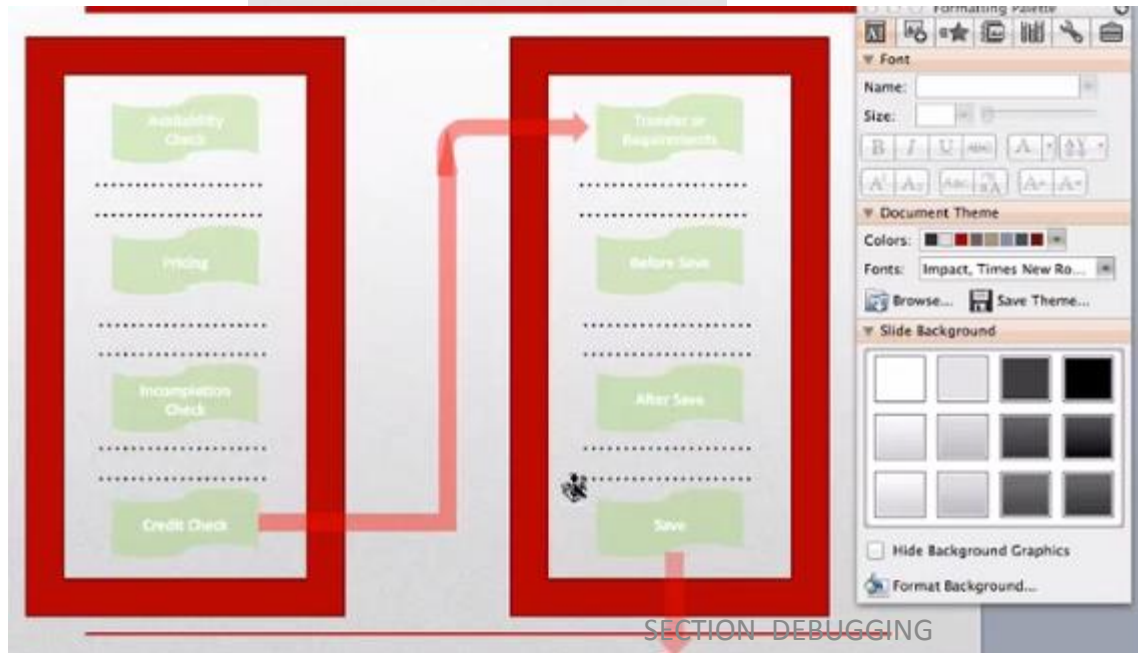


LECTURE: ABAP Debugging for Functional Consultants - 1

Debugging

Flow of Code



Create Standard Order: Overview

Menu Save Back Exit Cancel System Propose items More

Standard Order Net value

Sold-To Party

Ship-To Party

PO Number PO date

Sales Item overview Item detail Ordering party Procurement Shipping

Req. deliv date Deliver Plant

☐ Complete div. Total Weight

Delivery block Volume

Billing block

Payment card

Card Verif Code

Payment terms

The ABAP Program behind the Sales Order Screen

System VAN(800)
Client 800
User SIVA
Program SAPMV45A
Transaction VA01
Server fuze1000

VAN(800) *8

ABAP Editor: Display Mod. Pool SAPMV45A

Menu Back Exit Cancel System Previous Object Next Object Disp

Mod. Pool SAPMV45A Active

ENDENHANCEMENT.
f~End: SAPMV45A_03-----

* USER - EXIT S
* USER - EXIT S
* USER - EXIT S

* INCLUDE MV45AT2Z. * Data definitions in MV45ATOP
* INCLUDE MV45A02Z. * User-modules FB0
* INCLUDE MV45AI2Z. * User-modules PAI
* INCLUDE MV45AF2A. * User-forms < 3.0
* INCLUDE MV45AF2B. * User-forms
* INCLUDE MV45AF2C. * User-forms < 3.0D
* INCLUDE MV45AF2D. * User-forms 3.0E
* INCLUDE MV45AF2F. * User-forms 3.0F
* include mv45afzg. * User-forms 3.1G
* include mv45afzh. * User-forms 4.6B
* INCLUDE MV45AF2Z. * User-forms
* INCLUDE MV45AF24. * User-forms 4.0

ENHANCEMENT-POINT SAPMV45A_01 SPOTS ES_SAPMV45A STATIC.

