Cooperative Attribute-Expression

SCENARIO:

Configure a Cooperative Attribute as Type of Expression
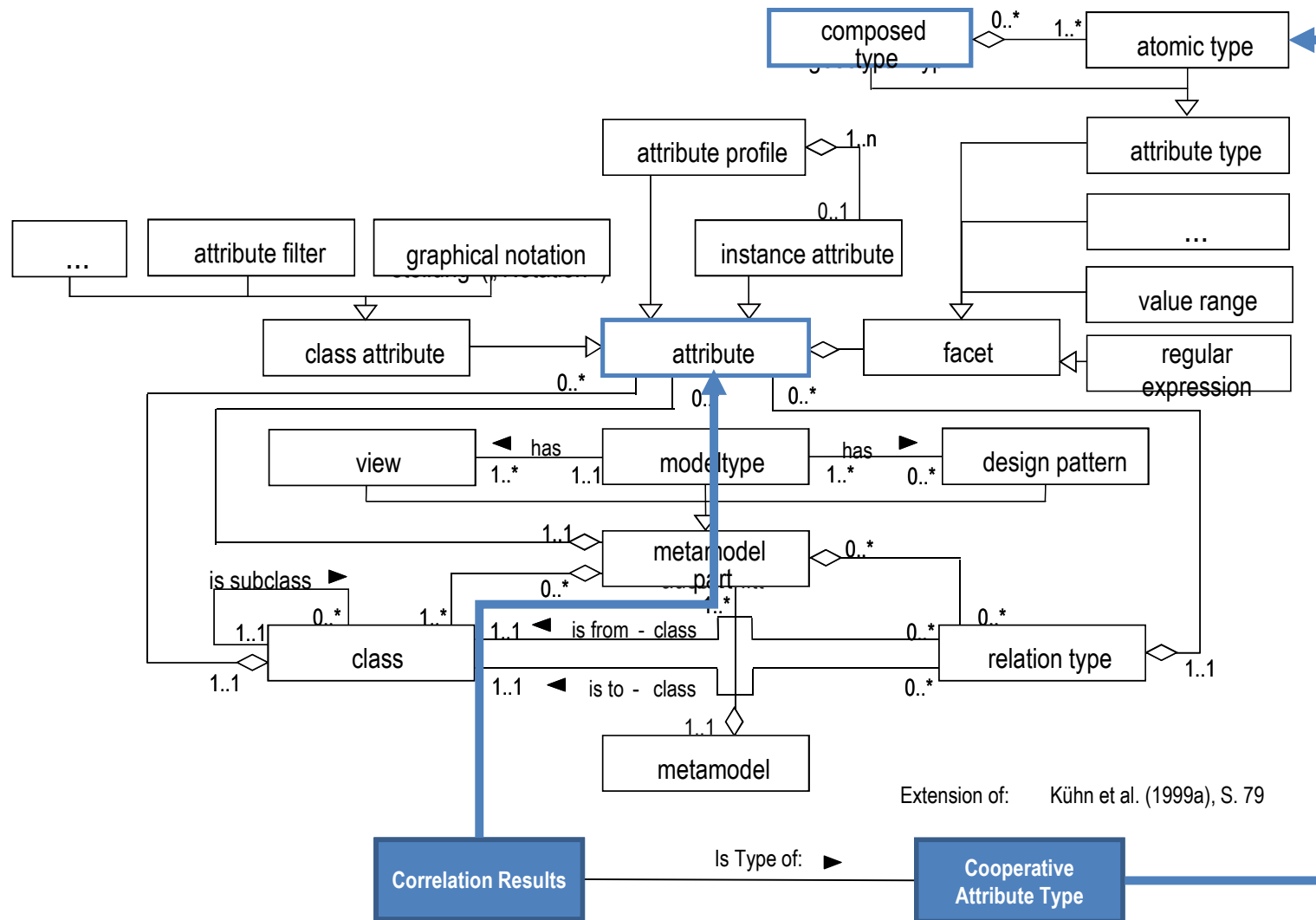
Scenario Description

Case:

Realization of Correlation Results attribute which consist of calculated correlation between preference of two users. The correlation calculation is realized by attribute type "EXPRESSION".
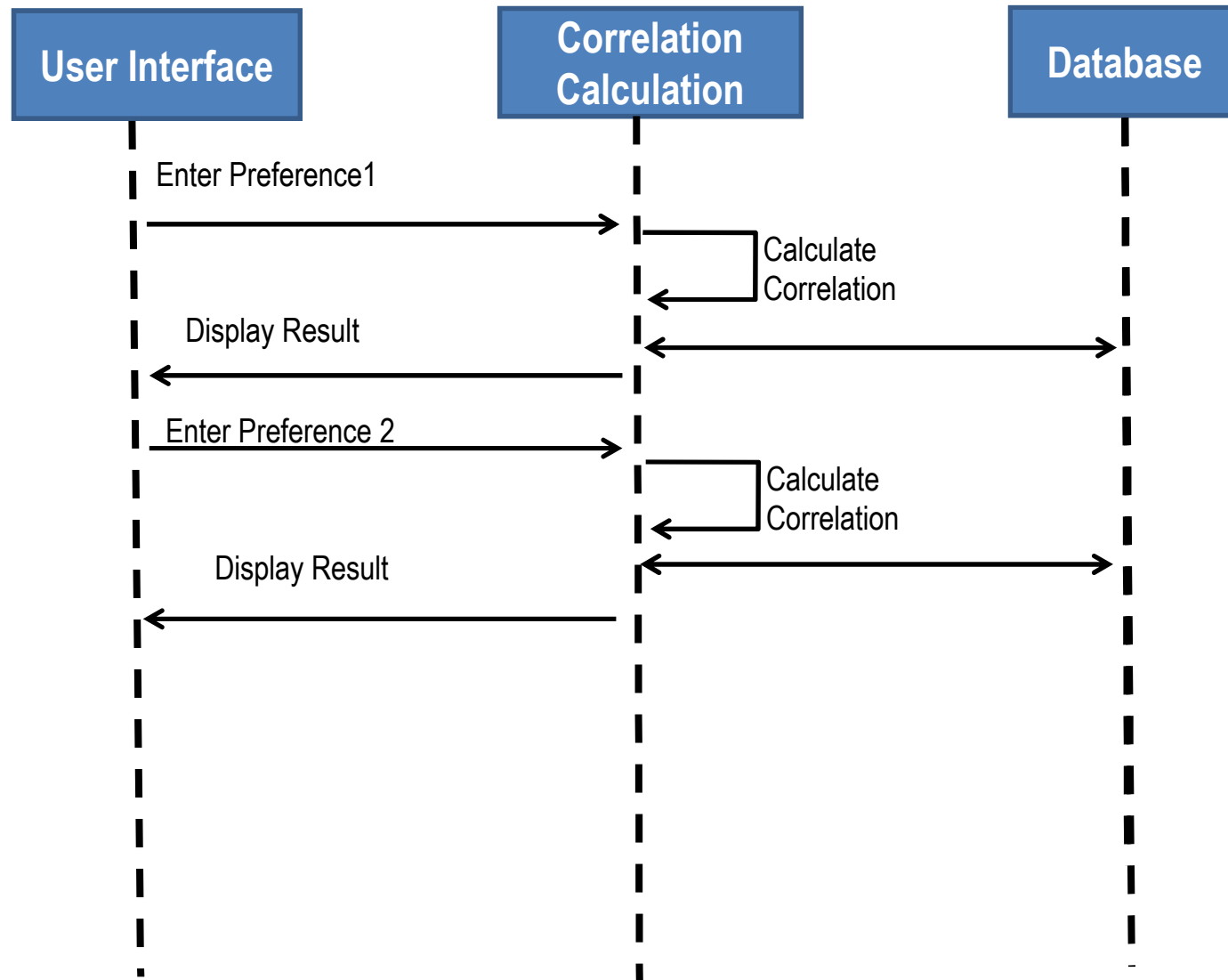
GOAL:

Demonstrate how a cooperative attribute can be realised consists of calculated common preferences via expression.
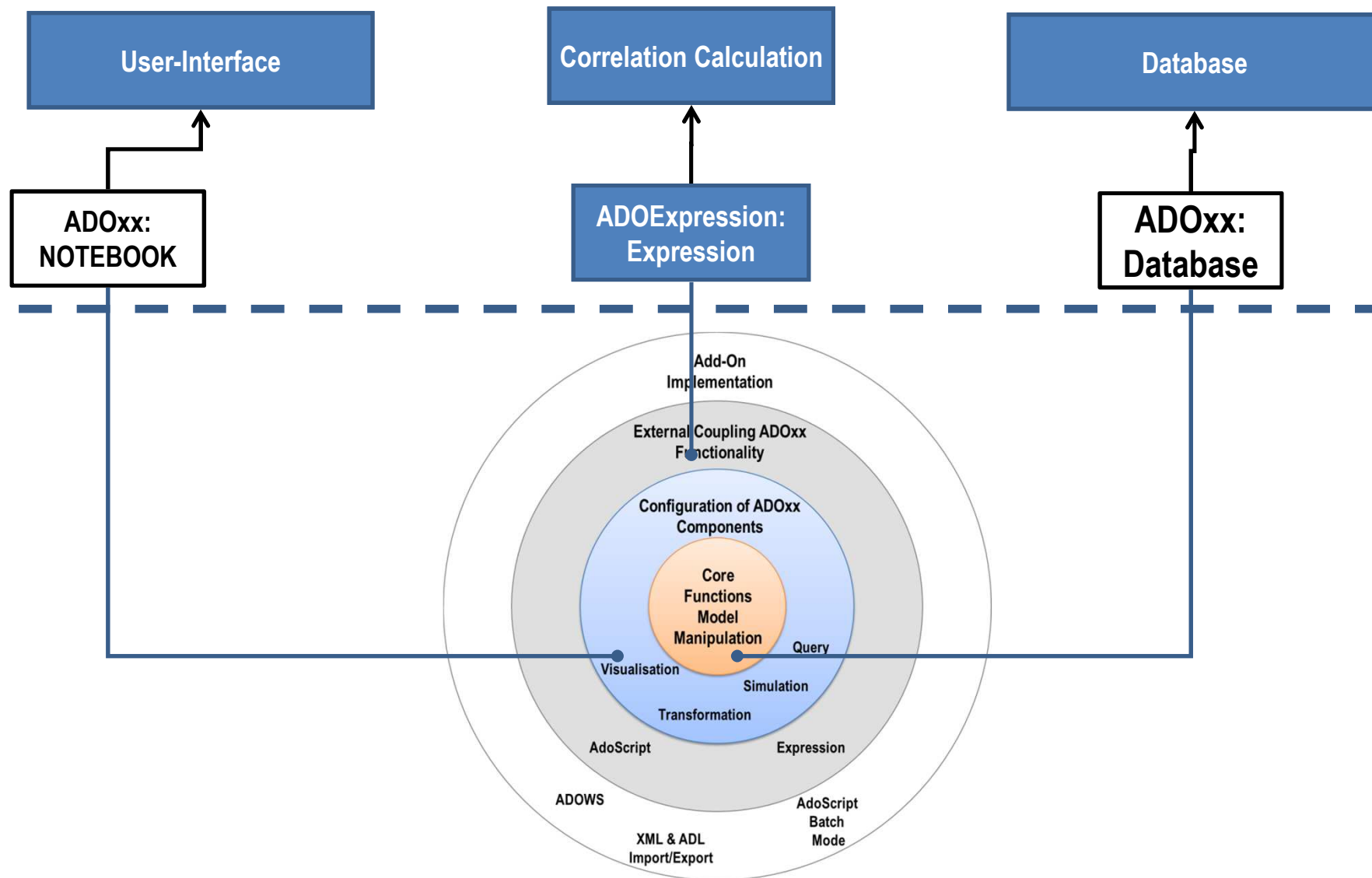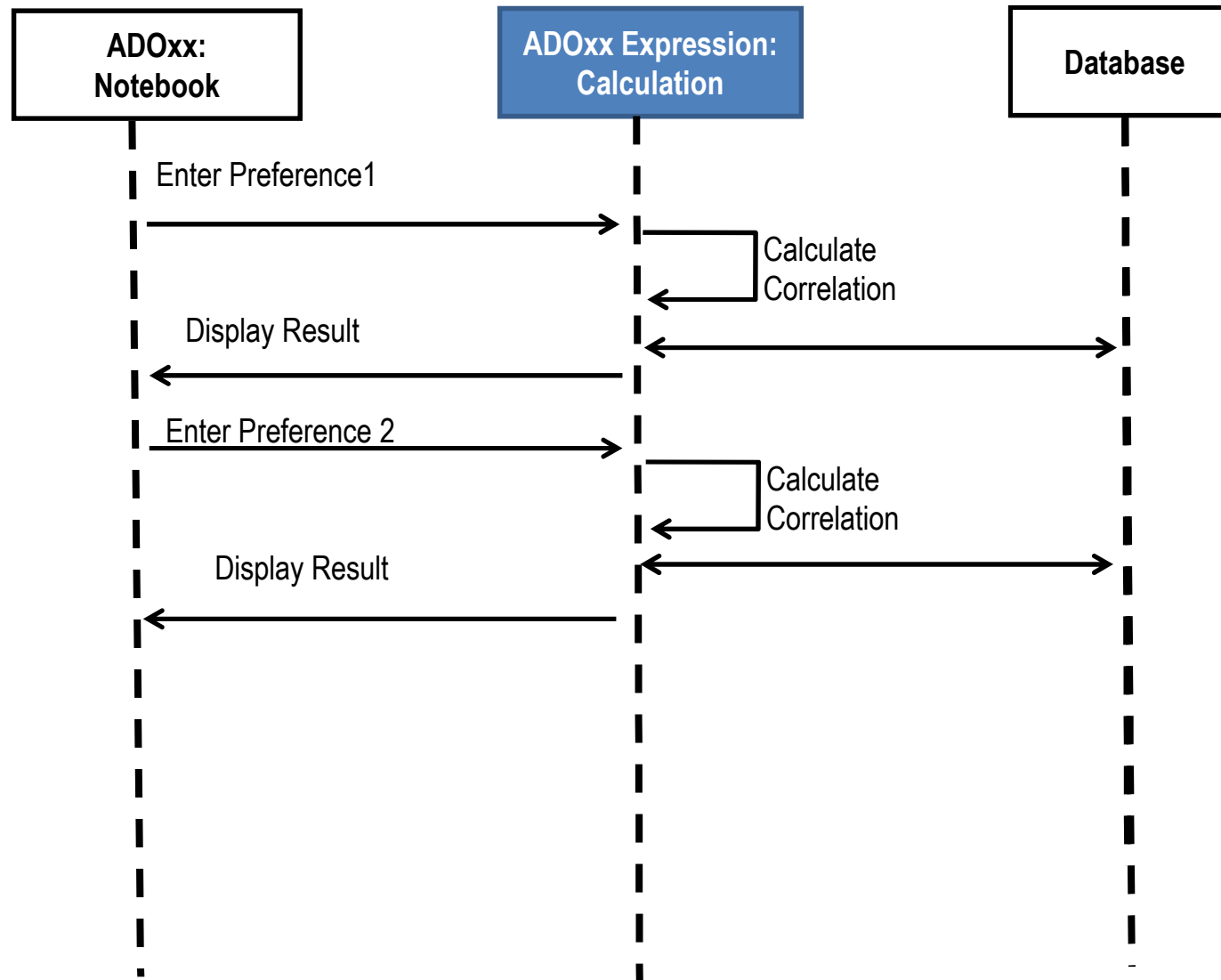
Meta Model of Meta Modelling Language

