WDA Tutorial II: Using Select Options in a WDA Application

SAP DEVELOPER NETWORK

Applies To:

SAP NetWeaver 2004s – Web Dynpro for ABAP

Summary

This tutorial provides a step-by-step guide for using Select Option functionality in a WDA application. This tutorial assumes that you have completed WDA Tutorial I: Getting Started with Web Dynpro for ABAP and have a good understanding of the basics of Web Dynpro for ABAP.

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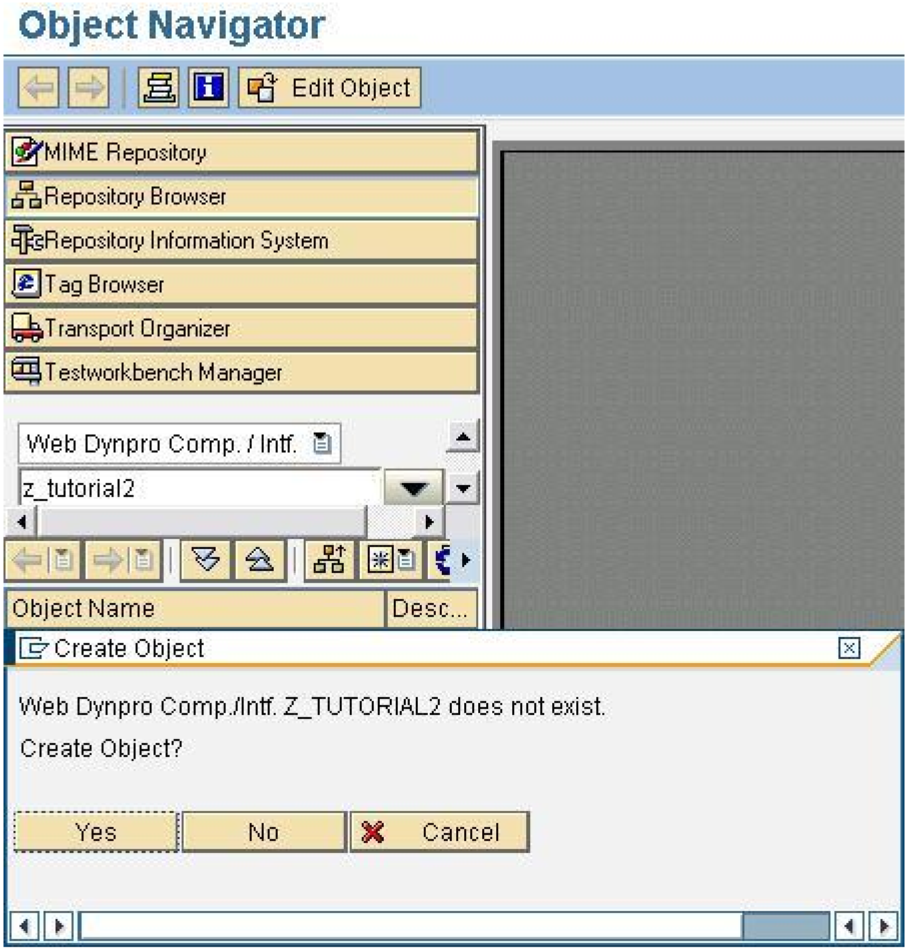
Step 1 – Creating the Web Dynpro for ABAP (WDA) Object

Go to transaction code SE80. This is the ABAP Workbench. In the object list box, choose *Web Dynpro Comp / Inf*. Enter the name of the object as Z_TUTORIAL2 and hit Enter. The system will ask you if you want to create this object. Click Yes.



Object Navigator

Web Dynpro Comp. / Intf.

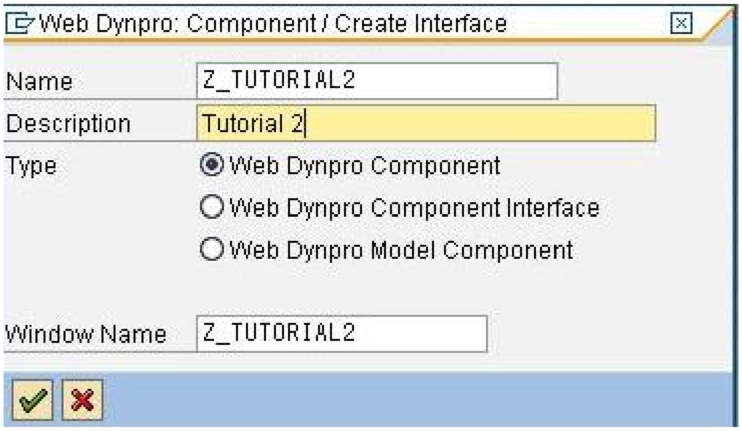
z_tutorial2

Create Object

Web Dynpro Comp./Intf. Z_TUTORIAL2 does not exist.

Create Object?

