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Attach files to GOS with Save, Retrieve, Delete functionality in SAP Web Dynpro ABAP – Part 1

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Purpose:

Application for attaching files to GOS with save, retrieve & delete functionality in Webdynpro ABAP

Scenario:

I would like to explain the functionality of how to save, retrieve & delete files / Notes during attachments to GOS in Webdynpro ABAP application.

Please refer the below link for more info on GOS

GOS (Generic Object Services)

Here I would consider the scenario of SAP FSRI module, and attach files / notes against a policy number.

Class: CL_GOS_API

Provides access to the GOS attachment list for applications. In the first step, the application must create an instance of the class CL_GOS_API and then register its unique application object at the same time. Currently, application objects of the categories BOR Object and Persistent Classes are supported. The attachment list can then be read, and the content of individual attachments can be read, modified, deleted, or created.

Pre-requisite:

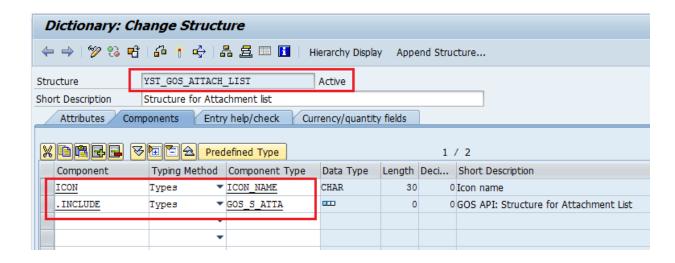
Basic knowledge of Webdynpro ABAP, & OO ABAP

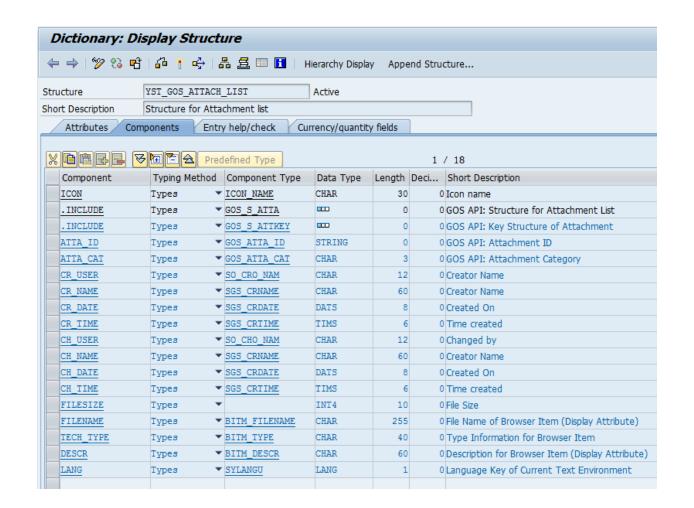
Step by Step Process:

Step 1:

Go t-code SE11 and create a custom structure YST_GOS_ATTACH_LIST as below

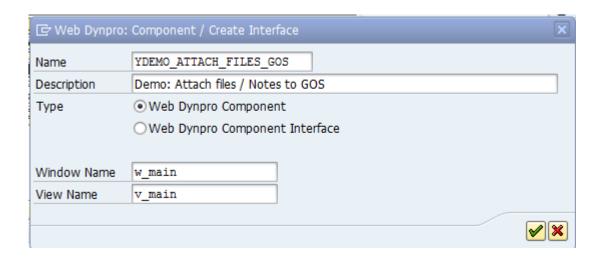
i.e. add a field ICON and include structure GOS_S_ATTA as below





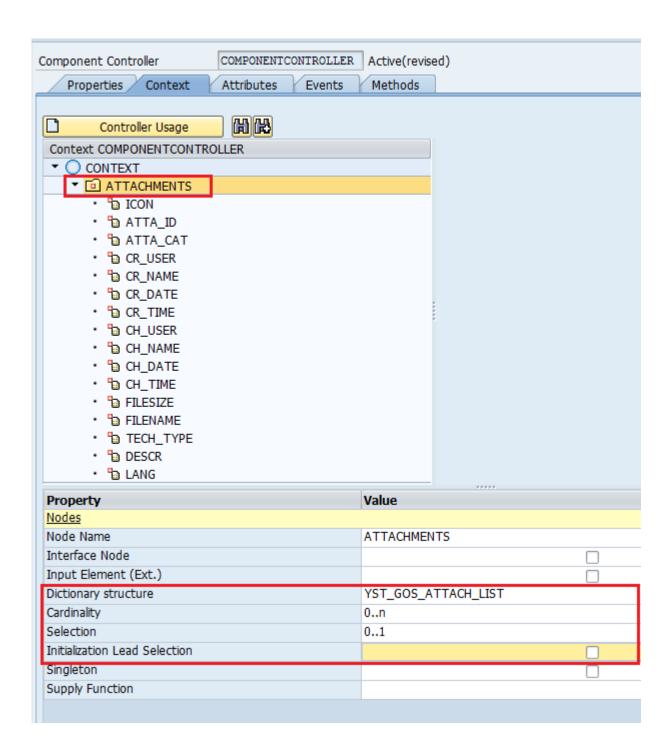
Step 2:

Go to t-code **SE80** and create a web dynpro component as below



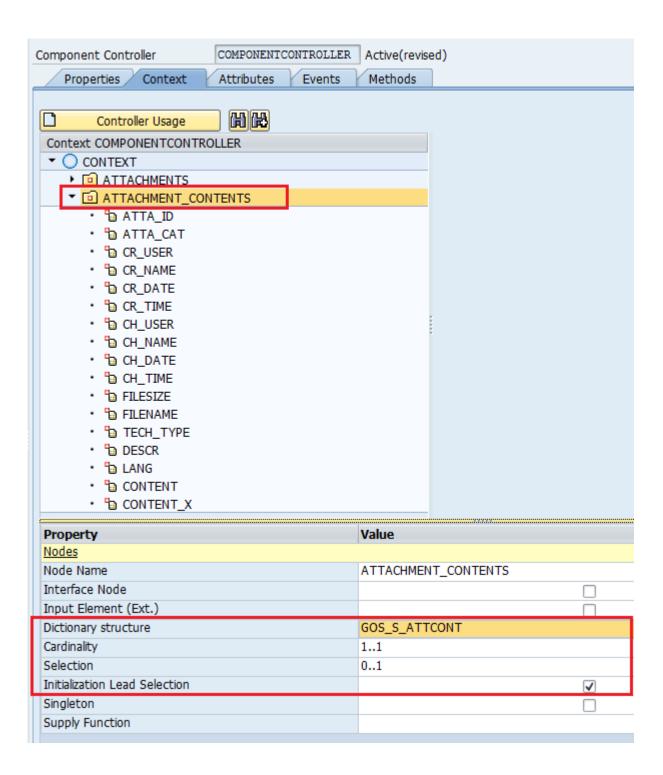
Step 3:

Go to context tab of component controller and create a node ATTACHMENTS by using structure YST_GOS_ATTACH_LIST and set the properties as below



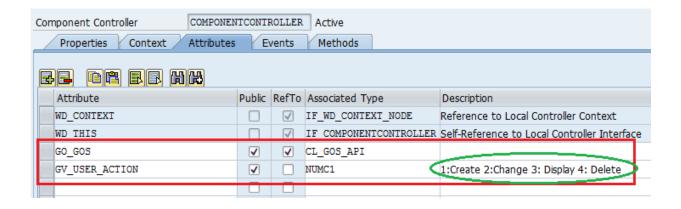
Step 4:

Create another node "ATTACHMENT_CONTENTS" by using structure GOS_S_ATTCONT as below



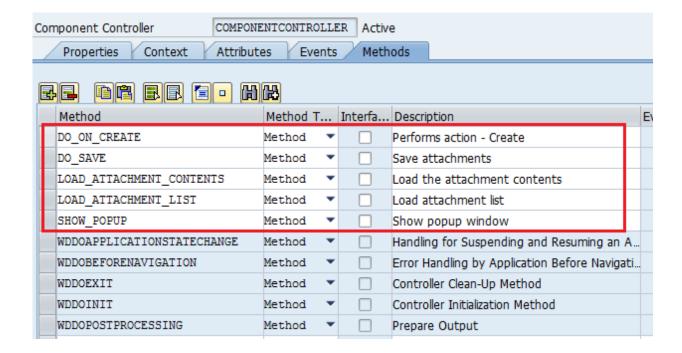
Step 5:

Go to attributes tab of component controller and create the global attributes GO_GOS & GV_USER_ACTION as below



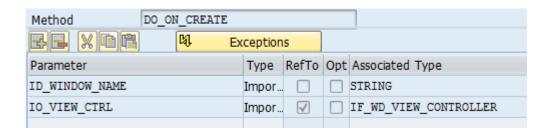
Step 5A:

Create methods in component controller as below



Now, the write the code as below

Method: DO_ON_CREATE



DO_ON_CREATE	

```
DO_ON_CREATE
METHOD do_on_create.
" Set user action
"<u>_____</u>
wd_this->gv_user_action = 1."Create
" Refresh attachment list ctx
"<u>_____</u>
DATA lo_node TYPE REF TO if_wd_context_node.
lo_node = wd_context->get_child_node(
  name = wd_this->wdctx_attachment_contents ).
lo_node->invalidate().
"Show respective popup window
"____
wd_this->show_popup(
 EXPORTING
 io_view_ctrl = io_view_ctrl
  id_button_kind = 3
  id_action1 = 'SAVE'
  id_window_name = id_window_name
ENDMETHOD.
```

