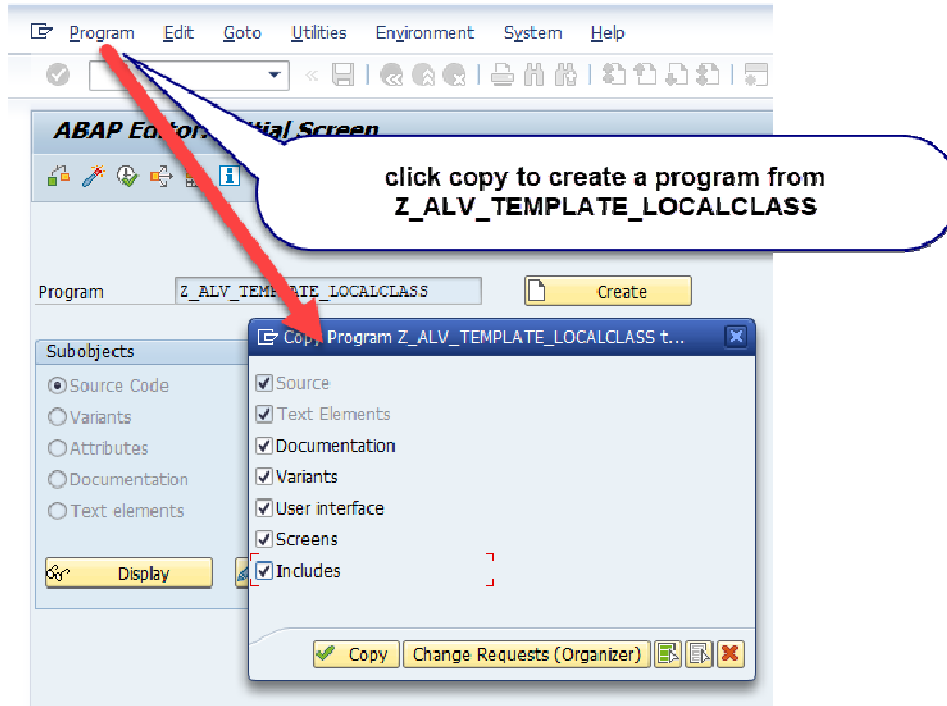


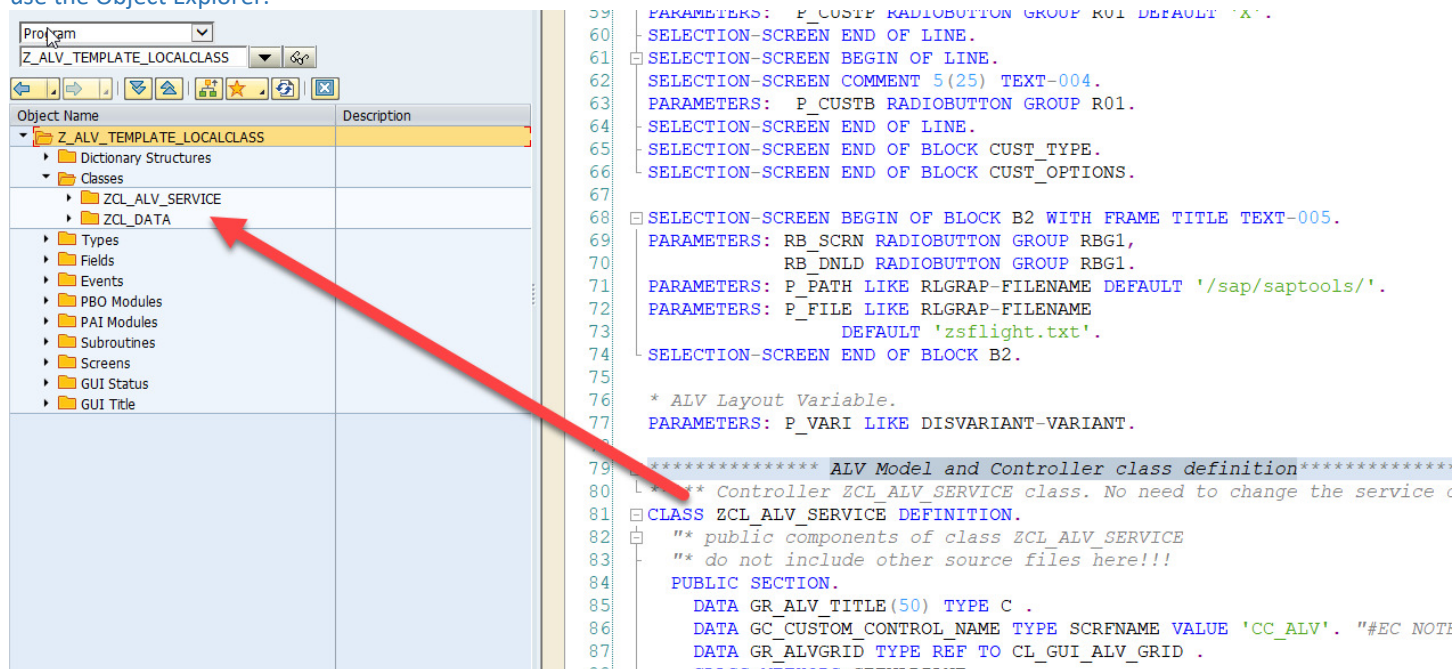
# Create an ALV Report in No Time

Wednesday, April 3, 2019 2:56 PM

- Create an ALV report by copying from Z\_ALV\_TEMPLATE\_LOCALCLASS



- MVC design pattern. Search "ALV Model and Controller class definition" or use the Object Explorer.



There are two custom Abap classes involved, ZCL\_DATA (REF\_DATA\_OBJECT) and ZCL\_ALV\_SERVICE (DIST\_ALV\_DISPLAY). ZCL\_DATA is the model and ZCL\_ALV\_SERVICE is the controller. The view is GR\_CONTAINER, which is initialized inside the constructor ZCL\_ALV\_SERVICE and imports the custom control container CC\_ALV we created in the Screen 1001. See Create\_ALV\_Template\_Program.pdf.

Search "Define MVC objects", you will find all the data definition for this MVC model. The instantiation of the MVC model objects is in FORM ALV\_OUTPUT.

```

FORM ALV_OUTPUT.
***** free the object ref and clean th
] IF REF_DATA_OBJECT IS BOUND.
  FREE REF_DATA_OBJECT.
- ENDIF.

] IF DIST_ALV_DISPLAY IS BOUND.
  FREE DIST_ALV_DISPLAY.
- ENDIF.

CLEAR: GS_LAYOUT, GT_FIELDCAT.
REFRESH: GT_FIELDCAT.

***** initialize the alv container and
CREATE OBJECT REF_DATA_OBJECT.

*-- Prepare the selection alv
CREATE OBJECT DIST_ALV_DISPLAY
EXPORTING
  IN_ALV_TITLE           = GS_TITLE
  IN_CUSTOM_CONTROL_NAME = 'CC_ALV'.

* static method call
CALL METHOD ZCL_DATA=>GET_GS_LAYOUT
EXPORTING
  GS_TITLE = GS_TITLE
CHANGING
  PS_LAYOUT = GS_LAYOUT.

```

- Change Report Name.

```

REPORT ZPP_COGI_ALV
MESSAGE-ID ZALV
NO STANDARD PAGE HEADING
LINE-SIZE 276
LINE-COUNT 65.

