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Lection 5 Workbook

Extended development

Contents

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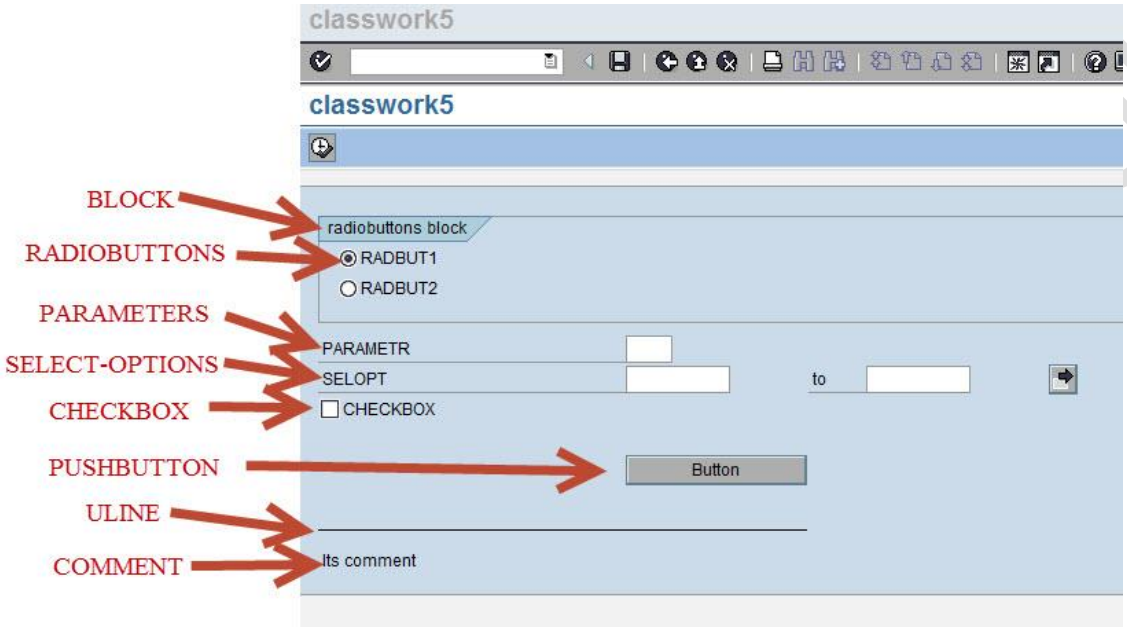
How to create a selection screen

You often use screens purely for data input**.** In these cases, you can use a selection screen. Selection screens provide a standardized user interface in the R/3 System. Users can enter both single values and complex selections. Input parameters are primarily used to control the program flow, while users can enter selection criteria to restrict the amount of data read from the database. You can create your own selection screen.
You can use: PARAMETERS, SELECT-OPTIONS, RADIOBUTTON, CHECKBOX, PUSHBUTTON, ULINE, COMMENT keywords. Also you can assign special name for any element.



For creating these elements you should use:

RADIOBUTTONS
```
PARAMETERS: <name1> RADIOBUTTON GROUP <grp_name1>,
            <name2> RADIOBUTTON GROUP <grp_name1>.
```

BLOCK
```
SELECTION-SCREEN BEGIN OF BLOCK <block_name1> WITH FRAME TITLE text-t01.
. . .
SELECTION-SCREEN END OF BLOCK <block_name1>.
```

PARAMETERS
```
PARAMETERS: <name> LIKE <type>.
```

SELECT-OPTIONS
```
SELECT-OPTIONS: <name> FOR <type>.
```

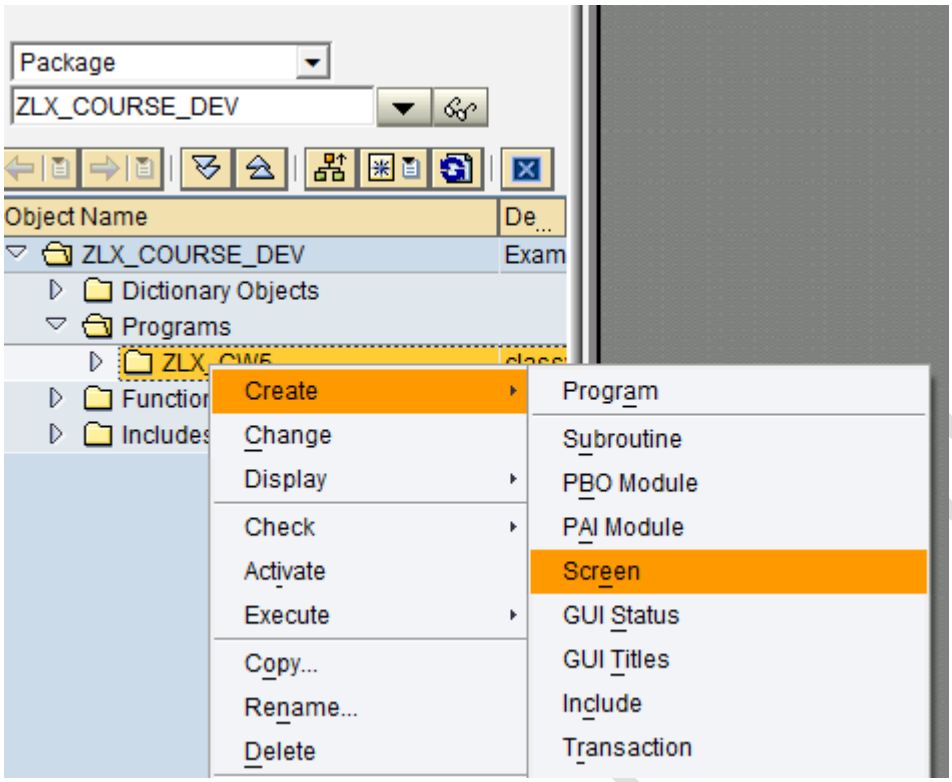
PUSHBUTTON
```
SELECTION-SCREEN PUSHBUTTON <name>.
```

ULINE
```
SELECTION-SCREEN ULINE /1(50).
```

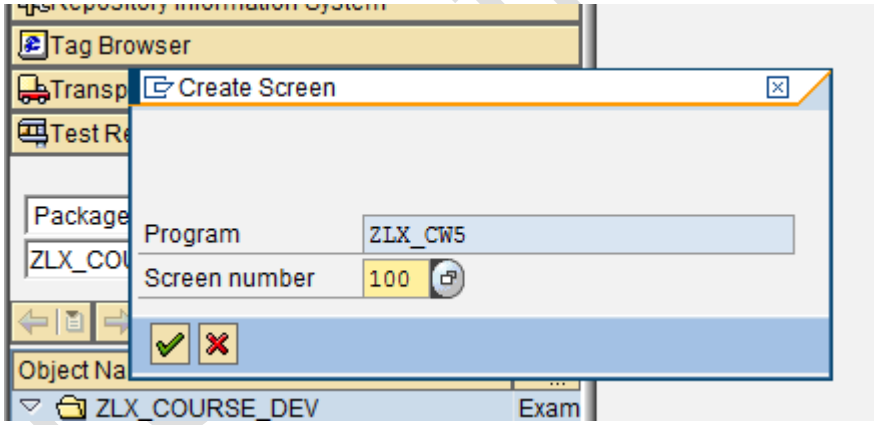
COMMENT
```
SELECTION-SCREEN COMMENT /1(20) <var_name>.
```

How to create a custom screen

Go to transaction SE80.
Select your package and select your program.
Right click on your program, choose Create → Screen



