Unified Framework for Driving Transformations

Labnaf Language Transformer

User Guide

See also the "**Labnaf Language Transformer - Reference Guide**"

WARNING

NEVER use the language transformer on your production repository before performing all necessary tests.

ALWAYS test your language transformer commands using a repository backup.

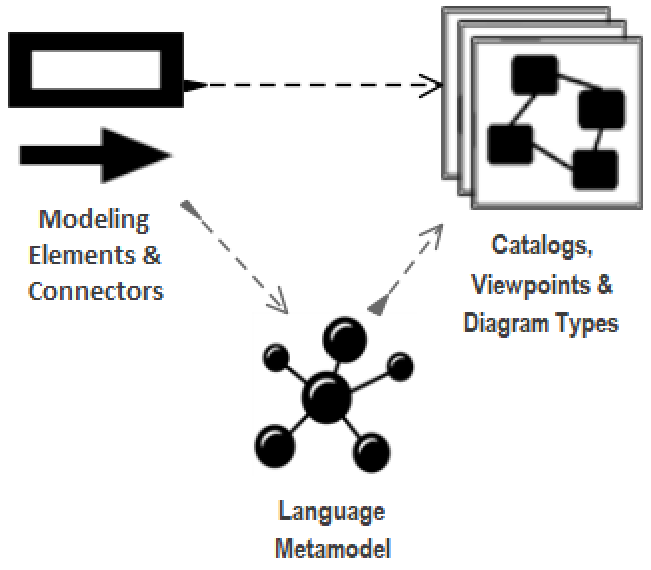
ALWAYS carefully check the resulting transformations and possible side effects. For example items could be deleted because you misspelled a type.

ALWAYS remember that type and stereotype names are case sensitive.

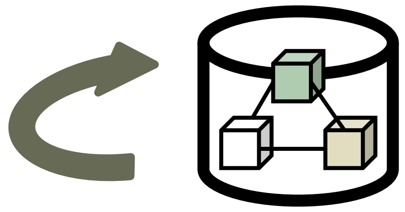
The Labnaf Language Transformer has been tested using Sparx Systems' Enterprise Architect versions 13.5 to 15.1

Labnaf Customization Steps

1. Customize the language following your organization requirements

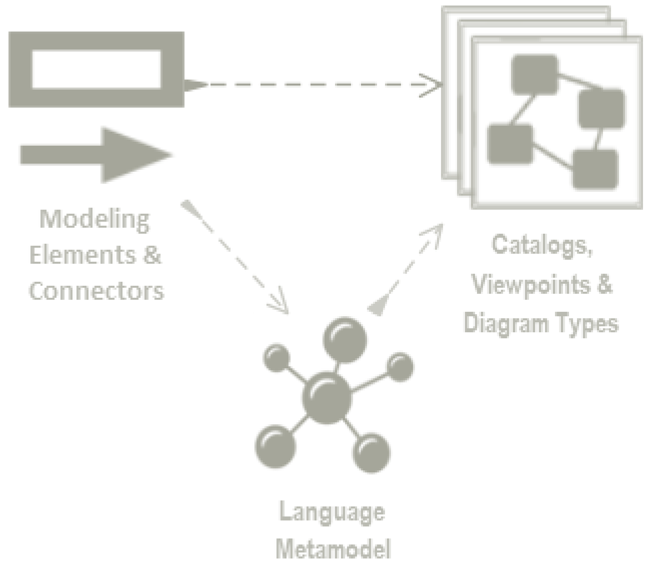

Modeling Elements & Connectors
Catalogs, Viewpoints & Diagram Types
Language Metamodel

