Capgemini
CONSULTING.TECHNOLOGY.OUTSOURCING

ABAP/4
Module - 4 LAB BOOK

Capgemini
CONSULTING.TECHNOLOGY.OUTSOURCING

Table of Contents

Getting Started

1.1 Overview

This lab book is a guided tour for learning SAP ABAP. It comprises of assignments to be done. Refer the demos and work out the assignments given by referring the case studies which will expose you to work with Java applications.

1.2 Setup Checklist for SAP ABAP

Here is what is expected on your machine in order to work with lab assignment.

Minimum System Requirements

- Intel Pentium 90 or higher (P166 recommended)
- Microsoft Windows 2010 or higher.
- Memory: (8GB or more recommended)

Please ensure that the following is done:

- SAP GUI is installed
- Connection to the SAP Server is present

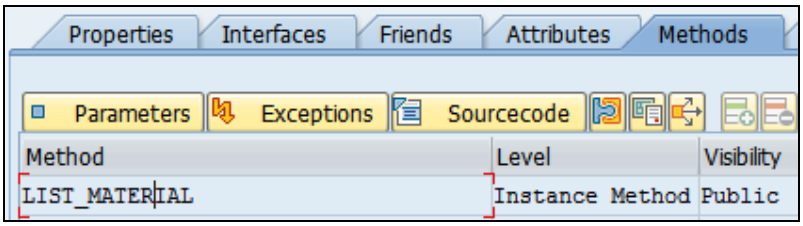
Lab 1-1 Introduction to OOABAP

Goals	• How to use the ABAP Objects using Global and Local class.
Time	60 Minutes
Lab Setup	• Connectivity to SAP server • Login details for connecting to SAP server

Assignment # 1:

Create the global class methods and pass the data from the local class.

Step # 1: Go to SE24 T-code and create the global class instance mthod.



Step # 2: Decleare the import and exporting parameters and click on the source code button to write the select query logic in side the method.

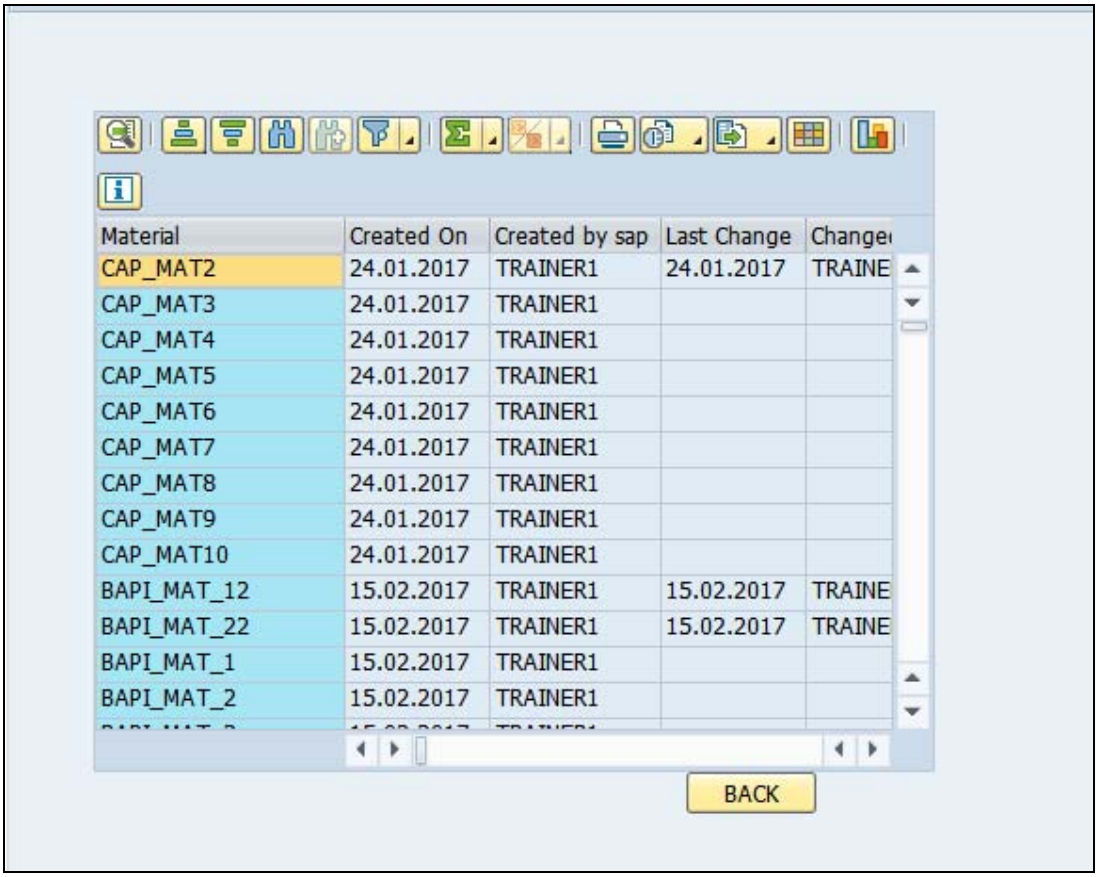
Parameter	Type	P...	O...	Typing Method	Associated Type
I_MATNR1	Importing	☐	☐	Type	MATNR
I_MATNR2	Importing	☐	☐	Type	MATNR
MAT_LIST	Exporting	☐	☐	Type	TABLE

Step # 3: Go to SE38 T-Code and create the local class and call the global class method.
Creat an internal table IT_TAB with the 10 fields from the MARA table structre and pass the material number range by using the SELECT-OPTIONS for I_MATNR1 and I_MATNR2.
Eg: SELECT-OPTIONS S_MATNR FOR MARA-MATNR.

For MAT_LIST Importing : Map the Internal table structre with the MAT_LIST.

```
CALL METHOD OBJ->LIST
  EXPORTING
    I_MATNR1          = S_MATNR-LOW
    I_MATNR2          = S_MATNR-HIGH
  IMPORTING
    MAT_LIST          = IT_TAB
  EXCEPTIONS
    MATERIAL_NOT_FOUND = 1
```

Expected output: OOABAP ALV grid display by using the custom container.



Material	Created On	Created by sap	Last Change	Change
CAP_MAT2	24.01.2017	TRAINER1	24.01.2017	TRAINE
CAP_MAT3	24.01.2017	TRAINER1		
CAP_MAT4	24.01.2017	TRAINER1		
CAP_MAT5	24.01.2017	TRAINER1		
CAP_MAT6	24.01.2017	TRAINER1		
CAP_MAT7	24.01.2017	TRAINER1		
CAP_MAT8	24.01.2017	TRAINER1		
CAP_MAT9	24.01.2017	TRAINER1		
CAP_MAT10	24.01.2017	TRAINER1		
BAPI_MAT_12	15.02.2017	TRAINER1	15.02.2017	TRAINE
BAPI_MAT_22	15.02.2017	TRAINER1	15.02.2017	TRAINE
BAPI_MAT_1	15.02.2017	TRAINER1		
BAPI_MAT_2	15.02.2017	TRAINER1		

Assignment # 2: Create a class with the following attributes.

Material Number
Industry Sector
Material Type
Base UOM
Gross weight
Net Weight

The class has a constructor which sets the value of the above.

Write down a method named DisplayMat which displays the above details.

Create two objects of the class.

Note: Do the above using Local and Global class.

Assignment # 3: Copy the above class and have a Method as SetMat(Instead of constructor) which sets the value of the attributes.

Write down a method named DisplayMat which displays the above details.

Create two objects of the class.

Note: Do the above using Local and Global class.

Assignment # 4: Create two local classes which contains one method each.

Note: Class c1 contains the method m1 and class c2 contains the method m2.

Class C1 contains the following attributes and method m1 sets the values of the same.

Material Number
Industry Sector
Material Type
Base UOM
Gross weight
Net Weight

Create an event in class 2 which should be trigger the method of class C1.

Wrtie a program which creates and instance of Class C2 and triggers the above event.

Lab 2-1 ALV and OOALV

Goals	• How to use normal ALV (ABAP List Viewer) and OOALV (Object Oriented ALV) Report Attributes, Methods, Events and Containers.
Time	8 Hours
Lab Setup	• Connectivity to SAP server • Login details for connecting to SAP server

Assignment # 1:

Create an ALV Grid Display with LOGO.

Create an executable program to prepare the range of materils list with LOGO and LIST Heading by using ALV Grid display.

Program Logic Hints:

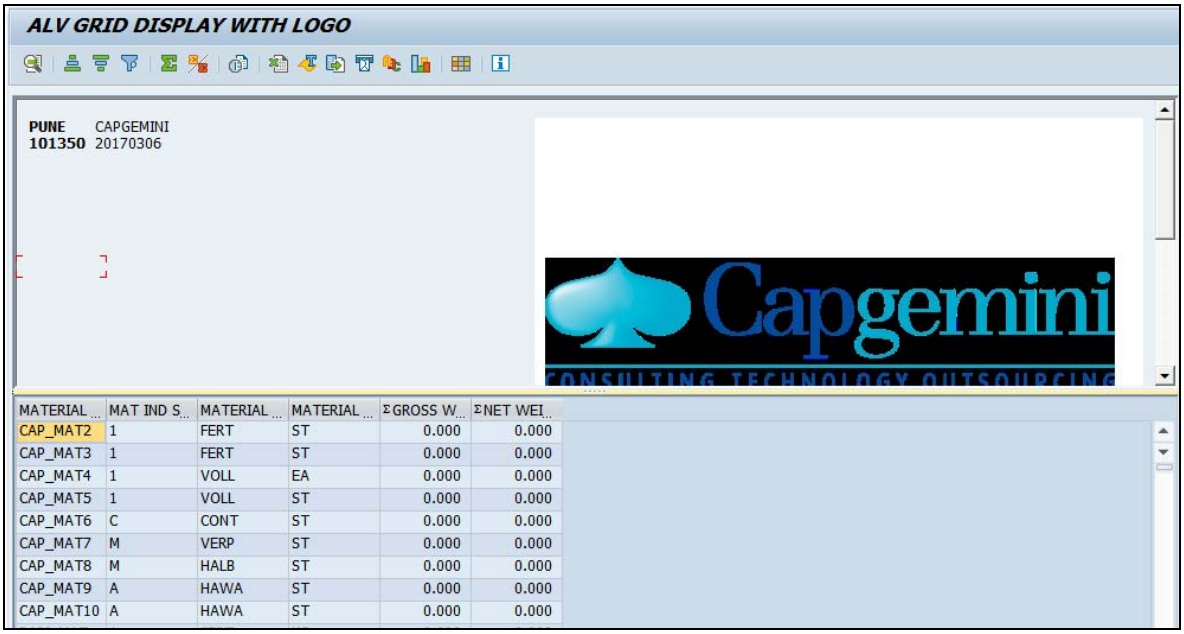
- Declare the Internal table types with ref to ALV SLIS_T_FIELDCAT_ALV , SLIS_T_LISTHEADER, SLIS_LAYOUT_ALV and SLIS_T_EVENT.
  Use the REUSE_ALV_GRID_DISPLAY and REUSE_ALV_COMMENTARY_WRITE Function Modules.
- Upload the LOGO By using the T-Code OAER and prepare the LIST Heading with the SLIS_T_LISTHEADER properties.

Referenece T-Codes and Tables:

T-Codes: SE37, OAER and MM03. **Tables:** MARA, MARC and MAKT .

Step # 1. Go SE38 T-Code and creat an executable program and the Input should be Materials range and it should be an obligatory.

Step # 2. The expected report output should be as shown in the below screen.



MATERIAL	MAT IND S	MATERIAL	MATERIAL	ΣGROSS W	ΣNET WEI
CAP_MAT2	1	FERT	ST	0.000	0.000
CAP_MAT3	1	FERT	ST	0.000	0.000
CAP_MAT4	1	VOLL	EA	0.000	0.000
CAP_MAT5	1	VOLL	ST	0.000	0.000
CAP_MAT6	C	CONT	ST	0.000	0.000
CAP_MAT7	M	VERP	ST	0.000	0.000
CAP_MAT8	M	HALB	ST	0.000	0.000
CAP_MAT9	A	HAWA	ST	0.000	0.000
CAP_MAT10	A	HAWA	ST	0.000	0.000

Assignment # 2:

Develop an ALV Hierarchical Sequential list display report.

Create an executable program to prepare the range of sales orders by using ALV Hierarchical display.