Provide the screen number



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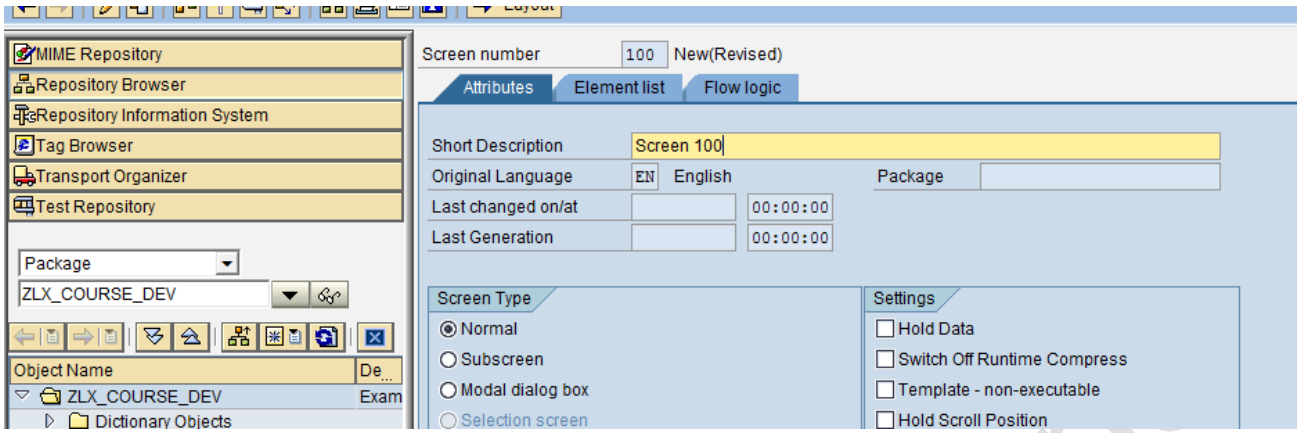
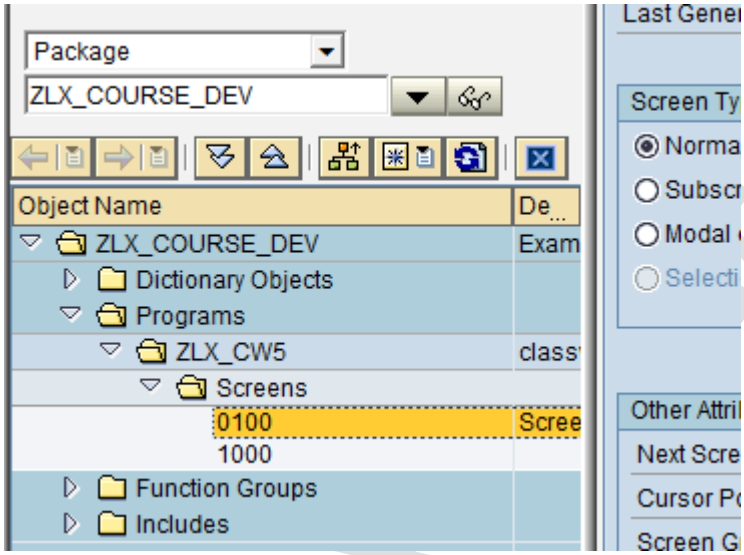
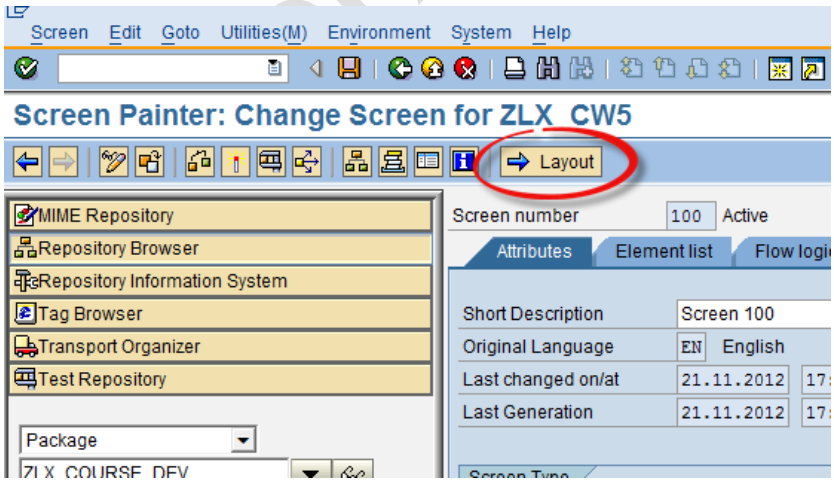
Provide the short description



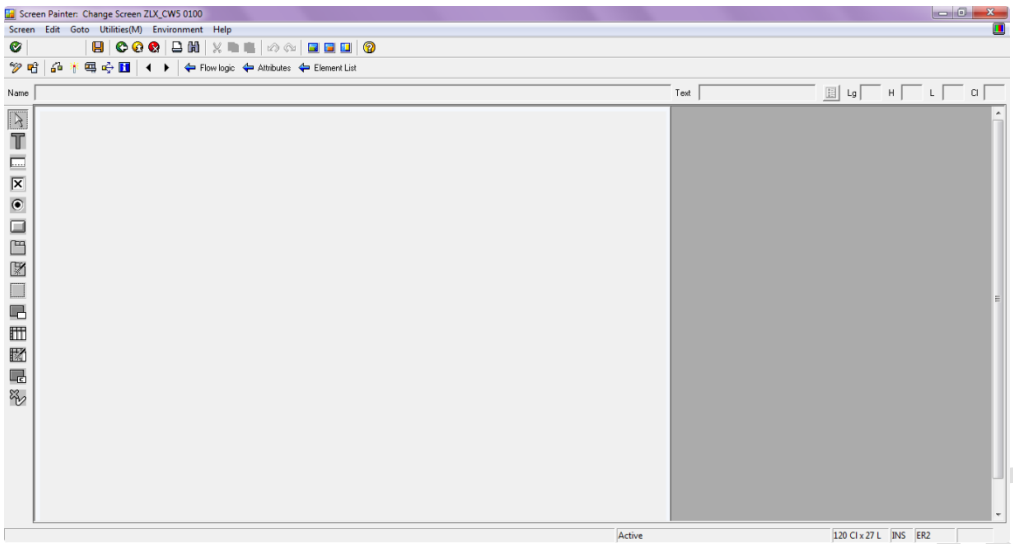
Save it and activate it.
Now you can see your screen



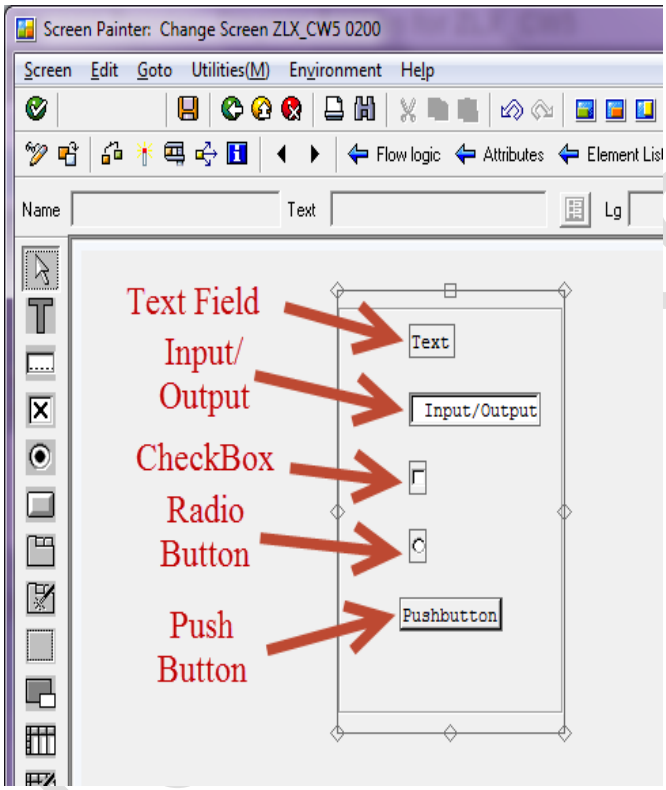
Click Layout button to design screen.



Now you can see a screen designer



You can drag-and-drop elements from toolbar.

