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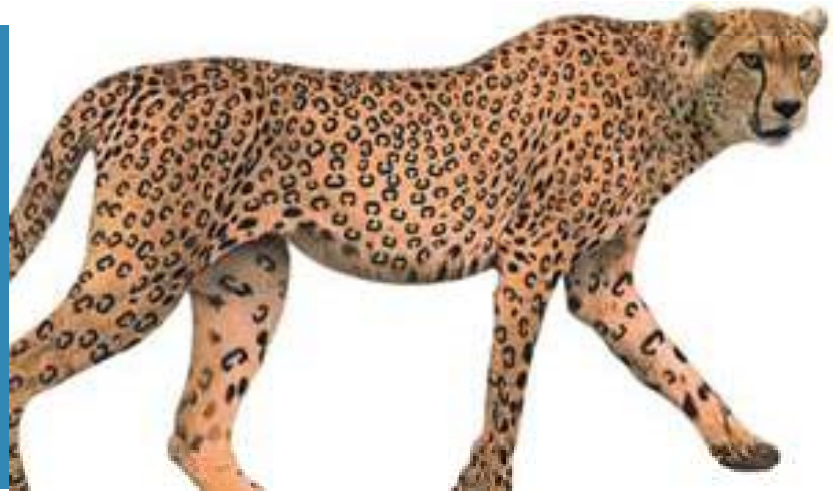
Informatica 9x : Reusable Objects



Session 8: Reusable Objects

Academy

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Reusable Objects : Overview

- **Introduction:**

This module gives a brief overview about Reusable objects in Informatica

Reusable Objects : Objective

- **Objective:**

After completing this chapter, you will be able to

- Explain reusable objects
- Define reusable transformation
- Define mapplet
- Define worklet
- Define reusable Workflow Tasks

Reusable Objects

In Informatica Power Center, certain objects can be re-used, if the operating logic or operation are same. Those objects are known as Reusable components

Types of reusable objects in Informatica

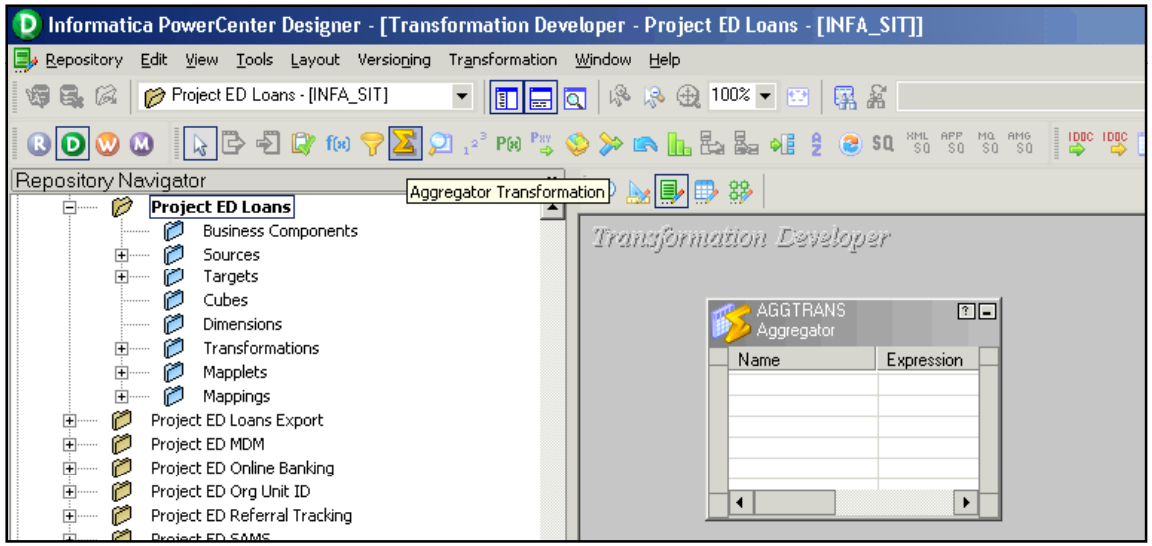
- Reusable Transformations
- Mapplets
- Worklets
- Reusable Workflow Tasks