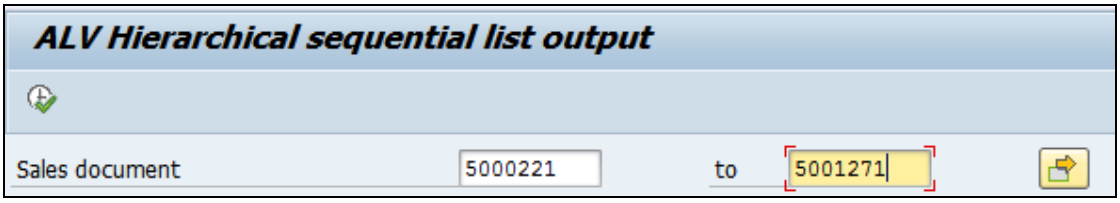
Program Logic Hints:

- Declare the Internal table types with ref to ALV SLIS_T_FIELDCAT_ALV , SLIS_LAYOUT_ALV and SLIS_KEYINFO_ALV.
- Use the REUSE_ALV_HIERSEQ_LIST_DISPLAY Function Module.

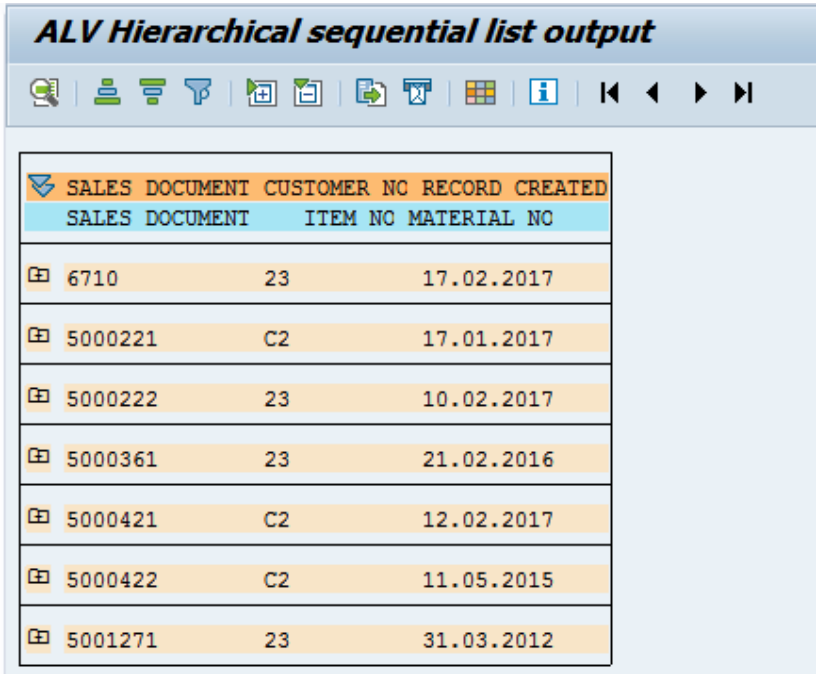
Referenece T-Codes and Tables:

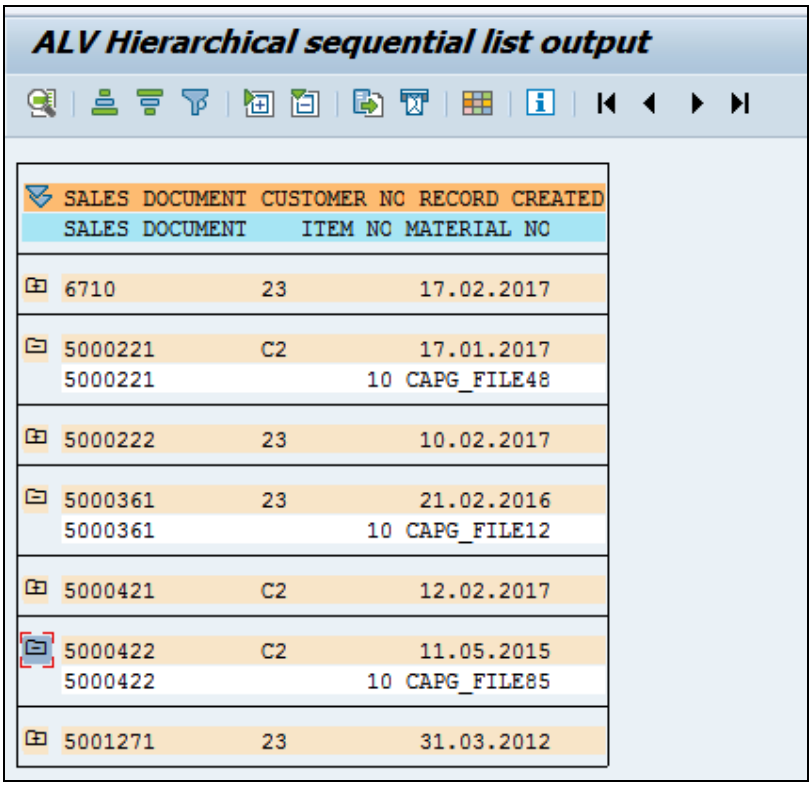
T-Codes: SE37, VA03. **Tables: VBAK, VBAP AND KNA1.**

Step # 1. Go SE38 T-Code and creat an executable program and the Input should be Sales document range and it should be an obligatory.



Step # 2. The expected report output should be as shown in the below screens.





Assignment # 3:

Create an OOALV SPLITTER CONTAINER WITH LOGO display report.

Display the customer wise sales order report by using the OOALV Splitter Container with Logo.

Program Logic Hints:

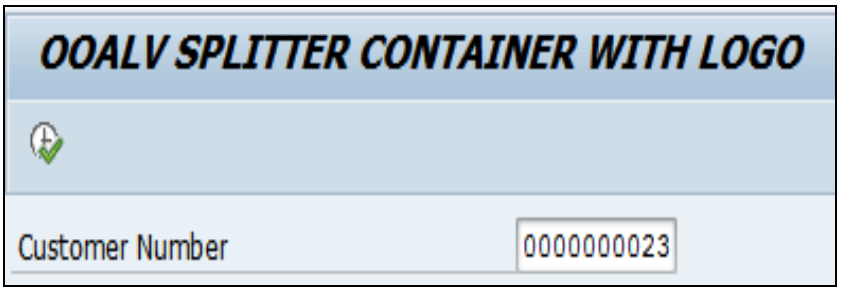
- Declare the Containers and Classes.
  Use the CL_GUI_CUSTOM_CONTAINER, CL_GUI_SPLITTER_CONTAINER CL_GUI_CONTAINER and CL_DD_DOCUMENT .

- Declare the EVENT handling Method.
  METHODS M_METH1 FOR EVENT TOP_OF_PAGE OF CL_GUI_ALV_GRID.
  Method Names: ADD_PICTURE, ADD_TEXT_AS_HEADING, ADD_TEXT, NEW_LINE ,ADD_GAP And DISPLAY_DOCUMENT.

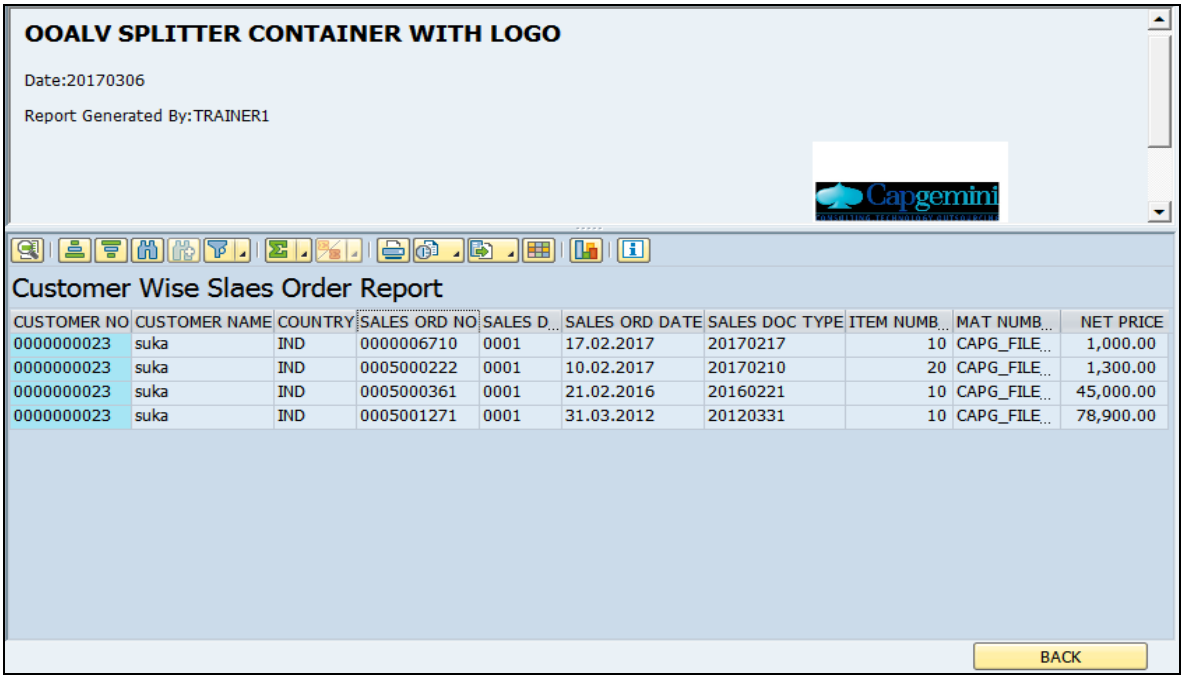
Referenece T-Codes and Tables:

T-Codes: VA03 and XD03. **Tables:** VBAK, VBAP and KNA1.

Step # 1. Go SE38 T-Code and create an executable program and the Input parameter should be customer number and an obligatory.



Step # 2. The expected report output should be as shown in the below screens.



Assignment # 4:

Create an OOALV Interactive report by using EVENT handling method and SAP MEMORY.

Display the Purchase Order OOALV Interactive report by using the custom container.

Program Logic Hints:

- Declare the Containers.
  Use the CL_GUI_CUSTOM_CONTAINER and CL_GUI_ALV_GRID Containers.

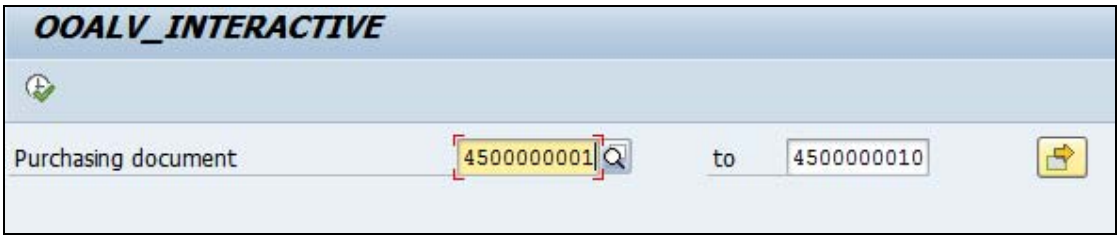
- Declare the EVENT handling Method.
  METHODS METH1 FOR EVENT DOUBLE_CLICK OF CL_GUI_ALV_GRID IMPORTING E_
  ROW E_COLUMN .

- Use the SET PARAMETER
  SET PARAMETER ID 'BES' FIELD <WA>-EBELN.
  CALL TRANSACTION 'ME23N'.

Referenece T-Codes and Tables:

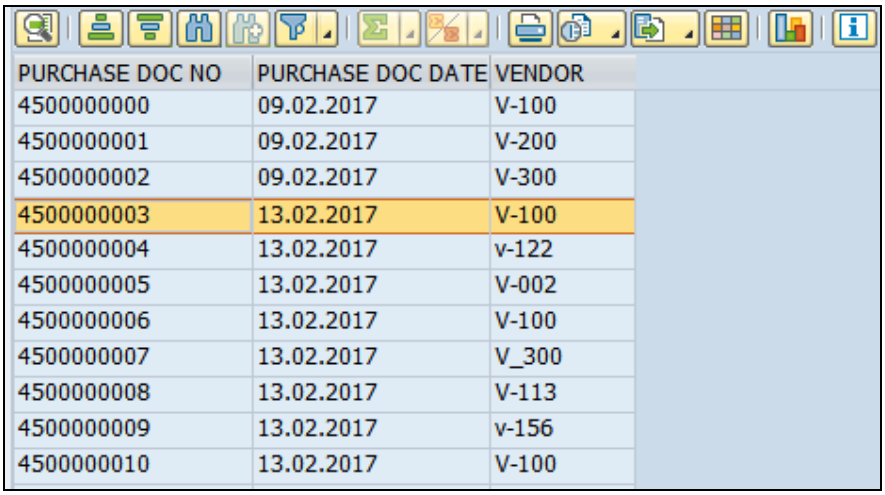
T-Codes: ME23N and MK03 **Tables:** EKKO, EKPO and LFA1.

Step # 1. Go SE38 T-Code and creat an executable program and the Input should be purchase order no range and it should be an obligatory.