Method: DO_SAVE

DO_SAVE

METHOD do_save.

```
DO_SAVE
DATA: Is_attacont TYPE gos_s_attcont,
  Is_atta_key TYPE gos_s_attkey,
  lv_roltype TYPE oblroltype,
  lv_commit TYPE flag,
  lo_node TYPE REF TO if_wd_context_node,
  lo_element TYPE REF TO if_wd_context_element.
"Read notes detail context
"<u>______</u>
lo_node = wd_context->get_child_node(
  name = wd_this->wdctx_attachment_contents
lo_node->get_element()->get_static_attributes(
IMPORTING static_attributes = Is_attacont).
" Attach notes
"_____
TRY.
 Is_attacont-atta_cat = cl_gos_api=>c_msg.
 " Check if attachment documents
 IF Is_attacont-content_x IS INITIAL.
  Is_attacont-tech_type = 'TXT'.
  lv_roltype = cl_gos_api=>c_annotation.
 ELSE.
  lv_roltype = cl_gos_api=>c_attachment.
 ENDIF.
 IF wd_this->gv_user_action EQ 1."Create
  wd_this->go_gos->insert_al_item(
   EXPORTING
    is_attcont = ls_attacont
```

```
DO_SAVE
    iv_roltype = lv_roltype
  RECEIVING
  rv_commit = lv_commit
  ELSEIF wd_this->gv_user_action EQ 2."Change
  lv_commit =
   wd_this->go_gos->update_al_item( is_attcont = ls_attacont ).
  ELSE."delete
   MOVE-CORRESPONDING Is_attacont TO Is_atta_key.
  lv_commit =
   wd_this->go_gos->delete_al_item( is_atta_key = ls_atta_key ).
    CATCH cx_gos_api. "GOS API: Exception
  ENDIF.
 CATCH cx_gos_api.
                              "#EC NO_HANDLER
ENDTRY.
IF Iv_commit EQ abap_true.
 CALL FUNCTION 'BAPI_TRANSACTION_COMMIT'
 EXPORTING
  wait = abap_true.
ENDIF.
" Reload the context
wd_this->load_attachment_list().
ENDMETHOD.
```

Method: LOAD_ATTACHMENT_CONTENTS

Method LOAD_ATTACHMENT_CONTENTS					
Exceptions Exceptions					
Parameter		Туре	RefTo	Opt	Associated Type
IO_VIEW_CTRL		Impor	✓		IF_WD_VIEW_CONTROLLER
IS_ATTA		Impor			YST_GOS_ATTACH_LIST

LOAD_ATTACHMENT_CONTENTS
METHOD load_attachment_contents .
DATA: ls_atta_key TYPE gos_s_attkey,
Is_attacont TYPE gos_s_attcont,
lv_window_name TYPE string,
lv_title TYPE string,
lv_text TYPE string,
lv_button_kind TYPE wdr_popup_button_kind.
" Prepare key
MOVE-CORRESPONDING is_atta TO ls_atta_key.
"get attachment content
TRY.
Is_attacont =
wd_this->go_gos->get_al_item(is_atta_key = ls_atta_key).
CATCH cx_gos_api. "#EC NO_HANDLER
ENDTRY.
"set data to context
DATA lo_node TYPE REF TO if_wd_context_node.
DATA lo_element TYPE REF TO if_wd_context_element.
lo_node = wd_context->get_child_node(
name = wd_this->wdctx_attachment_contents).

```
LOAD_ATTACHMENT_CONTENTS
lo_element = lo_node->get_element( ).
lo_element->set_static_attributes( static_attributes = ls_attacont ).
"Based on content, show popup window
"=======
CLEAR Iv_button_kind.
IF wd_this->gv_user_action EQ 2.
lv_title = 'Change'.
lv_button_kind = 3.
ELSEIF wd_this->gv_user_action EQ 3.
lv_title = 'Display'.
ELSEIF wd_this->gv_user_action EQ 4.
lv_title = 'Delete'.
lv_button_kind = 3.
ENDIF.
IF Is_attacont-content_x IS INITIAL.
lv_window_name = 'W_ATTACH_NOTES'.
Iv_text = 'Notes'.
CONCATENATE Iv_title Iv_text INTO Iv_title SEPARATED BY space.
ELSE.
Iv_window_name = 'W_ATTACH_FILES'.
lv_text = 'File'.
 CONCATENATE Iv_title Iv_text INTO Iv_title SEPARATED BY space.
ENDIF.
wd_this->show_popup(
 EXPORTING
 io_view_ctrl = io_view_ctrl
 id_button_kind = lv_button_kind
 id_title = lv_title
```

```
id_action1 = 'SAVE'
id_window_name = lv_window_name
).
ENDMETHOD.
```