Reusable Transformations

- Reusable transformations can be used in multiple mappings. For example, we can create a reusable Aggregator transformation to perform the same aggregate calculations in multiple mappings
- The Designer stores each reusable transformation as metadata separate from any mapping
- An instance of the Reusable Transformation appears within the mapping
- Creating Reusable Transformations
  - » Design and create it in the Transformation Developer
  - » Promote a non-reusable transformation from the Mapping Designer

Creating a Reusable transformation

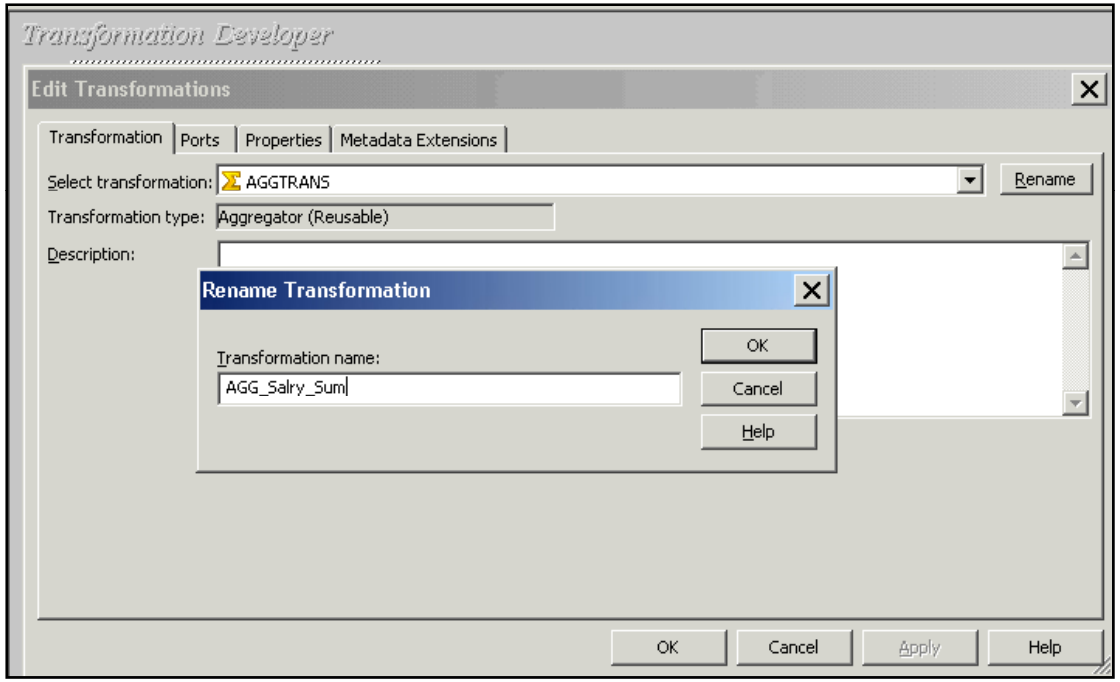
1. In the Designer, switch to the Transformation Developer
2. Click the button on the Transformation toolbar corresponding to the type of transformation you want to create
3. Drag within the workbook to create the transformation