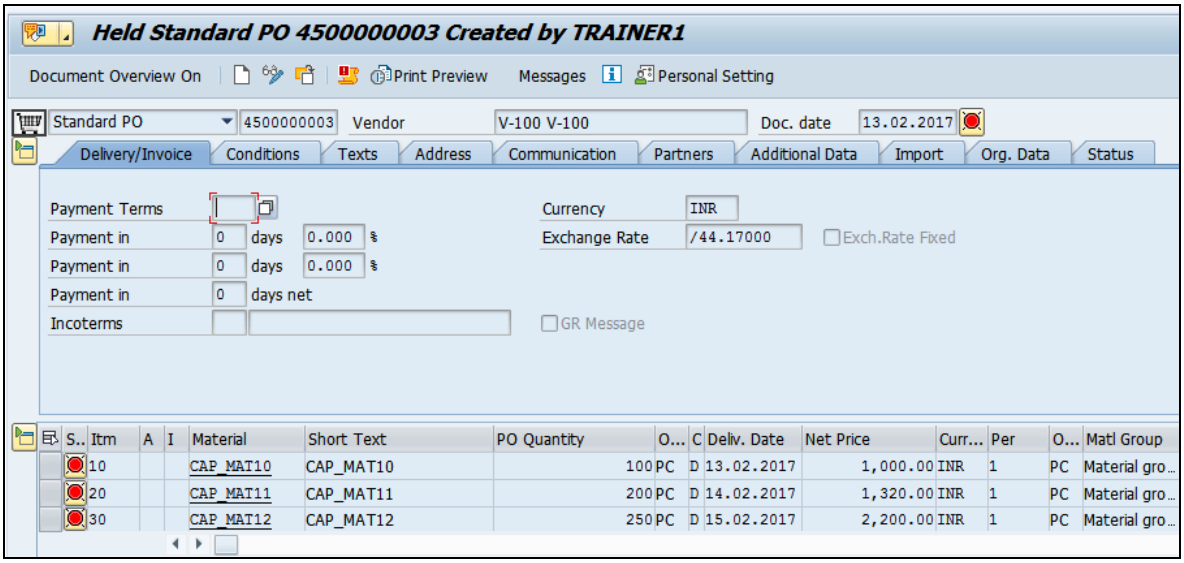
Step # 2. Output of the report should be 3 Fields I.e PURCHASE DOC NO, PURCHASE DOC DATE and VENDOR NO from EKKO Table.

Note: PURCHASE DOC NO and VENDOR NO Should be an Interactive fields.

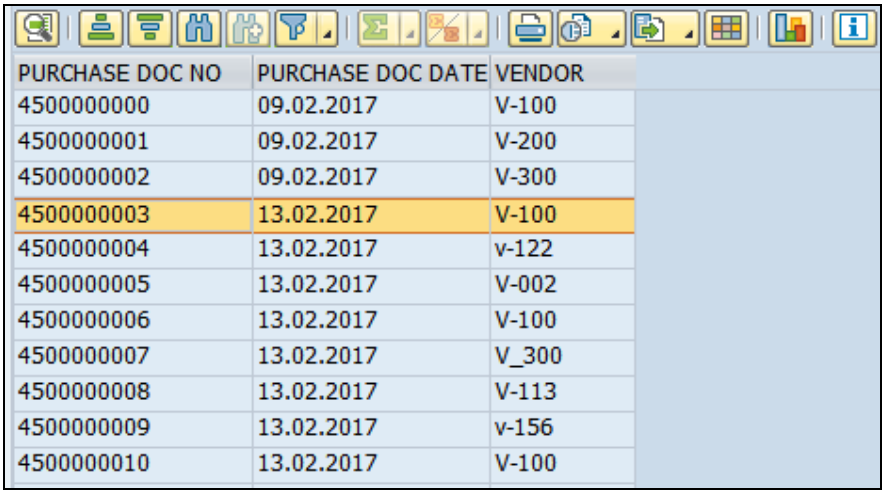


PURCHASE DOC NO	PURCHASE DOC DATE	VENDOR
4500000000	09.02.2017	V-100
4500000001	09.02.2017	V-200
4500000002	09.02.2017	V-300
4500000003	13.02.2017	V-100
4500000004	13.02.2017	v-122
4500000005	13.02.2017	V-002
4500000006	13.02.2017	V-100
4500000007	13.02.2017	V_300
4500000008	13.02.2017	V-113
4500000009	13.02.2017	v-156
4500000010	13.02.2017	V-100

Step # 3. If the user selected (Double click) any purchase order no based on that, Call the Transaction code ME23N and display the selected purchase order info accordingly as shown below Eg: 4500000003.

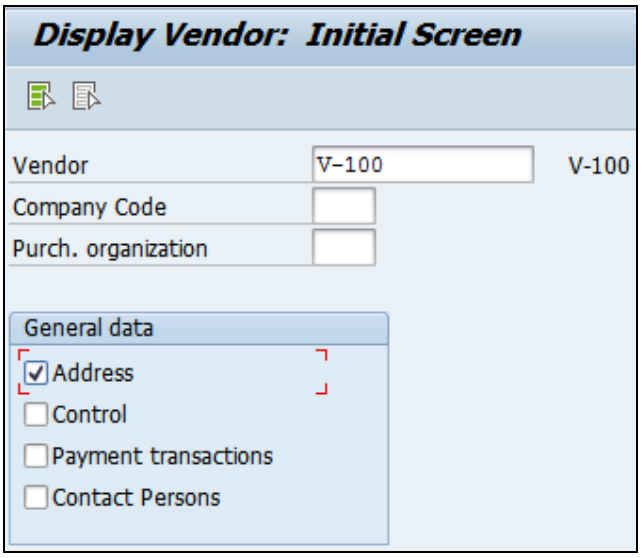


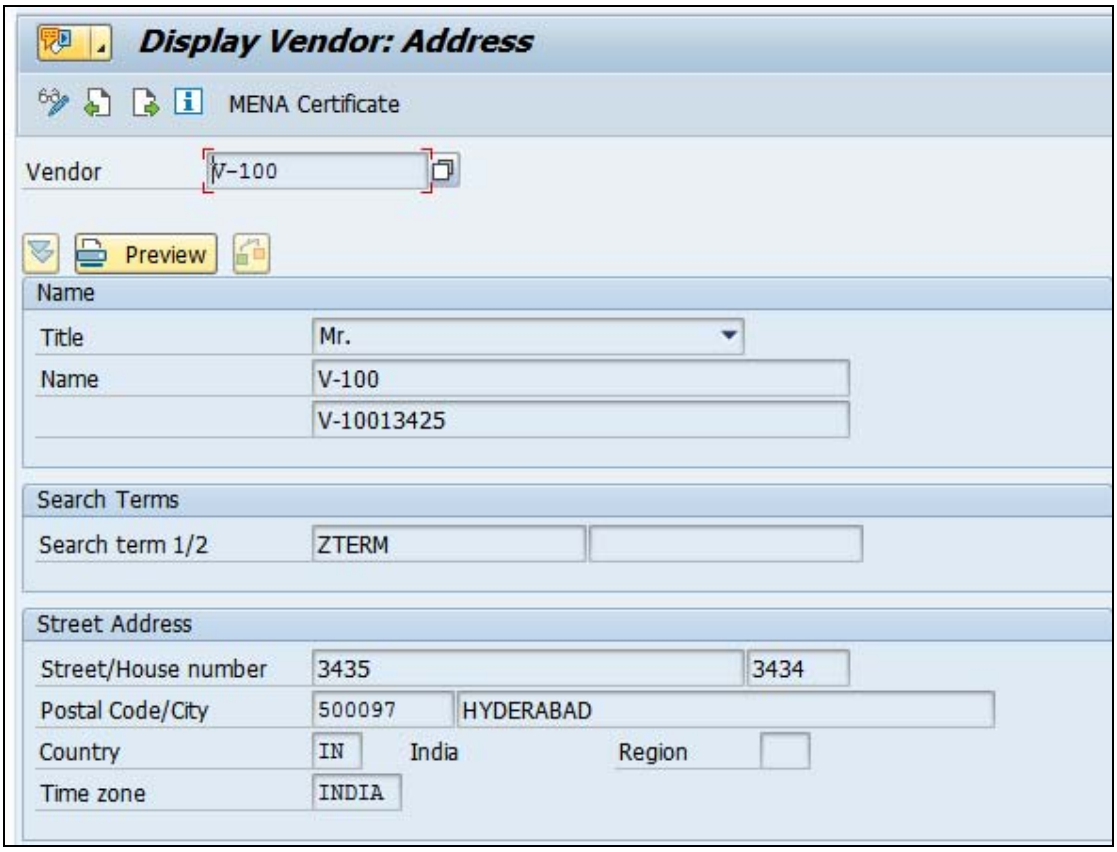
Step # 4. If the user selected (Double click) any Vendor no based on that, Call the Transaction code MK03 and display the selected Vendor info accordingly as shown below. Eg: V-100.



PURCHASE DOC NO	PURCHASE DOC DATE	VENDOR
4500000000	09.02.2017	V-100
4500000001	09.02.2017	V-200
4500000002	09.02.2017	V-300
4500000003	13.02.2017	V-100
4500000004	13.02.2017	v-122
4500000005	13.02.2017	V-002
4500000006	13.02.2017	V-100
4500000007	13.02.2017	V_300
4500000008	13.02.2017	V-113
4500000009	13.02.2017	v-156
4500000010	13.02.2017	V-100

Step # 5: Select the vendor address check box and proceed for the detailed info by clicking the enter button.





Lab 3-1 File Handling

Goals	• How to use the file handling and data upload through the BDC Session Method by using the File Handling.
Time	120 Minutes
Lab Setup	• Connectivity to SAP server • Login details for connecting SAP server

Referenece T-Codes:

T-Codes: **AL11** and **CG3Z**.

Refer the Application Server Path:

Go to AL11 T-Code and click on the below path to find out the physical files in the application server.

Path 1:

DIR_HOME	D:\usr\sap\LND\DVEBMGS00\work

Path 2:

DIR_TRANS	\\IN-BLR-LND\sapmnt\trans

Assignment # 1:

File Uploading.

Write an executable program to read the attaced file from the presentation server(GUI_UPLOAD) and upload it on to the Application Server for a specific path (Ref; the above path 1 to check the files in application server after upload). Eg: D:\usr\sap\LND\DVEBMGS00\work\CAP_MAT1

Assignment # 2:

File Downloading.

Write an executable program to download (GUI_DOWNLOAD) the file from the Application Server to Presentation Server for a specific path.
Eg:C:\Users\adm-ig-hwdlab2e\Desktop\MAT_MAST.TXT.

Assignment # 3:

File Appending.

Write an executable program to read the attaced file from the presentation server(GUI_UPLOAD) and upload it to an existing file path on to the Application Server. (Ref; the above path 1 to check the files in application server after upload). Eg: D:\usr\sap\LND\DVEBMGS00\work\CAP_MAT1.

Assignment # 4:

Data upload through BDC Session Method by using the File Handling.

Step # 1.Write an executable program to upload the proper new material master file (file name Eg.Mat_Mast.txt) from the presentation server and upload it on to the Application Server.

Step # 2.Write a BDC Session method program to upload the new material master data for MM01 T-code and file should be read from the application server (I.e: File Name placed with the step # 1) .

Step # 3. Process the BDC session method by using the SM35 T-code and check the materials status in MM03 T-Code and Check the entries in MARA, MARC and MAKT tables.