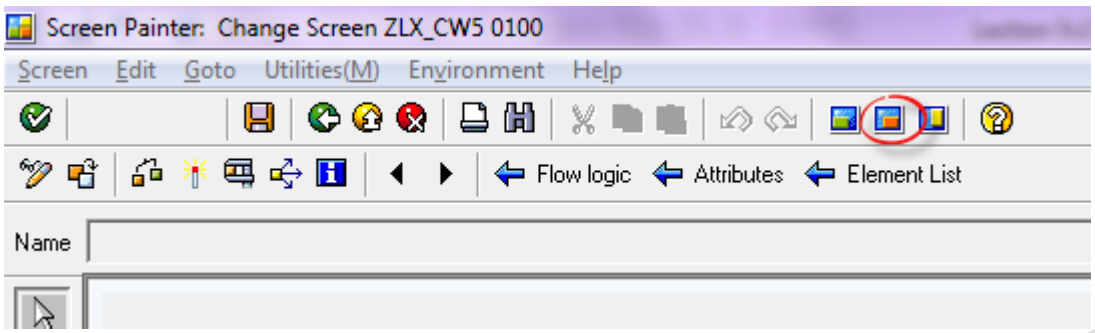


If you want to display variable from your report on the screen you need:

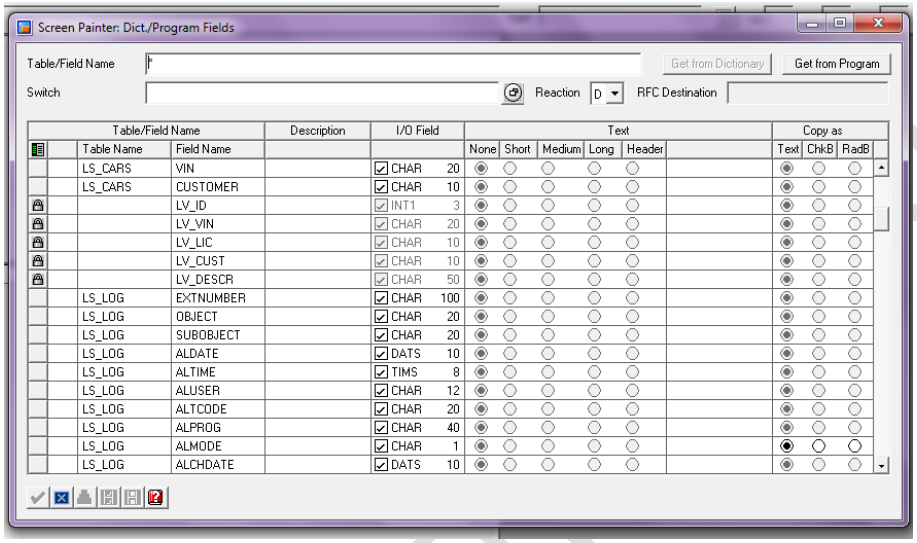
1. Create variables in source code.

```
DATA: lv_id TYPE zlx_cars_id,
      lv_vin TYPE zlx_cars_vin,
      lv_lic TYPE zlx_cars_licplate,
      lv_cust TYPE kunnr,
      lv_descr TYPE zlx_cars_desc.
```

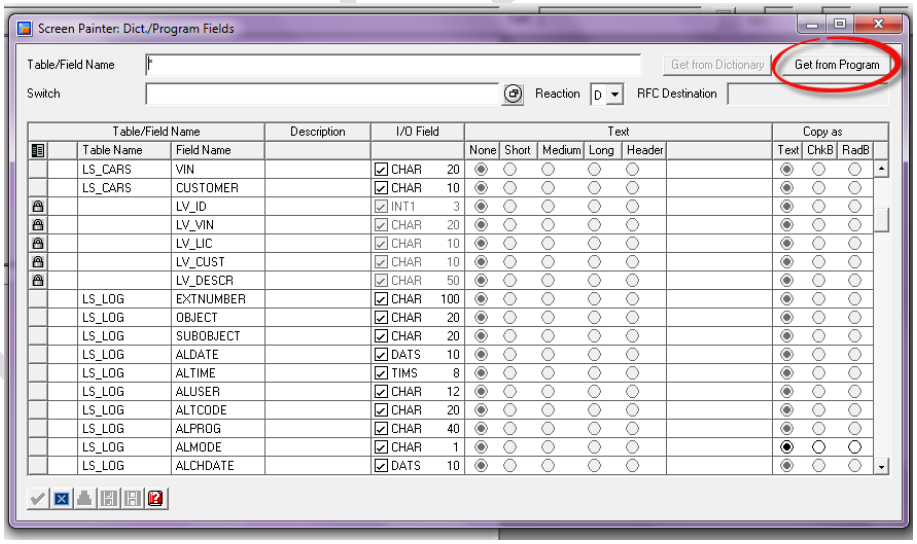
2. Open screen designer (button Layout). Press button Dictionary/Program fields window.



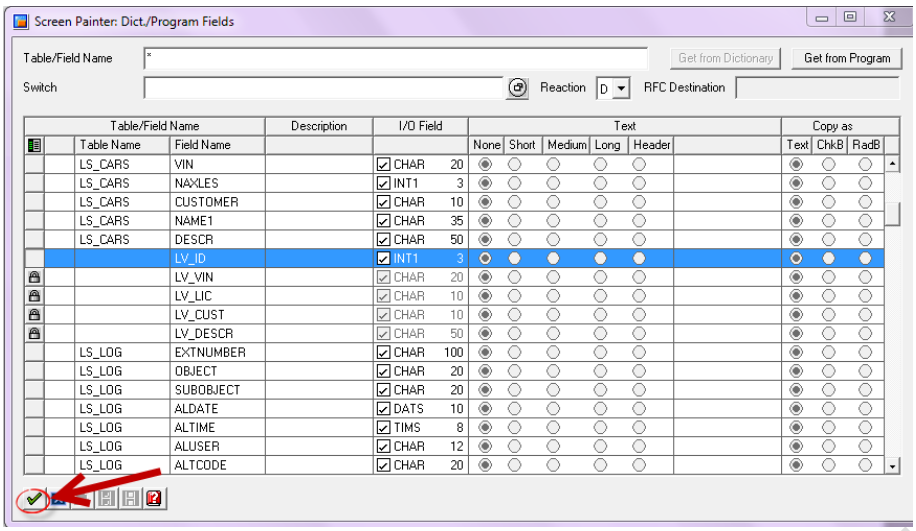
3. Now you can see Screen painter window