4. Double-click the transformation title bar to open the dialog displaying its properties

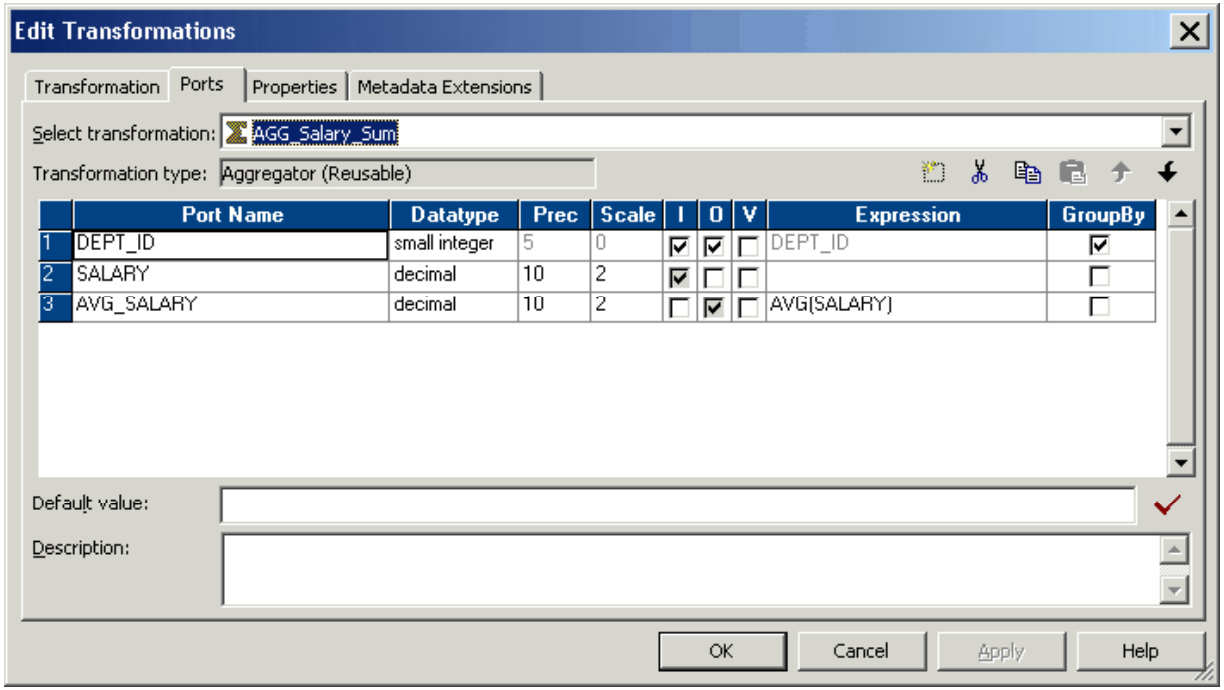
Creating a Reusable transformation

4. Click the Rename button and enter a descriptive name for the transformation, and click OK