```

- Set all the display title below as you expected.

The screenshot shows the SAP ALV report output for 'ZPP\_COGI\_ALV'. The report title is 'ALV template title(ALV\_TITLE)'. The GUI title is 'ALV template title(ALV\_TITLE)'. The report name is 'Report Name Here'. The table displays flight data with columns: Carrier ID, Connection ID, Flight Date, Customer ID, Customer Type, Smoker, Currency, and Amount. The first row is highlighted in yellow.

Carrier ID	Connection ID	Flight Date	Customer ID	Customer Type	Smoker	Currency	Amount
AA	17	07/26/2018	1951	P		USD	359.50
AA			1190	P		EUR	461.00
AA			2642	P		USD	359.50
AA	17		4416	P		GBP	243.09
AA	17	07/26/2018	3918	P		EUR	391.86
AA	17	07/26/2018	856	P		EUR	461.00
AA	17	07/26/2018	3292	P		USD	359.50
AA	17	07/26/2018	665	P		USD	401.79
AA	17	07/26/2018	4478	P		EUR	437.95
AA	17	07/26/2018	772	P		EUR	461.00
AA	17	07/26/2018	2371	P		GBP	271.68
AA	17	07/26/2018	4096	P		USD	422.94
AA	17	07/26/2018	379	P		USD	422.94
AA	17	07/26/2018	1538	P		USD	359.50
AA	17	07/26/2018	617	P		EUR	437.95
AA	17	07/26/2018	4616	P		USD	380.65
AA	17	07/26/2018	451	P		CHF	685.51
AA	17	07/26/2018	920	P		EUR	391.86
AA	17	07/26/2018	357	P		EUR	414.91
AA	17	07/26/2018	1367	P		GBP	271.68
AA	17	07/26/2018	3325	P		USD	422.94
AA	17	07/26/2018	2466	P		EUR	461.00
AA	17	07/26/2018	3724	P		USD	401.79
AA	17	07/26/2018	3076	P		GBP	285.98
AA	17	07/26/2018	585	P		EUR	414.91
AA	17	07/26/2018	3860	P		USD	401.79
AA	17	07/26/2018	2320	P		EUR	414.91
AA	17	07/26/2018	3656	P		EUR	414.91
AA	17	07/26/2018	3656	P		USD	380.65
AA	17	07/26/2018	577	P		EUR	414.91