Open the Program in ABAP Editor

ABAP Editor: Display Mod. Pool SAPMV45A

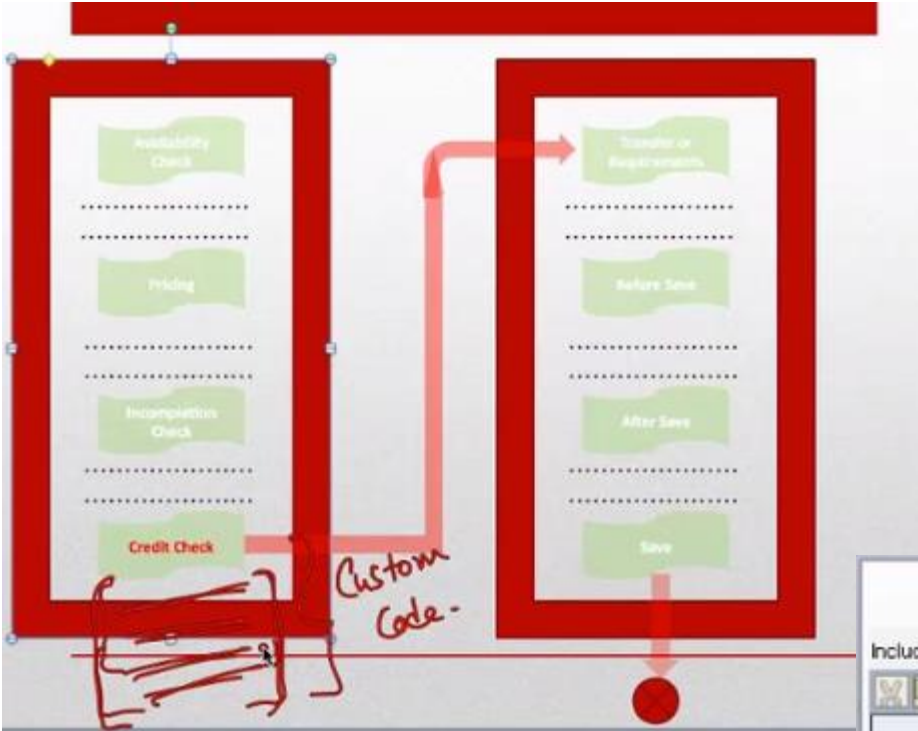
Menu Back Exit Cancel System Previous Object Next Object Display

Mod. Pool Active

```
END ENHANCEMENT.
***-End:  SAPMV45A_03-----
*
*      U S E R - E X I T S
*      U S E R - E X I T S
*      U S E R - E X I T S
*-----
*      INCLUDE MV45AT2Z.          " Data definitions in MV45ATOP
*      INCLUDE MV45A02Z.          " User-modules PBO
*      INCLUDE MV45AI2Z.          " User-modules PAI
*      INCLUDE MV45AF2A.          " User-forms < 3.0
*      INCLUDE MV45AF2B.          " User-forms
*      INCLUDE MV45AF2C.          " User-forms
*      INCLUDE MV45AF2D.          " User-forms
*      INCLUDE MV45AF2F.          " User-forms
*      include mv45afzg.          " User-forms 4.6B
*      include mv45afzh.          " User-forms
*      INCLUDE MV45AF2Z.          " User-forms
*      INCLUDE MV45AF24.          " User-forms 4.0
ENHANCEMENT-POINT SAPMV45A_01 SPOTS ES_SAPMV45A STATIC.
***-End:  SAPMV45A_01-----
```