2. Adapt existing repository content

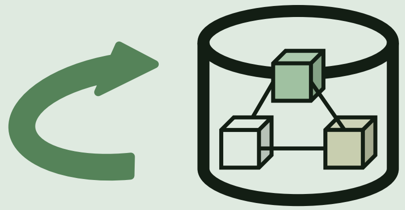


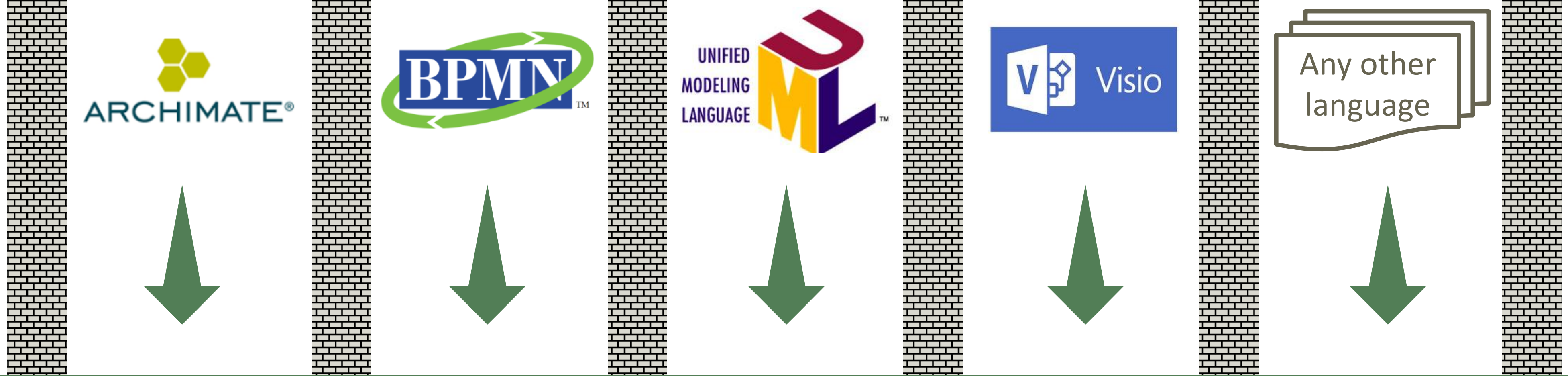
Labnaf Language Transformer

1. Customize the language


Modeling Elements & Connectors
Catalogs, Viewpoints & Diagram Types
Language Metamodel

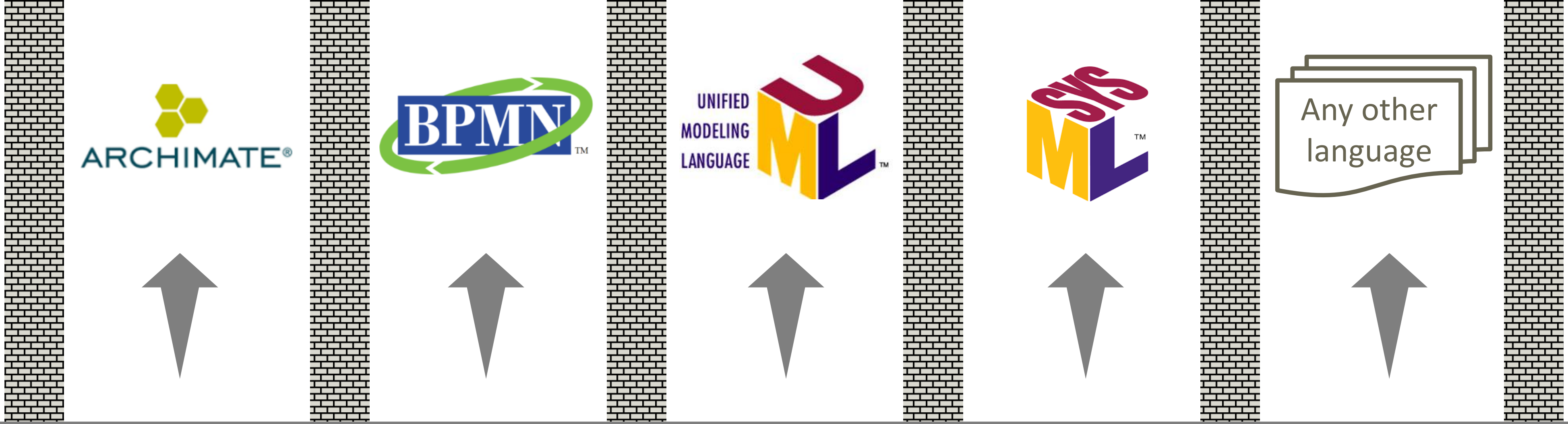
2. **Adapt existing repository content**