composed type

atomic type

0..*   1..*

attribute profile

1..n

attribute type

…

attribute filter

graphical notation

instance attribute

0..1

value range

class attribute

attribute

facet

regular expression

0..*

0..*

view

has

modeltype

has

design pattern

1..*   1..1

1..*   0..*

1..1

metamodel part

0..*

is subclass ►

0..*

0..*

1..1   0..*   1..*

class

1..1 ◄ is from - class

relation type

1..1

1..1

1..1 ◄ is to - class

0..*   0..*

0..*

1..1

metamodel

Extension of: Kühn et al. (1999a), S. 79

Correlation Results

Is Type of: ►

Cooperative Attribute Type

Description of Algorithm

Mapping ADOxx Functionality

ADOxx Realisation Approach

Added Value of Metamodelling Platform

Used meta-modelling functionality for realisation of the scenario:

- **Attribute Type: EXPRESSION**
- **AttrRep (NOTEBOOK):**

ADOxx Realisation Hands-On

1.   Realisation of Modelling Language

1.   Define Model Types "Space Model",

2.   New class "Interaction Process",

3.   Add Attributes

4.   Configure Expression

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

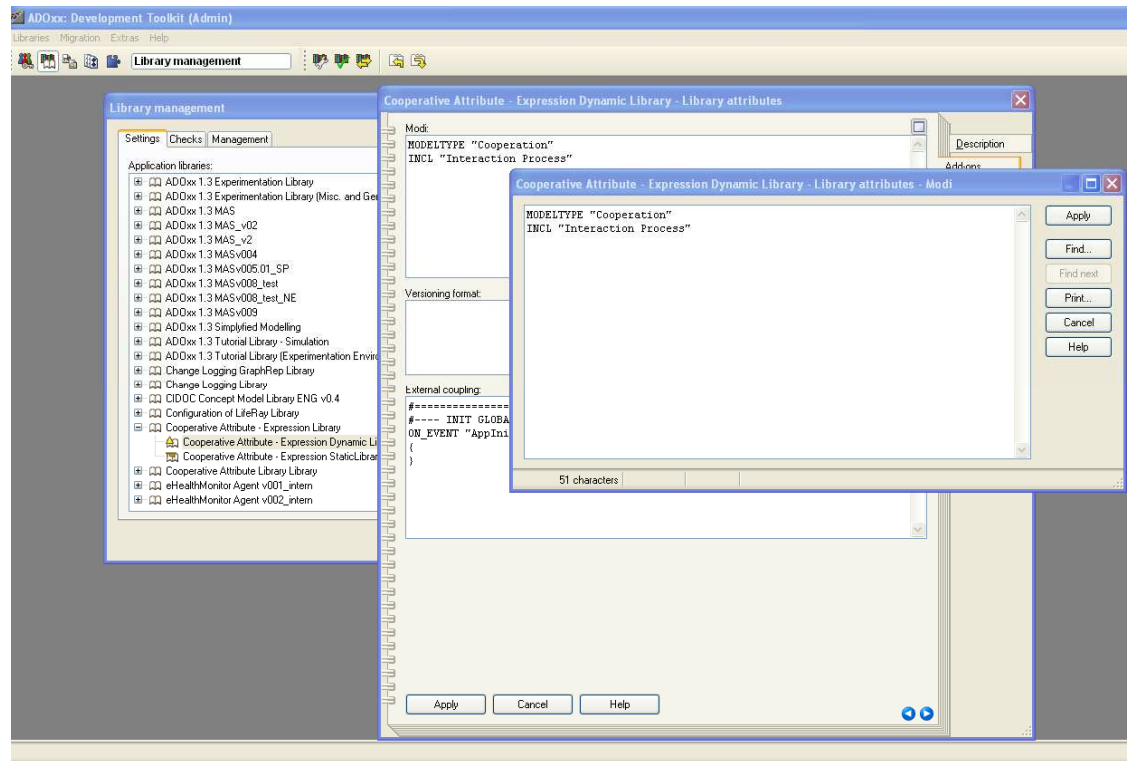XML / ADL Import – Export

ADOscriptBatch Mode

HANDS-ON

Cooperative Attribute-Expression

SCENARIO:

**Configure a Cooperative Attribute as Type of Expression**

Define Model Types "Space Model" and "Preference Pool Model"

New Modeltypes:

- Select "Cooperative Attribute Dynamic Library" and open Library attributes.