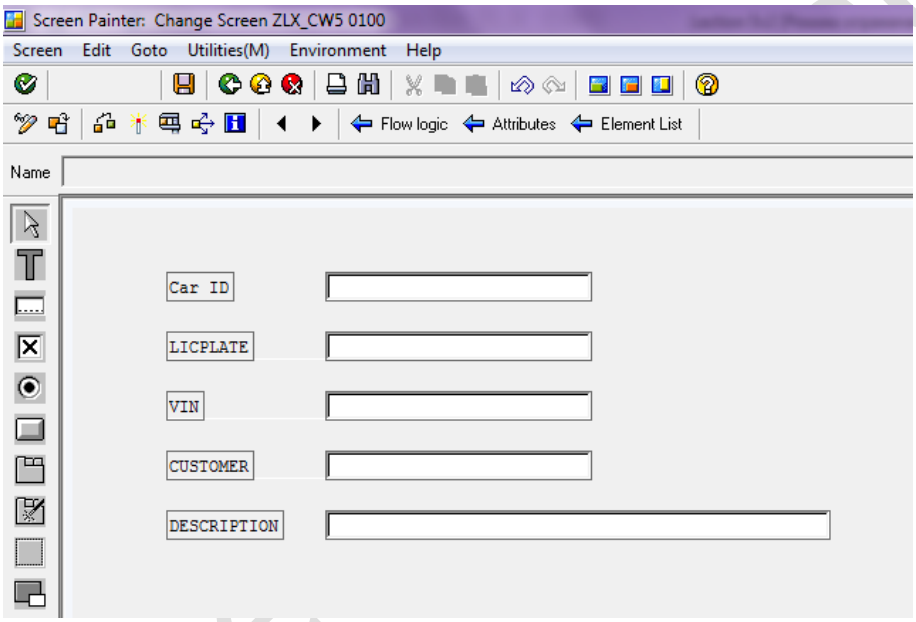
4. Press button Get from Program



5. Select row with necessary parameter and press Ok button

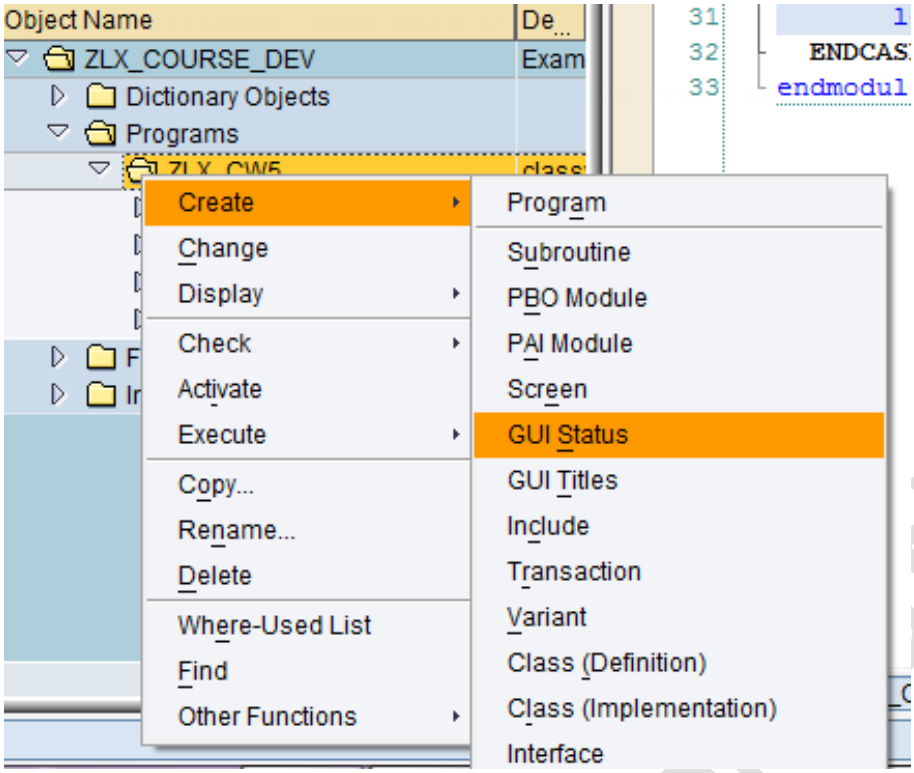


6. Continue adding other parameters.

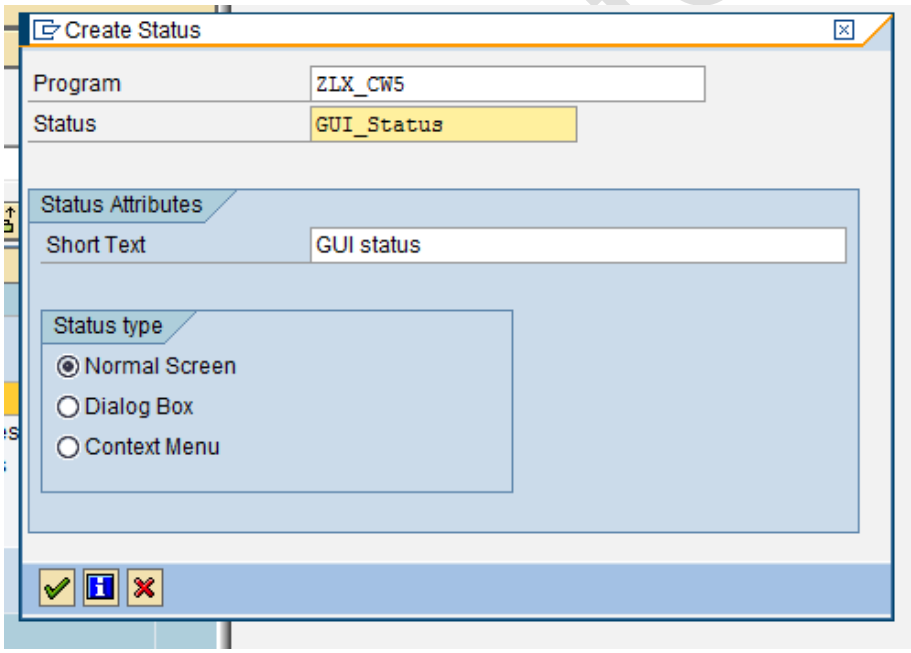


Save it and activate it.

Now you need to create GUI Status. Go to transaction SE80. Click on your program with right mouse-button, choose Create→ GUI Status.

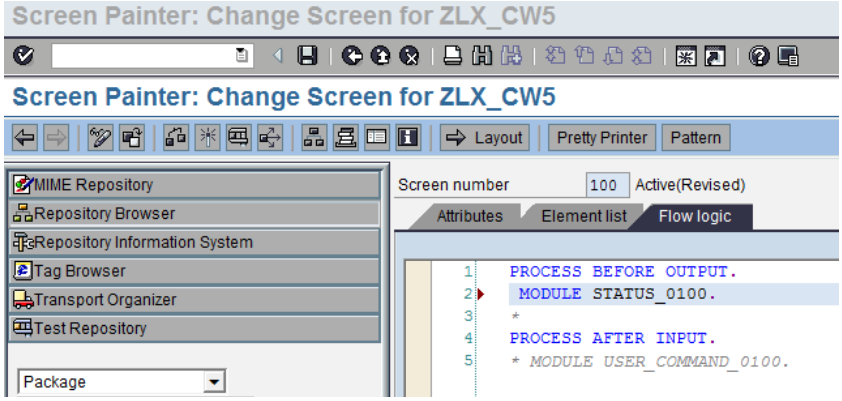


Provide the status name and the short text.

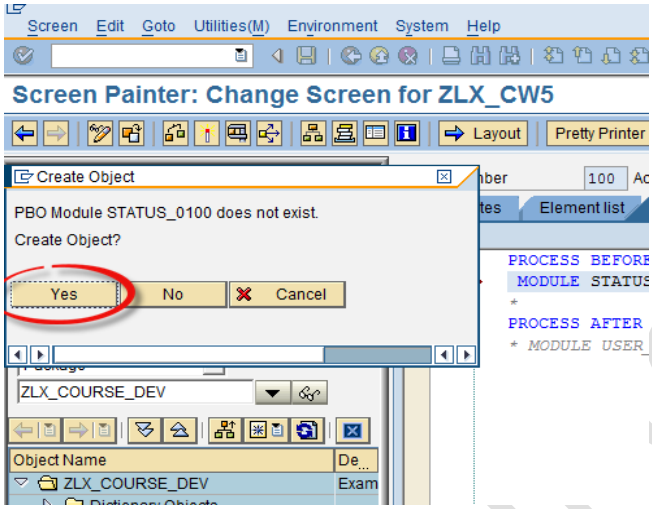


You can see two events: PBO(PROCESS BEFORE OUTPUT) and PAI(PROCESS AFTER INPUT).

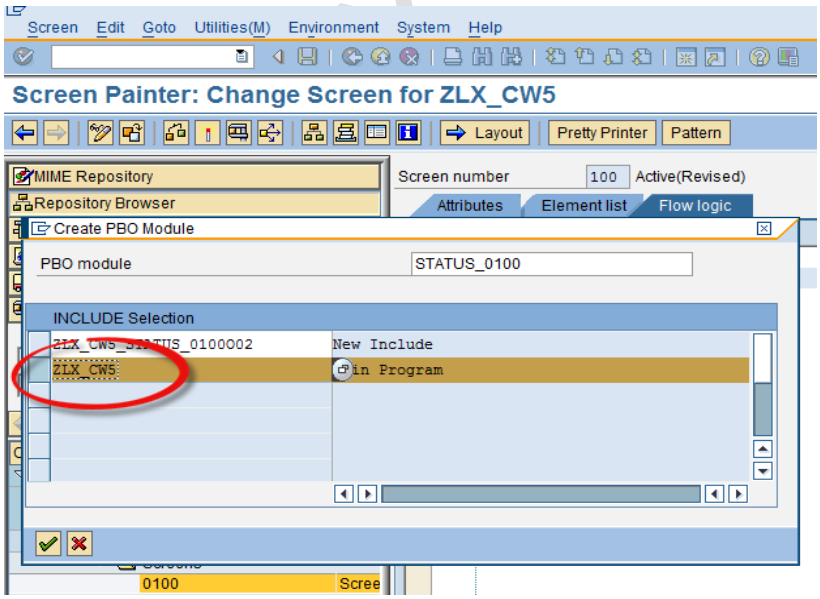
Uncomment string MODULE STATUS_0100.



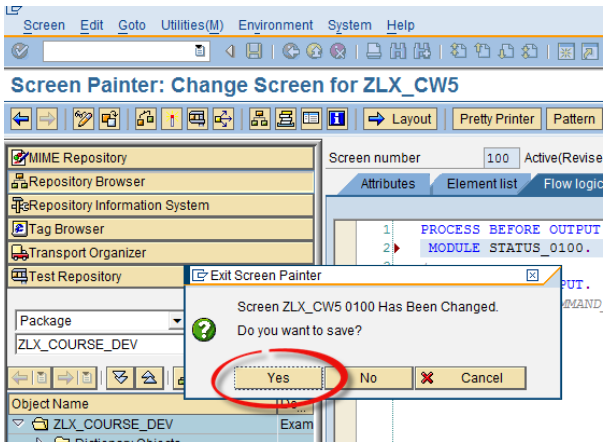
Double click on it. Choose Yes.



Select in Program.