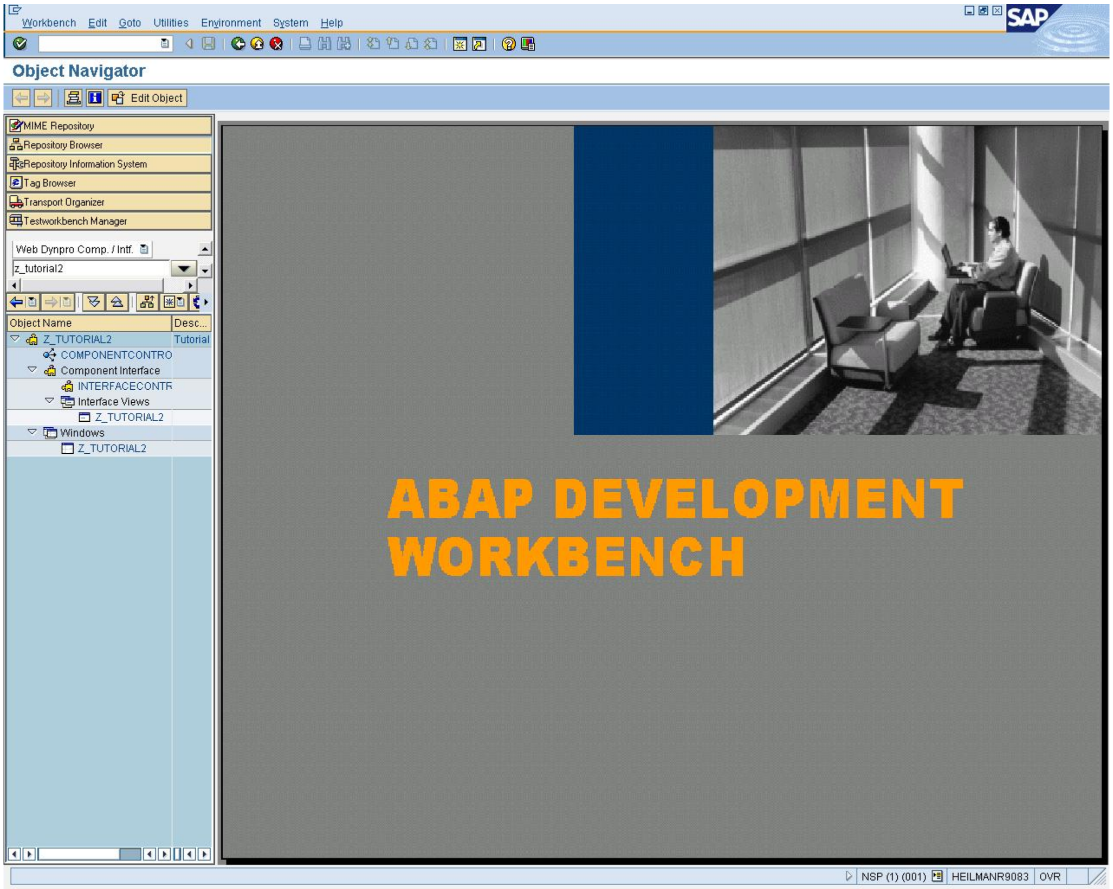
Enter a description for the object and hit Enter. A dialog will appear asking to assign a package. Click *Local Object*.



Web Dynpro: Component / Create Interface

Name	Z_TUTORIAL2
Description	Tutorial 2
Type	● Web Dynpro Component ○ Web Dynpro Component Interface ○ Web Dynpro Model Component
Window Name	Z_TUTORIAL2

Now the WDA Object has been created.



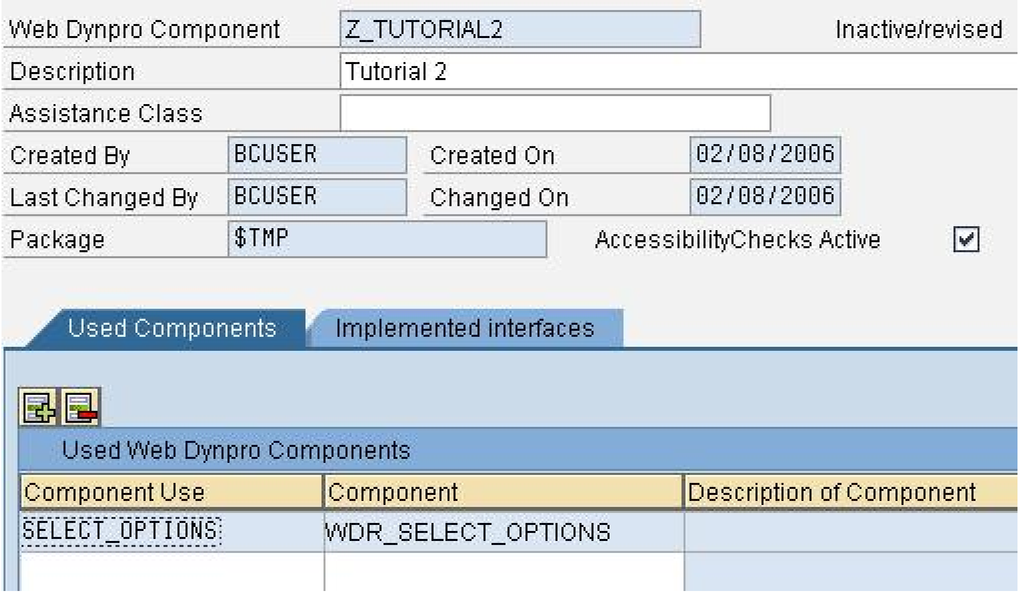
Web Dynpro Comp. / Intf.

z_tutorial2

Object Name	Desc...
Z_TUTORIAL2	Tutorial
COMPONENTCONTRO	
Component Interface	
INTERFACECONTR	
Interface Views	
Z_TUTORIAL2	
Windows	
Z_TUTORIAL2	

Step 2 – Define Used Components

Define the used web dynpro components for the application. Double click on the web dynpro component. Add the component under the "Used Components" table. Enter SELECT_OPTIONS as the Component Use, and WDR_SELECT_OPTIONS as the Component.