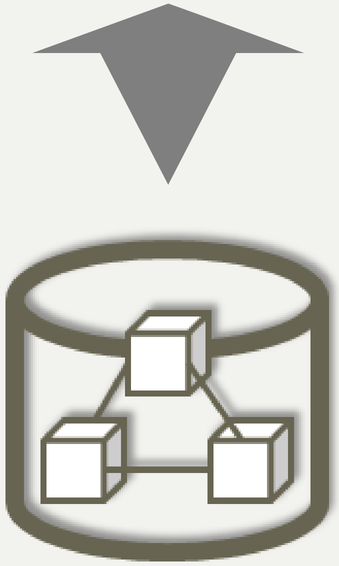


Transform any language…

We all speak the same language



… in any direction



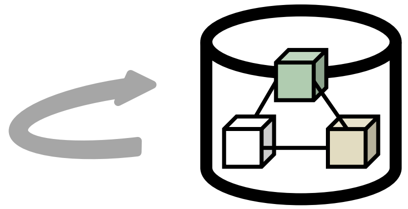
labnaf

One **Single**
Strategy & Architecture
Modeling **Language**

You are never locked in Labnaf !

The Language Transformer adapts the language in existing repository content

- **ChangeElementType**
- **ChangeConnectorType**
- **ChangeDiagramType**
- **ChangeDiagramTypesDefinedInCsv**
- **TemplateMetamodelFromActiveMetamodel**
- **TvRename**
- **TvDelete**



See the **Language Transformer Reference Guide** for command specific information.

Prerequisites

Install the Language Transformer using the

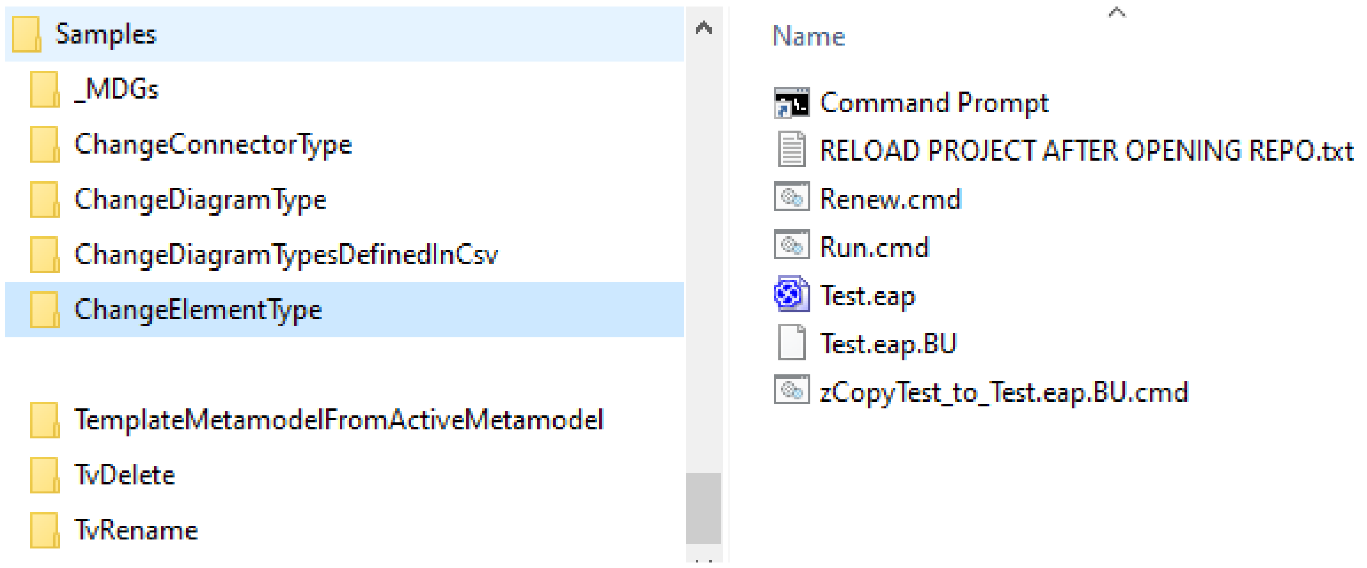
Installer/LabnafLanguageTransformerSetup.msi

