Dynamic Business Graphics Creation Web Dynpro ABAP

Applies to:

Web Dynpro for ABAP, For more information, visit the Web Dynpro ABAP homepage.

Summary

Step by step Dynamic creation of the Web Dynpro ABAP UI element “Business Graphics”.

This includes dynamically creating the series and category.

The values to be plotted in the graph are also available only at runtime.

Author: Gayathri R

Company: SAP LABS India Pvt Ltd.

Created on: 21 July, 2009

Author Bio

Gayathri R is woking at SAP labs India pvt Ltd as a developer for 2 years.

Table of Contents

Dynamic Creation of Business Graphics

A basic understanding of the Business Graphic (BGR) UI element can be found at SAP Knowledge Warehouse.

Let us assume the following:

- BGR element is created in the rootuielement container of the view
- The Series source node for the BGR element is dynamically created
- Both the series and category for the BGR is dynamically fetched
-

To now create the BGR with the above assumptions the following steps can be followed:

1) Let us first create the node dynamically for the Series Source of the BGR.

Node name: NODE_DYN.

Here is a sample code snippet which is included in any method of the view:

```
  DATA: node_info type ref to if_wd_context_node_info,
      struct_type TYPE REF TO cl_abap_structdescr,
      table_type  type ref to cl_abap_tabledescr,
      comp_tab    TYPE cl_abap_structdescr=>component_table,
      comp        LIKE LINE OF comp_tab.

  comp-name = 'SERIES'.
  comp-type ?= cl_abap_datadescr=>describe_by_name( 'CHAR' ).
  APPEND comp TO comp_tab.

  comp-name = 'CATEGORY'.
  comp-type ?= cl_abap_datadescr=>describe_by_name( 'I' ).
  APPEND comp TO comp_tab.
* now this structure contains the required fields
  struct_type = cl_abap_structdescr=>create( comp_tab ).

*  * now the nodeinfo is created only first time
  node_info = wd_context->get_node_info( ).
  node_info = node_info->add_new_child_node(
    name                          = 'NODE_DYN'
    IS_MANDATORY                  = ABAP_false
    IS_MULTIPLE                   = ABAP_true
    STATIC_ELEMENT_RTTI           = struct_type
    IS_STATIC                     = ABAP_false
       ).
```

Now this node 'NODE_DYN' will be used while creating the BGR as the Series Source.

Write code to fill the node 'NODE_DYN' with values.

2) In the WDDOMODIFYVIEW the BGR element will be created:

The class that will be used for this is cl_wd_business_graphics. The chart type chosen is "lines".

Here is a sample code snippet which is included in the WDDOMODIFYVIEW of the view:

```
  DATA:lr_graph TYPE REF TO cl_wd_business_graphics,
       lr_cat TYPE REF TO cl_wd_category,
       lr_series TYPE REF TO cl_wd_simple_series,
       lr_container TYPE REF TO  cl_wd_uielement_container,
       lr_flow TYPE REF TO cl_wd_flow_data.

 lr_container ?= view->get_element( 'ROOTUIELEMENTCONTAINER' ).

 lr_graph = cl_wd_business_graphics=>new_business_graphics(
             bind_series_source   = 'NODE_DYN'
             chart_type           = cl_wd_business_graphics=>e_chart_type-
lines
             height               = 340
             width                = 750
*              BIND_TOOLTIP         = 'GRAPH.TT'
             id                   = 'GRAPH'             ).
    lr_flow = cl_wd_flow_data=>new_flow_data( element = lr_graph ).


    lr_container->add_child( lr_graph ) .
    wd_this->value_cs ?= lr_graph.

  wd_this->mr_view ?= view.
```

The BGR, a line type is now created with ID: ‘GRAPH’ and its reference is stored in the attribute, value_cs.

Dynamic Series Creation

The attribute ‘SERIES’ of the node ‘NODE_DYN’ will be used as the binding source for the simple series.

This series creation is done in a new method of the View.

Here is the code snippet which is included in any method of the view:

```
DATA: lr_bgr_ss TYPE REF TO cl_wd_simple_series.

  lr_bgr_ss   = cl_wd_simple_series=>new_simple_series(
     bind_value   = ‘NODE_DYN.SERIES’
     label        =  ‘Series_1’
     view         = wd_this->mr_view
      ).
```

Dynamic Category Creation

The attribute ‘CATEGORY’ of the node ‘NODE_DYN’ will be used as the binding source for the category of the BGR.

Here is the code snippet which is included in any method of the view:

```
    DATA: lr_bgr_cs TYPE REF TO cl_wd_category.

  lr_bgr_cs  = cl_wd_category=>new_category(
                            view          = wd_this->mr_view
                            bind_description = 'NODE_DYN.CATEGORY').


    wd_this->value_cs->set_category( lr_bgr_cs ).
```

Note: The tooltips can additionally be added if needed.

Related Content

For more information, visit the Web Dynpro ABAP homepage.

For more information, visit the Web Dynpro Java homepage.

Copyright