Some Important User Exit Programs

LECTURE: ABAP Debugging for Functional Consultants -2



Include MV45AFZZ Active

```
*-----*
* FORM USEREXIT_MOVE_FIELD_TO_VBAP *
*-----*
* This userexit can be used to move some fields into the sales *
* dokument item workarea VBAP *
*
* SVBAP-TABIX = 0: Create item *
* SVBAP-TABIX > 0: Change item *
*
* This form is called at the end of f *
*
*-----*
FORM USEREXIT_MOVE_FIELD_TO_VBAP.
  * VBAP-zzfield = xxxx-zzfield2.
ENDFORM.
*~*~*
```

Consists of a Bunch of User Exits
FORM USEREXIT_XXX
.....
ENDFORM

ABAP Editor: Display Include MV45AFZZ

The screenshot displays the ABAP Editor interface for the include MV45AFZZ. The code is as follows:

```

CALL FUNCTION 'FUNCTION EXISTS'
  EXPORTING
    funcname = lv_func_pref_sdia_r3
  EXCEPTIONS
    function_not_exist = 1
    OTHERS = 2.
IF sy-subrc <> 0.
  EXIT.
ENDIF.

lv_simulation = 'X'.

CALL FUNCTION '/SAFEILL/PREF SDIA R3'
  EXPORTING
    is_header = vbak
    iv_business_object = businessobject
    iv_simulation = lv_simulation
    iv_deletion_indicator = yvbak_updks
    is_document_type = tvak
  TABLES
    it_partner_new = xvbpa
    it_partner_old = yvbpa
    ct_item_new = xvbap
    it_item_old = yvbap
    it_item_status_new = xvbup
    it_sched_line_vb = xvbep
    it_business_data = xvbkd
    it_partner_address = xvbade
  EXCEPTIONS
    OTHERS = 1.
  "#EC EXISTS
*) INSERT
*) INSERT DNR911941
*) INSERT

ENDFORM.
*reject
  
```

Handwritten annotations in red ink include:

- VAΦ1 ✓
- VAΦ2
- Z Table [Z ondu - log]
- userport-delete-program
- exit 8

Arrows indicate connections between the annotations and the code: one points from VAΦ1 to the first CALL FUNCTION, another from VAΦ2 to the second CALL FUNCTION, and a third from the Z Table annotation to a table structure diagram.

ABAP Editor: Display Include MV45AFZZ

```

where parvw = 'ZV'.
  tkomp-rsprocit = xvbpa-lifnr.
  tkomp-rsprocind = xvbpa-lasdi.
endloop.
loop at xvbpa
  where parvw = 'ZM'.
  tkomp-rsprocit = xvbpa-lifnr.
  tkomp-rsprocind = xvbpa-lasdi.
endloop.

* 29.12.2005 Achim Rink, D029764
* move city of partners YV (Load port) and YW (Discharge Port) into comm
* structures
loop at xvbpa
  where parvw = 'YV'.
  tkomp-rsloadport = xvbpa-lifnr.
endloop.
loop at xvbpa
  where parvw = 'YW'.
  tkomp-rsdischport = xvbpa-lifnr.
endloop.
* end of inser
* 29.12.2005 Achim Rink, D029764
endif.

* Material Freight Group for TMC and CYD
if not vbap-uepos is initial and
not vbap-stltn is initial and
vbap-pstyp eq 'ESLC'.
  read table xvbap with key posnr = vbap-uepos
  into wa_xvbap.
  tkomp-mfrgr = wa_xvbap-mfrgr.
endif.

* Reference document for pricing agreements in Contract Process
if not vbak-vqbel is initial
and vbap-pstyp eq 'ILSC'.
  tkomp-vqbel = vbak-vqbel.
endif.

*) INSERT