Method: LOAD_ATTACHMENT_LIST

LOAD_ATTACHMENT_LIST METHOD load_attachment_list. "______ DATA: It_atta TYPE TABLE OF gos_s_atta, It_attachment_list TYPE wd_this->elements_attachments, Is_attachment_list LIKE LINE OF It_attachment_list. FIELD-SYMBOLS: <Is_atta> LIKE LINE OF It_atta. TRY. lt_atta = wd_this->go_gos->get_atta_list(). CATCH cx_gos_api. "#EC NO HANDLER ENDTRY. CLEAR It_attachment_list. LOOP AT It_atta ASSIGNING <Is_atta>. CLEAR Is_attachment_list. MOVE-CORRESPONDING < Is_atta> TO Is_attachment_list. CONDENSE Is_attachment_list-tech_type. IF Is_attachment_list-tech_type EQ 'TXT' OR Is_attachment_list-tech_type IS INITIAL.

```
LOAD_ATTACHMENT_LIST
  Is_attachment_list-icon = 'ICON_ANNOTATION'.
 ELSE.
 Is_attachment_list-icon = 'ICON_ATTACHMENT'.
 ENDIF.
 APPEND Is_attachment_list TO It_attachment_list.
ENDLOOP.
" Set data to context node
DATA lo_node TYPE REF TO if_wd_context_node.
lo_node = wd_context->get_child_node(
        = wd_this->wdctx_attachments
  name
lo_node->bind_table(
 EXPORTING
 new_items
              = lt_attachment_list
ENDMETHOD.
```

Method: SHOW_POPUP

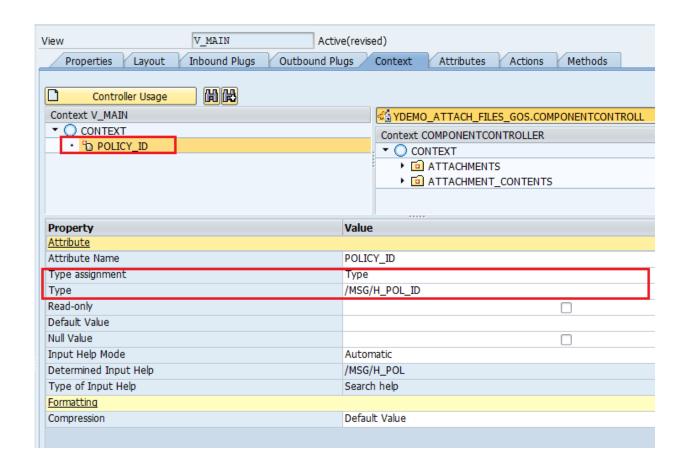
Method SHOW_POPUP			
BB XDG &	xceptions		
Parameter	Type RefTo	Opt Associated Type	Default Value
ID_ACTION1	Impor	✓ STRING	
ID_ACTION1_TEXT	Impor	✓ STRING	'Ok'
ID_ACTION2	Impor	✓ STRING	
ID_BUTTON_KIND	Impor	✓ WDR_POPUP_BUTTON_KIND	2
ID_RESIZABLE	Impor	✓ WDY_BOOLEAN	abap_false
ID_TITLE	Impor	✓ STRING	
ID_WINDOW_NAME	Impor	☐ STRING	
IO_VIEW_CTRL	Impor	☐ IF_WD_VIEW_CONTROLLER	

SHOW_POPUP
method SHOW_POPUP.
"Purpose: Display popup window of More CoB
"—————————————————————————————————————
DATA lo_window_manager TYPE REF TO if_wd_window_manager. DATA lo_api_component TYPE REF TO if_wd_component. DATA lo_window TYPE REF TO if_wd_window. DATA lv_title TYPE string.
"get view contoller, window manager
lo_api_component = wd_this->wd_get_api().
lo_window_manager = lo_api_component->get_window_manager(). * "
IF Iv_title IS INITIAL. Iv_title = 'Create Attachments'.
ENDIF.

```
SHOW_POPUP
"creat a pop up window
CALL METHOD lo_window_manager->create_window
EXPORTING
 modal
              = ABAP_TRUE
                  = id_window_name
 window_name
            = lv_title
 title
 close_button = ABAP_TRUE
 button_kind = id_button_kind
 message_type = IF_WD_WINDOW=>CO_MSG_TYPE_NONE
  close_in_any_case = ABAP_TRUE
 message_display_mode =
  default_button =
 is_resizable
               = abap_false
RECEIVING
              = lo_window.
 window
IF Io_window IS BOUND.
IF id_button_kind EQ 3.
 IF id_action1 IS NOT INITIAL.
  CALL METHOD lo_window->subscribe_to_button_event
   EXPORTING
    button
              = 4
    button_text = id_action1_text
    tooltip
    action_name = id_action1
    action_view = io_view_ctrl
    is_default_button = abap_true.
 ENDIF.
 IF id_action2 IS NOT INITIAL.
  CALL METHOD lo_window->subscribe_to_button_event
   EXPORTING
```