- REPORT name
- Program Attribute

AWAP: Program Attributes ZPP\_COGI\_ALV Change

Title: Good Issue to Production Order

Original language: EN English

Created: JLU 04/03/2019

Last Changed: JLU 04/03/2019

Status:

Attributes

Type: Executable program

Status: Customer Production Program

Application: Plant maintenance

Authorization Group:

Package: Z\_TRANSPORTABLE\_OBJ... Dev class for transportable objects

Logical database:

Selection screen:

☐ Editor lock ☒ Fixed point arithmetic

☒ Unicode Checks Active ☐ Start using variant

Save

- GUI Title - ALV template title(ALV\_TITLE)

Program: ZPP\_COGI\_ALV

Object Name: ZPP\_COGI\_ALV

Description:

Change Title

Program: ZPP\_COGI\_ALV

Title Code: ALV\_TITLE

Title: ALV template title(ALV\_TITLE)

ALV\_TITLE ALV template title(ALV\_TITLE)

- GS TITLE - Report Name Here

```

431 ***** End of ALV Model and Controller classes*****
432
433
434 DATA REF_DATA_OBJECT TYPE REF TO ZCL_DATA.
435 ***** ALV related *****
436 L ****TODO: Type the report name here.
437 DATA: GS_TITLE(50) TYPE C VALUE 'Report Name Here'.
438 *-- Layout Structure
439 DATA GS_LAYOUT TYPE LVC_S_LAYO.
440 *-- ALV Service CLASS, display the ALV
441 DATA: DIST_ALV_DISPLAY TYPE REF TO ZCL_ALV_SERVICE.
442 *-- Field Category
443 DATA GT_FIELDCAT TYPE LVC_T_FCAT.
444 *-- File Name
445 DATA: FNAME(128) TYPE C.
446
447

```

- Search "TODO: Your own global types and data section ". Prepare data type and data definition, especially the internal table to display. Here it is ITAB\_GIITEM, which will be used below to hook up with the GUI container

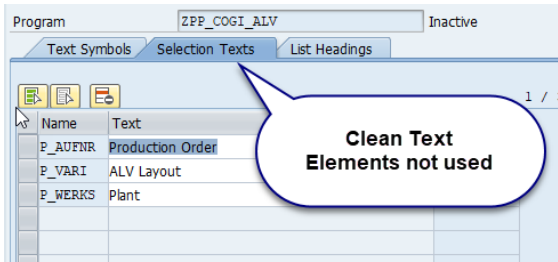
```

****TODO: Your own global types and data section
TYPES: BEGIN OF TY_GIITEM,
    FLAG(1) TYPE C,
    AUFNR LIKE RESB-AUFNR, " Production Order
    MATNR LIKE RESB-MATNR, " Material
    WERKS LIKE RESB-WERKS, " Plant
    LGORT LIKE RESB-LGORT, " Storage Location
    RSNUM LIKE RESB-RSNUM, " Reservation Quantity
    BDMNG LIKE RESB-BDMNG, " Requirement Quantity
    ENMNG LIKE RESB-ENMNG, " Withdrawn Quantity
    RNMNG LIKE RESB-ENMNG, " Issue Quantity
TYPES: END OF TY_GIITEM.

DATA: ITAB_GIITEM TYPE STANDARD TABLE OF TY_GIITEM,
      WA_GIITEM TYPE TY_GIITEM.
CONSTANTS : C_CHECK(1) VALUE 'X'. " value used to set X for a field