Unzip the sample language transformations files stored in

Doc/SampleLanguageTransformations.zip

Prerequisites

Review the content of the Sample language transformations folder that you unzipped



Samples
- _MDGs
- ChangeConnectorType
- ChangeDiagramType
- ChangeDiagramTypesDefinedInCsv
- ChangeElementType
- TemplateMetamodelFromActiveMetamodel
- TvDelete
- TvRename

Name
- Command Prompt
- RELOAD PROJECT AFTER OPENING REPO.txt
- Renew.cmd
- Run.cmd
- Test.eap
- Test.eap.BU
- zCopyTest_to_Test.eap.BU.cmd

For each Language Transformer command, there is a sample folder with an example. Folder names are language transformer command names.

The folders have a common structure. The file names are about the same. The content of the “Run.cmd” and “Test.eap” files are specific to each folder/command.

Development Lifecycle

- To transform a language in a repository, you will need a combination of transformer commands.
- We advise to address each command separately and in that order:
  - **ChangeElementType**
  - **ChangeConnectorType**
  - **ChangeDiagramType or ChangeDiagramTypesDefinedInCsv**
  - **TvRename**
  - **TvDelete**

The development lifecycle is the same for each command.

Keep backups of your different versions.

Develop and Test Your Script (cont.)

Edit and run the test script

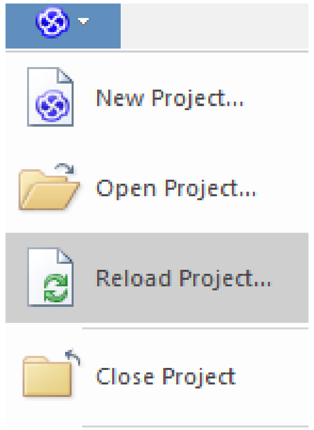
- Edit **Run.cmd.** Put your own transformation commands
- Execute **Run.cmd**

See the language transformation results

- Open **Test.eap**
- **In Sparx EA**
  - Reload the project

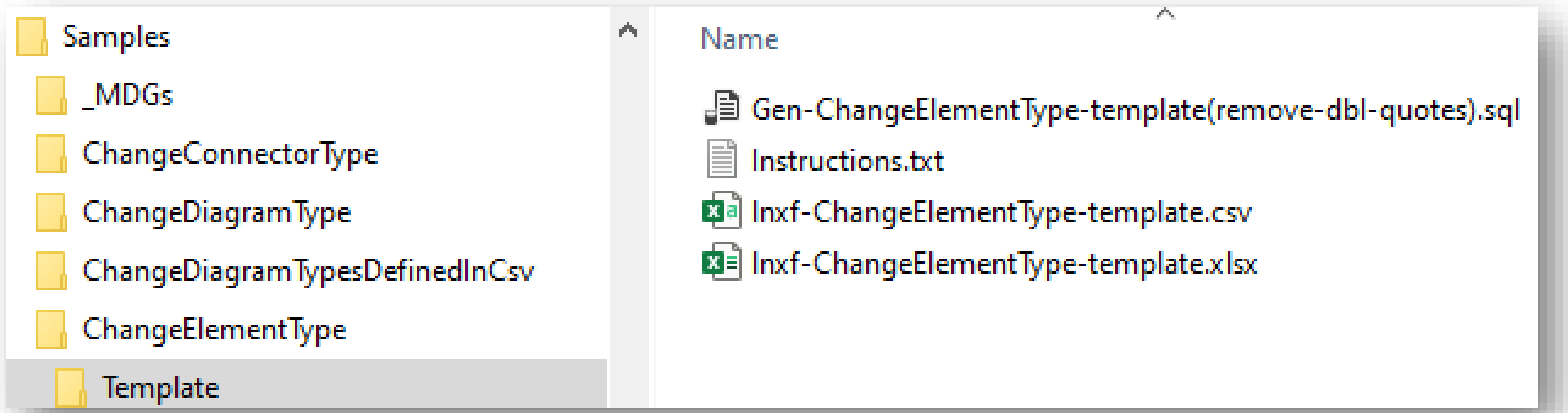
    => the shapes are updated in the diagram
  - Remove the shapes from the diagram and move the back in the diagram