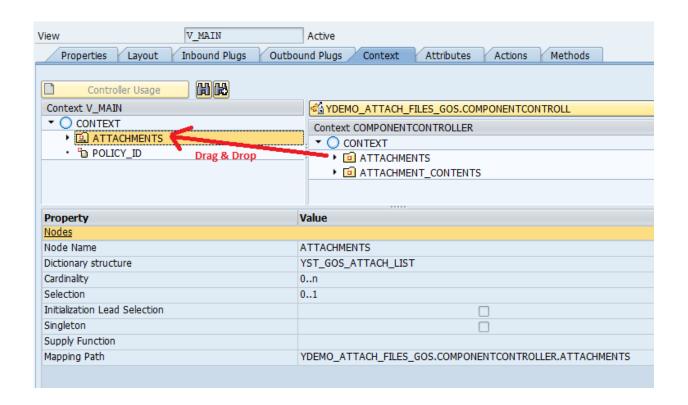
Step 6:

Go to view V_MAIN and create context attribute POLICY_ID under node CONTEXT as below



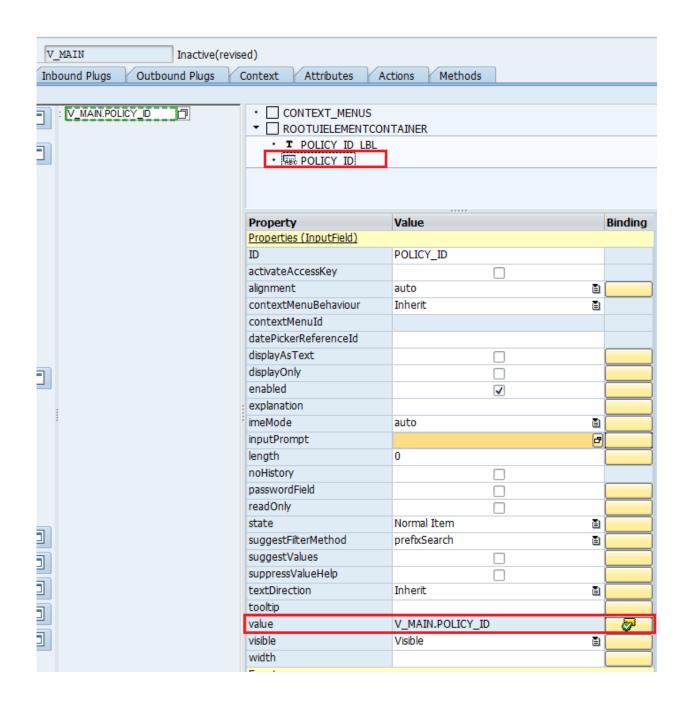
Step 7:

Map the context node ATTACHMENTS from component controller to V_MAIN view's controller as below



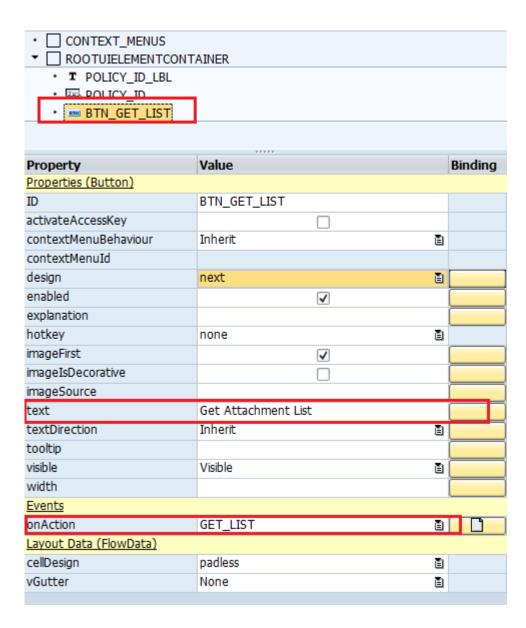
Step 8:

Create an input field and bind the value to context attribute POLICY_ID as below



Step 9:

Create a button "BTN_GET_LIST" and create an action "GET_LIST" and bind it to the event of button as below



Step 9 A:

Write the below code in event handler method ONACTIONGET_LIST as below

Here, we are creating an instance to GOS for the given policy number.

```
ONACTIONGET_LIST
METHOD onactionget_list.
" Data declarations
DATA lv_pol_id TYPE /msg/h_pol_id.
"read policy number
wd_context->get_attribute(
 EXPORTING
 name = 'POLICY_ID'
 IMPORTING
 value = lv_pol_id
"Create an instance of GOS
DATA Is_object TYPE gos_s_obj.
CLEAR Is_object.
ls_object-instid = lv_pol_id. " Policy Number
Is_object-typeid = '/MSG/HRISK'.
Is_object-catid = 'BO'.
TRY.
 wd_comp_controller->go_gos =
 cl_gos_api=>create_instance( is_object = Is_object ).
 CATCH cx_gos_api.
                         "#EC NO_HANDLER
ENDTRY.
"Load attachment list
```

ONACTIONGET_LIST

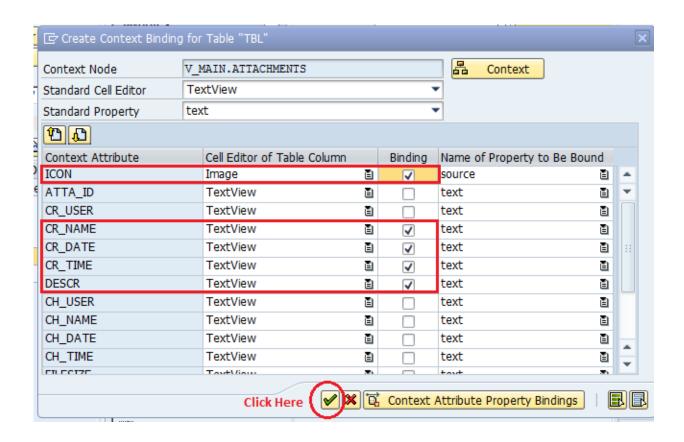
wd_comp_controller->load_attachment_list(). ENDMETHOD.

Step 10:

Create a table ui element TBL and bind the data source property to node ATTACHMENTS as below

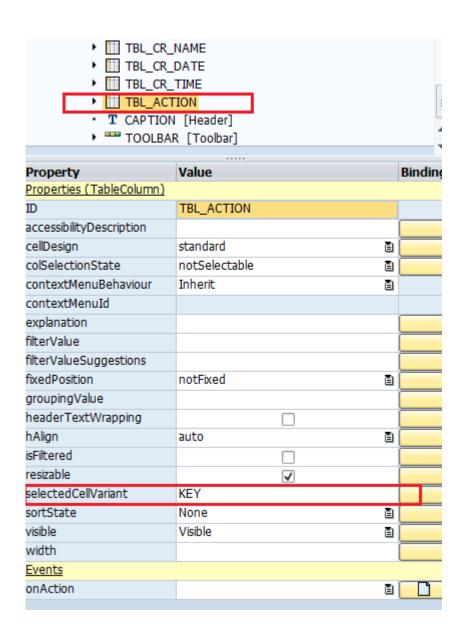
• ☐ CONTEXT_MENUS ▼ ☐ ROOTUIELEMENTCONTAINER		
▶ ☐ TC_TOP		
<u> </u>		
→ III TBL		
Property	Value	
Properties (Table)		
ID	TBL	
accessibilityDescription		
activateAccessKey		
columnResizeMode	preserveTableWidth 🖺	
contextMenuBehaviour	Inherit 🖺	
contextMenuId		
dataSource	V_MAIN.ATTACHMENTS	
defaultButtonId	1	
design	Standard 🖺	
displayEmptyRows		
dropOnRowName		
emptyTableText		
enabled	✓	
firstActualRow	0	
firstVisibleRow	0	
firstVisibleScrollableCol		
fixedTableLayout		
footerVisible	✓	
gridMode	both 🖺	
handleHotkeys		
legendId		
multiColSorting		
readOnly		
rowCount	-1	
rowSelectable	✓	
scrollableColCount	-1	
selectedPopin		
selectionChangeBehavio	auto 🖺	
and the Californian Danier	J - € L	

Step 11:Create the columns and bind to the context attributes as shown below

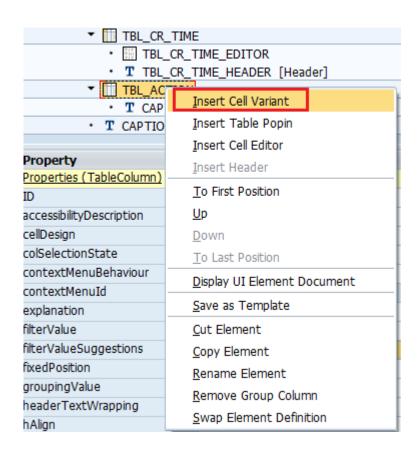


Step 12:

Create an extra column called "ACTIONS" for display, change, delete actions with SelectedCellVariant "KEY" as below