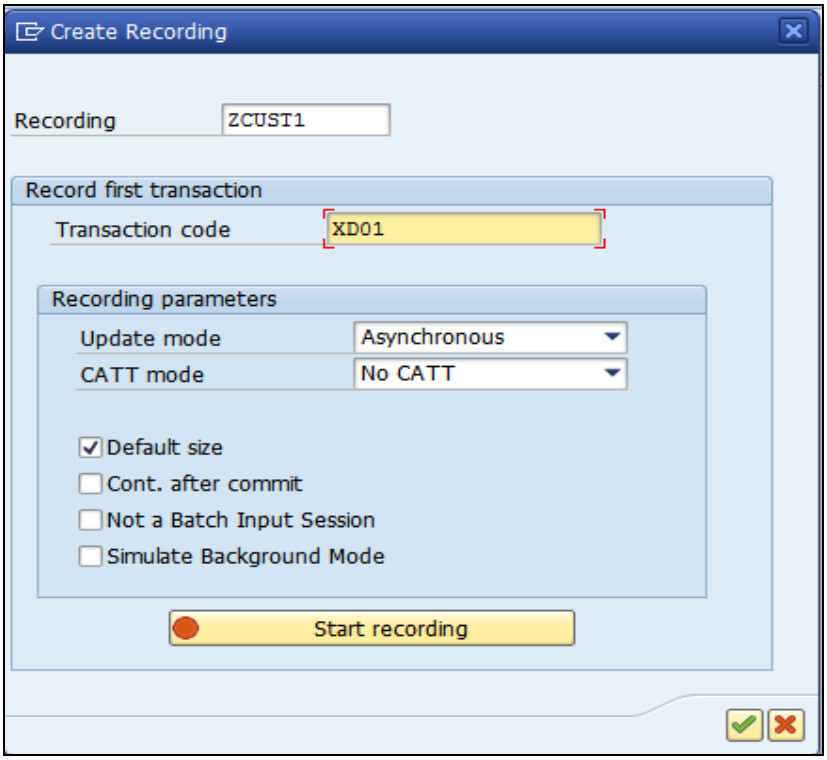
Lab 4-1 BDC and LSMW

Goals	• To know the data migration techniques and how to upload the data through the BDC Session method and Call Transaction Techniques. • Data upload through the LSMW tool
Time	4 Hours
Lab Setup	• Connectivity to SAP server • Login details for connecting SAP server

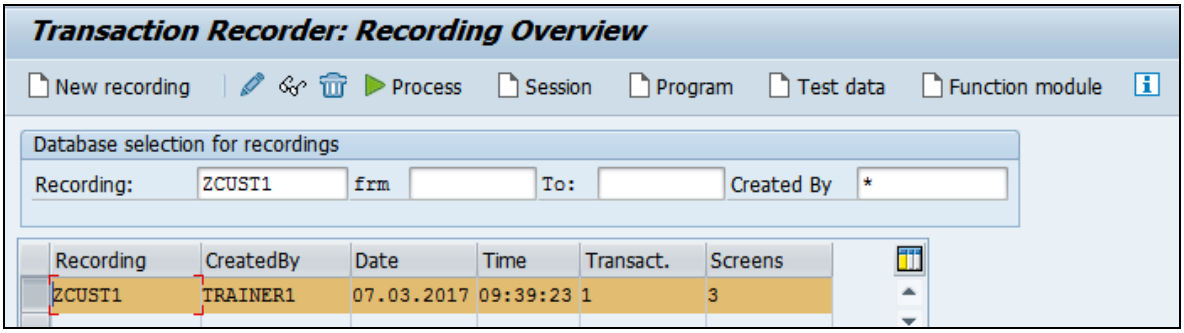
Assignment # 1:

Perform the BDC Recording for Customer Master data and create a program for the same.

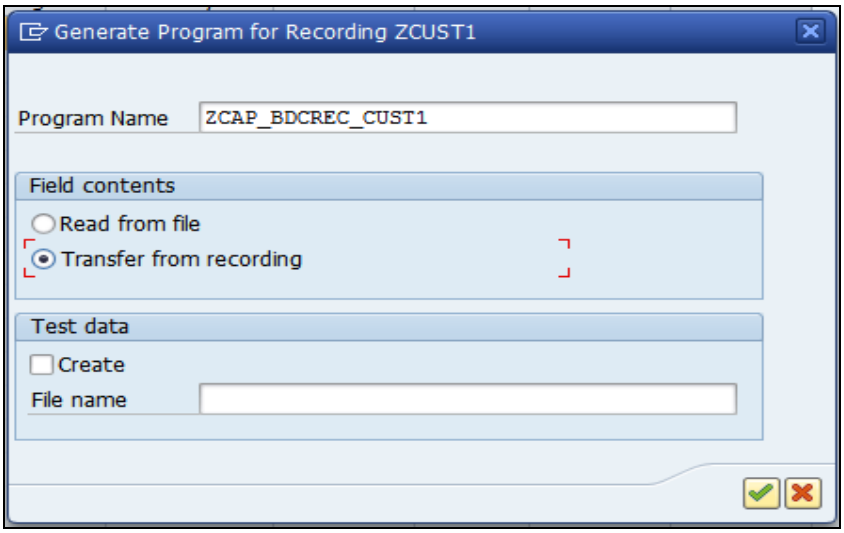
Step # 1. Go to SHDB T-code and start the recording for the customer master info using the transaction code XD01 as shown in the below screen.



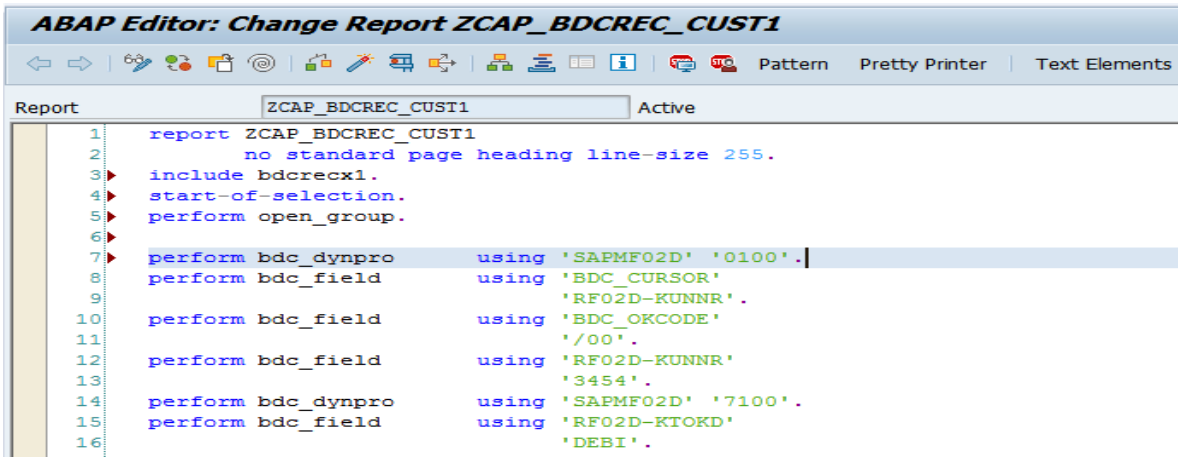
Step # 2. Select the recording and click on the program .



Step # 3. Select the Transfer from recording radiobutton and continue.



Step # 4. Program created automatically with the bdc performs.



Assignment # 2:

BDC Session Method for Material Master.

Create a BDC Session method program for Materail Master T-Code MM01.

Program Logic Hints:

- Call BDC_OPEN_GROUP, BDC_INSERT and BDC_CLOSE_GROUP Functions.
- Create the flat file in the presentation system to attach the data.
- Process the foreground sessions with SM35 T-Code or Process with background job using the Predefined program RSBDCSUB in SE38.

Referenece T-Codes and Tables:

T-Codes: SE38 and MM01/02/03 Tables: MARA, MARC and MAKT.

Step # 1. Go to SHDB and enter the MM01 t-code to record the material master data.

Step # 2. Create an executable program and write the session method logic .

Step # 3. Process the BDC Session Method through the SM35 T-Code.

Assignment # 3:

BDC Call Transaction Method for Vendor Master using the error handling.

Create a BDC calltransaction method program for the Vendor Master Transaction MK01 and handle the errors using BDCMSGCOLL.

Program Logic Hints:

- Create the flat file(Excel Format) in the presentation system to attach the data.
- Create an internal table IT_BDCMSGCOLL TYPE BDCMSGCOLL for the BDCMSGCOLL Structure.
- Call the FORMAT_MESSAGE Function Module and display the messages.
- Loop the IT_BDCMSGCOLL into WA_BDCMSGCOLL.

Referenece T-Codes and Tables:

T-Codes: SE38 and MK01/02/03 Tables: LFA1 and LFB1.

Step # 1. Go to SHDB and enter the MK01 t-code to record the vendor master data.

Step # 2. Create an executable program and write the call transaction method logic.

Step # 3. Read the messages into IT_BDCMSGCOLL into WA_BDCMSGCOLL and display the messages for the user communication.

Assignment # 4:

Create a BDC Session Method with Table Control for Customer Master XD01 transaction.

Create a BDC Session method program with table control for Customer Master data to upload the customer master general data(Address Tab in XD01) and customer master bank data (Payment Transaction Tab in XD01).

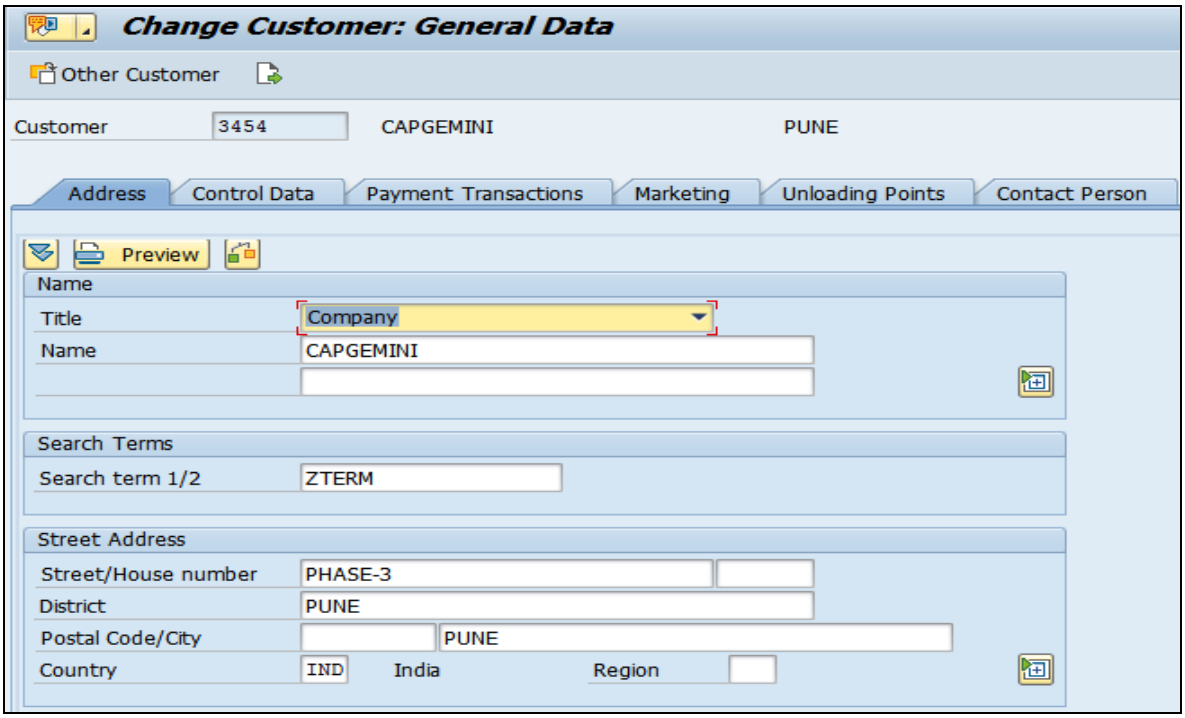
Program Logic Hints:

- Declare the two internal tables, First one is for the general data and second one is for the bank data.
- Call two GUI_UPLOAD function modules in the program.
- Create 2 Flat Files or 2 Excel Files in the presentation system to attach the data.
  1) Customer General Data.
  2) Customer Bank Data.
- Loop the **General Data** BDC performs to the first Internal table and **Bank Data** BDC performs to the Second Internal table.

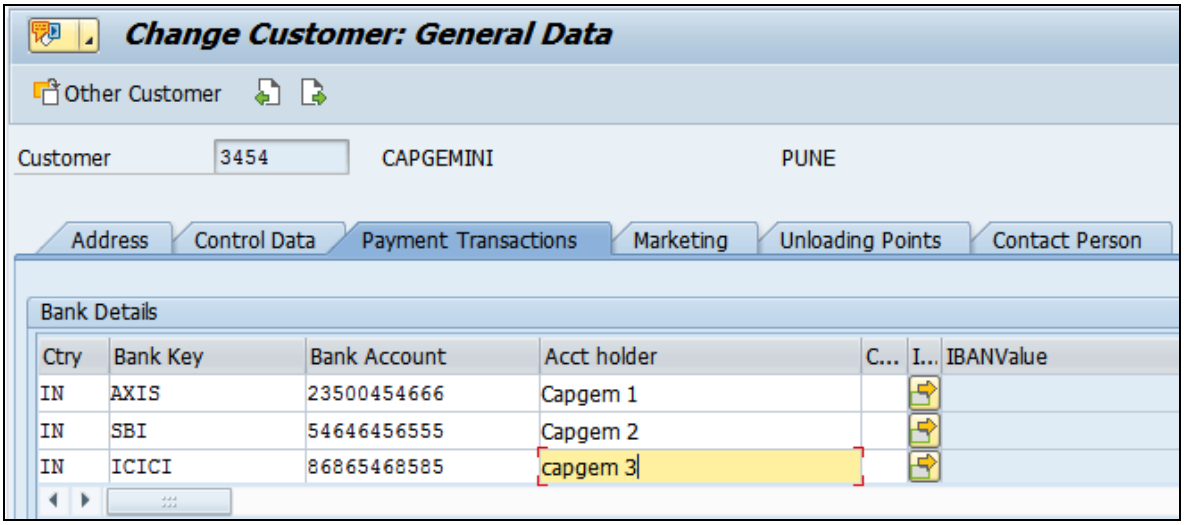
Referenece T-Codes and Tables:

T-Codes: SE38 and XD01/02/03. **Tables:** KNA1 and KNB1.

