

Annotation of Objects

SCENARIO: STICKY NOTE FUNCTIONALITY TO ANNOTATE PRODUCT FEATURES ON INNOVATION WHITEBOARD

Scenario Description



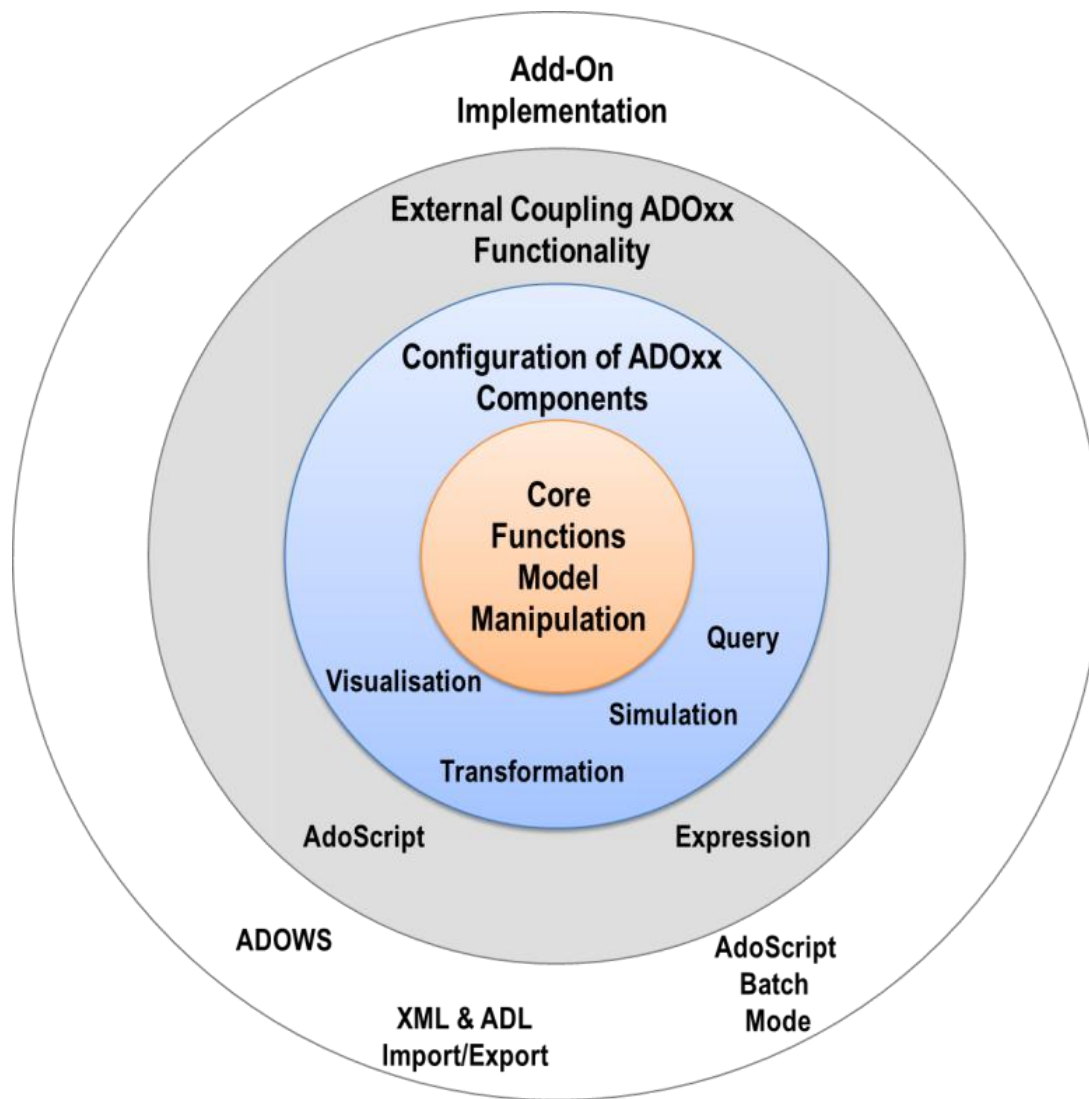
CASE:

Sticky note functionality to annotate product features on innovation whiteboard.