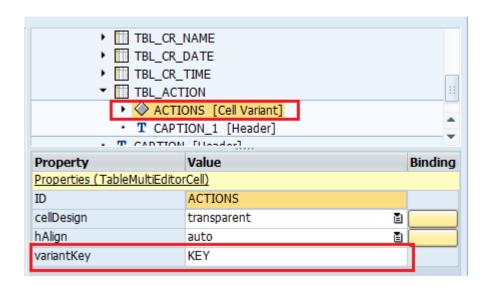


Step 13:Right click on column ACTIONS and choose "Insert Cell Variant" as below



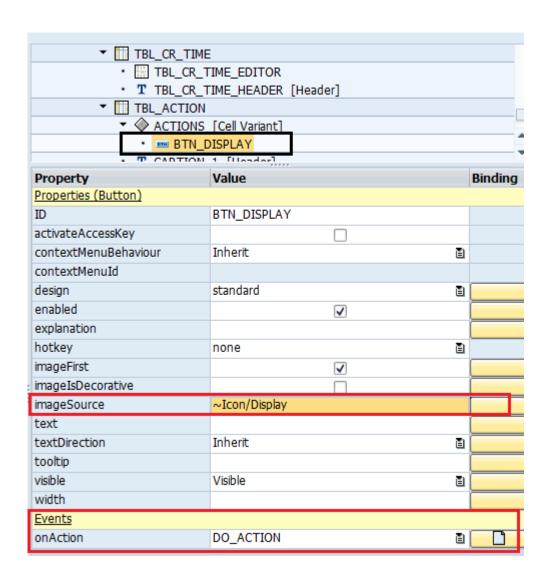
Step 14:

Set the variantKey "KEY" to TableMultiCellEditor as shown below



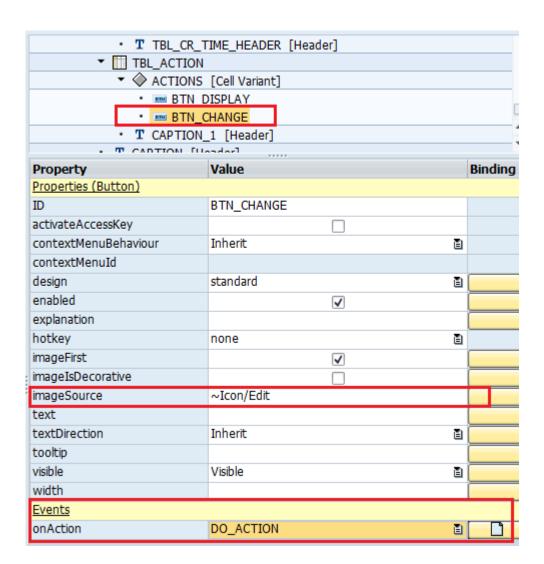
Step 15:

Create a button for display and bind it to the action DO_ACTION as below



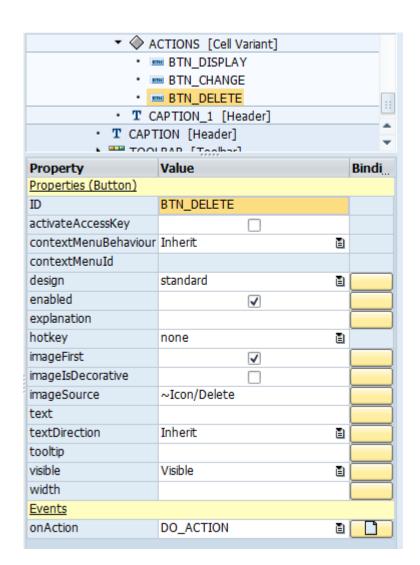
Step 16:

Create a button for change and bind it to the action DO_ACTION as below



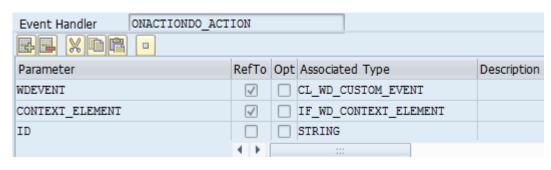
Step 17:

Create a button for delete and bind it to the action DO_ACTION as below



Step 17A:

Write the below code in event handler method ONACTIONDO_ACTION



ONACTIONDO_ACTION

```
ONACTIONDO_ACTION
METHOD onactiondo_action.
DATA Is_attachments TYPE wd_this->element_attachments.
DATA lo_view_ctrl TYPE REF TO if_wd_view_controller.
CASE id.
 WHEN 'BTN_CHANGE'.
  wd_comp_controller->gv_user_action = 2."Change
 WHEN 'BTN_DISPLAY'.
  wd_comp_controller->gv_user_action = 3."Display
 WHEN 'BTN_DELETE'.
  wd_comp_controller->gv_user_action = 4."Delete
 WHEN OTHERS.
ENDCASE.
"get the current row data
CALL METHOD context_element->get_static_attributes
 IMPORTING
  static_attributes = ls_attachments.
"Load attachment content
lo_view_ctrl ?= wd_this->wd_get_api( ).
CALL METHOD wd_comp_controller->load_attachment_contents
 EXPORTING
 is_atta = ls_attachments
 io_view_ctrl = lo_view_ctrl.
ENDMETHOD.
```