    => the icons are updated in the browser window



Keep backups of your different versions.

Use the Excel Templates to define your mappings

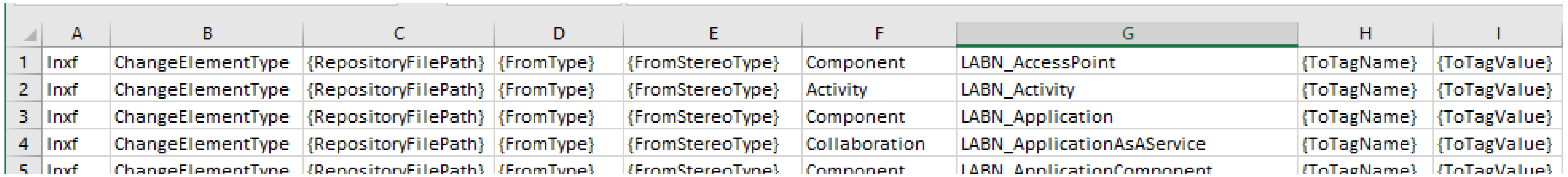


- Samples
  - _MDGs
  - ChangeConnectorType
  - ChangeDiagramType
  - ChangeDiagramTypesDefinedInCsv
  - ChangeElementType
    - Template

Name

- Gen-ChangeElementType-template(remove-dbl-quotes).sql
- Instructions.txt
- Inxf-ChangeElementType-template.csv
- Inxf-ChangeElementType-template.xlsx

- Map source to target types and stereotypes in Excel



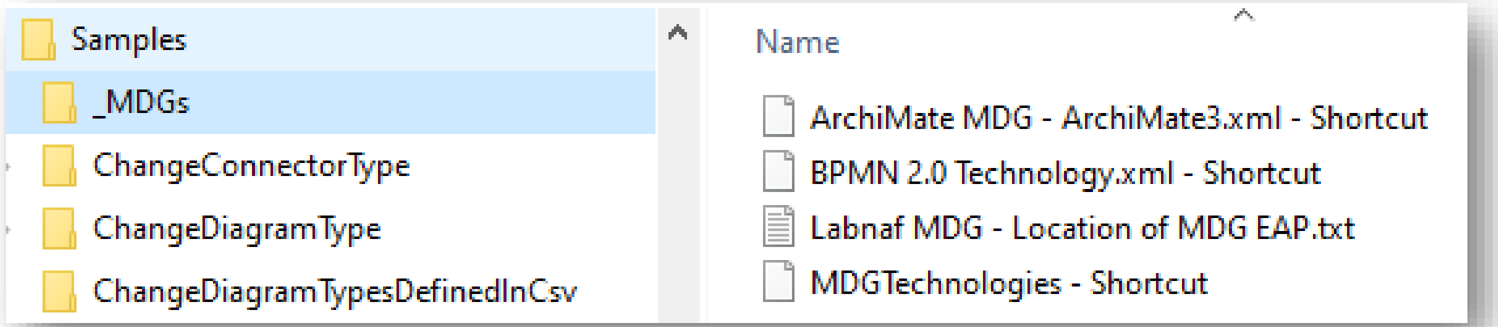
	A	B	C	D	E	F	G	H	I
1	Inxf	ChangeElementType	{RepositoryFilePath}	{FromType}	{FromStereoType}	Component	LABN_AccessPoint	{ToTagName}	{ToTagValue}
2	Inxf	ChangeElementType	{RepositoryFilePath}	{FromType}	{FromStereoType}	Activity	LABN_Activity	{ToTagName}	{ToTagValue}
3	Inxf	ChangeElementType	{RepositoryFilePath}	{FromType}	{FromStereoType}	Component	LABN_Application	{ToTagName}	{ToTagValue}
4	Inxf	ChangeElementType	{RepositoryFilePath}	{FromType}	{FromStereoType}	Collaboration	LABN_ApplicationAsAService	{ToTagName}	{ToTagValue}
5	Inxf	ChangeElementType	{RepositoryFilePath}	{FromType}	{FromStereoType}	Component	LABN_ApplicationComponent	{ToTagName}	{ToTagValue}