Step # 1. Go to SHDB and enter the XD01 T-Code to record the customer master general data in **Address Tab** and Bank data in **Payment Transaction Tab** as shown in the below screens.



Step # 2. Click on the **Payment Transactions tab** to enter the multiple bank details .



Step # 3. Prepare the BDC Session Method based on the recording and upload the customer master data with multiple bank details.

Step # 4. Check the customer data in XD03 transaction and check the uploaded entries in KAN1 and KNB1 Tables.

Assignment # 5:

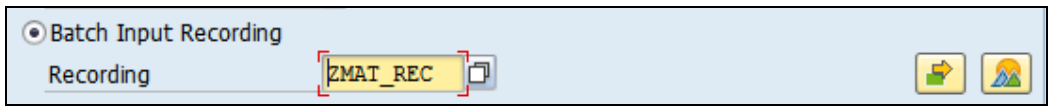
LSMW- Legacy System Migration Workbench.

Data upload through the LSMW Batch Input Recording technique for the Materail Master MM01 transaction.

Referenece T-Codes and Tables:

T-Codes: LSMW and MM01/02/03. **Tables:** MARA,MARC and MAKT.

Hint: Select the Batch Input Recording.



Assignment # 6:

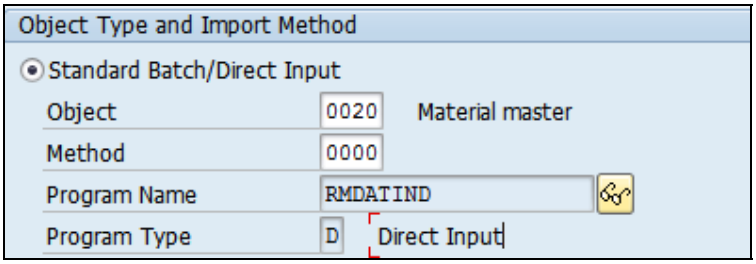
LSMW- Legacy System Migration Workbench.

Data upload through the LSMW Direct Input Technique for the Materail Master MM01 transaction.

Referenece T-Codes and Tables:

T-Codes: LSMW and MM01/02/03. **Tables:** MARA,MARC and MAKT.

Hint: Select the Standard Batch/Direct Input Method Radiobutton.



Lab 5-1 Enhancements and Modifications

Goals	• How to use Enhancements and Modifications
Time	60 Minutes
Lab Setup	• Connectivity to SAP server • Login details for connecting to SAP server

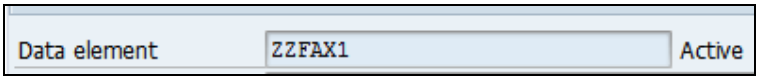
Assignment # 1:

ABAP Dictionary Table Enhancements Using the Append Structure.

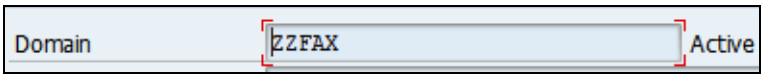
ABAP Dictionary Table Enhancemetns for Vendor Master Table (LFA1) and add any Fields by using the Append structure.

Create the Fields, Data Elements and the Domains should start with the customer name space Starting with ZZ or YY as shown in the below screens.

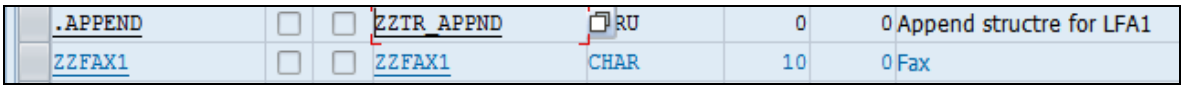
Step # 1: Go to SE11 T-Code to Crate the Data Element.



Step # 2: Go to SE11 T-Code to Crate the Doman. Activate the Doman and Data element.



Step # 3: Provide the data element and domain inside the append structure and back to table you can find the fields under .Append structure.



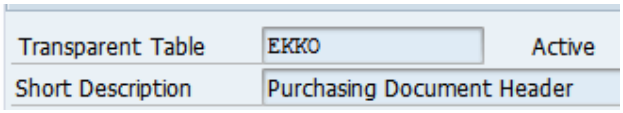
Assignment # 2:

ABAP Dictionary Table Enhancements Using the CI (Customizing Includes).

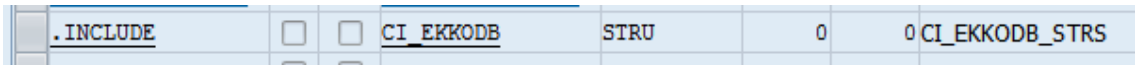
ABAP Dictionary Table Enhancemetns for Purchase order Table (EKKO) and add any ZZFields by using the CI_EKKODB Structure.

Create the Fields, Data Elements and the Domains should start with the customer name space starting with ZZ or YY as shown in the below screens.

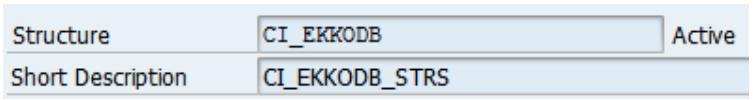
Step # 1: Go to Table EKKO Purchase Order Header.



Step # 2: Double click on the CI_EKKODB Structure.



Step # 3: Add the fields in CI_EKKODB Structure as shown in the below screen.



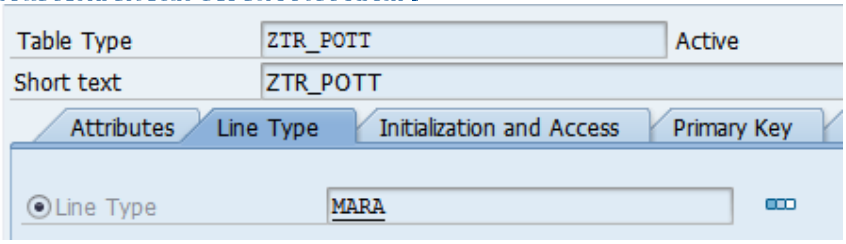
Eg:

ZZFAX1	Types	ZZFAX1	CHAR	10	0	Fax	
NAME	Types	NAME	CHAR	35	0	Employee's last name	
ZZFAX123	Types	ZZFAX123	CHAR	10	0	FAX	
ZZTELNO	Types	ZZTELNO	CHAR	10	0	TELEPHONE NO	
ZZTAN	Types	ZZTAN	CHAR	8	0	DFHGTFRGH	
ZZSOU	Types	ZZSOUACH_INCLUDE1	CHAR	5	0	ZZSOUACH_INCLUDE1	

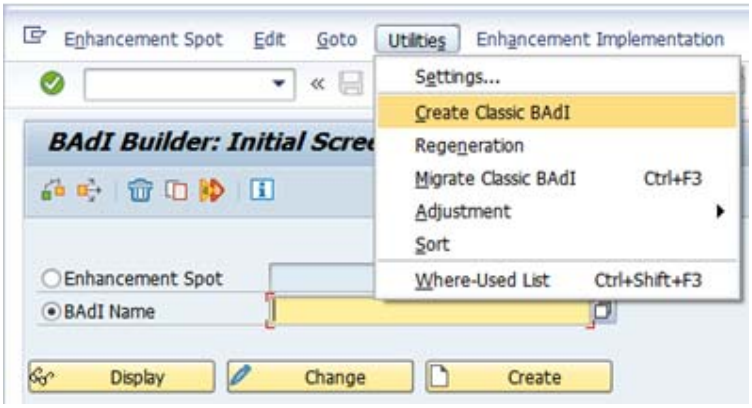
Assignment # 3:

Create a Classic BADI and Implement it.

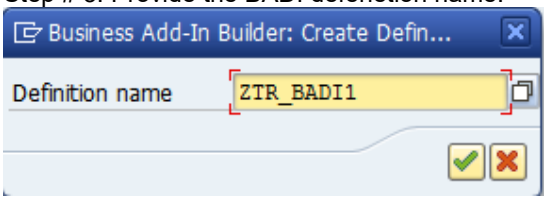
Step # 1: Create the table type and line type by using the T-code SE11.



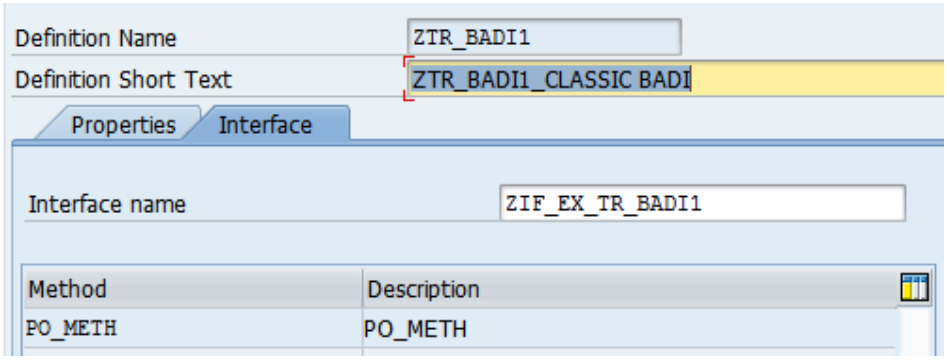
Step # 2: Create a classic badi by using the T-code SE18, go to utilities and select the Create Classic BADI option.



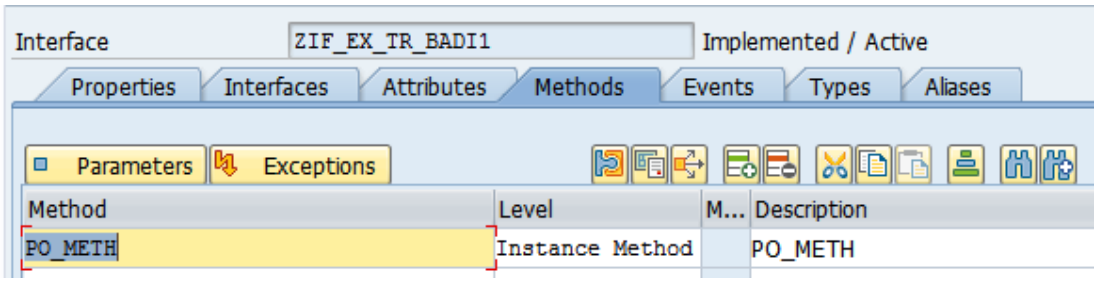
Step # 3: Provide the BADI defenetion name.



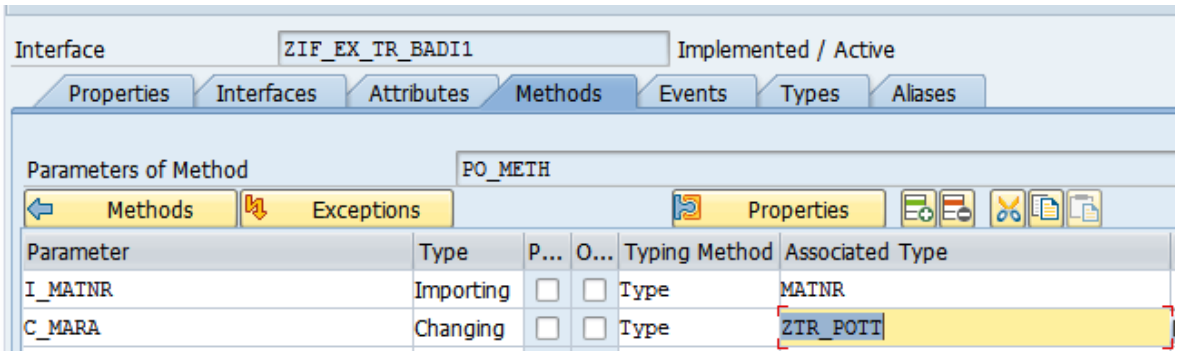
Step # 4: Provide the Interface name and Method name.