Click Yes

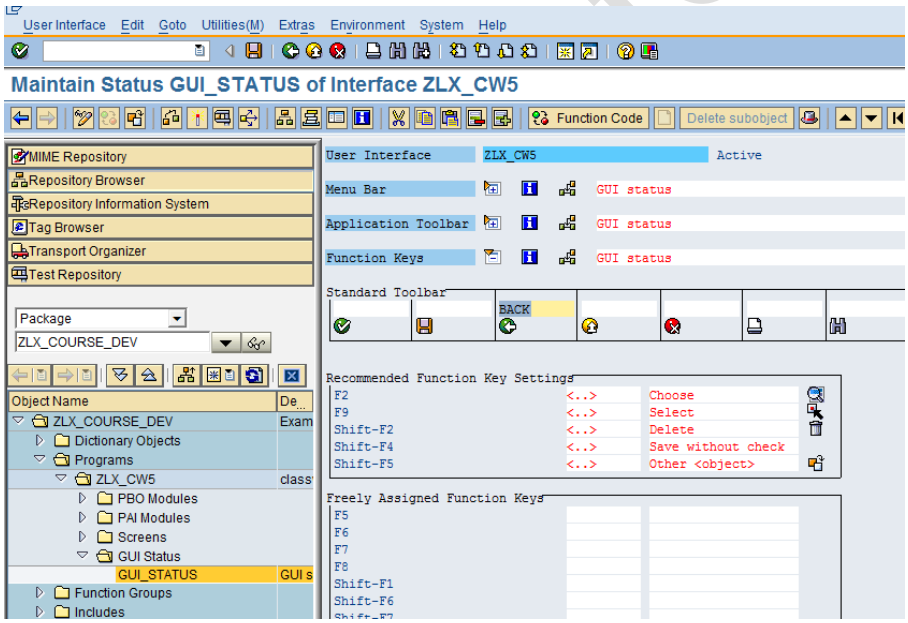


System automatically creates source code.
Uncomment lines SET PF-STATUS 'xxxxxxxx' and SET TITLEBAR 'xxx'.
Enter PF-STATUS 'GUI_STATUS' and TITLEBAR 'Class Work 5'.

```
module STATUS_0100 output.
  SET PF-STATUS 'GUI_STATUS'.
  SET TITLEBAR 'Class Work 5'.
```

Save it & activate it.

Now you should create BACK button in GUI status. Choose GUI_STATUS→ Function Keys. Enter name for button BACK.



Go to Screens, choose your screen. Uncomment line: MODULE USER_COMMAND_0100 and double click on it. System automatically creates source code. Enter this code:

```
CASE sy-ucomm.
 WHEN 'BACK'.
   leave to screen 0.
ENDCASE.
```

Save it and activate it.

How to create a BAL LOG

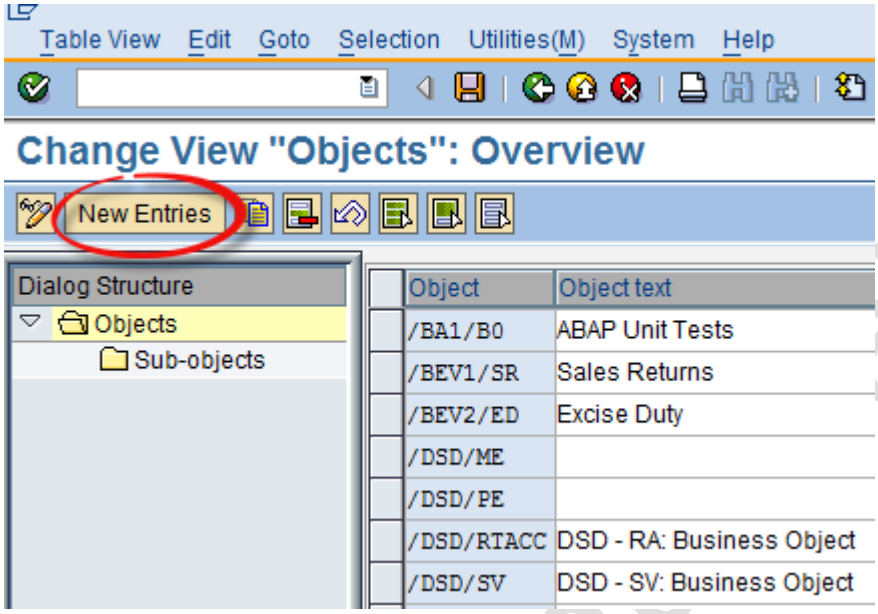
Application Log provides an infrastructure for collecting messages and exceptions in a log, saving, reading and deleting logs in the database and displaying them.

How to use Application Log

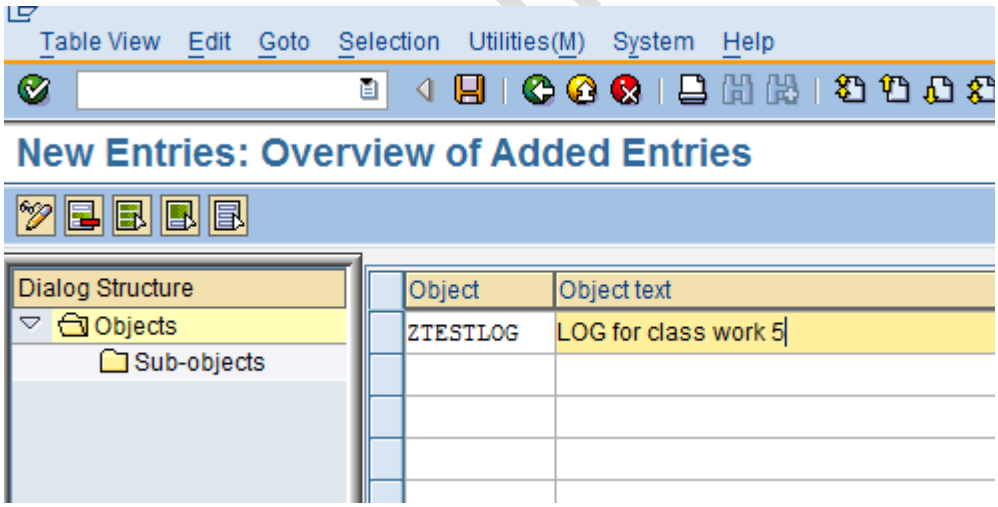
There are different transactions for use of the Application Log.

- Developer: Use transaction SLG0 to define entries for your own applications in the application log.
- Key user: Use transaction SLG1 to analyse the application log.
- Administrator: Use transaction SLG2 to delete logs.

Go to transaction SLG0. Press button New Entries.



Provide the name of the objects and Object text. Save it.



We need to add code to cteate LOG, add messages to LOG, save LOG and display LOG.

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Create LOG:

```
DATA: ls_log TYPE bal_s_log,
      gv_log_handle TYPE balloghndl,
      l_s_display_profile TYPE bal_s_prof,
      l_s_msg TYPE bal_s_msg.
ls_log-extnumber  = 'Application Log for Class Work 5'.
ls_log-object     = 'ZTESTLOG'.
ls_log-aldate     = sy-datum.
ls_log-altime     = sy-uzeit.
ls_log-aluser     = sy-uname.
ls_log-alprog     = sy-repid.
  CALL FUNCTION 'BAL_LOG_CREATE'
    EXPORTING
      i_s_log              = ls_log
    IMPORTING
      e_log_handle         = gv_log_handle
    EXCEPTIONS
      log_header_inconsistent = 1
      OTHERS                  = 2.
  IF sy-subrc <> 0.
       MESSAGE ID sy-msgid TYPE sy-msgty NUMBER sy-msgno
          WITH sy-msgv1 sy-msgv2 sy-msgv3 sy-msgv4.
  ENDIF.
```

Add message:

```
l_s_msg-msgty = sy-msgty.
l_s_msg-msgid = sy-msgid.
l_s_msg-msgno = sy-msgno.
l_s_msg-msgv1 = sy-msgv1.
l_s_msg-msgv2 = sy-msgv2.
l_s_msg-msgv3 = sy-msgv3.
l_s_msg-msgv4 = sy-msgv4.

CALL FUNCTION 'BAL_LOG_MSG_ADD'
  EXPORTING
    i_log_handle     = gv_log_handle
    i_s_msg          = l_s_msg
  EXCEPTIONS
    log_not_found    = 1
    msg_inconsistent = 2
    log_is_full      = 3
    OTHERS           = 4.
```

Save LOG:

```
 CALL FUNCTION 'BAL_DB_SAVE'
 EXPORTING
   i_save_all = 'X'
 EXCEPTIONS
   OTHERS     = 1.
 IF sy-subrc <> 0.
    MESSAGE ID sy-msgid TYPE sy-msgty NUMBER sy-msgno
    WITH sy-msgv1 sy-msgv2 sy-msgv3 sy-msgv4.
 ENDIF.
```