- Create your transformation commands based on the Excel

Development Lifecycle

To find out what types and stereotypes are

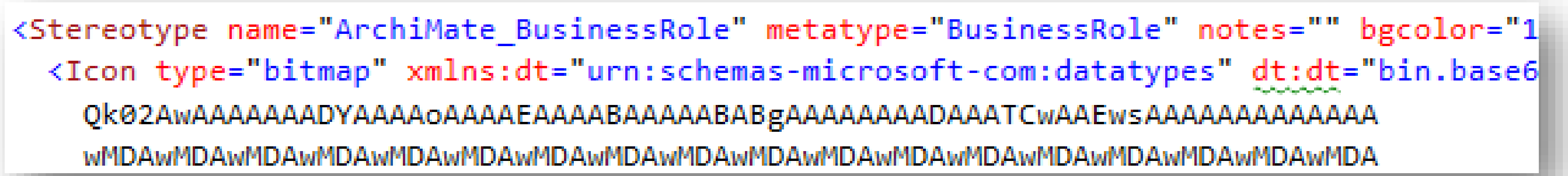
- Look inside the MDG XML files



Samples
_MDGs
ChangeConnectorType
ChangeDiagramType
ChangeDiagramTypesDefinedInCsv

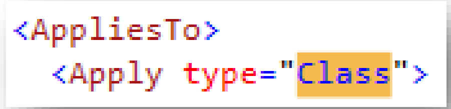
Name
ArchiMate MDG - ArchiMate3.xml - Shortcut
BPMN 2.0 Technology.xml - Shortcut
Labnaf MDG - Location of MDG EAP.txt
MDGTechnologies - Shortcut

- Search for **Stereotype name="*{stereotype I am looking for}*"**
  Or **metatype="*{metatype I am looking for}*"**



```
<Stereotype name="ArchiMate_BusinessRole" metatype="BusinessRole" notes="" bgcolor="1
  <Icon type="bitmap" xmlns:dt="urn:schemas-microsoft-com:datatypes" dt:dt="bin.base6
    Qk02AwAAAAAAADYAAAAoAAAAEAAAABAAAAABABgAAAAAAADAAATCwAAEwsAAAAAAAAAAAAA
    wMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDA
```

- See the extended type



```
<AppliesTo>
  <Apply type="Class">
```

Develop and Test Your Script

Adapt the test data as needed

- Execute **Renew.cmd**
  - to copy the backup database into a fresh **Test.eap**

- Open and edit **Test.eap.**
  - Replace the content by you own test data
  - Close **Test.eap**

- Execute "**zCopyTest_to_Test.eap.BU.cmd**"
  - to create a new backup database from **Test.eap.** So you will then be able to Renew the test database with your own data before running each test.

Keep backups of your different versions.

Test on real data

- Backup your PROD repository into an Access repository (EAP).
- Replace “Test.eap” by that backup repository.
- Execute the transformation script “Run.eap” and see the result

Run your transformation script on the PROD repository

- Ensure nobody is working on the repository
- Make a backup of you PROD repository
- Replace “Test.eap” by a shortcut to your PROD repository.
- Execute the transformation script “Run.eap” and see the results

Keep backups of your different versions.

To create a **new metamodel** from scratch

- Use **TemplateMetamodelFromActiveMetamodel**