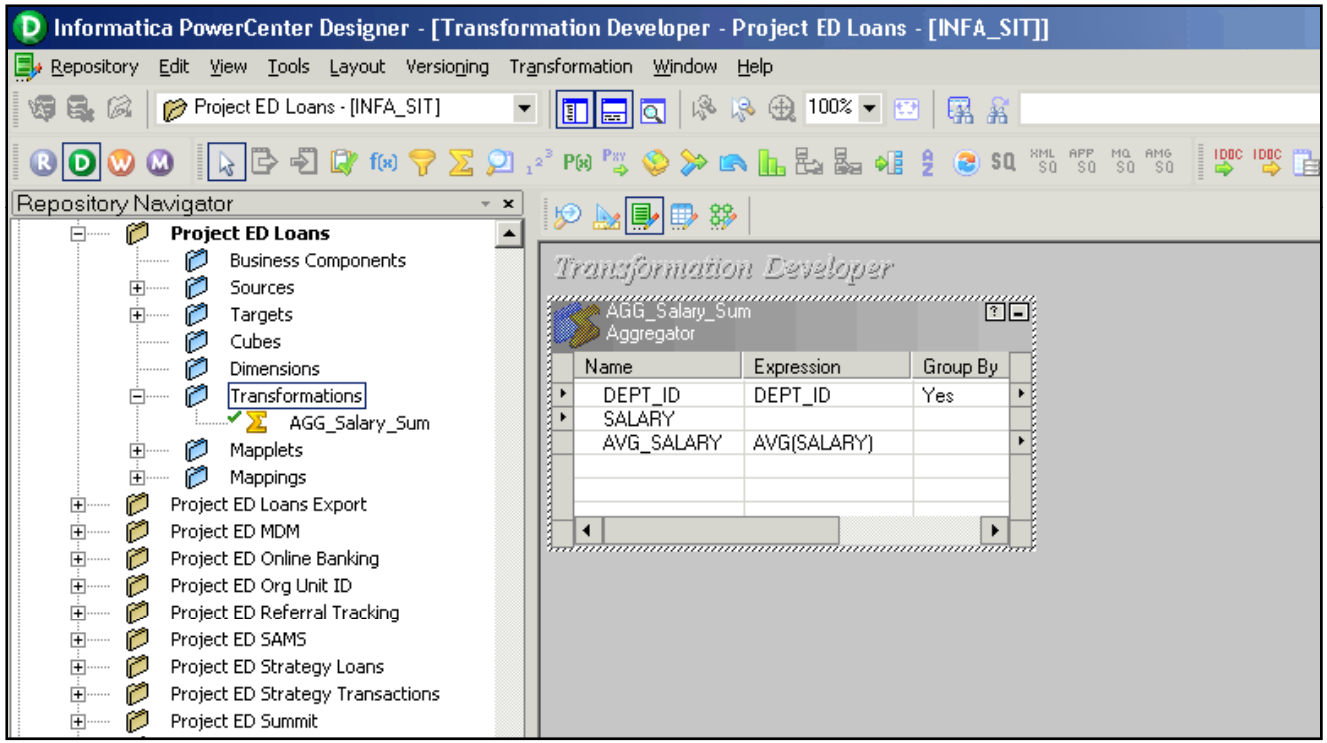
Creating a Reusable transformation

6. Click the Ports tab, then add any input and output ports you need for this transformation
7. Set the other properties of the transformation, and click OK