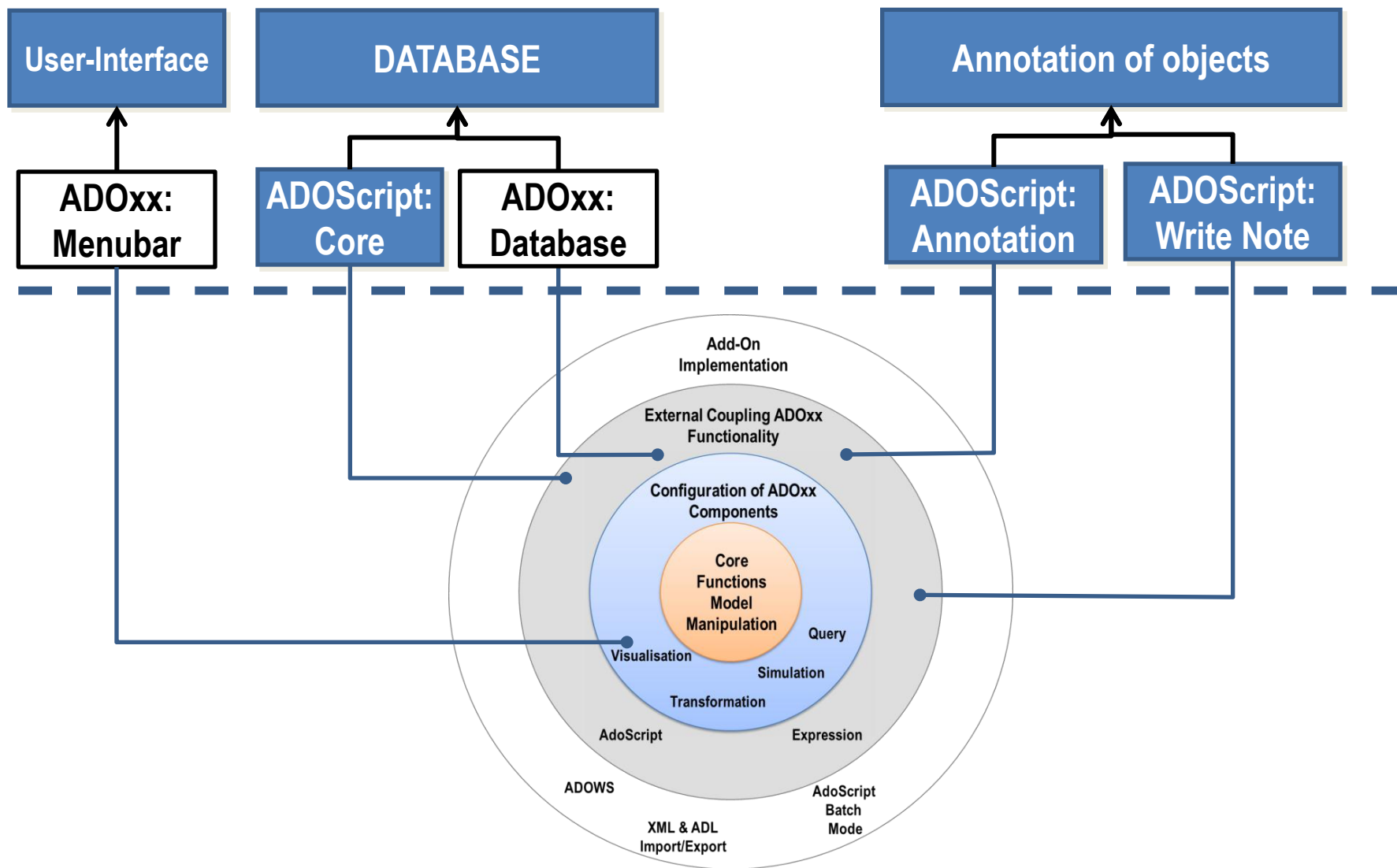
GOAL:

Demonstrate how to implement an annotation functionality to annotate modeling objects with comments, feedbacks, and new ideas.

