Reading and Writing Data from Web Dynpro for ABAP View Context

**Applies to:**
Web Dynpro ABAP. For more information, visit the [ABAP homepage](http).

**Summary**
This tutorial explains how to read and write data to and from a views context. It deals with both tables as well as variables.

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Table of Contents

Requirement ................................................................................................................................. 3
Assumptions ................................................................................................................................. 3
Code.............................................................................................................................................. 5
  Scenario 1: Code to obtain values from the context node to variable ........................................ 5
  Scenario 2: Code to write values from variable to context node ............................................... 5
  Scenario 3: Code to obtain values from the context node to local internal table ...................... 5
  Scenario 4: Code to write values from local internal table to context node ............................... 6
Disclaimer and Liability Notice .................................................................................................... 7
Requirement
The heart of Web Dynpro ABAP is data exchange between context and the UI.
This can be in the form of a table or it can be in the form of a variable etc.

Assumptions
Let us assume that we have a context for the Component controller as given below.
Let us also assume that this context is mapped to the view ‘MAIN’ as shown below

Here, we observe that the nodes EID and ERROR_MESSAGE are mapped directly to the view context and the Node PROJECTS is independent and not mapped to component controller context.

Here, the Node EID and ERROR_MESSAGE have a cardinality of 1..1 while the node PROJECTS has a cardinality of 1..n
**Code**

**Scenario 1: Code to obtain values from the context node to variable**

```abap
DATA lo_nd_eid TYPE REF TO if_wd_context_node.
DATA lo_el_eid TYPE REF TO if_wd_context_element.
DATA ls_eid TYPE wd_this->element_eid.
DATA lv_id LIKE ls_eid->id.
lo_nd_eid = wd_context->get_child_node( name = 'EID' ).
lo_el_eid = lo_nd_eid->get_element( ).
lo_el_eid->get_attribute( 
  EXPORTING
  name = 'ID'
  IMPORTING
  value = lv_id ).
```

**Note:** This code gets the value within the attribute ID of the node EID and places it in the local variable lv_id.

**Scenario 2: Code to write values from variable to context node**

```abap
DATA lo_nd_error_message TYPE REF TO if_wd_context_node.
DATA lo_el_error_message TYPE REF TO if_wd_context_element.
DATA ls_error_message TYPE wd_this->element_error_message.
DATA lv_text LIKE ls_error_message->text.
lo_nd_error_message = wd_context->get_child_node( name = 'ERROR_MESSAGE' ).
lo_el_error_message = lo_nd_error_message->get_element( ).
lo_el_error_message->set_attribute( 
  EXPORTING
  name = 'TEXT'
  value = lv_text ).
```

**Note:** This code changes the value within the attribute TEXT of the node ERROR_MESSAGE from the value in the local variable lv_text.

**Scenario 3: Code to obtain values from the context node to local internal table**

```abap
DATA lo_nd_projects TYPE REF TO if_wd_context_node.
DATA lo_el_projects TYPE REF TO if_wd_context_element.
DATA ls_projects TYPE wd_this->elements_projects.
DATA wa_projects TYPE wd_this->element_projects.

lo_nd_projects = wd_context->get_child_node( name = wd_this->wdctx_projects ).
lo_el_projects = lo_nd_projects->get_element( ).
CALL METHOD lo_nd_projects->get_static_attributes_table 
  IMPORTING
  table = ls_projects.
```

**Note:** This code gets the internal table within the context and copies it into the internal table ls_projects.

If my context node is named Node1, then I can declare an internal table with the same type as the that of the node by declaring it of type wd_this->elements_node1. And a work area of the same type can be declared similarly by making it of type wd_this->element_node1.
Scenario 4: Code to write values from local internal table to context node

```abap
DATA wa type dpr_ts_Favourites_d.
DATA lo_nd_projects TYPE REF TO if_wd_context_node.
DATA lo_el_projects TYPE REF TO if_wd_context_element.
DATA it_table type wd_this->elements_projects.
DATA wa_table type wd_this->element_projects.
lo_nd_projects = wd_context->get_child_node( name = wd_this->wdctx_projects ).
lo_el_projects = lo_nd_projects->get_element( ).
lo_nd_projects->bind_table( it_table ).
```

**Note:** This code binds the table `it_table` to the context node ‘PROEJCTS’. It is important to note that the type of the internal table and the context must be the same. It is ensured as mentioned in the below note.

If my context node is named `Node1`, then I can declare an internal table with the same type as that of the node by declaring it of type `wd_this->elements_node1`. And a work area of the same type can be declared similarly by making it of type `wd_this->element_node1`.

In the above code sample, since our node is named Projects, the internal table and work area are declared as `wd_this->elements_projects` and `wd_this->element_projects` respectively.
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