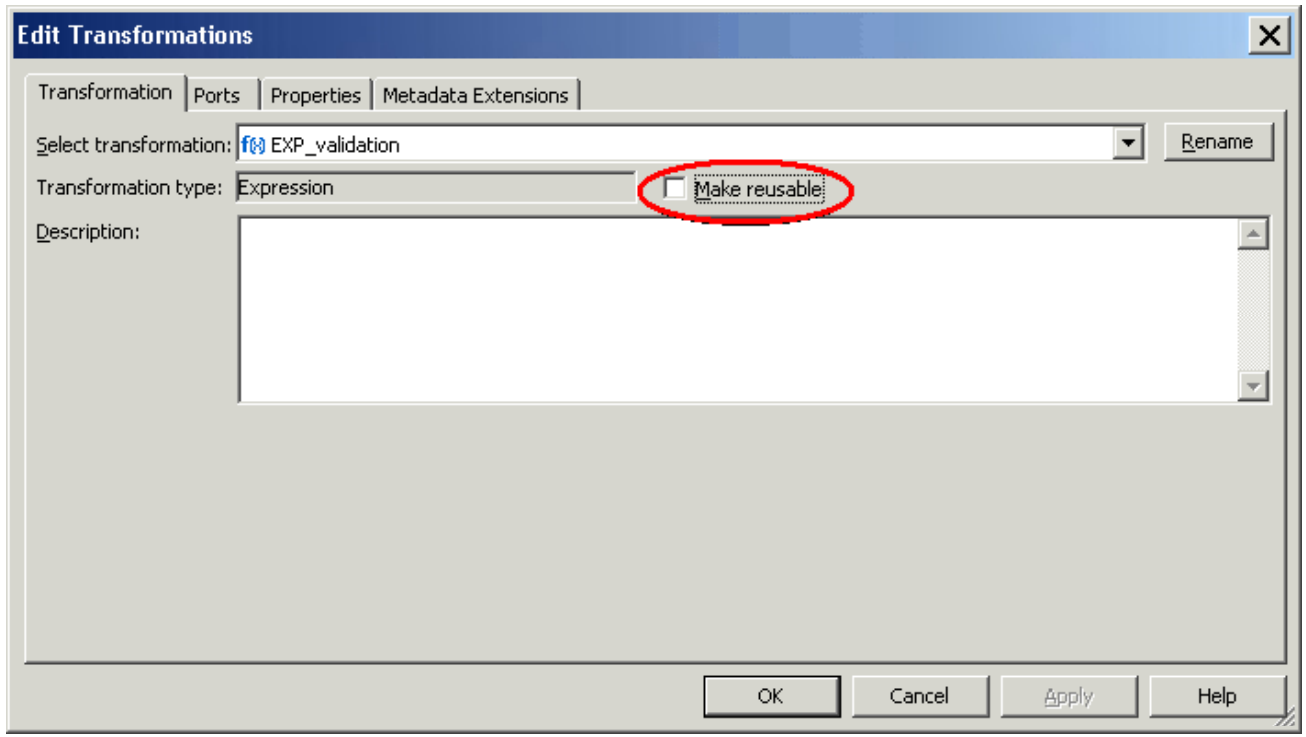
Creating a Reusable transformation

8. Click Repository > Save



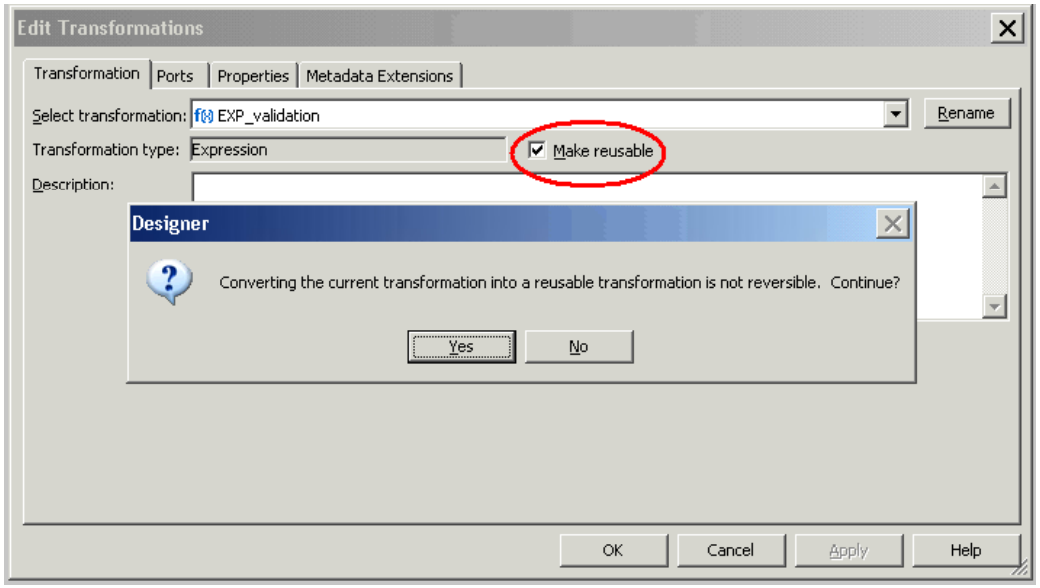
Promoting a non-reusable transformation

1. In the Designer, open a mapping and double-click the title bar of the transformation you want to promote
2. Select the Make Reusable option