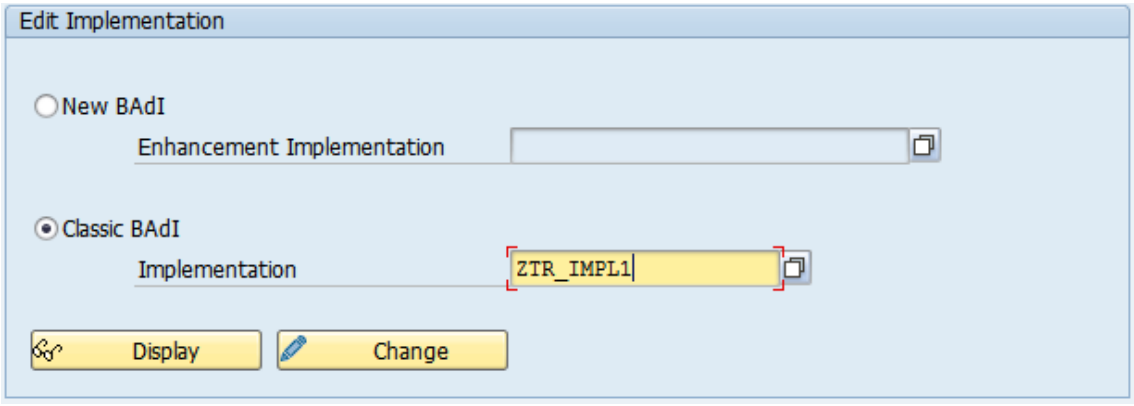
Step # 5: Provide the Method name and Parameters.



Step # 6: Changing parameter eg: C_MARA is requied for the Internal table declerations of Table type.



Step # 7: Implement the Classic BAdi by using the SE19 T-Code.

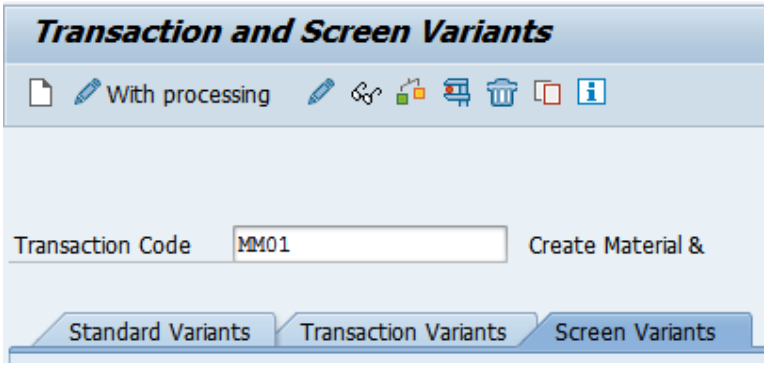


Step # 8: Create an executable program in SE38 and Call the Classic BADI By using the CALL METHOD CL_EXITHANDLER=>GET_INSTANCE

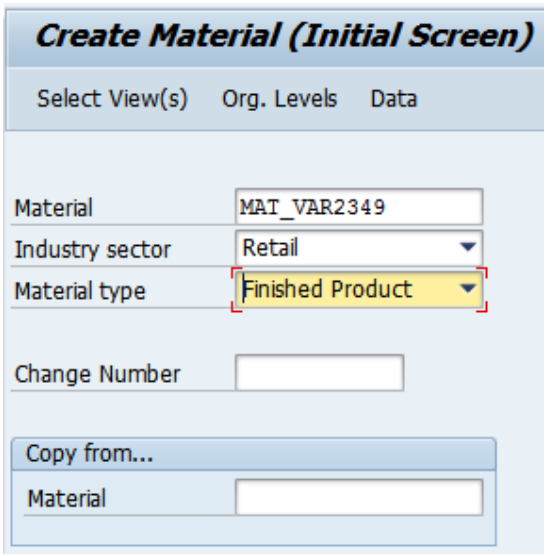
Assignment # 4:

Create a transaction variant for MM01 T-Code (Material Master).

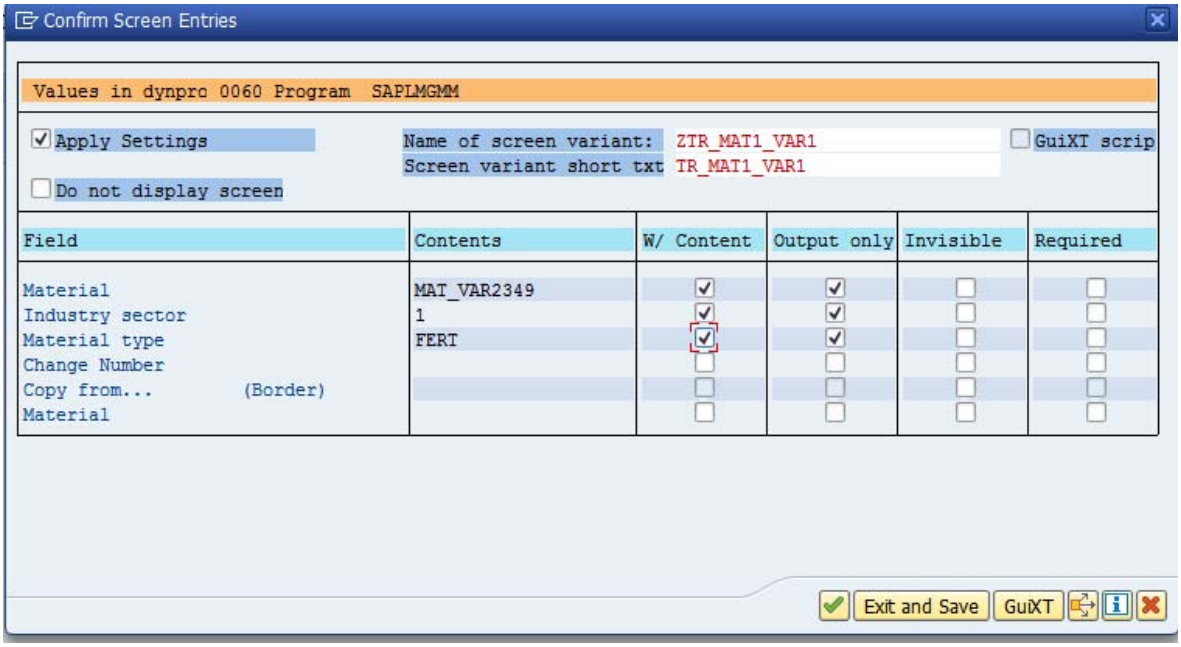
Step # 1: Create the transaction variant by using the T-Code SHD0 and provide the transaction code MM01 and click on create button.



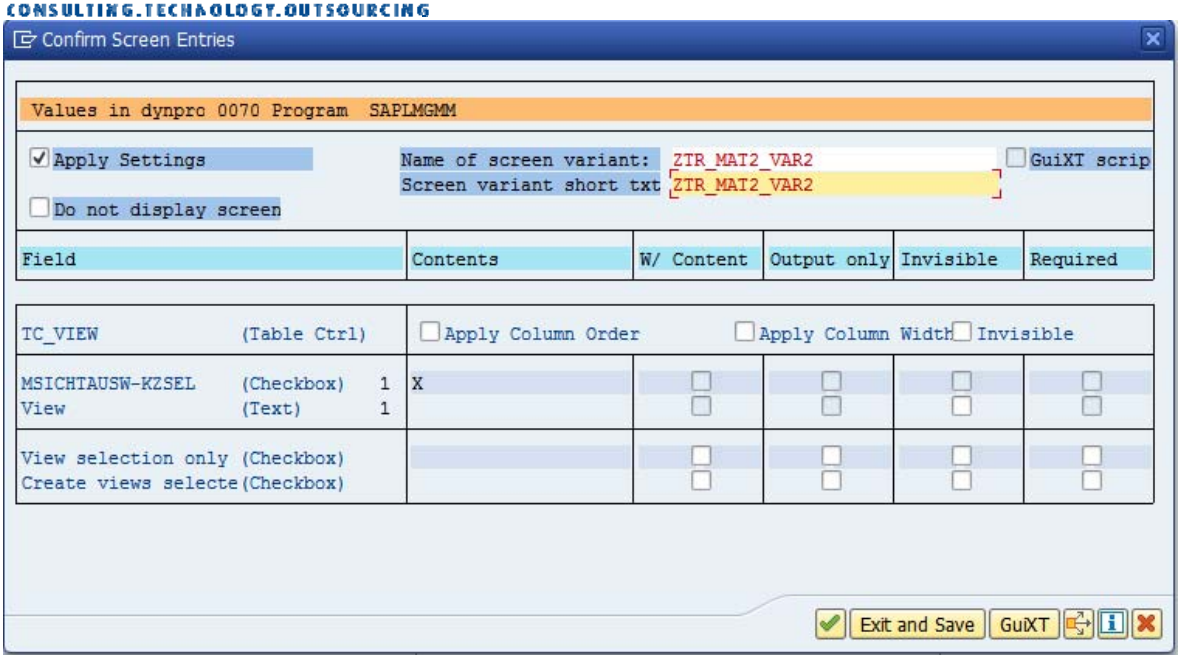
Step # 2: Provide the required material details and continue.



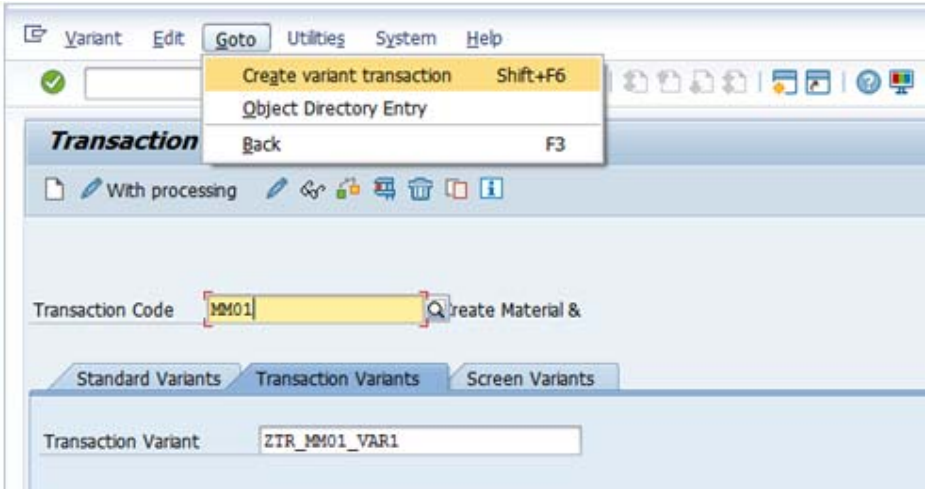
Step # 3: Provide the screen variant name, short description and click on continue.



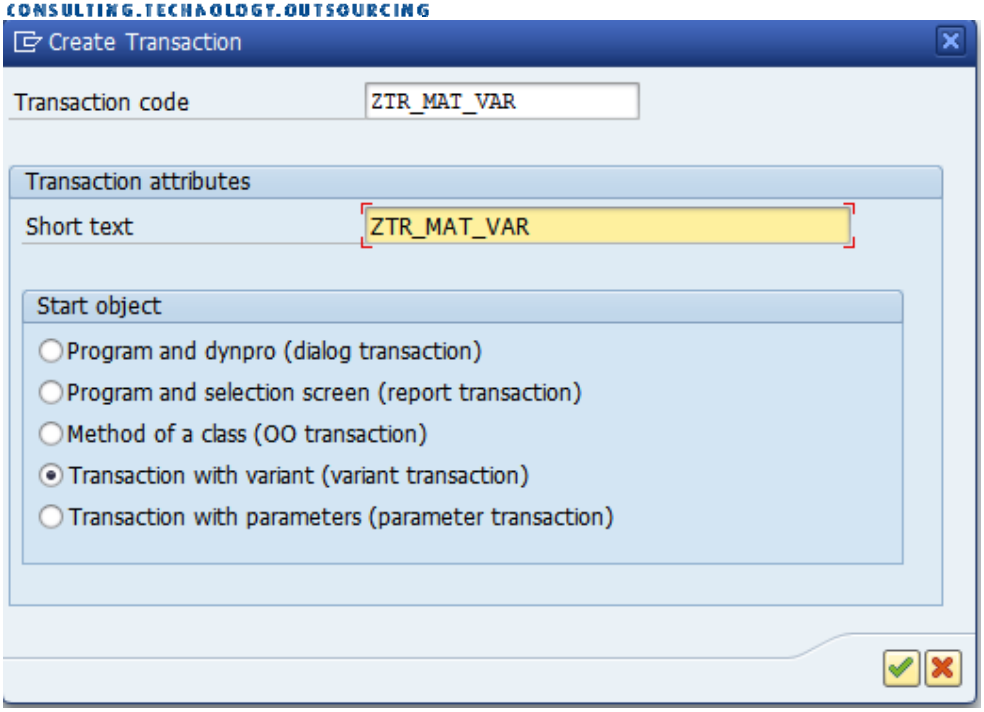
Step # 4: Provide the screen variant name, Short description and click on exit and save button.