```

USΦ1, CAΦ1

ZF2 → Φ1 → 1 - 99999

Invoice

VFΦ4

ZF2

→ CAΦ1

17

Ge

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

INS - Li 157, Co 1 - Li 248, Co 29
Ln 218 - Ln 258 of 435 lines

Insert a text box where you want by clicking
or dragging

Include

MV45AFZZ

Active



```
*-----*
*  FORM USEREXIT_MOVE_FIELD_TO_VBAP  *
*-----*
*  This userexit can be used to move some fields into the sales *
*  dokument item workarea VBAP *
*-----*
*  SVBAP-TABIX = 0:  Create item *
*  SVBAP-TABIX > 0:  Change item *
*-----*
*  This form is called at the end of f *
*-----*
FORM USEREXIT_MOVE_FIELD_TO_VBAP.
*  VBAP-zzfield = xxxx-zzfield2.
ENDFORM.
*reject
```

Illustrate more User Exits in
MV45AFZA, MV45AFZB,
MV45AFZC

What is a Break Point ?

ABAP Debugger

Menu | Save breakpoints | Exit | System | Single Step | Execute | Return

Fields: Table Breakpoints Watchpoints Calls Overview Settings

Main Program: **SAPHV45A**

Source code of: **MV45AFZZ** 201

```

FORM USEREXIT_PRICING_PREPARE_TKOMP.
*
*   This form is called from form PREISFINDUNG_VORBEREITEN.
*
*-----
FORM USEREXIT_PRICING_PREPARE_TKOMP.

* TKOMP-ssfield = xxxx-ssfield2.
*{ INSERT          ID3K933021
* SL Ocean Carrier Demo Setup
data: lv_adrnr like vbpa-adrnr.
data: wa_xvbap like vbap.

if vbak-auart = 'Z20R' or
   vbak-auart = 'Z20T' or
   vbak-auart = 'Z2SC'.

```

The Execution of the Code Stops for Further Analysis

ABAP Debugger

Menu | Save breakpoints | Exit | System | Single Step | Execute | Return

Fields: Table Breakpoints Watchpoints Calls Overview Settings

Main Program: **SAPHV45A**

Source code of: **MV45AFZZ** 201

```

FORM USEREXIT_PRICING_PREPARE_TKOMP.
*
*   This form is called from form PREISFINDUNG_VORBEREITEN.
*
*-----
FORM USEREXIT_PRICING_PREPARE_TKOMP.

* TKOMP-ssfield = xxxx-ssfield2
*{ INSERT          ID3K933021
* SL Ocean Carrier Demo Setup
data: lv_adrnr like vbpa-adrnr.
data: wa_xvbap like vbap.

if vbak-auart = 'Z20R' or
   vbak-auart = 'Z20T' or
   vbak-auart = 'Z2SC'.

```

Illustrate the following

1. Step Through
2. One Step
3. Continue
4. Execute

What is a DEBUG Replace ?

The screenshot displays the SAP ABAP code editor with a DEBUG Replace operation. The code defines a data object `wa_xvdp` and a loop over `xvdp`. Inside the loop, there is a conditional statement that checks for specific values of `vbak-auart` and assigns values to `tkomp-kvgr2`.

```
data: wa_xvdp like vdp.  
  
if vbak-auart = 'ZZOR' or  
   vbak-auart = 'ZZQT' or  
   vbak-auart = 'ZZSC'.  
   tkomp-kvgr2 = vbak-kvgr2.  
loop at xvdp
```

Below the code, the 'Field names' table is visible, showing the current values of the variables:

Field names	1 - 4
vbak-auart	TA
vbak-kunnr	0000001400

At the bottom, the status bar shows the following values:

SY-SUBRC	SY-TABIX	SY-DECHI	SY-DYNNI
0	12	0	4900

A yellow callout box points to the 'Field names' table with the text: "Illustrate how to check for the values of variables at RUN TIME".