Promoting a non-reusable transformation

3. When prompted whether you are sure you want to promote the transformation, click Yes

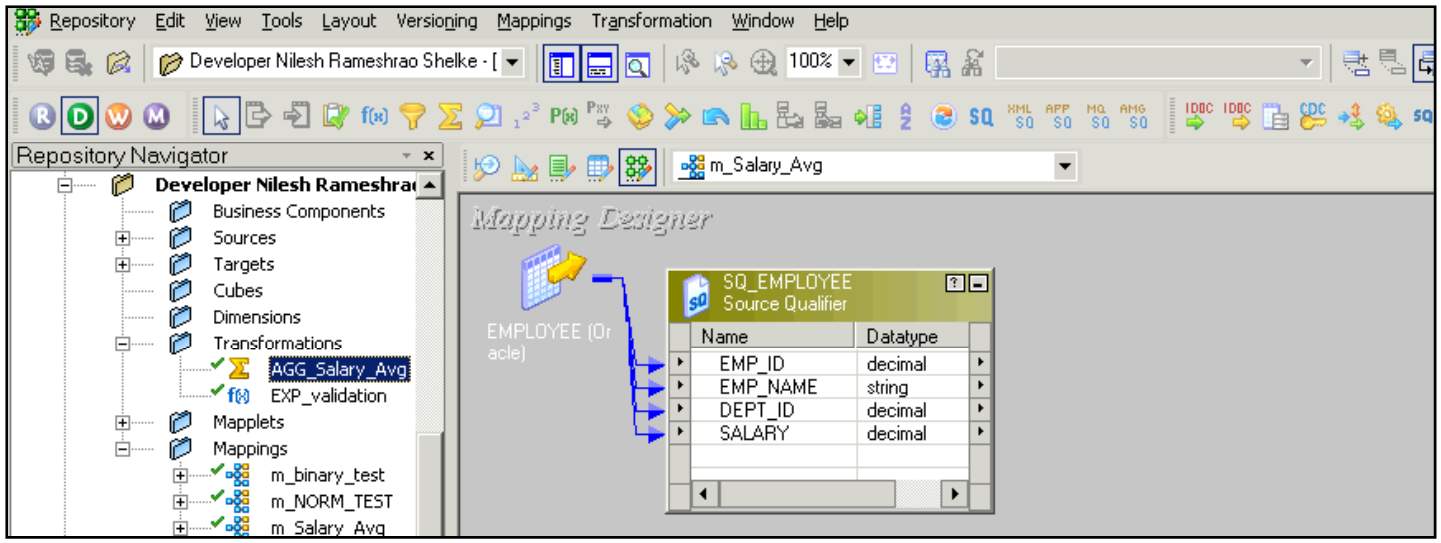


4. Click OK to return to the mapping
5. Click Repository > Save

Adding Reusable Transformations to Mappings

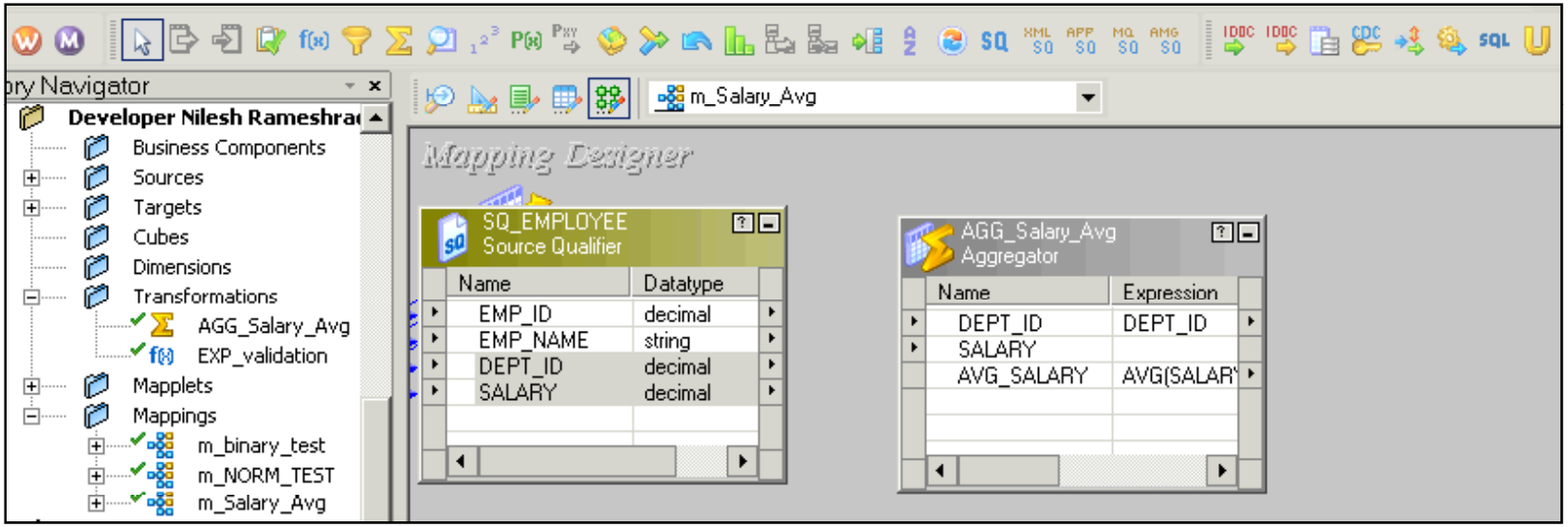
To add a reusable transformation

1. In the Designer, switch to the Mapping Designer