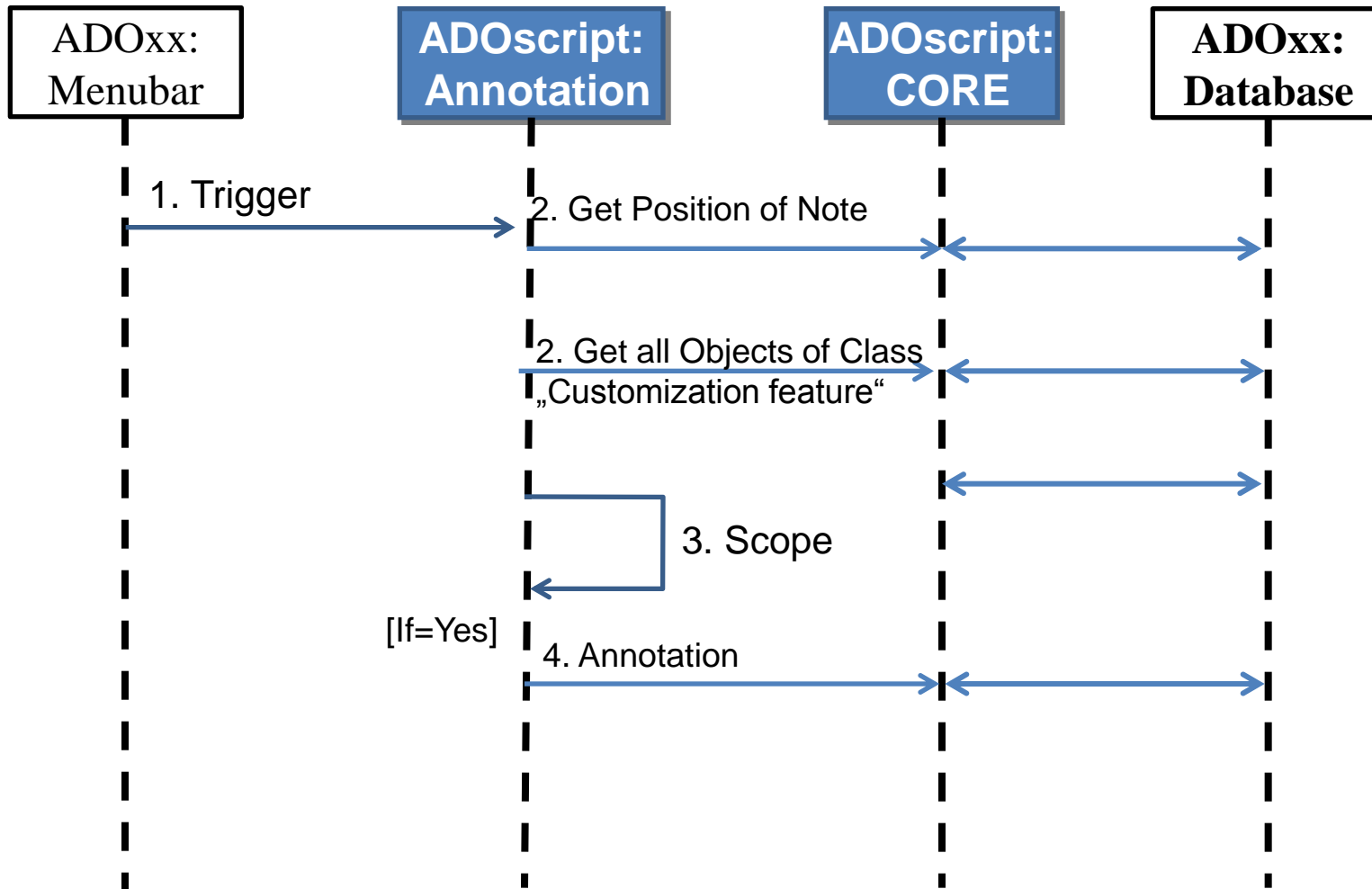
ADOxx Functionality on Meta Level



Mapping ADOxx Functionality



ADOxx Realisation Approach





1. Modelling Language Extensions to enable this algorithms

1. New class “Product”, “Customization Feature”, and “Note”.
2. New relation class “inside”

2. Configure ADOxx




1. Configure Menubar


3. Implement Algorithm with ADOscript

1. ADOscript User Interface
2. Query the position(*) of class “Note” with ADOscript
3. Get an object of class “Customization Feature” at that position(*).
4. Annotate “Note”-object to “Customization Feature”-object.