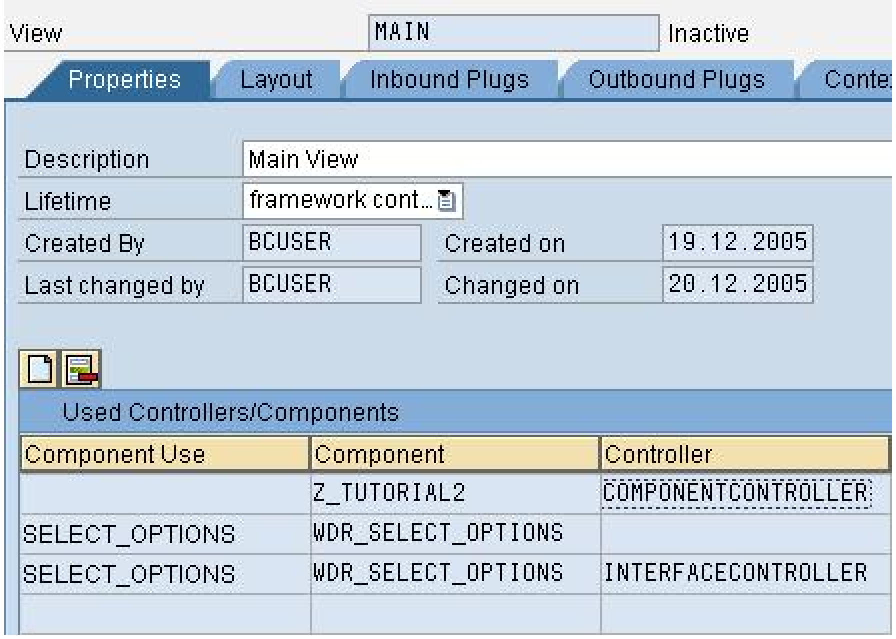
Web Dynpro Component	Z_TUTORIAL2	Inactive/revised	
Description	Tutorial 2		
Assistance Class			
Created By	BCUSER	Created On	02/08/2006
Last Changed By	BCUSER	Changed On	02/08/2006
Package	$TMP	AccessibilityChecks Active	☑

Used Web Dynpro Components

Component Use	Component	Description of Component
SELECT_OPTIONS	WDR_SELECT_OPTIONS	

Step 3 – Creating a View

Create a view by right clicking on the object name and choose Create->View. Give the view name as "MAIN" and a description. Click on the properties tab of the view. In the "Used Controllers/Components" tab, click the create icon. Add the two components for Select_Options.



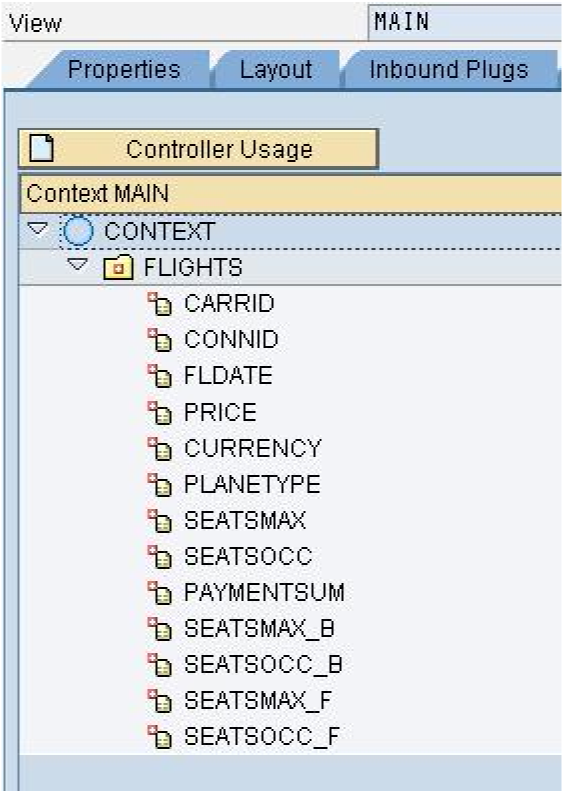
View MAIN Inactive

Description: Main View
Lifetime: framework cont...
Created By: BCUSER   Created on: 19.12.2005
Last changed by: BCUSER   Changed on: 20.12.2005

Used Controllers/Components

Component Use	Component	Controller
	Z_TUTORIAL2	COMPONENTCONTROLLER
SELECT_OPTIONS	WDR_SELECT_OPTIONS	
SELECT_OPTIONS	WDR_SELECT_OPTIONS	INTERFACECONTROLLER

Click on the Context tab of the view. Create a node called "FLIGHTS". Set the Cardinality as 0..N. Next create the attributes by right clicking on the node and choosing Create Using the Wizard->Attributes from Components of Structure. Enter SFLIGHT as the structure to be copied. Select all fields except MANDT and hit enter. The Context should now look like this.