2. Open or create a mapping
3. In the list of repository objects, drill down until you find the reusable transformation you want in the Transformations section of a folder



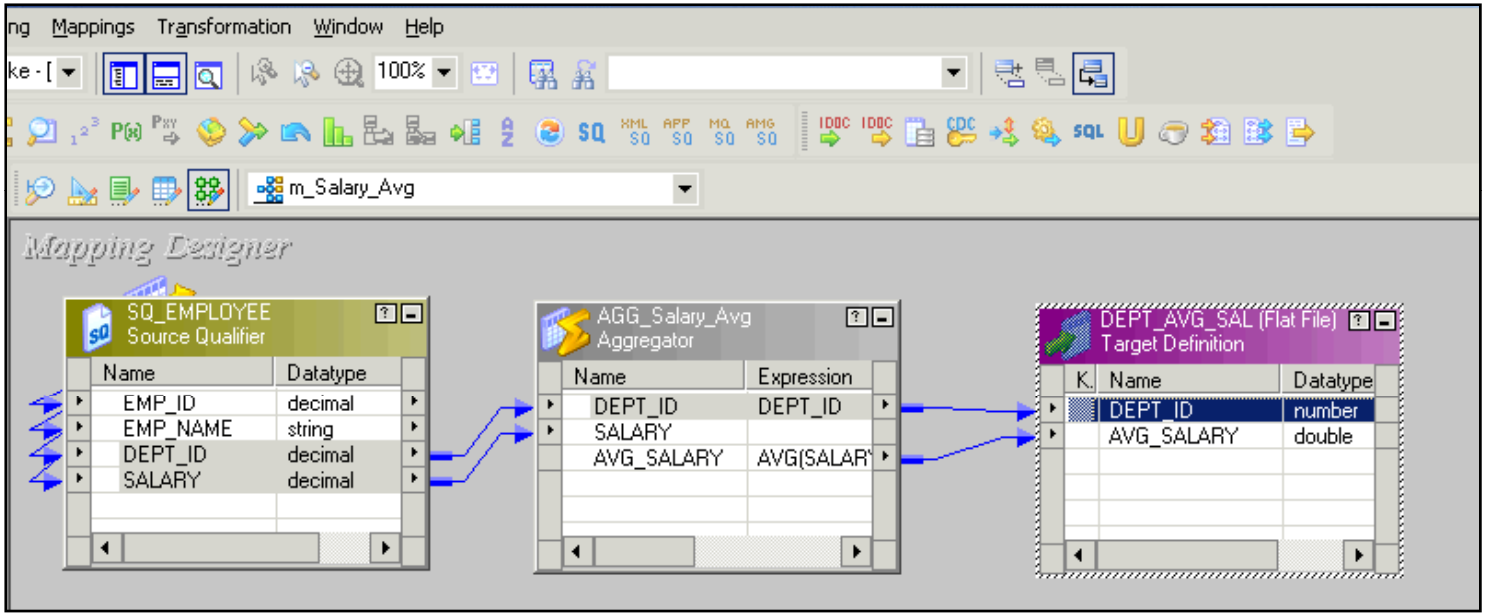
Adding Reusable Transformations to Mappings

4. Drag the transformation from the Navigator into the mapping. A copy (or instance) of the reusable transformation appears.