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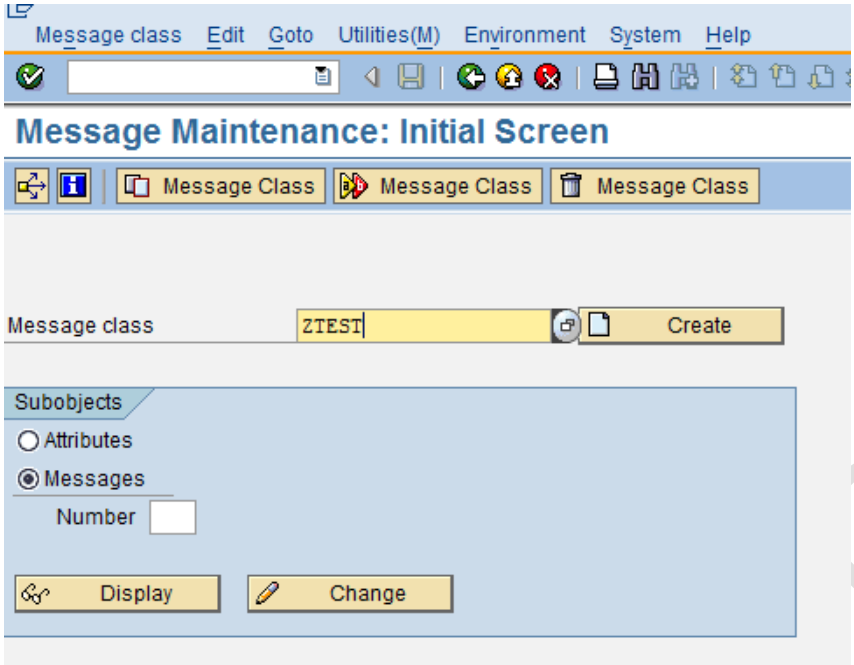
Show LOG:

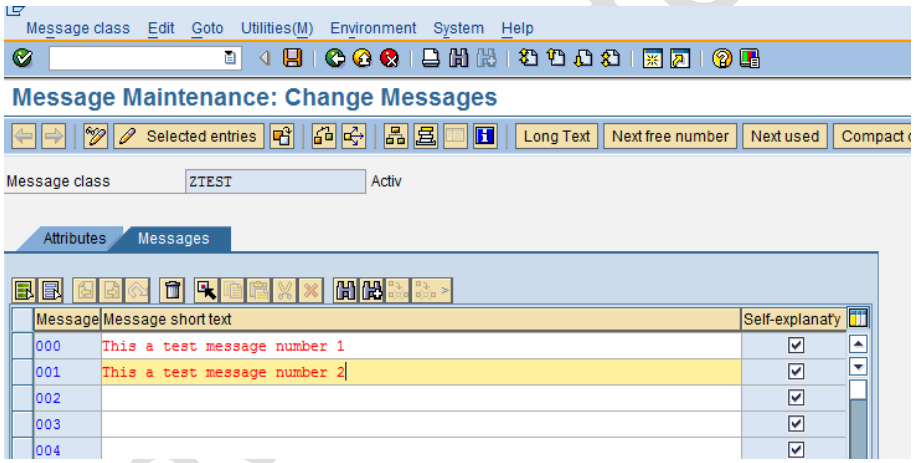
```
CALL FUNCTION 'BAL_DSP_PROFILE_POPUP_GET'
  EXPORTING
    start_col          = 5
    start_row          = 5
    end_col            = 87
    end_row            = 25
  IMPORTING
    e_s_display_profile  = l_s_display_profile
  EXCEPTIONS
    profile_inconsistent = 1
    internal_error       = 2
    no_data_available    = 3
    no_authority         = 4
    OTHERS               = 5.
IF sy-subrc <> 0.
  MESSAGE ID sy-msgid TYPE sy-msgty NUMBER sy-msgno
     WITH sy-msgv1 sy-msgv2 sy-msgv3 sy-msgv4.
ENDIF.

l_s_display_profile-disvariant-report = sy-repid.
l_s_display_profile-disvariant-handle = 'LOG'.

CALL FUNCTION 'BAL_DSP_LOG_DISPLAY'
  EXPORTING
    i_s_display_profile = l_s_display_profile
  EXCEPTIONS
    OTHERS              = 1.
IF sy-subrc <> 0.
  MESSAGE ID sy-msgid TYPE sy-msgty NUMBER sy-msgno
         WITH sy-msgv1 sy-msgv2 sy-msgv3 sy-msgv4.
ENDIF.
```

How to create a Message class

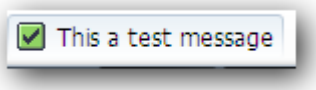
Message Class is a like a container which holds a number of different messages. Each message in the message class is identified with unique message number. So when you call a message in a ABAP program, you need to specify the message class and message number.
Go to transaction SE91, enter the name of the message class and click on create button.



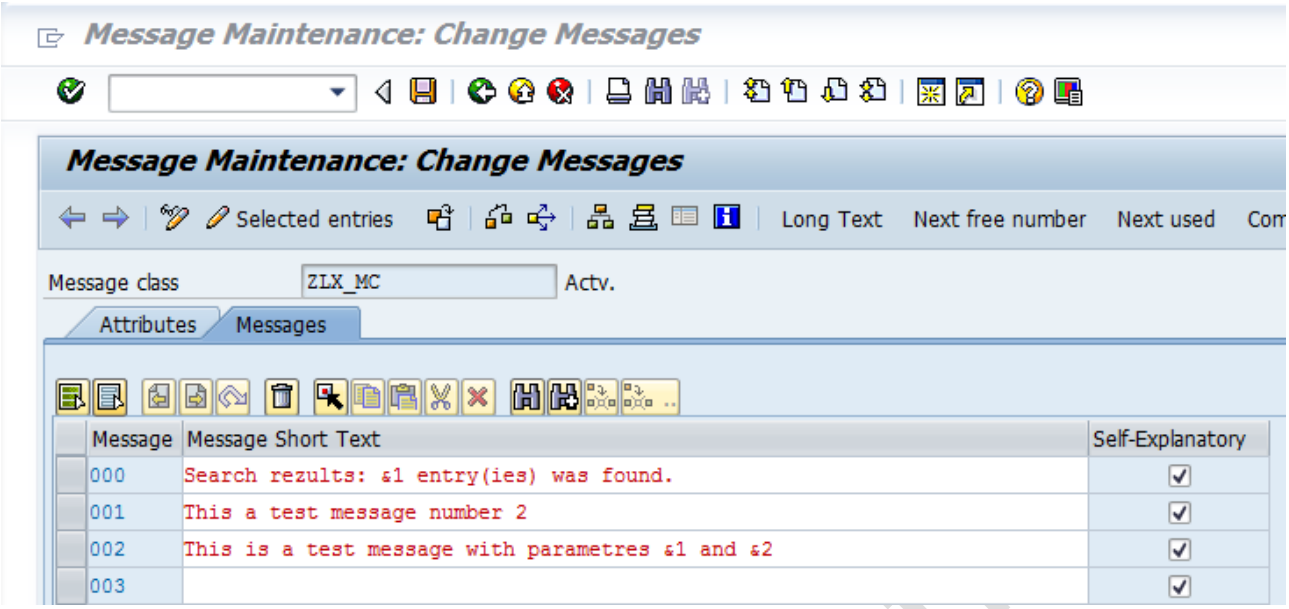
Maintain the required message texts with message numbers.



Messages can be issued as follows.
MESSAGE s000(ztest).



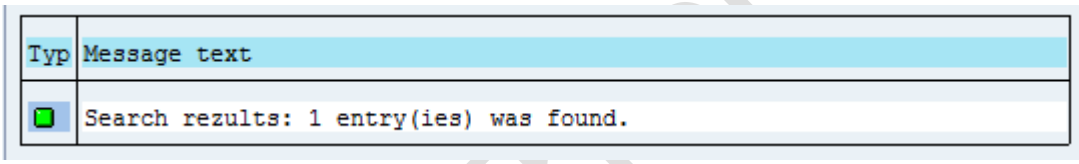
You can create message with parameters using C-language syntax.



Symbol “&” determines the spot in witch string argument will be inserted.