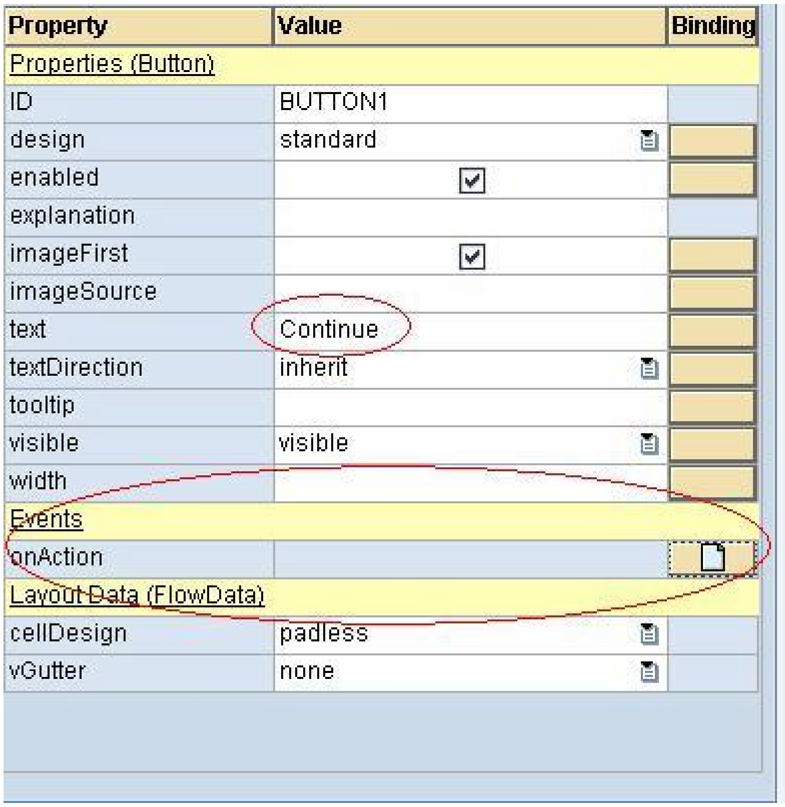


View MAIN

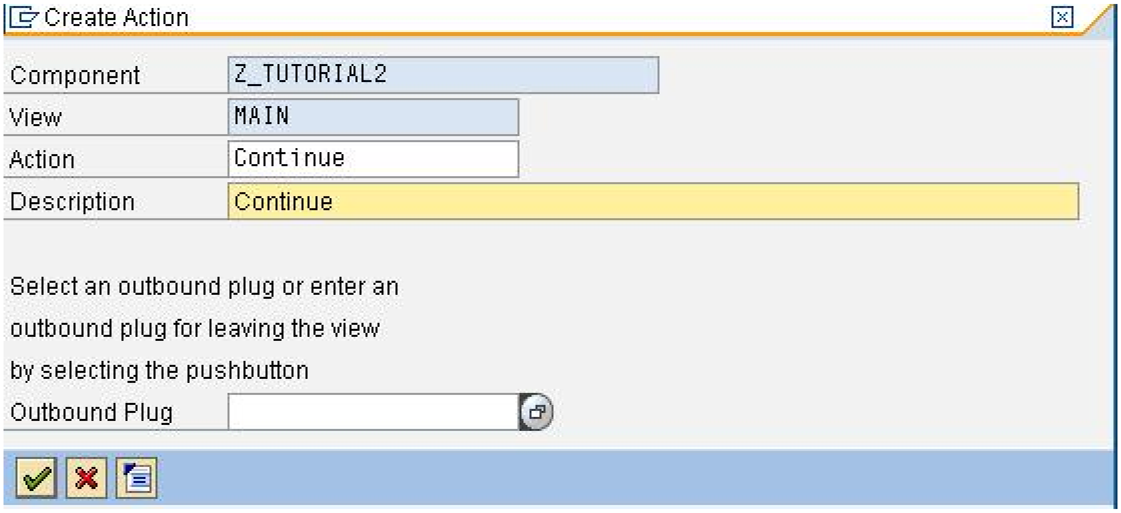
Context MAIN

- CONTEXT
  - FLIGHTS
    - CARRID
    - CONNID
    - FLDATE
    - PRICE
    - CURRENCY
    - PLANETYPE
    - SEATSMAX
    - SEATSOCC
    - PAYMENTSUM
    - SEATSMAX_B
    - SEATSOCC_B
    - SEATSMAX_F
    - SEATSOCC_F

Click on the Layout tab of the view. Add UI element of type ViewContainerUIElement, give the name as "View_Container". Add a button to the view, call it "BUTTON1", and create an Action called "CONTINUE" in the properties box of the Button.