```

- Finish the select screen and clean the Text elements



- Search "TODO: prepare the model data here. " and prepare the data to display.
- Search "TODO: Delete the code below ". This code is only for demo alv template.
- Search "TODO: Prepare ALV Field Category " and set field category for fields to display in ALV grid.

```

319  ***TODO: Prepare ALV Field Category (column name, type etc)
320  METHOD GET_FIELDCAT.
321  DATA WA_PT_FCAT TYPE LVC_S_FCAT.
322  CLEAR WA_PT_FCAT.
323  WA_PT_FCAT-FIELDNAME = 'CHECKBOX'.
324  WA_PT_FCAT-CHECKBOX = 'X'.
325  WA_PT_FCAT-EDIT = 'X'.
326  WA_PT_FCAT-COLTEXT = 'Select'.
327  WA_PT_FCAT-SELTEXT = 'Select A Row'.
328  APPEND WA_PT_FCAT TO PT_FIELDCAT.
329
330  CLEAR WA_PT_FCAT.
331  WA_PT_FCAT-FIELDNAME = 'MATNR'.
332  WA_PT_FCAT-REF_TABLE = 'ITAB_GIITEMS'.
333  WA_PT_FCAT-REF_FIELD = 'MATNR'.
334  WA_PT_FCAT-OUTPUTLEN = '18'.
335  WA_PT_FCAT-JUST = 'L'.
336  WA_PT_FCAT-COLTEXT = 'Material'.
337  WA_PT_FCAT-SELTEXT = 'Material'.
338  APPEND WA_PT_FCAT TO PT_FIELDCAT.
339

```

- ALV output or Download. Search "ALV output or Background job download. "

This template provide code sample for either ALV output or file download. Comment out DOWNLOAD\_OUTPUT if no needed, both DOWNLOAD\_OUTPUT, DOWNLOAD\_HEADER and DOWNLOAD\_DETAIL forms and the form call.

```

❑ * ALV output or Background job download.
❑ * IF RB_SCRN = 'X'.
    PERFORM ALV_OUTPUT.
❑ * ELSE.
❑ *     PERFORM DOWNLOAD_OUTPUT.
❑ * ENDIF.

```

- Search "TODO: set your table ". Link your table to the view

```

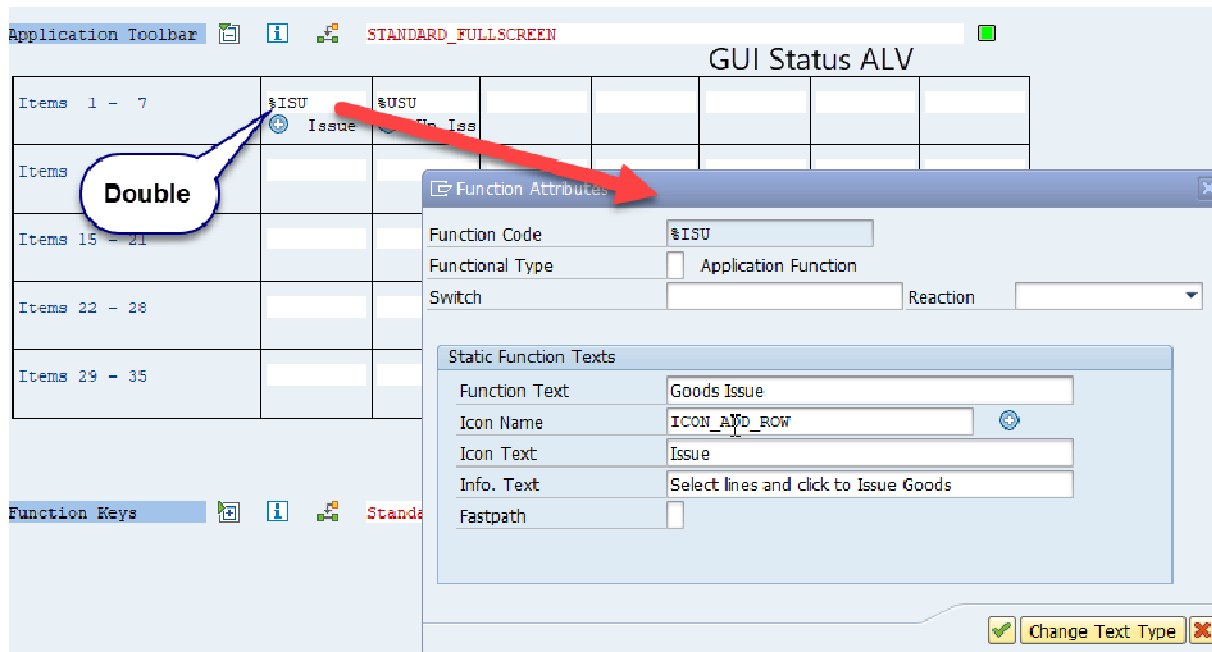
❑ MODULE STATUS_1001 OUTPUT.
    SET PF-STATUS 'ALV'. "Defined in the GUI Status folder
    SET TITLEBAR 'ALV_TITLE'. "Defined in the GUI Title folder
❑ ***TODO: set your table
❑ * Display it
    CALL METHOD DIST_ALV_DISPLAY->DISPLAY_ALV
      CHANGING
        GT_FIELDCAT = GT_FIELDCAT
        GS_LAYOUT = GS_LAYOUT
        GS_TAB = ITAB_GIITEM[]
        GS_VARIANT = P_VARI.
    ENDMODULE. " STATUS_1001 OUTPUT