Messages with parameters can be used as follows:

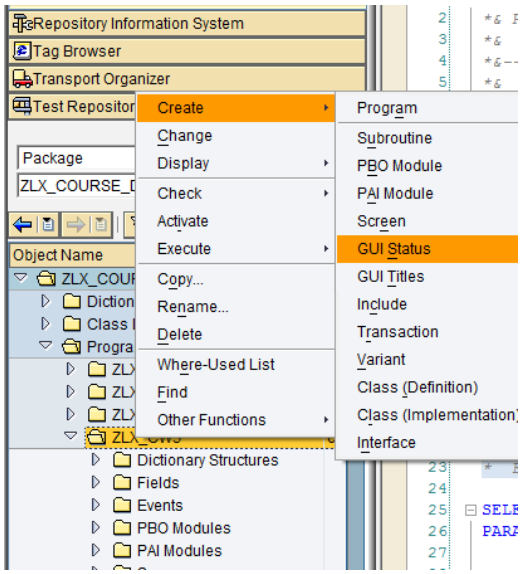
```
MESSAGE s000( zlx_mc ) WITH `1`.
```



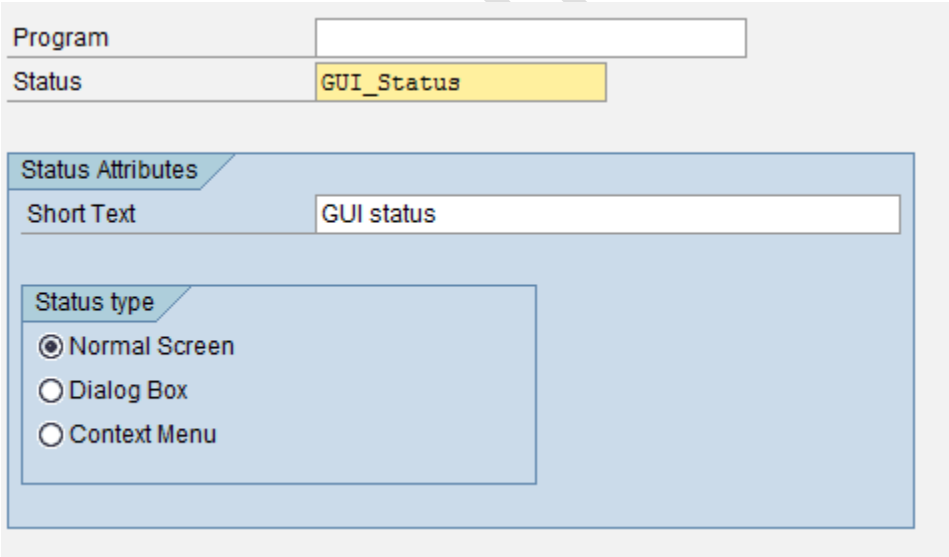
How to create a GUI-status

The function of a GUI status is to provide the user with a range of functions on a screen.
Each function has an associated function code of up to 20 characters, and when the user chooses a function, the PAI event is triggered.
In each PAI event, the function code, as long as it is not empty, is placed in the system field SYST-UCOMM (SY-UCOMM) and assigned to the OK_CODE field. Empty function codes are placed in neither the SY-UCOMM field nor the OK_CODE field. Before you can work with the OK_CODE field, you must assign a name to it in the Screen Painter.
All function codes in an ABAP program, apart from those only assigned to pushbuttons on screens, are defined and administered in the Menu Painter.

Go to transaction SE80, select your program, right click on it choose Create->GUI Status

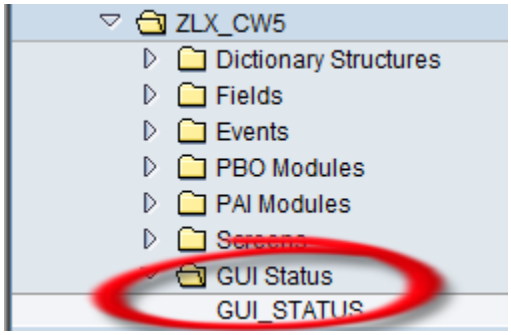


Enter status name and Short text, click Continue

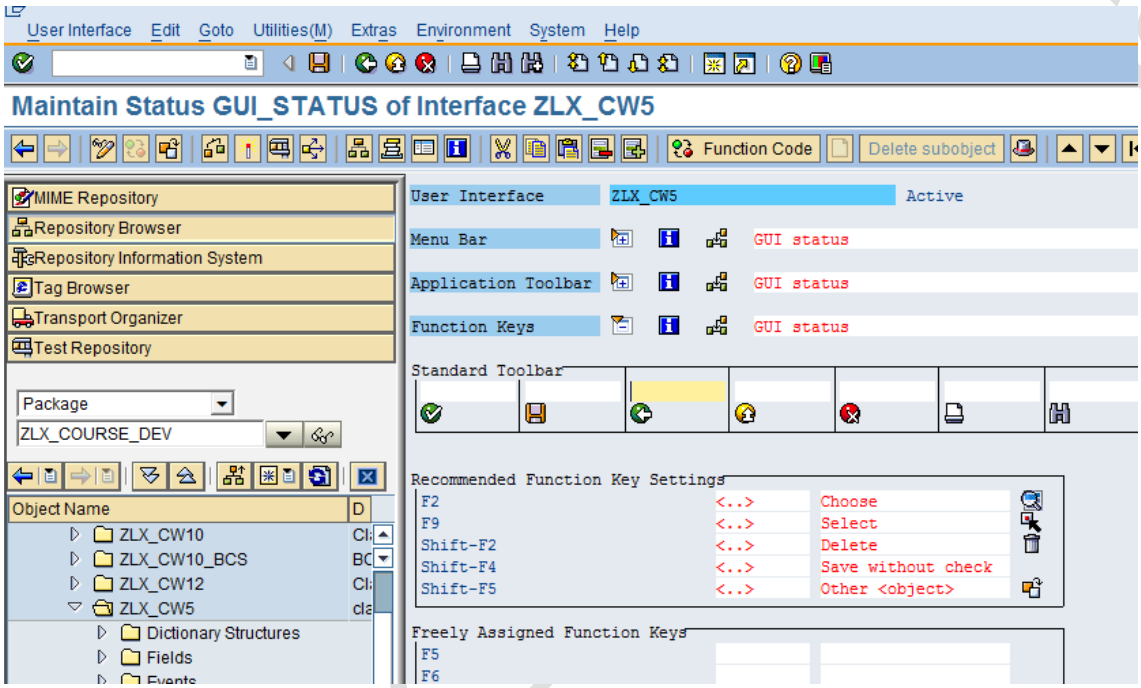


Save and Activate it.

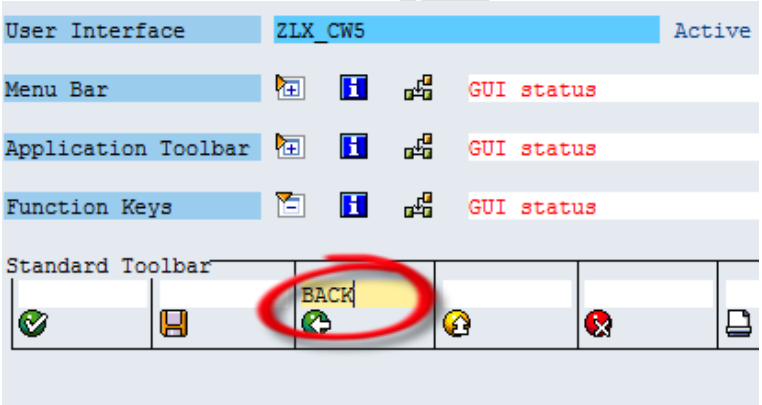
You can see GUI-status in your program in SE80 transaction.



Double click on your GUI-status and expand *Function Keys*



Enter name for button, save and activate it.