Used ADOxx Functionality: Implementing an Algorithm



Introduction	
Setup of Implementation Environment	
Modelling Language Implementation	
Classes	
Relations	
Class Attributes and Attributes	
GRAPHREP	
ATTRREP	
CLASS Cardinality	
CONVERSION	
Model Pointer	
Attribute Facets	
Model Types	

Mechanisms & Algorithms Implementation	
Core Functions for Model Manipulation	
Database	
Visualisation	
Query	
Transformation	
Configuration of ADOxx Components	
Visualisation	
Query	
External Coupling ADOxx Functionality	
 ADOscript Triggers	
 ADOscript Language Constructs	
Visualisation ADOscript	
Visualisation Expression	
Query ADOscript	
Transformation ADOscript	
ADD-ON Implementation	
ADOxx Web-Service	
XML / ADL Import – Export	
ADOscriptBatch Mode	

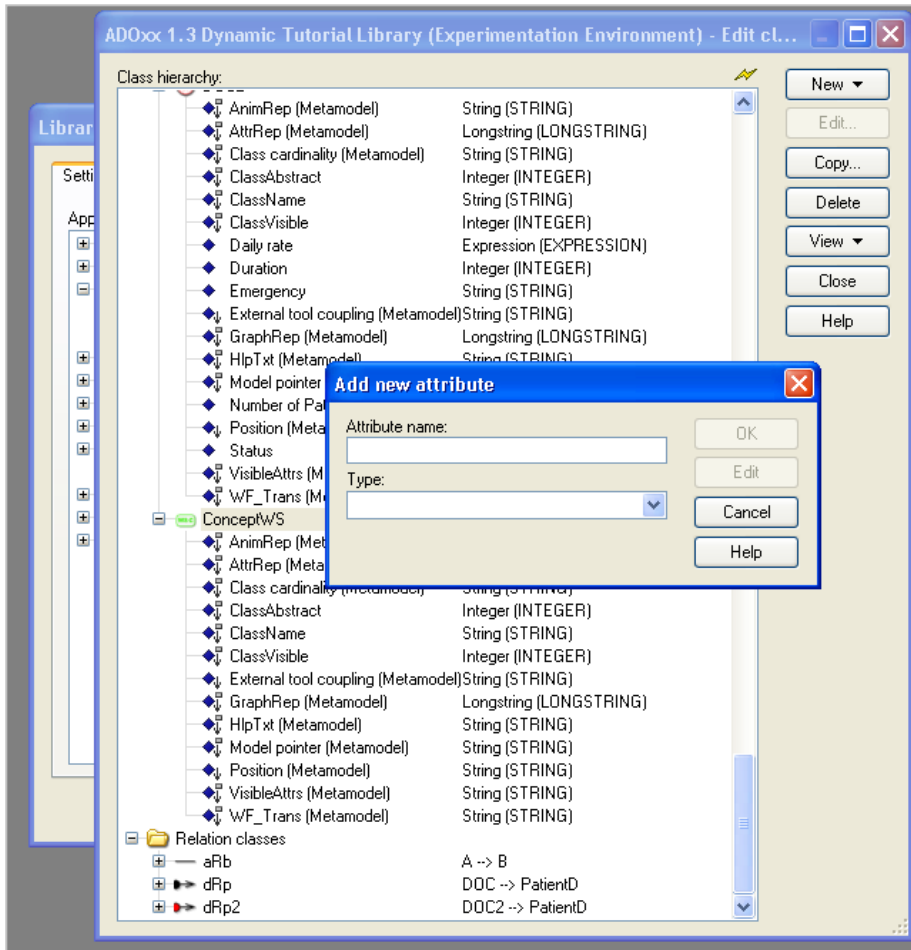


HANDS-ON

Annotation of Objects

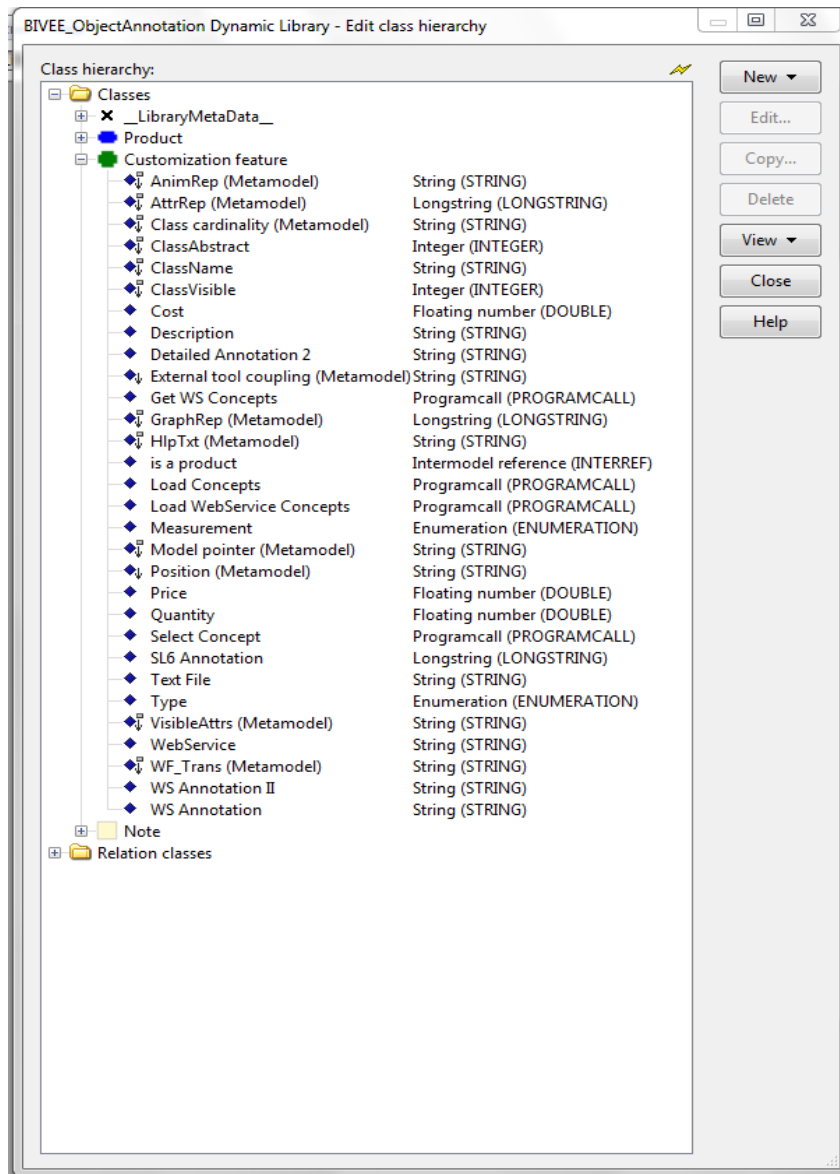
**SCENARIO: STICKY NOTE FUNCTIONALITY
TO ANNOTATE PRODUCT FEATURES ON
INNOVATION WHITEBOARD**

Definition of Modelling Language on ADOxx



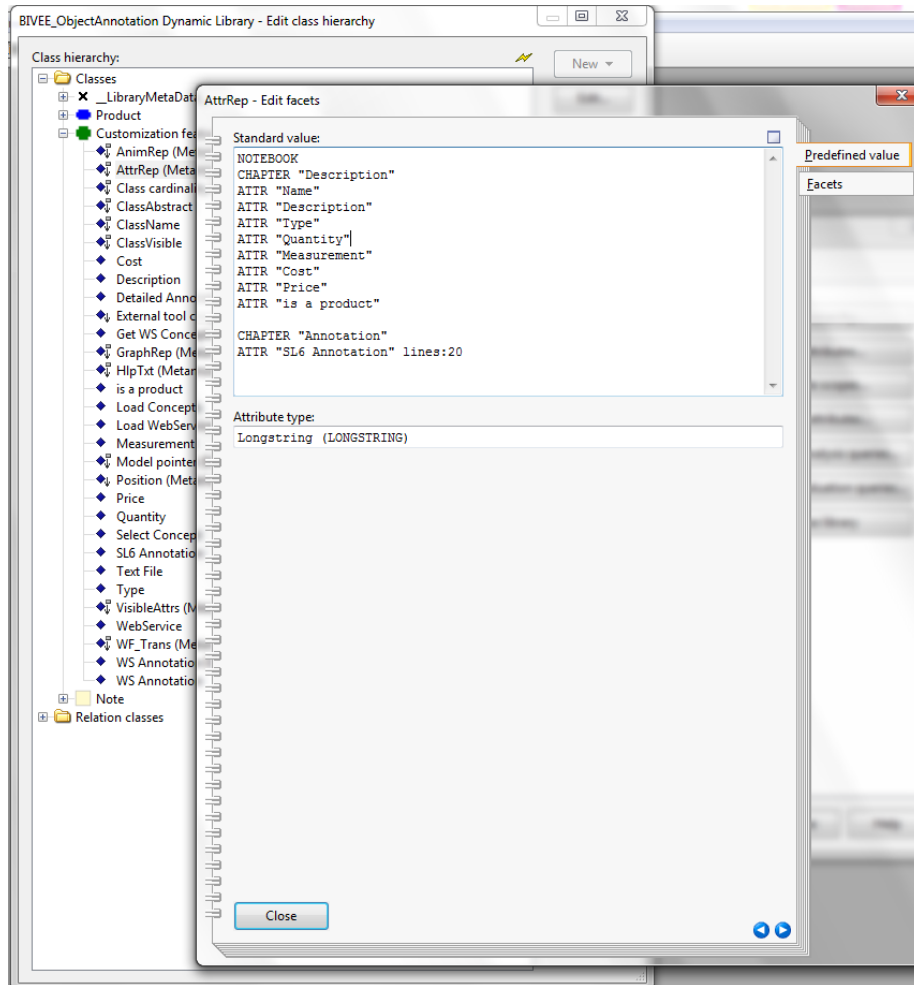
1. For Class "Customization feature"
2. Select New Attribute
3. Create following Attributes:
 1. Name (STRING)
 2. Description (STRING)
 3. Type (ENUMERATION)
 4. Quantity (DOUBLE)
 5. Measurement (ENUMERATION)
 6. Cost (DOUBLE)
 7. Price (DOUBLE)
 8. Is a product (INTERREF)
 9. SL6 Annotation (STRING)