Property	Value	Binding
Properties (Button)		
ID	BUTTON1	
design	standard	
enabled	☑	
explanation		
imageFirst	☑	
imageSource		
text	Continue	
textDirection	inherit	
tooltip		
visible	visible	
width		
Events		
onAction		
Layout Data (FlowData)		
cellDesign	padless	
vGutter	none	



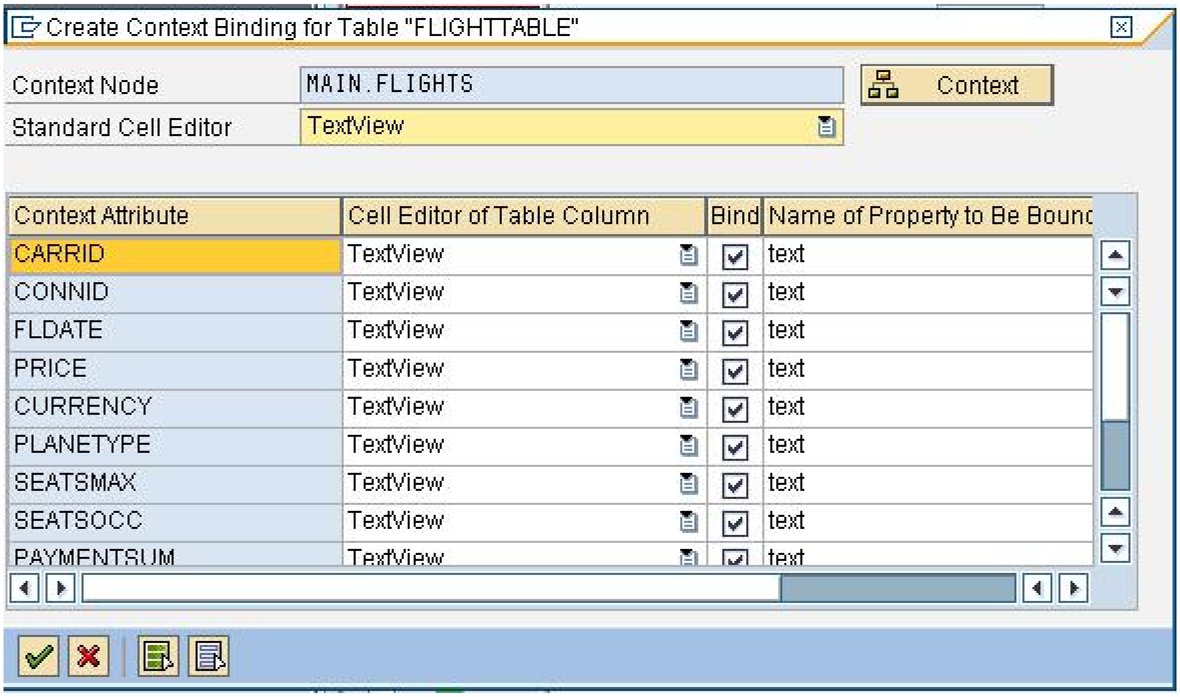
Create Action

Component	Z_TUTORIAL2
View	MAIN
Action	Continue
Description	Continue

Select an outbound plug or enter an outbound plug for leaving the view by selecting the pushbutton

Outbound Plug

Finally add a table to the layout, name it as "FLIGHTTABLE", define the datasource as the FLIGHTS node from the view controller. Bind the table to the view context by right clicking on the FLIGHTTABLE in the ROOTUIELEMENTCONTAINER. Select all, set the standard cell editor as TextView.



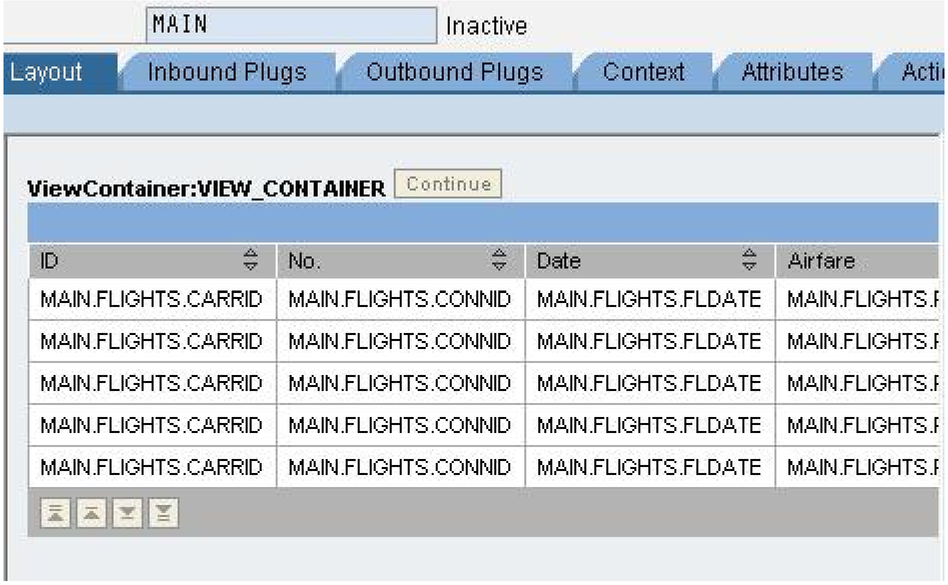
Create Context Binding for Table "FLIGHTTABLE"

Context Node: MAIN.FLIGHTS

Standard Cell Editor: TextView

Context Attribute	Cell Editor of Table Column	Bind	Name of Property to Be Bound
CARRID	TextView	☑	text
CONNID	TextView	☑	text
FLDATE	TextView	☑	text
PRICE	TextView	☑	text
CURRENCY	TextView	☑	text
PLANETYPE	TextView	☑	text
SEATSMAX	TextView	☑	text
SEATSOCC	TextView	☑	text
PAYMENTSUM	TextView	☑	text

The layout of the view should now look like this.