In the PBO module you need set pf-status:

```
SET PF-STATUS 'GUI_STATUS'.
```

In the PAI module you need handle the event of your button:

```
CASE sy-ucomm.
  WHEN 'BACK'.
    LEAVE TO SCREEN 0.
```

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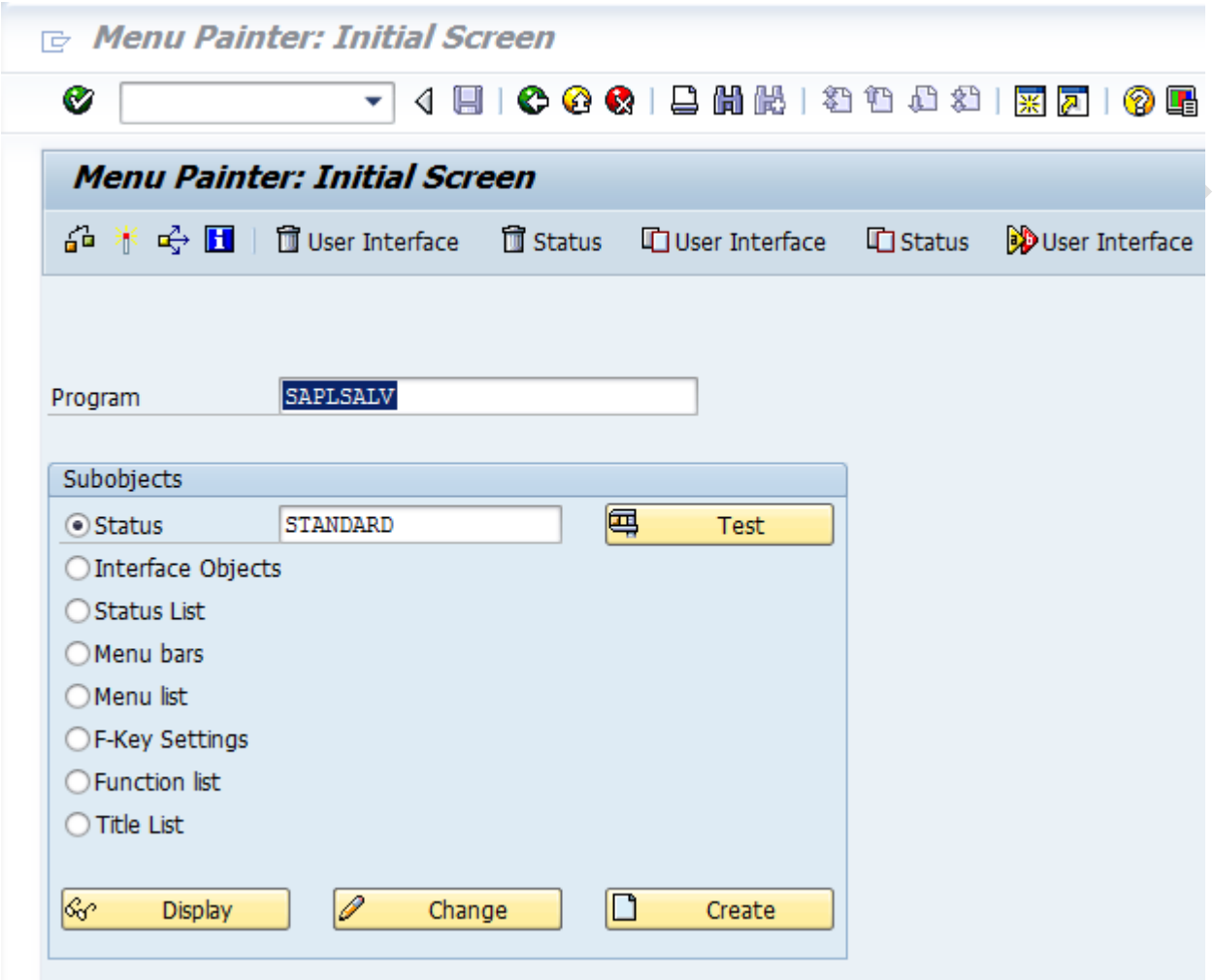
If you want to use and modify prepared GUI status that's already implemented in other programs, you need to do following:

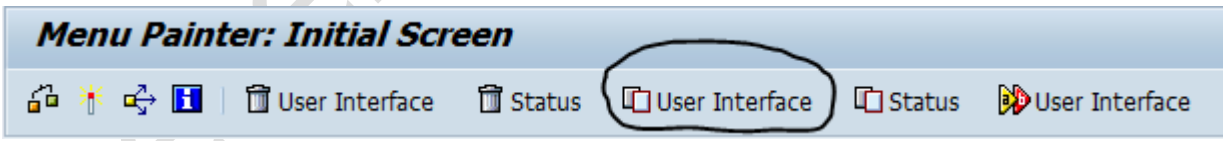
1) Go to transaction SE41.

2) Enter program name and GUI status name witch you want to copy in your Z* program:

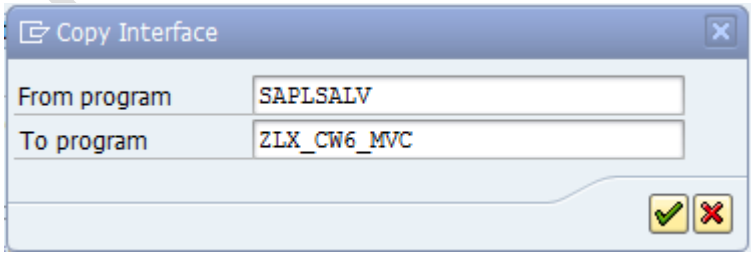
(Example GUI status for ALV Grid)



3) Press User Interface button witch signed as "Copy user interface" (Ctrl+F5 combination)



4) Enter name of your Z* program in popup window:



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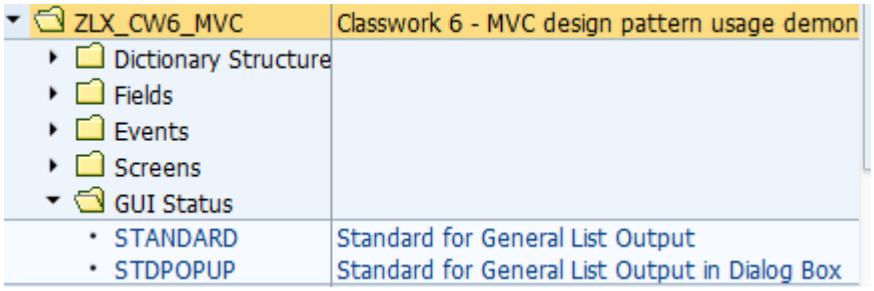
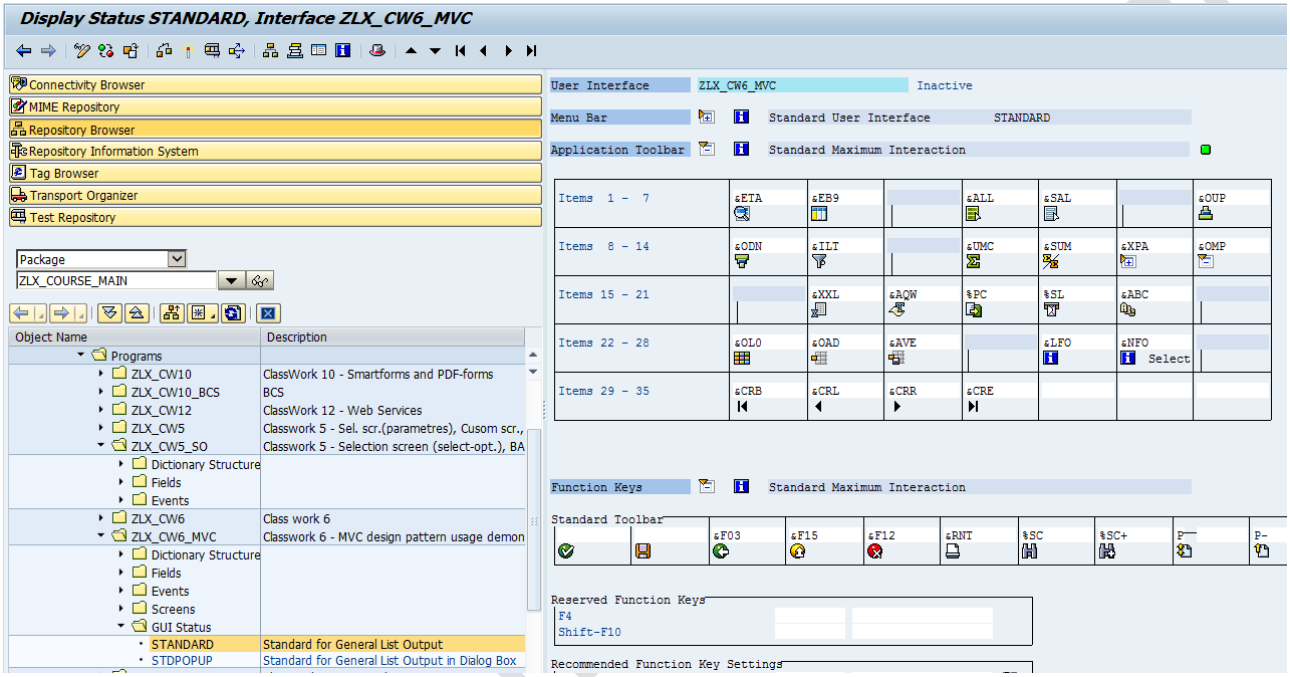
After that GUI status appears in corresponding program folder:



5) Double click on STANDARD and you will see prepared content of GUI Status.



6) Modify buttons according to your program logic, save and activate it.