Write the below code in event handle	method ONACTIONSAVE.
ONACTIONSAVE	
" Save attachements	
wd_comp_controller->do_save().	
Continued	
Continued	
Attach files to GOS with	Save, Retrieve, Delete functionality in SAP Web Dynpro ABAP – Part 2
Alert Moderator	
Assigned tags	
UI Web Dynpro ABAP abap web dynpr	abap webdynpo attach files gos web dynpro abap Web Dynpro
View more	

Go to actions tab of view V_MAIN and create an action SAVE for save action on popup window for attaching notes or files. i.e. we have subscribed the

button "OK" of popup window to SAVE action on view V_MAIN

Related Blog Posts

Attach files to GOS with Save, Retrieve, Delete functionality in SAP Web Dynpro ABAP - Part 2

By Ramakrishnappa Gangappa, Mar 12, 2014

Attach files with save, retrieve and delete functionality in Web Dynpro ABAP - Part 1

By Ramakrishnappa Gangappa, Jan 10, 2014

Attach files with save, retrieve and delete functionality in Web Dynpro ABAP – Part 2

By Ramakrishnappa Gangappa, Jan 10, 2014

Related Questions

Display file in the desktop

By Former Member , Aug 18, 2015

Generic Object Services using WebDynpro ABAP

By Former Member, Nov 02, 2008

Display PO Attachment

By Former Member, Mar 02, 2009

10 Comments

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Former Member

March 17, 2014 at 3:24 pm

Hello

Can you add the implementation code for method LOAD_ATTACHMENT_LIST?

And also code to implement for events DO_ACTION and GET_LIST ?
Thx
Xavier
Like (0)
Ramakrishnappa Gangappa Post author March 18, 2014 at 1:54 am Hi Xavier,
Thanks a lot for going through the document in details $\ensuremath{\mathfrak{C}}$ I appreciate your findings yah! missed to include the implementation of those methods $\ensuremath{\mathfrak{C}}$
I have added the implementation code of those methods $\ref{eq:continuous}$
Regards,
Rama
Like (0)
Former Member
August 26, 2014 at 6:35 pm

August 26, 2014 at 6:35 pm

We need to find out the minimum Netweaver Enhancement Pack level that is required for CL_GOS_API – so we can get this to work in our webdynpro development.

Like (0)



August 27, 2014 at 3:45 am

Hi,

As for as I know, the class CL_GOS_API is available from NW 7.31.

Like (0)



Former Member

August 27, 2014 at 3:16 am

Hi,

Class CL_GOS_API and structure GOS_S_ATTA does not exist in our system ECC 6.0,.

What to do? do we need to activate object or patch update?

Like (0)



Ramakrishnappa Gangappa | Post author

August 27, 2014 at 3:47 am

Hi John,

AFAIK, the class CL_GOS_API is available from NW 7.31. I think you might need to upgrade your system to EHP6.

Like (0)



January 19, 2015 at 6:52 am

Dear Ramakrishnappa Gangappa,

Thanks for u r Sharing the Good Document regarding GOS In WebDynpro. I'm Getting the all that u r shared but after upload then i want to see the attachments like(PDF,PNG,JPEG,doc..) files are converted as a raw string data type data, I'm unable to get the exact output that i have uploaded. while click on download button it's path changed like C:/FAKEPATH/KOLA.jpg. Please help me regarding this.

Thanks & Regards,

Suresh Reddy.

Like (0)



Ramakrishnappa Gangappa | Post author

January 19, 2015 at 8:24 am

Hi Suresh,

Thank you for your feedback.

Please have look at the below thread:

File path defaulted to 'C:\fakepath' when attaching

Hope this helps you.

Regards,

Rama

Like (0)



January 21, 2015 at 6:05 am

Dear Ramakrishnapppa,

Thanks for your feedback i'm getting the exact output in internet Explorer Browser with your Suggestion but in the google chrome browser and also it's work for .PDF Files. Suppose if i upload the file formats like .PNG,.DOC,.JPEG and Excel then it woks like Pdf file viewing on the Browser. If is not possible what is alternative solution for this.

Thanks & Regards,

Suresh Reddy.

Like (0)



Former Member

October 18, 2016 at 5:27 pm

Hi

I am trying to do the same, But i am getting the Error:

500 SAP Internal Server Error

ERROR: Could not find attribute ATTACHMENTS (termination: RABAX_STATE)

please help me, I am new for WD.

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