\_and\_validate

Any release specific logic for defaulting and validation can be written here . It is called from the fn\_default\_and\_validate in the main package

### 7.2.2 Flow of control through Hook packages

The flow of control through the Hook Packages for a particular stage is as explained in the figure below

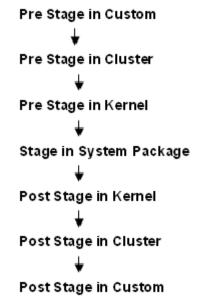
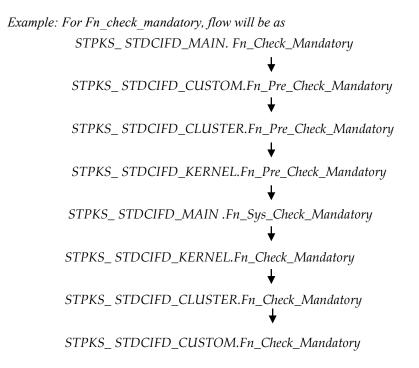


Fig 12.31: Flow of control through Hook Packages



### 7.2.3 By passing Base Release Functionality

There are auto generated functions like FN\_SKIP\_<RELEAE\_TYPE> which would determine whether or not a particular hooks needs to be called.

Developer also has an option to bypass the base release hook if need be. For example if the validations written in *STPKS\_STDCINF\_KERNEL.FN\_PRE\_CHECK\_MANDATORY* are not required or not suitable for the Cluster release, system provides an option to bypass the code written by Kernel team. Similarly a Custom release can also bypass the code written by Kernel and Custom Releases. This can be achieved by calling procedures

*PR\_SET\_SKIP\_<RELEASE\_TYPE>* and *PR\_SET\_ACTIVATE\_<RELEASETYPE>*. These procedures will be made available in the main package and the development teams of Customization teams can use these procedures to skip and re-activate the hooks of parent release.

The Developer should avoid adding validations or Checks in the Pre Stage of any function, like Fn\_Pre\_Check\_Mandatory, etc and should aim to add all the validations in the Fn\_Post\_Default\_and\_Validate.

For Example let us see the flow for the Mandatory Stage for STDCIFD:

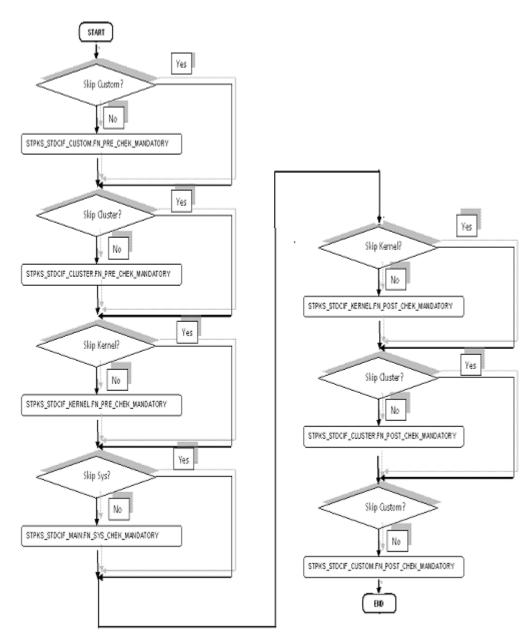


Fig 12.31: Flow of control explaining skip logic in pacakges



Development of Maintenance Form [June] [2021] Version 14.5.1.0.0

Oracle Financial Services Software Limited Oracle Park Off Western Express Highway Goregaon (East) Mumbai, Maharashtra 400 063 India

Worldwide Inquiries: Phone: +91 22 6718 3000 Fax:+91 22 6718 3001 www.oracle.com/financialservices/

Copyright © 2007, 2021, Oracle and/or its affiliates. All rights reserved.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

U.S. GOVERNMENT END USERS: Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate failsafe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

This software or hardware and documentation may provide access to or information on content, products and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.