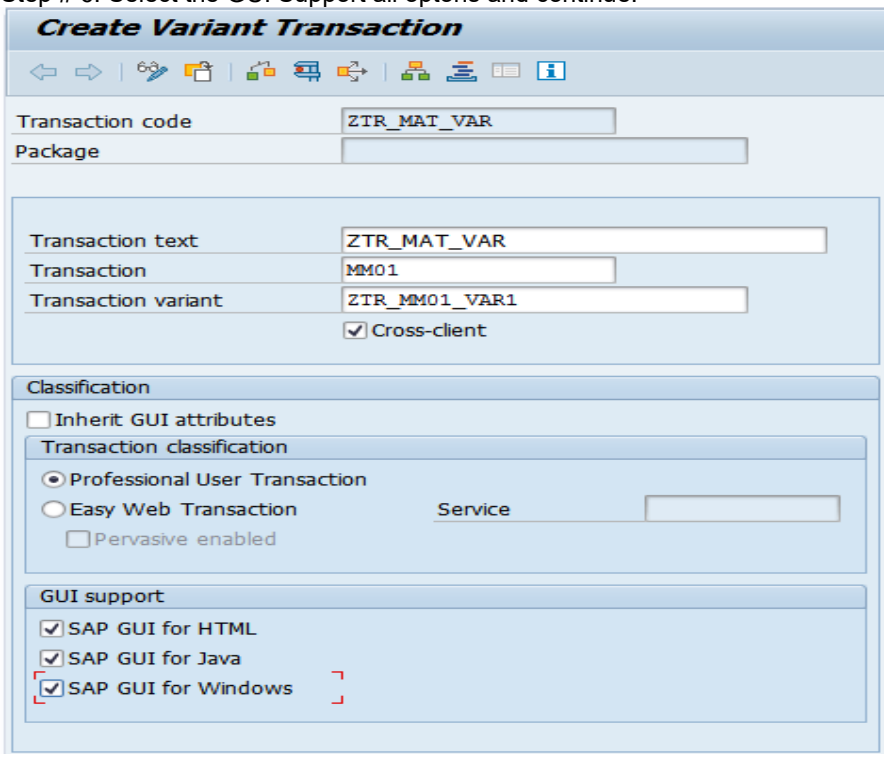
Step # 4: In the main screen navigate → Click on Goto menu and click on the create variant transaction.



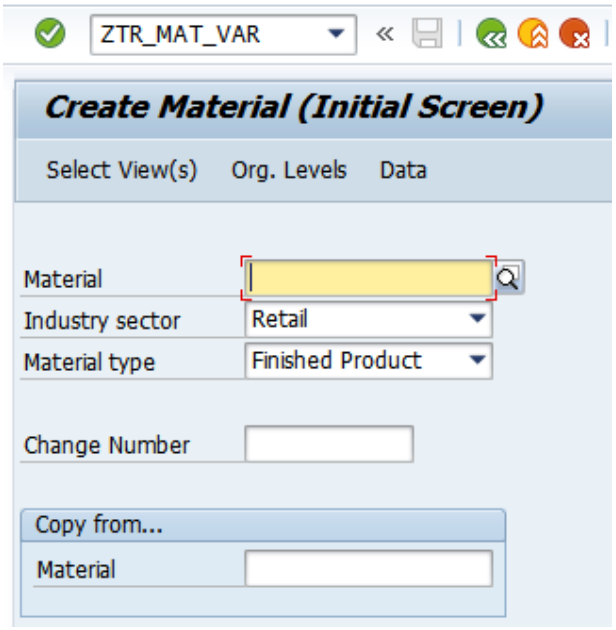
Step # 5: Provide the Short Text and continue.



Step # 6: Select the GUI Support all optons and continue.



Step # 7: Execute the transaction variant .



Lab 6-1 Smartforms

Goals	• How to design the Smartforms , Smart Styles and Text Modules
Time	120 Minutes
Lab Setup	• Connectivity to SAP server • Login details for connecting to SAP server

Assignment # 1:

Design the smartform to display the customer wise sales orders.

Step # 1. Go to smartforms t-code and design the smartforms with tables and templates based on the windows.

Step # 2. Go to smartstyles t-code and assign the same to the smartforms.

Step # 3. Go to smartforms t-code and create the textmodules and assign the same to the smartforms.

Step # 4. Go to SE38 t-code and write the main program logic for the smartforms and call the smartform from the driver program.

Smartform Code Logic:

Referenece T-Codes and Tables:

T-Codes: VA02/VA03 **Tables:** VBAK, VBAP, KNA1 and ADRC.

1) Input of the smartform should be Customer No or Sales Document No.
2) Title window : Hardcoded Text.
3) Address window : Hardcoded text or get the data from ADRC table based on the customer related to the respective sales order provided in the smartforms input field.
4) Template window : Get the Sales doc no , PO Number and Customer no records from the VBAK table.
5) Main window : Get the sales order line items from the VBAP table based on the VBAK Sales order number and display the data for the table format in the MAIN WINDOW.
6) Footer Window : Provide the system fields for the Date, Time and Page no.

Note: as shown below output of the smartform data may not be same in all the clietns or servers.

Expected Output of the Smartform :

CUSTOMER WISE SALES ORDER DETAILS

Capgemini Technology Services
India Limited.
Hinjewadi,Pune.
MAHARASTRA. INDIA.

Sales Doc No:	4970
PO Number:	TS-234999
Customer:	1000

Sales Item	Material Number	Material Text	Plant	Storage loc	Quantity	Gross Weight	Net Weight
000010	CAP_MAT1	CAP_MAT1	1000	01	1,000.000	100,000.000	100,000.000
000020	CAP_MAT2	CAP_MAT2	1000	02	2,000.000	400,000.000	400,000.000

Sales Item	Material Number	Material Text	Plant	Storage loc	Quantity	Gross Weight	Net Weight
000010	CAP_MAT1	CAP_MAT1	1000	01	1,000.000	100,000.000	100,000.000
000020	CAP_MAT2	CAP_MAT2	1000	02	2,000.000	400,000.000	400,000.000

Date: 11.01.2017 Time: 15:19:18 Page No:1

Assignment # 2:

Design the smartform to display the Vendor Wise Purchase Orders.

Step # 1. Go to smartforms t-code and design the smartforms with tables and templates based on the windows.

Step # 2. Go to smartstyles t-code and assign the same to the smartforms.

Step # 3. Go to smartforms t-code and create the textmodules and assign the same to the smartforms.

Step # 4. Go to SE38 t-code and write the main program logic for the smartforms and call the smartform from the driver program/Print Program.

Smartform Code Logic:

Referenece T-Codes and Tables:

T-Codes: ME22N/ME23N **Tables:** EKKO, EKPO, LFA1 and ADRC.

1. Input of the smartform should be Vendor No or Purchase Document no.
2. Title window : Hardcoded text “PURCHASE ORDER INFO”.
3. Address window : Hardcoded text or get the data from ADRC table based on the customer related to the respective sales order provided in the smartforms input field.
4. Template window : Get the Purchase Order No , PO date and Vendor No records from the EKKO table.
5. Main window : Get the purchase order line items from the EKPO table based on the EKKO order number into the main window and display the data into the table format.
6. Footer Window : Provide the system fields for the Date, Time and Page No.

Note: as shown below output of the smartform data may not be the same in all the clietns or the servers.

Expected Output of the Smartform :

PURCHASE ORDER INFO

Capgemini Technology Services
India Limited.
Airoli, Mumbai,
MAHARASTRA. INDIA.

PO Number:	4500000009
PO Date:	13.02.2017
Vendor:	v-156

Line Item	Material Number	Material Text	Company Code	Plant	Quantity	Net Price	Order Value
00010	cap_mat45	cap_mat45	0001		1.000	2,154,444.00	0.00
00020	cap_mat46	cap_mat46	0001		1.000	5,353,545.00	0.00
00030			0001		0.000	0.00	0.00
00040			0001		0.000	0.00	0.00
00050			0001		0.000	0.00	0.00
00060			0001		0.000	0.00	0.00
00070			0001		0.000	0.00	0.00
00080			0001		0.000	0.00	0.00
00090			0001		0.000	0.00	0.00
00100			0001		0.000	0.00	0.00

Date: 01.03.2017 Time: 11:14:25 Page No:1

Lab 7-1 Adobe Forms

Goals	• Understand and use the Adobe Interfaces and Forms.
Time	120 Minutes
Lab Setup	• Connectivity to SAP server • Login details for connecting to SAP server

Assignment # 1:

Design the Adobeform to display the Purchase Order Info.

Step # 1. Go to SFP t-code and creaet the Adobe Form Interface.

Step # 2. Go to SFP t-code and design the Adobe Form with tables and other properties as shown in the below screen.

Step # 3. Go to SE38 t-code and write the main program logic for the Adobe form and call the Adobe form from the driver program/Print program.

Adobe Form Desing Logic:

Referenece T-Codes and Tables:

T-Codes: ME22N/ME23N **Tables:** EKKO, EKPO, LFA1 and ADRC.

1. Input of the Adobe form should be the vendor no.
2. Hardcoded text “PURCHASE ORDER ” for Form Heading .
3. Get the purchase order no , PO date from the EKKO table.
4. **“Bill to” and “Ship to”** Hardcoded text and data to be displayed based on the vendor PO number and get the vendor(LIFNR) no form the EKKO and Enter vendor no LIFNR in LFA1 table based on the vendor(LIFNR) no get the ADRNR no and display the data accordingly .
5. Get the purchase order line items from the EKPO table based on the EKKO Purchase order number display the data in the table format.

   Ref the fields from EKPO Table: EBELP, MATNR, EMATN, BUKRS, WERKS, KTMNG, MENGE and NETPR.

6. Based on the purchase order no, Get the payment terms from the EKKO table. Field ZTERM for the payment terms, Field ZBD1T for the Payment in and Field ZBD1P for the days.

Note: As shown below output of the Adobe form data may not be the same in all the clietns or the servers.

PURCHASE ORDER

PO No:450000003
PO Date: 12.02.2017

Bill To:

Vendor No: V-100
Name: V-100
Street : 3435
Postal code: 411057
City: Bangalore
State: Karnataka
Country: INDIA.

Ship To:

Vendor No: V-100
Name: V-100
Street : 3435
Postal code: 411057
City: Bangalore
State: Karnataka
Country: INDIA.

Line Items	Material No	Material Description	Company Code	Plant	Target Quantity	Purchase Order Quantity	Net Price in Purchasing Document
10	CAP_MAT10	CAP_MAT10	0001	CN100	150	100	1090.00
20	CAP_MAT11	CAP_MAT11	0001	1000	900	850	2100.00
30	CAP_MAT12	CAP_MAT12	0001	CN100	1250	1250	1550.00
40	CAP_MAT13	CAP_MAT13	0001	1000	2300	2000	3020.00
50	CAP_MAT14	CAP_MAT14	0001	1000	2300	2300	2349.00

Total :	10109.00
14% Tax:	1415.26
Grand Total:	11524.26

Terms and Conditions: Payment Terms: 0002 Payment In: within 14 days 2 % Cash Discount.

Lab 8-1 ALE and IDOCS

Goals	• Configure the ALE IDOC Steps for Standard and Customised Applications.
Time	120 Minutes
Lab Setup	• Connectivity to SAP server • Login details for connecting to SAP server

Assignment # 1:

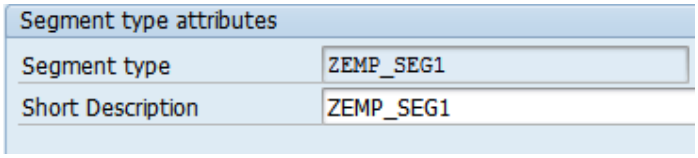
Configure the ALE and IDOC Customised steps for the segments, Idoc type, Messages and Assign Idoc type to Messge type for your own 'Z' or 'Y' Tables and Customised Applications.

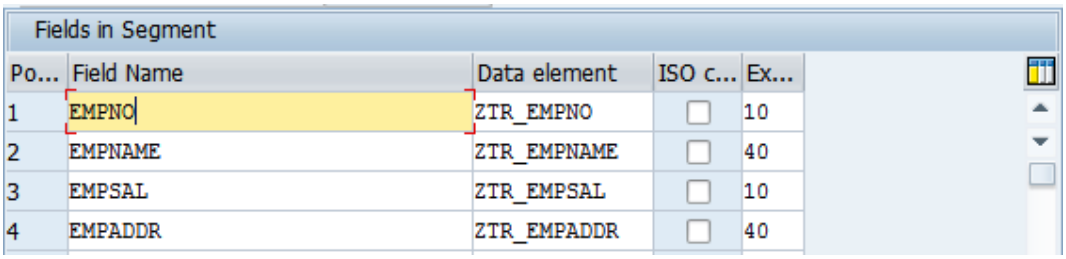
Step # 1. Create the 'Z' or 'Y' tables in the outbound systmes.