```

Your internal table variable

- Add Buttons to the Application Tab.

Add Item into GUI Status ALV.



```

Add code to "MODULE USER_COMMAND_1001 INPUT. "
MODULE USER_COMMAND_1001 INPUT.
  CASE SY-UCOMM.
    WHEN '%ISU'. " Issue Goods
      REFRESH: ITAB_SELECTEDGIITEM.
    *** Get input
      CALL METHOD DIST_ALV_DISPLAY->CHECK_CHANGED_DATA.

      CALL METHOD REF_DATA_OBJECT->GETSELECTED
        EXPORTING
          ITEMS          = ITAB_GIITEM
        IMPORTING
          SELECTEDITEMS = ITAB_SELECTEDGIITEM.
      IF LINES( ITAB_SELECTEDGIITEM ) > 0.
        CALL METHOD DIST_ALV_DISPLAY->POST_GOODS_ISSUE
          EXPORTING
            ISSUES       = 'X'
            SELECTEDITEMS = ITAB_SELECTEDGIITEM.
        CALL METHOD REF_DATA_OBJECT->GET_DATA.
      ENDIF.
    WHEN '%USU'. " Goods Withdraw
      REFRESH: ITAB_SELECTEDGIITEM.
    *** Get Input
      CALL METHOD DIST_ALV_DISPLAY->CHECK_CHANGED_DATA.

      CALL METHOD REF_DATA_OBJECT->GETSELECTED
        EXPORTING
          ITEMS          = ITAB_GIITEM
        IMPORTING
          SELECTEDITEMS = ITAB_SELECTEDGIITEM.
      IF LINES( ITAB_SELECTEDGIITEM ) > 0.
        CALL METHOD DIST_ALV_DISPLAY->POST_GOODS_ISSUE
          EXPORTING
            ISSUES       = ''
            SELECTEDITEMS = ITAB_SELECTEDGIITEM.
        CALL METHOD REF_DATA_OBJECT->GET_DATA.
      ENDIF.
    WHEN 'BACK' OR 'EXIT' OR 'RETURN' OR 'CANCEL' OR '&F03' OR '&F12' OR
      '&F15'.
      LEAVE TO SCREEN '0'.
      CALL METHOD DIST_ALV_DISPLAY->FREE.
    WHEN 'DISPLAY'.
      LEAVE TO SCREEN 1001.
  ENDCASE.
ENDMODULE.
" USER_COMMAND_1001 INPUT

```

- Add an action to the controller, for example posting.

**Add action to the controller**

```
76 CLASS-METHODS CHECKVARIANT
77 IMPORTING
78   VALUE(SAVETYPE) TYPE C
79 CHANGING
80   !ES_VARIANT      TYPE SLIS_VARI .
81 METHODS CHECK_CHANGED_DATA .
82 METHODS REFRESH .
83 METHODS DATACHANGED .
84 METHODS POST_GOODS_ISSUE
85 IMPORTING
86   !ISISSUE          TYPE C
87   !SELECTEDITEMS    TYPE TY_HASHGITEMS.
88 PROTECTED SECTION.
89   DATA GR_CONTAINER TYPE REF TO CL_GUI_CUSTOM_CONTAINER
90   DATA ISFIRSTTIME TYPE C VALUE 'X'.
91   ** private components of class ZCL_ALV_SERVICE
92   ** do not include other source files here!!!
93 PRIVATE SECTION.
94 ENDCLASS.
```