Definition of Modelling Language on ADOxx



1. For Class “Customization Feature”
2. Select New Attribute
3. Create following Attributes:
 1. SL6 Annotation of type LONGSTRING

Definition of Modelling Language on ADOxx

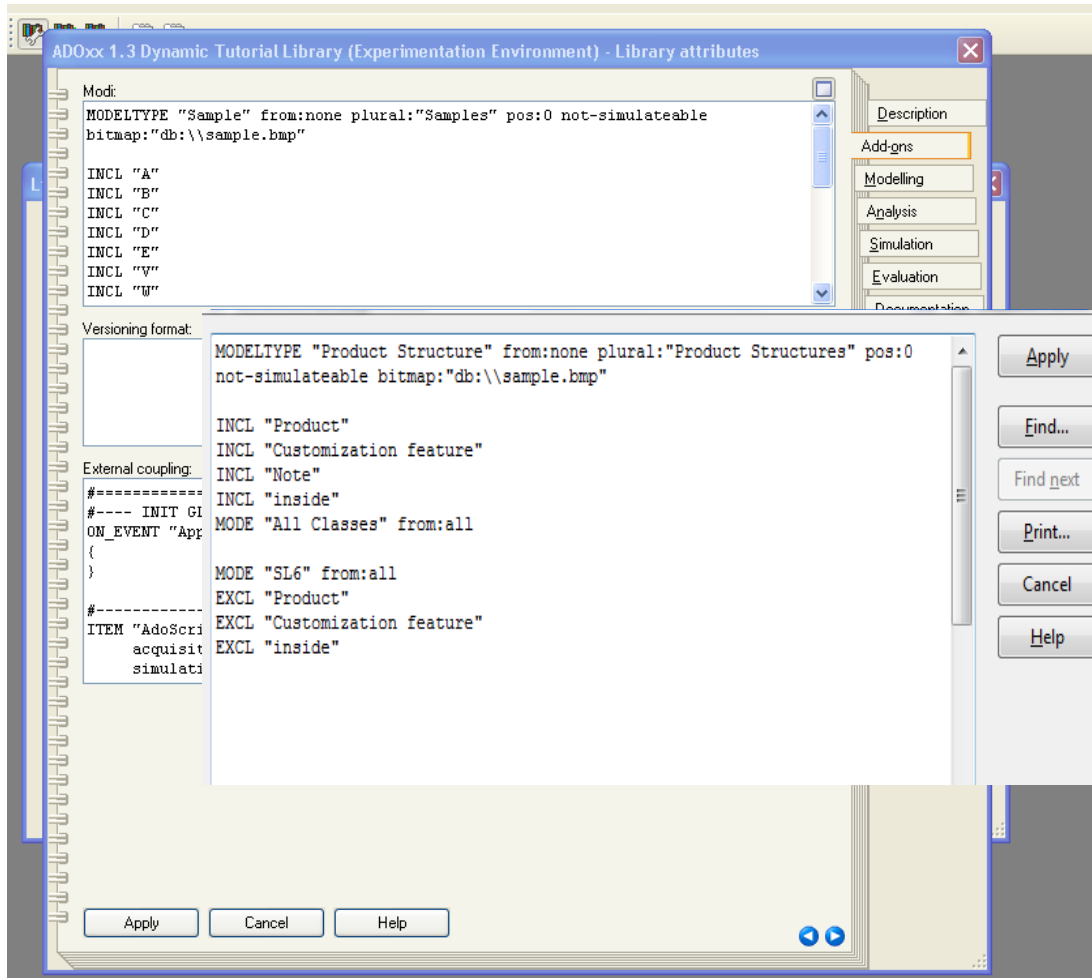


1. Select AttRep Attribute of created classes
2. Write AttRep code to make created attributes visible in the Notebook:

```
NOTEBOOK  
CHAPTER "Description"  
ATTR "Name"  
ATTR "Description"  
ATTR "Type"  
ATTR "Quantity"  
ATTR "Measurement"  
ATTR "Cost"  
ATTR "Price"  
ATTR "is a product"
```

```