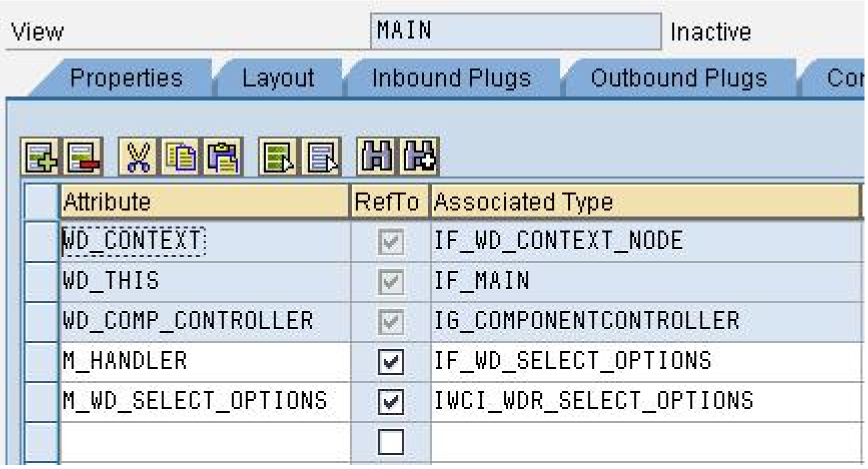
MAIN Inactive

ViewContainer:VIEW_CONTAINER

ID	No.	Date	Airfare
MAIN.FLIGHTS.CARRID	MAIN.FLIGHTS.CONNID	MAIN.FLIGHTS.FLDATE	MAIN.FLIGHTS.
MAIN.FLIGHTS.CARRID	MAIN.FLIGHTS.CONNID	MAIN.FLIGHTS.FLDATE	MAIN.FLIGHTS.
MAIN.FLIGHTS.CARRID	MAIN.FLIGHTS.CONNID	MAIN.FLIGHTS.FLDATE	MAIN.FLIGHTS.
MAIN.FLIGHTS.CARRID	MAIN.FLIGHTS.CONNID	MAIN.FLIGHTS.FLDATE	MAIN.FLIGHTS.
MAIN.FLIGHTS.CARRID	MAIN.FLIGHTS.CONNID	MAIN.FLIGHTS.FLDATE	MAIN.FLIGHTS.

Step 4 – Defining Attributes

Click on the Attributes tab of the view. Add the following attributes as seen here.



View MAIN Inactive

Attribute	RefTo	Associated Type
WD_CONTEXT	☑	IF_WD_CONTEXT_NODE
WD_THIS	☑	IF_MAIN
WD_COMP_CONTROLLER	☑	IG_COMPONENTCONTROLLER
M_HANDLER	☑	IF_WD_SELECT_OPTIONS
M_WD_SELECT_OPTIONS	☑	IWCI_WDR_SELECT_OPTIONS
	□	

Step 5 – Method Implementation

Click on the Methods tab of the view. Double click on the WDDOINIT method. Add the code as you see here:.

```
method WDDOINIT .

  data:
    lt_range_table       type ref to data,
    rt_range_table       type ref to data,
    read_only            type abap_bool,
    typename             type string.

  data:
    lr_componentcontroller type ref to ig_componentcontroller,
    l_ref_cmp_usage type ref to if_wd_component_usage.

* create the used component
  l_ref_cmp_usage = wd_this->wd_cpuse_select_options( ).
  if l_ref_cmp_usage->has_active_component( ) is initial.
    l_ref_cmp_usage->create_component( ).
  endif.

* get a pointer to the interface controller of the select options
*component
  wd_this->m_wd_select_options =
       wd_this->wd_cpifc_select_options( ).

* init the select screen
  wd_this->m_handler =
       wd_this->m_wd_select_options->init_selection_screen( ).

* create a range table that consists of this new data element
  lt_range_table =
    wd_this->m_handler->create_range_table(
         i_typename = 'S_CARR_ID' ).
```

```
* add a new field to the selection
  wd_this->m_handler->add_selection_field(
                 i_id = 'S_CARR_ID'
                 it_result = lt_range_table
                 i_read_only = read_only ).

* create a range table that consists of this new data element
  lt_range_table =
    wd_this->m_handler->create_range_table(
         i_typename = 'S_CONN_ID' ).

* add a new field to the selection
  wd_this->m_handler->add_selection_field(
                 i_id = 'S_CONN_ID'
                 it_result = lt_range_table
                 i_read_only = read_only ).

endmethod.
```

