Creating Custom Business Object Repository (BOR) Objects, Methods and Attributes

Applies to:
SAP R3/ISU/CRM- ABAP side

Summary
This article explains how to create a custom Business Object Repository Object and Methods and attributes.

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What is a Business Object Repository (BOR) object?

A business object is a problem-domain entity that you model in the SAP system, such as SalesOrder, BillingDocument and Employee. The BOR stores all the objects in the R/3 system. The repository is a group of all the objects in the R/3 system.

How to create a Custom BOR Object?

The following steps should be performed in order to create a custom BOR object:

**Step 1:** Copy a standard BOR object or create a new one using transaction SWO1 as shown in the Following figure.

![Business Object Builder: Initial Screen](image)

**Figure 1: Business Object Builder: Initial screen**
Your Custom BOR object is created. Now you need to create Methods inside it.

How to create a custom Method?

Perform the following steps to create a custom method:

**Step 2:** Create a custom method using the create option.
Step 3: Create without FM template as shown below:

**Change Object Type ZMOVEIO**

<table>
<thead>
<tr>
<th>Interfaces</th>
<th>Key Fields</th>
<th>Attributes</th>
<th>Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- `custom_moveinout.ExistenceCheck`
- `custom_moveinout.Display`
- `custom_moveinout.zcsf002` (Update status for Selective Metering - Reverse)
- `custom_moveinout.zcsf001` (FK for printing VAT questionnaire)
- `custom_moveinout.zcsf004` (method to call t-code ZCORIT)
- `custom_moveinout.zcsf005` (Method for transfer items)
- `custom_moveinout.ChangeRateType` (Method for change rate type during Move-out)
- `custom_moveinout.CreateMoveIn` (Move-in processing)
- `custom_moveinout.CreateMoveOut` (Create move-in)
- `custom_moveinout.CreateForPartner` (Business partner move-in/out in supply area)
- `custom_moveinout.PremisesEnvironment` (Move-in/out for premise)
- `custom_moveinoutPartner.Environment` (Partner move-in/out data)

**Figure 3: Create custom method**
Figure 4: Create Method with function Module as template

Step 4: Give Method-name, Name and Description.

Figure 5: Create Method- general tab Create Method- general tab

Step 5: Click on the 'ABAP' tab and attach a FM or BAPI, whichever is applicable.

Figure 6: Create Method- ABAP tab
Step 6: Create the FM or BAPI individually (using transaction SE37) and release the FM or BAPI, before attaching it to the method.

Step 7: Create the parameters (Import and Export) with options (mandatory/optional) with necessary ABAP dictionary field references as below:

![Create Parameters for the Method](image1)

![Create parameters with ABAP dictionary field proposals](image2)
Mention the type of parameter and options for it as shown:

![Figure 9: Define parameters for the method](image)

The parameters are created as below:

![Figure 10: Parameters created for the method](image)

**Step 8:** Create the program for the method generated as below:

Click on the 'Program' tab.
The code will look like as below (this is auto-generated):

```
custom_moveinout ExistenceCheck
custom_moveinout Display
custom_moveinout zsf052  Update status for Selective Notoring - Reverse
custom_moveinout zsf061  PM for printing VAT questionnaire
custom_moveinout zsf064  Method to call t-code ZOBELTR
custom_moveinout zsf065  Method for transfer items
custom_moveinout zsf066  Method for change rate type during Move-Out
custom_moveinout Create
custom_moveinout CreateMovein
custom_moveinout CreateMovein1
custom_moveinout CreateMoveOut
custom_moveinout CreateForPartner
custom_moveinout CreateForPremise
custom_moveinout PremisesEnvironment
custom_moveinout PartnerEnvironment
```
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You just need to pass the parameters as declared before to the called function as shown above.

**Step 10:** First implement and then Release the Object type component as shown below:

![Figure 13: Implement and release the Method](image-url)
How to Create a Custom Attribute?

i) Click on ‘Attributes’ node and after expanding, click on ‘create’ button.

Figure 14: Create Custom Attribute

ii) Create attribute without ABAP Dictionary field proposals as shown below:

Figure 15: Create attribute without ABAP dictionary field proposal
Similar to method, generate the program by clicking on ‘Program’ button. It will automatically generate the code. You can additionally put your own code as below:

**Sample Code Block for Attribute**

```plaintext
GET_TABLE_PROPERTY ADR6.
DATA SUBRC LIKE SY-SUBRC.
* Fill TABLES ADR6 to enable Object Manager Access to Table Properties
  PERFORM SELECT_TABLE_ADR6 USING SUBRC.
  IF SUBRC NE 0.
    EXIT_OBJECT_NOT_FOUND.
  ENDIF.
END_PROPERTY.

* Use Form also for other(virtual) Properties to fill TABLES ADR6
FORM SELECT_TABLE_ADR6 USING SUBRC LIKE SY-SUBRC.
* Select single * from ADR6, if OBJECT-_ADR6 is initial
  IF OBJECT-_ADR6-CLIENT IS INITIAL
    AND OBJECT-_ADR6-ADDRNUMBER IS INITIAL
    AND OBJECT-_ADR6-PERSNUMBER IS INITIAL
    AND OBJECT-_ADR6-DATE_FROM IS INITIAL
    AND OBJECT-_ADR6-CONSNUMBER IS INITIAL.
  
data: l_adrnb type fkkvkp-adrnb,
    l_ADDRNUMBER type but020-ADDRNUMBER.
  select single adrnbr
    from fkkvkp
    into l_adrnb
    where vkont = object-key-contractaccount.
  
  if l_adrnb is initial.
    select single ADDRNUMBER
      from but020
      into l_ADDRNUMBER
      where partner = object-key-partner
        and XDFADR = 'X'.
    l_adrnb = l_ADDRNUMBER.
  endif.

SELECT SINGLE * FROM ADR6 CLIENT SPECIFIED
  WHERE CLIENT = SY-MANDT
  AND ADDRNUMBER = l_adrnb
  AND FLGDEUFL = 'X'.
  SUBRC = SY-SUBRC.
  IF SUBRC NE 0. EXIT. ENDIF.
  OBJECT-_ADR6 = ADR6.
ELSE.
  SUBRC = 0.
  ADR6 = OBJECT-_ADR6.
ENDIF.
ENDFORM.
```

The Custom attribute is now created and needs to be implemented and released as method.
Sample Code Block for Method

This is an example of a code sample:

```
begin_method zcsf001 changing container.
  data: l_zvat_print like zvat_print,
       l_return type bapireturn,
       t_zvat_printdata type standard table of zvat_printdata,
       businesspartner type zvat_print-bu_partner,
       contract type zvat_print-cont_num.
  swc_get_element container 'BusinessPartner' businesspartner.
  swc_get_element container 'Contract' contract.
  l_zvat_print-bu_partner = businesspartner.
  l_zvat_print-cont_num = contract.
  call function 'ZBAPI_CS_VATPRINT'
    exporting
      vat_print = l_zvat_print
    importing
      return = l_return
    tables
      t_zvat_printdata = t_zvat_printdata
    exceptions
      others = 01.
  case sy-subrc.
    when 0. " OK
    when others. " to be implemented
  endcase.
end_method.
```

Step 11: Finally release the Object as well as shown below:
Figure 16: Release and Generate the Object

The custom BOR object type is successfully created and ready to be tested!
Related Content

Please include at least three references to SDN documents or web pages.
http://www.erpgenie.com/abap/bor.htm
http://help.sap.com