CHAPTER "Annotation"  
ATTR "SL6 Annotation" lines:20
```

Definition of Modelling Language on ADOxx

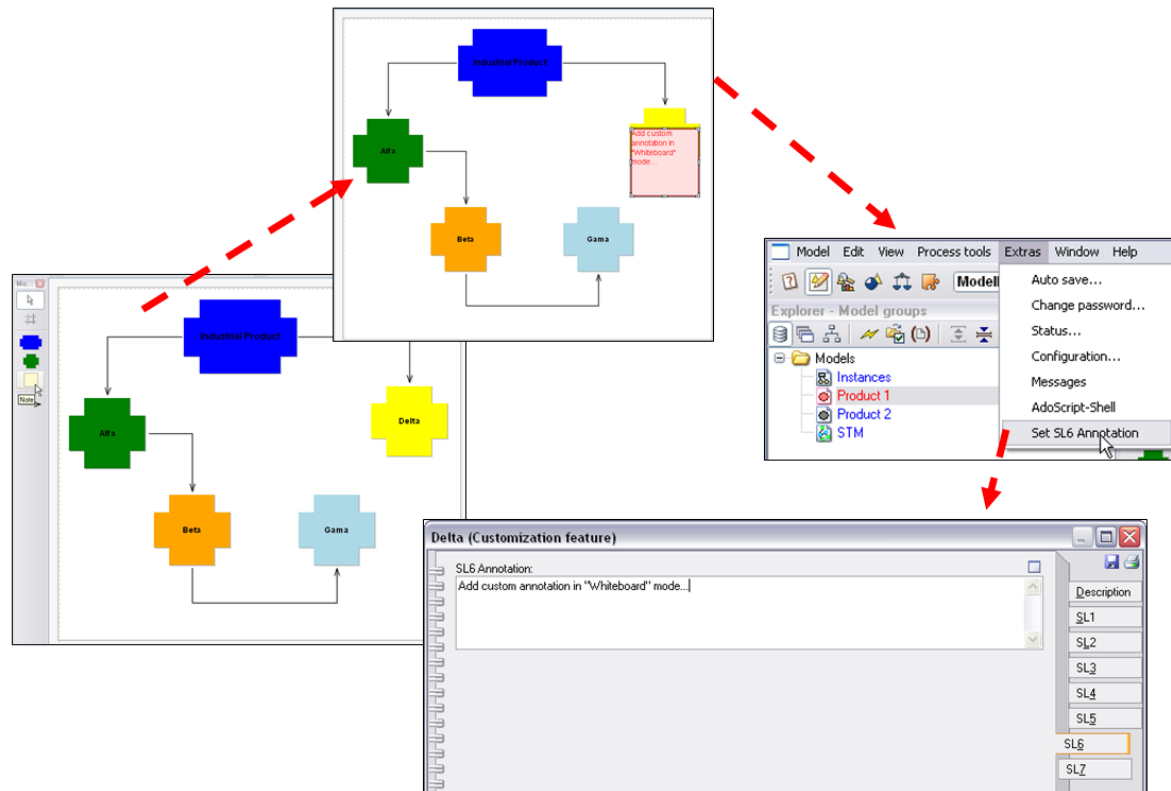


1. Select Library attributes
2. Click on tab Add-ons
3. Expand the “Modi”
4. Write the Model Type definition Code for “Product Structure”
 - MODELTYPE "Product Structure" from:none plural:"Product Structures" pos:0 not-simulateable bitmap:"db:\\sample.bmp" INCL "Product" INCL "Customization feature" INCL "Note" INCL "inside" MODE "All Classes" from:all MODE "SL6" from:all EXCL "Product" EXCL "Customization feature" EXCL "inside"