Create the custom table for Eg: ZEMP_TAB by using the T-Code SE11.

Step # 2. Create the Segments.

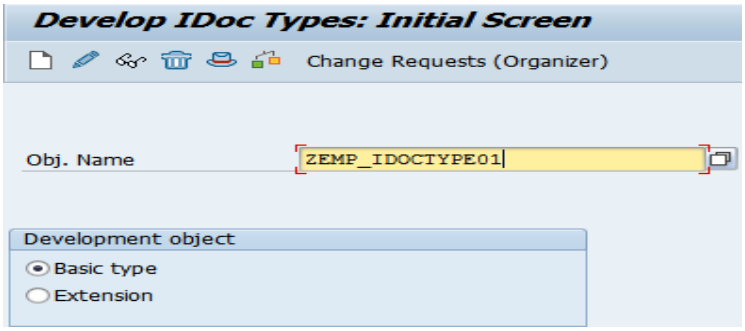
Create the segments based on the step # 1 ('Z' or 'Y' table fields) by using the T-Code WE31.
Eg: ZEMP_SEG1.

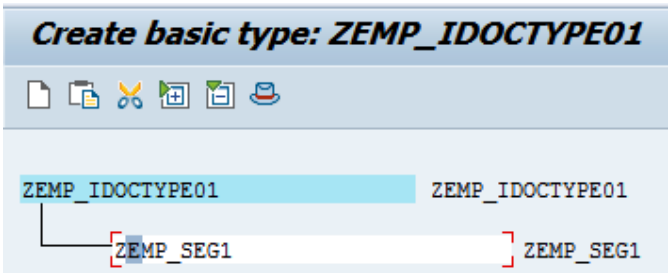




Step # 3. Create the Basic IDoc type.

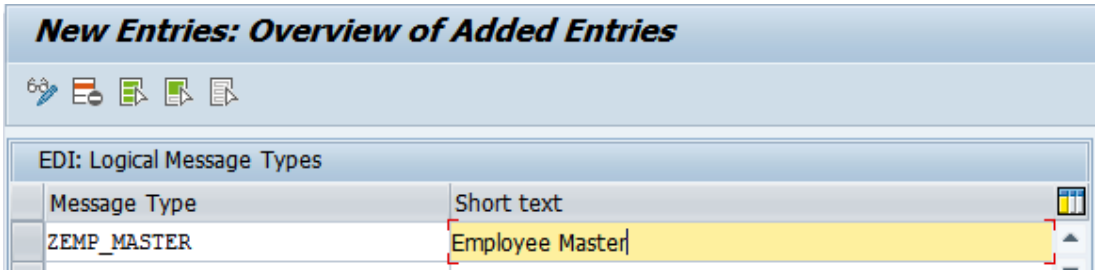
Create the Basic Idoc type by using the T-Code WE30. Eg: ZEMP_IDOCTYPE01.





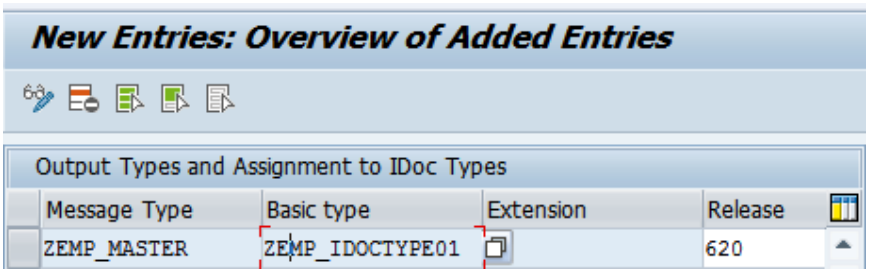
Step # 4. Creat the message type.

Create the custom message type by using the T-Code WE81. Eg: ZEMP_MASTER.



Step # 5. Assign the IDoc type to message type.

Assign the Idoc type to Message type by using the T-Code WE82. Eg: ZEMP_IDOCTYPE01 is assigned to ZEMP_MASTER.



Assignment # 2:

Configure the standard ALE and IDOC steps for the Client to Client with in the same server by using The Message type MATMAS for Material Mater (T-Code MM01).

Create the New Materials (T-code MM01) in the Outbound System Client Eg:100 and Release the Materials by using the Standard IDOC and the Materails should be posted automatically in the Inbound system Client Eg: 200.

Step # 1. Create the Logical Systmes.

Use predefined Logical Systmes which are already created. Ref the transaction code: SALE or BD54

Step # 2. Assign the Logical Systems to Client.

Ref predefined Logical Systmes which are already assigned to the clients. Ref the transaction code: SALE or SCC4

Step # 3. Create the new RFC Connection.

Create new R/3 RFC connection . Ref the transaction code: SALE or SCC4

Step # 4. Create the new PORT Connection.

Create the new port ref the transaction code: WE21

Step # 5. Create the new Partner Profiles at Outbound Systems.

Create the new partner profile ref the transaction code: WE20

Step # 6. Create the new Partner Profiles at Inbound Systems.

Create the new partner profile ref the transaction code: WE20

Step # 7. Distribute the Model View.

Distribute the Model view by using the BD64

Step # 8. Create the Material Master .

Create the new material master in outbound by using the MM01 T-code.

Step # 9. Release the Materials list by using the BD10 T-code.

Select the list of range materials to release from outbout to inbound.

Step # 10. Check the IDOC List by using the WE02/09 T-Code at Outbound .

Check the Idoc Status at outbound side.

Step # 11. Test the IDOC by Using the T-code WE19 at Outbound .

Check the Segments data is proper or not by using IDOC test tool .

Step # 12. Check the IDOC List by using the WE02/09 T-Code in Inbound.

Check the Idoc Status at inbound side.

Step # 13. Check the Material Mater status in MM03 or MARA and MAKT Tables in Inbound.

Check the Materials are posted or not in inbund MM03

Lab 9-1 Transports

Goals	• How to Release the Objects from the DEV to QAS to PRD and to Understand the Version Management. DEV - Development System. QAS - Quality Assurance System. PRD - Production System.
Time	30 Minutes
Lab Setup	• Connectivity to SAP server • Login details for connecting to SAP server

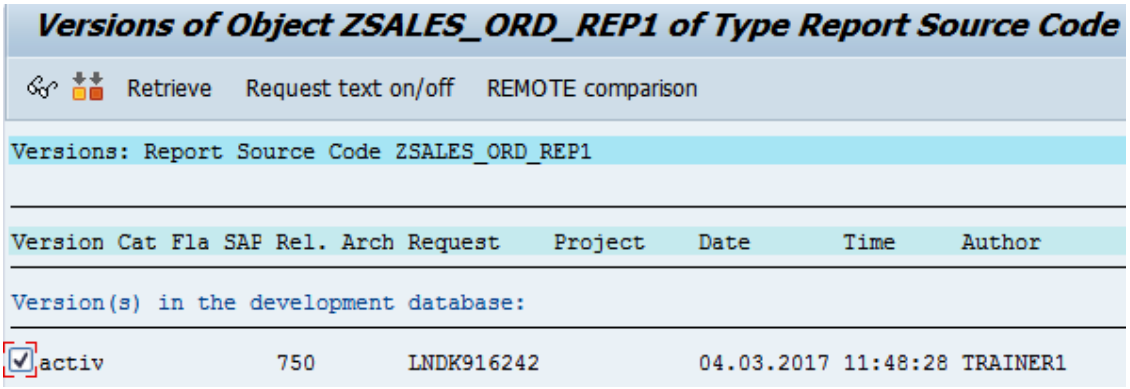
Assignment # 1:

Develop the ZObjects in DEV (Developmet) System and release the same to QAS(Quality) System by using the Trasportation.

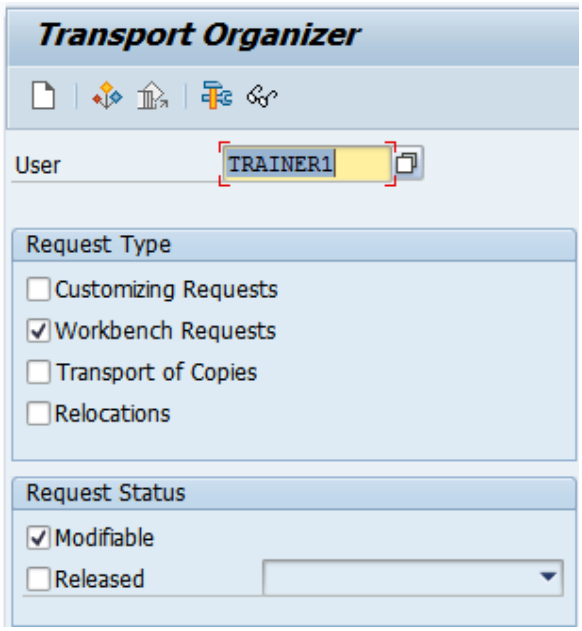
Step # 1. Create a user defined package Eg: **ZCAP_PACKAGE** by using the T-Code SE21.

Step # 2. Create a user defined ZObject Eg **ZSALES_ORD_REP1** (Executable Program) and assign the same object to the package Eg:**ZCAP_PACKAGE**.

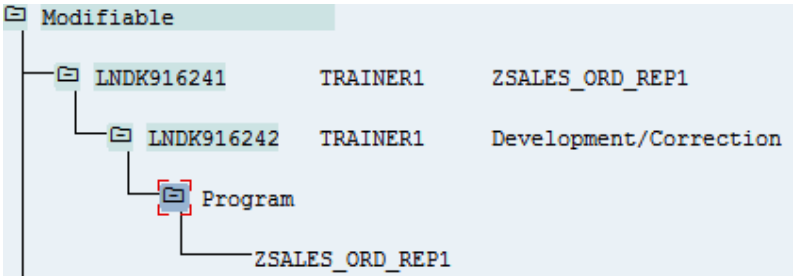
Step # 3. Go to the program and Navigate →Utilities and select the Versions→ Version Management to know the object request.



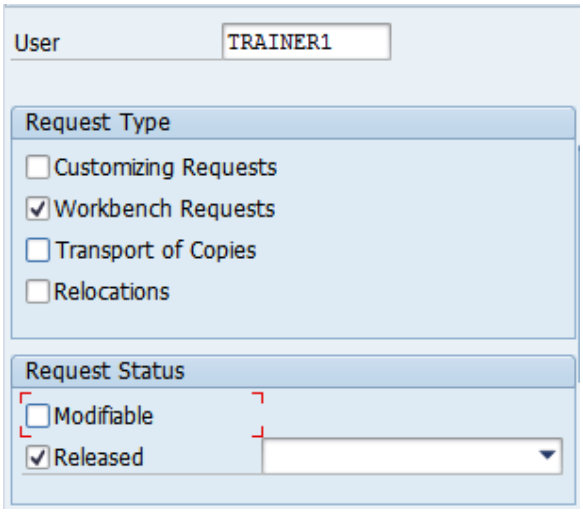
Step # 4. To see the modifiable objects, Select the Workbench Requests and Modifiable status check box by using the T-Code SE01/SE09/SE10.

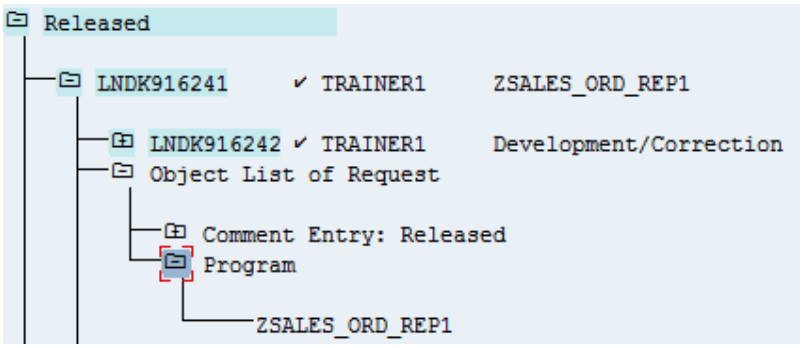


Step # 5. Release the object task Eg: LNDK916242 and request number LNDK916241 by using the T-Code SE01/SE09/SE10.



Step # 6. To see the Released objects, Select the Workbench Requests and Released status check box by using the T-Code SE01/SE09/SE10.





Step # 7. Modify the program code(V2) after release and create the new task and repeat the above steps.

Go to the program and Navigate →Utilities and select the Versions→ Version Management to compare the two versions of V1 and V2 Code.