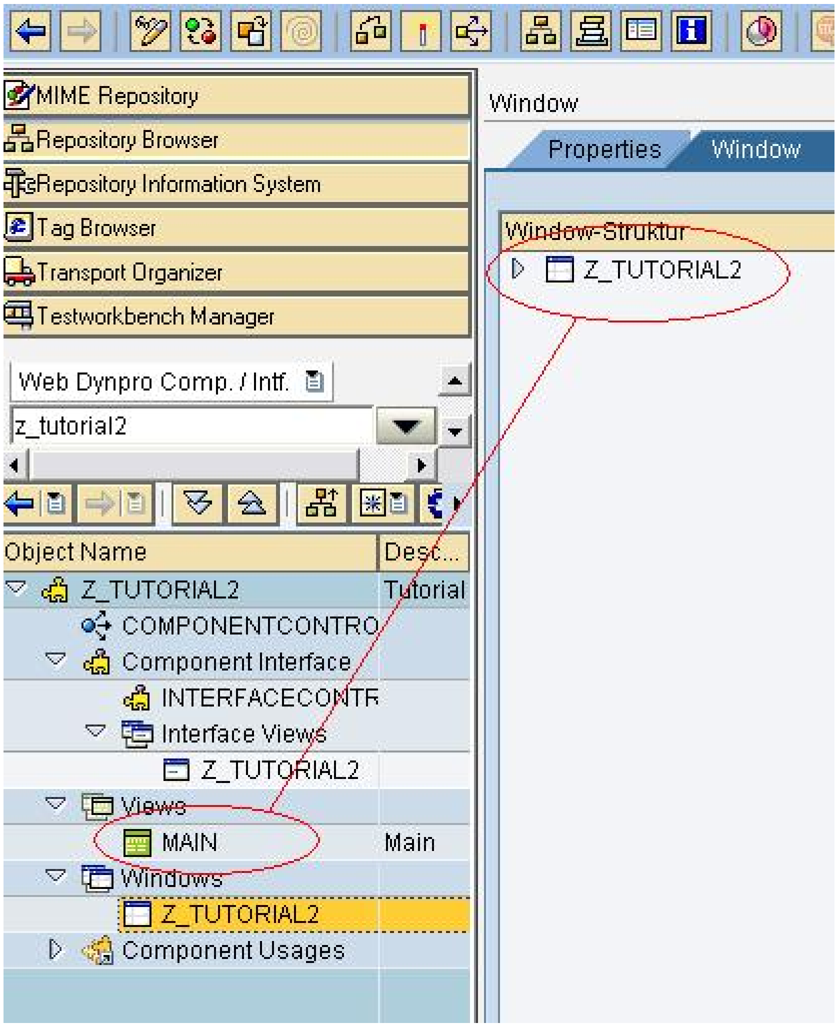
Click on the Methods List button. Double click on the ONACTIONCONTINUE method. Add the code as you see here.

```
method onactioncontinue .

  data: node_flights   type ref to if_wd_context_node.
  data: rt_carrid type ref to data.
  data: rt_connid type ref to data.
  data: isflight type table of sflight.
  data: wsflight type sflight.
  field-symbols: <fs_carrid> type table,
                 <fs_connid> type table.

* Retrieve the data from the select option
  rt_carrid = wd_this->m_handler->get_range_table_of_sel_field(
                           i_id = 'S_CARR_ID' ).
* Assign it to a field symbol
  assign rt_carrid->* to <fs_carrid>.

* Retrieve the data from the select option
  rt_connid = wd_this->m_handler->get_range_table_of_sel_field(
                           i_id = 'S_CONN_ID' ).
* Assign it to a field symbol
  assign rt_connid->* to <fs_connid>.

* Retrieve that data from the database.  Normally it is suggested to
* encapsulate the data retrieval in a separate class.
* For simplicity, the SELECT statement has been implemented here.
  clear isflight. refresh isflight.
  select * into corresponding fields of table isflight from sflight
          where carrid in <fs_carrid>
            and connid in <fs_connid>.

* Bind the data to the context
  node_flights = wd_context->get_child_node( name = `FLIGHTS` ).
  node_flights->bind_elements( isflight ).
```

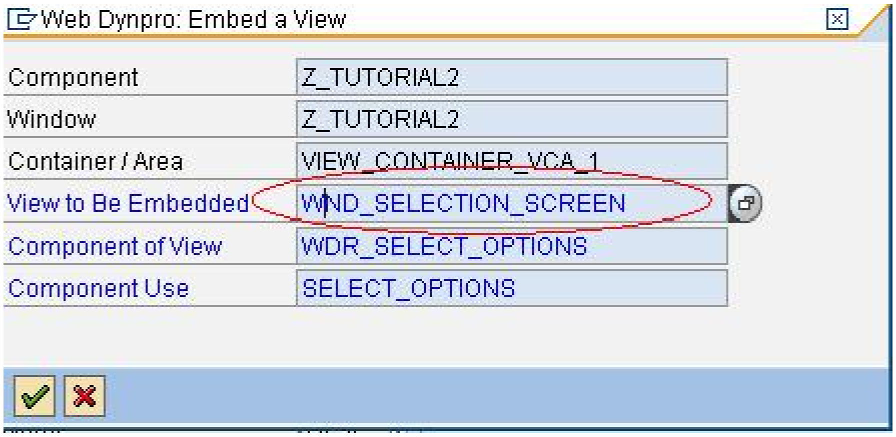
```
endmethod.
```

Step 6 – Embed View into Window

Double-click on the window under the Windows folder in the object tree to the left. Drag and drop the MAIN view to the Window.



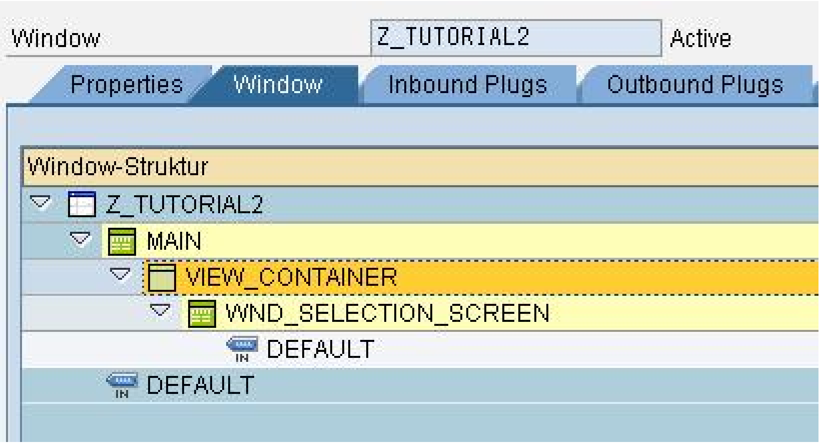
Expand the window, right click on VIEW_CONTAINER and select Embed View. In the dialog hit F4 on the "View to be embedded" Select the WND_SELECTION_SCREEN from the help.