Graphical Annotation within Model (Whiteboard): Scenario



This scenario provides a “whiteboard” functionality to annotate a desired modelling object with previously non existing concepts by using an object that functions as a post-it on a whiteboard.



Graphical Annotation within Model (Whiteboard): Sript (1/3)



```
#-----  
ITEM "Set SL6 Annotation"  
    acquisition:"Extras" modeling:"Extras" analysis:"Extras"  
    simulation:"Extras" evaluation:"Extras" importexport:"Extras"  
#-----  
CC "Modeling" GET_ACT_MODEL  
CC "Core" GET_ALL_OBJS modelid: (modelid)  
SET str_objids: (objids)  
SET id_noteid: (-1)  
FOR id_objectid in: (str_objids)  
{  
    CC "Core" GET_CLASS_NAME classid: (VAL(id_objectid))  
    IF (classname = "Note")  
    {  
        SET id_noteid: (VAL(id_objectid))  
        CC "Core" GET_ATTR_VAL objid: (id_noteid) attrname: "Annotated"  
        IF ( (val) = "no")  
        {  
            CC "Core" GET_CLASS_ID objid: (id_noteid)  
            CC "Core" GET_ATTR_ID classid: (classid) attrname: "Position"  
            CC "Core" GET_ATTR_VAL objid: (id_noteid) attrid: (attrid)  
            SET str_notePosition: (val)  
            SET n_xnote:0  
            GET_PARAM_VAL main_string:(str_notePosition) idx_param:1 param_val:n_xnote  
            SET n_ynote:0  
            GET_PARAM_VAL main_string:(str_notePosition) idx_param:2 param_val:n_ynote  
            SET n_wnote:0  
            GET_PARAM_VAL main_string:(str_notePosition) idx_param:3 param_val:n_wnote  
            SET n_hnote:0  
            GET_PARAM_VAL main_string:(str_notePosition) idx_param:4 param_val:n_hnote
```

Graphical Annotation within Model (Whiteboard): Script (2/3)



```
SET n_cxnote: (n_xnote + n_wnote/2)
SET n_cynote: (n_ynote + n_hnote/2)
SET id_newobjid: (-1)
FOR id_objectid2 in: (str_objids)
{
  CC "Core" GET_CLASS_ID objid: (VAL(id_objectid2))
  CC "Core" GET_CLASS_NAME classid: (classid)
  IF (classname = "Customization feature")
  {
    CC "Core" GET_CLASS_ID objid: (VAL(id_objectid2))
    CC "Core" GET_ATTR_ID classid: (classid) attrname: "Position"
    CC "Core" GET_ATTR_VAL objid: (VAL(id_objectid2)) attrid: (attrid)
    SET str_objPosition: (val)
    SET n_xobj:0
    GET_PARAM_VAL main_string:(str_objPosition) idx_param:1 param_val:n_xobj
    SET n_yobj:0
    GET_PARAM_VAL main_string:(str_objPosition) idx_param:2 param_val:n_yobj
    SET n_wobj:0
    GET_PARAM_VAL main_string:(str_objPosition) idx_param:3 param_val:n_wobj
    SET n_hobj:0
    GET_PARAM_VAL main_string:(str_objPosition) idx_param:4 param_val:n_hobj
    IF ((n_cxnote > n_xobj - n_wobj/2) AND (n_cxnote < (n_xobj + n_wobj/2)) AND (n_cynote >
n_yobj - n_hobj/2) AND (n_cynote < (n_yobj + n_hobj/2)))
    {
      SET id_newobjid: (VAL(id_objectid2))
      CC "Core" GET_CLASS_ID objid: (id_newobjid)
      CC "Core" GET_CLASS_NAME classid: (classid)
      CC "Core" GET_ATTR_VAL objid: (id_noteid) attrname:"Note"
      SET str_noteValue: (val)
```




Further Questions?

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