- Got to Add Ons

- Add the Modeltype "Space Model" in the Modi attribute

- When the class are defined, you need to INCLUDE "Interaction Process" under "Space Model".
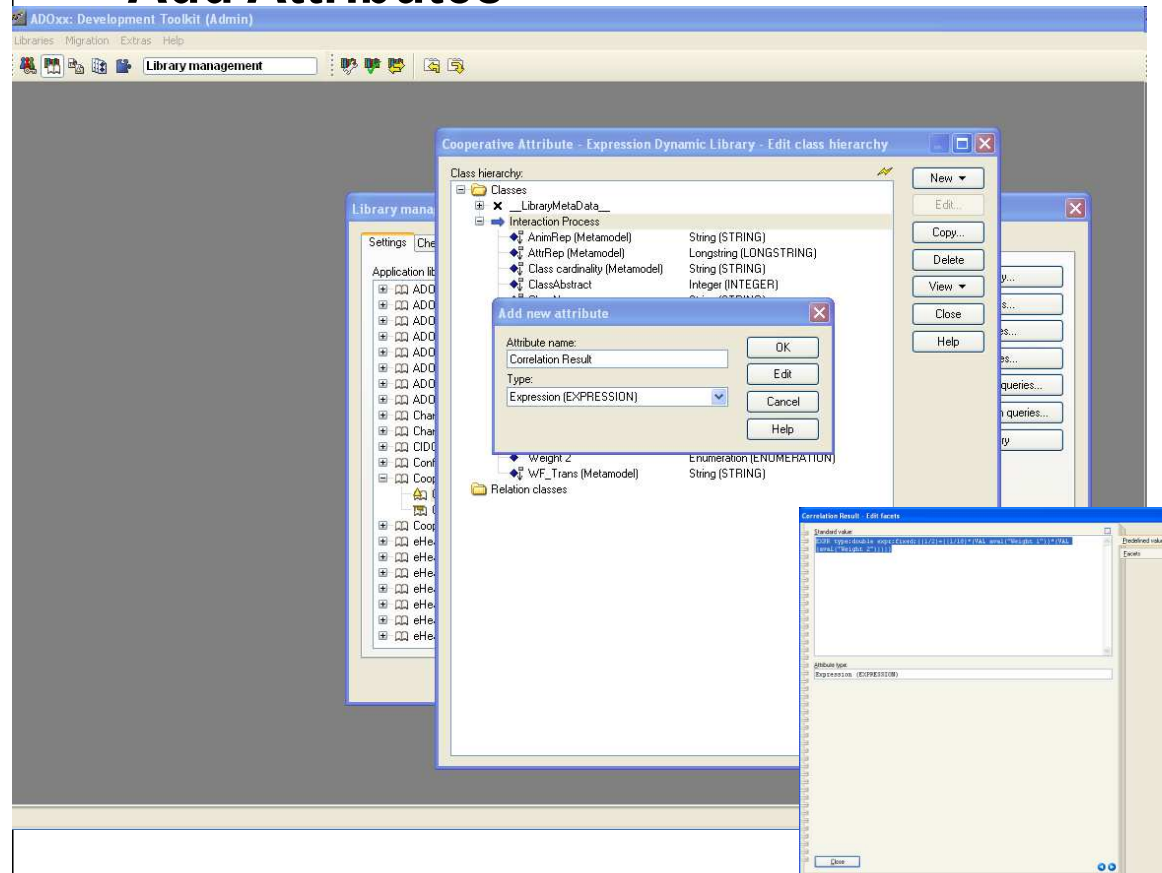
Create New Classes
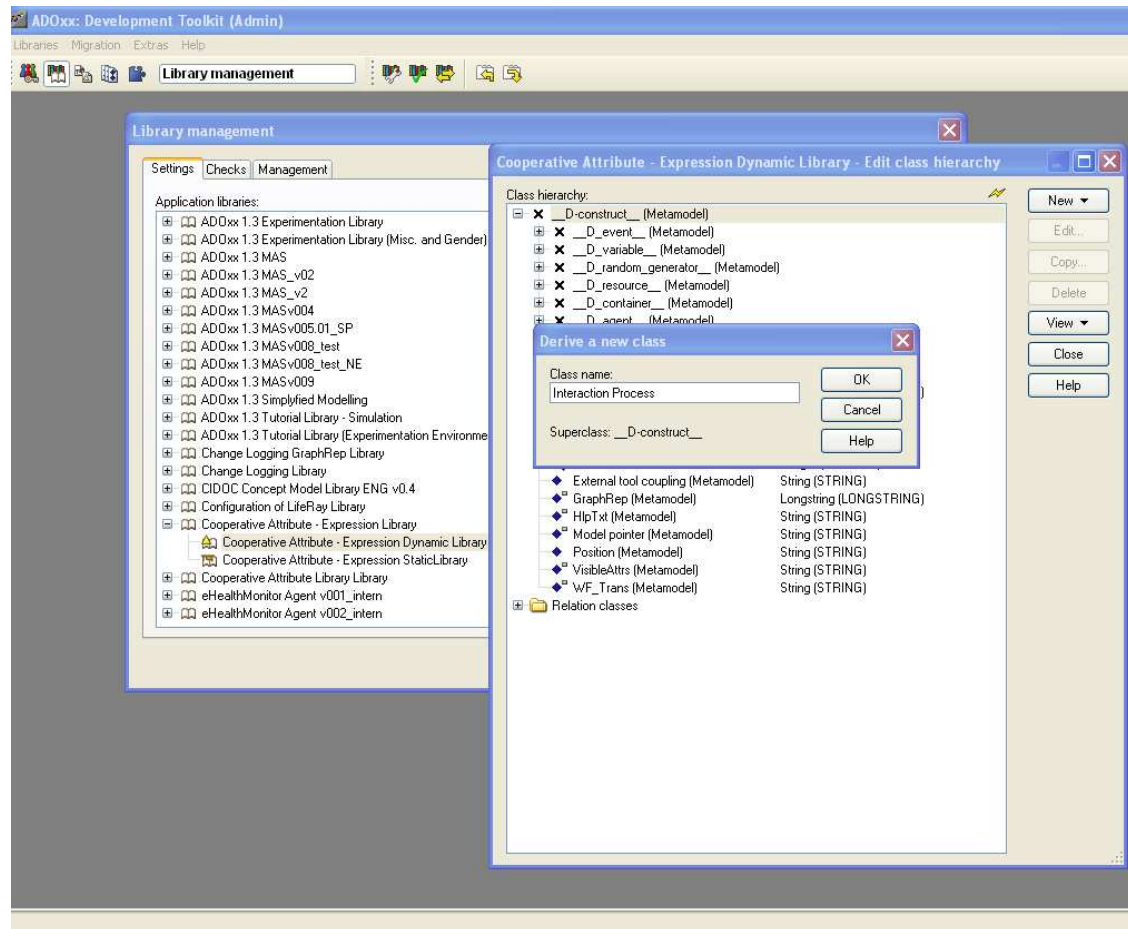
Create New Classes

- Select "Cooperative Attribute Dynamic Library" and open Library attributes.
- Open Class hierarchy, view "Metamodel" and "Class hierarchy" in the View button, select __D-construct__ and click new class.
- Name new classes: "Interaction Process, now it is subclass of __D-construct__

Add Attributes

Add Attributes

- Select "Interaction Process" and click Newattribute.
- Make "Weight 1" and "Weight 2" as type ENUMERATION , set their EnumerationDomain like {-3@-2@-1@0@1@2@3}.
- Make "Correlation Reuslts" as type EXPRESSION and configure expression as follows;

Expression Configuration:

EXPR type:double expr:fixed:((1/2)+((1/18)(VAL aval("Weight 1"))*(VAL (aval("Weight 2")))))*

Result

Further Questions?
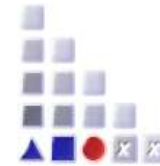
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