Web Dynpro: Embed a View

Component	Z_TUTORIAL2
Window	Z_TUTORIAL2
Container / Area	VIEW_CONTAINER_VCA_1
View to Be Embedded	WND_SELECTION_SCREEN
Component of View	WDR_SELECT_OPTIONS
Component Use	SELECT_OPTIONS

The Window should now look like this.

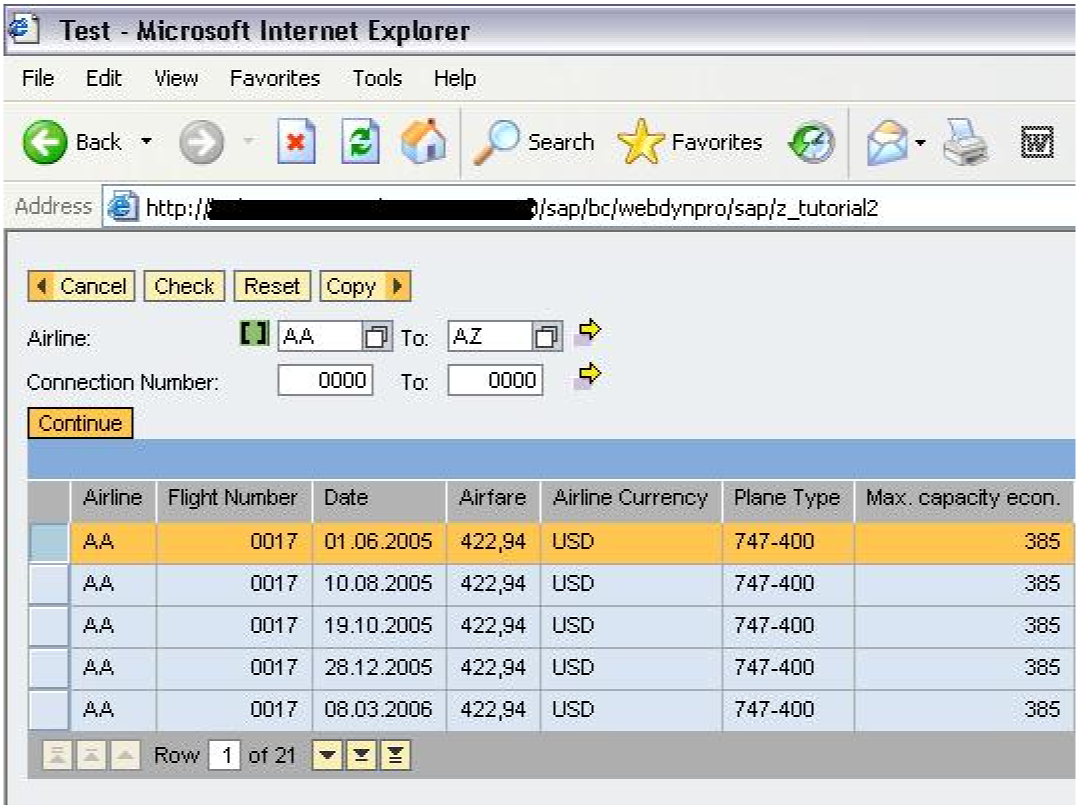


Window Z_TUTORIAL2 Active

```
Window-Struktur
▽ Z_TUTORIAL2
  ▽ MAIN
    ▽ VIEW_CONTAINER
      ▽ WND_SELECTION_SCREEN
          DEFAULT
    DEFAULT
```

Step 7 – Create the Application and Test

Finally, create the application and test it. Make sure that you save and activate the web dynpro component. When the browser opens, enter some values in your select-options and click continue. You will see the data in the table below. If you have no data in your Sneak Preview system, run program SAPBC_DATA_GENERATOR to generate the data for you.


Test - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back
Search
Favorites
Address
Cancel
Check
Reset
Copy
Continue

http://[redacted]/sap/bc/webdynpro/sap/z_tutorial2

Airline: AA To: AZ

Connection Number: 0000 To: 0000

Airline	Flight Number	Date	Airfare	Airline Currency	Plane Type	Max. capacity econ.
AA	0017	01.06.2005	422,94	USD	747-400	385
AA	0017	10.08.2005	422,94	USD	747-400	385
AA	0017	19.10.2005	422,94	USD	747-400	385
AA	0017	28.12.2005	422,94	USD	747-400	385
AA	0017	08.03.2006	422,94	USD	747-400	385

Row 1 of 21

Author Bio

Rich Heilman is an ABAP/J2EE Software Engineer/Analyst for Yorktowne Cabinetry, Inc. based in Red Lion, Pennsylvania, USA. He has a total of nine years experience in the IT industry. He has spent the past five years studying ABAP and Java.

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