Adding Reusable Transformations to Mappings

5. Link the new transformation to other transformations or target definitions



6. Click Repository > Save

Modifying a Reusable Transformation

Any of the following changes to the reusable transformation, mappings that use instances of it may be invalidated when

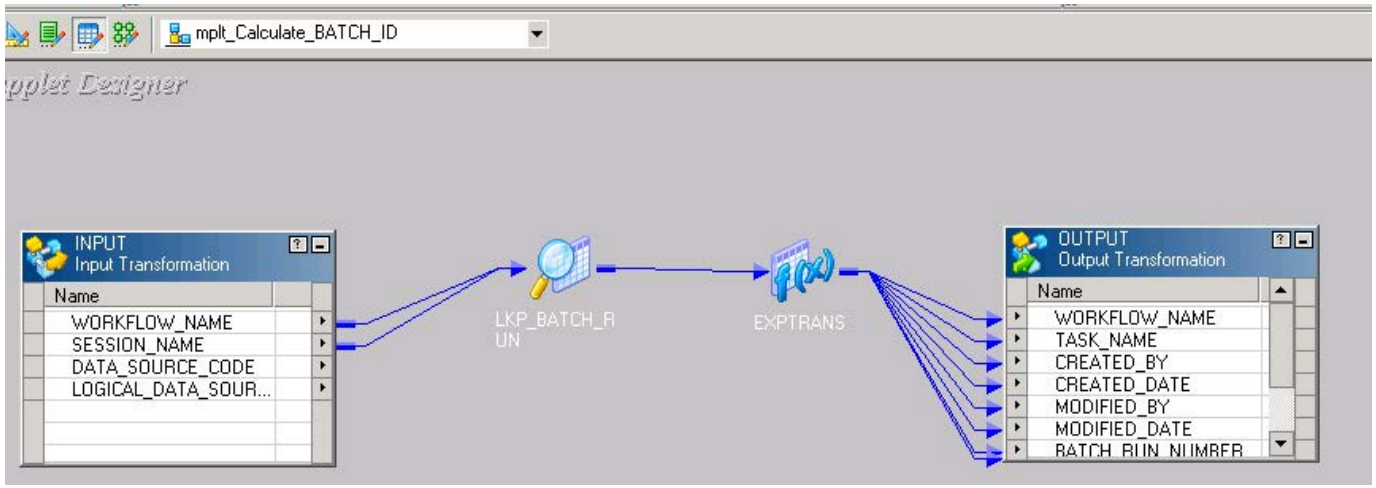
- You delete a port or multiple ports in a transformation, you disconnect the instance from part or all of the data flow through the mapping
- You change a port data type, you make it impossible to map data from that port to another port using an incompatible data type
- You change a port name, expressions that refer to the port are no longer valid
- You enter an invalid expression in the reusable transformation, mappings that use the transformation are no longer valid. The Integration Service cannot run sessions based on invalid mappings

Mapplets

- A Mapplet is a reusable object that you create in the Mapplet Designer. It contains a set of transformations and allows you to reuse that transformation logic in multiple mappings
- When you use a mapplet in a mapping, you use an instance of the mapplet
- Like a reusable transformation, any changes made to the mapplet is inherited by all instances of the mapplet
- Mapplets help simplify mappings in the following ways
  - » Include source definitions
  - » Accept data from sources in the mapping
  - » Include multiple transformations
  - » Pass data to multiple transformations
  - » Contain unused ports

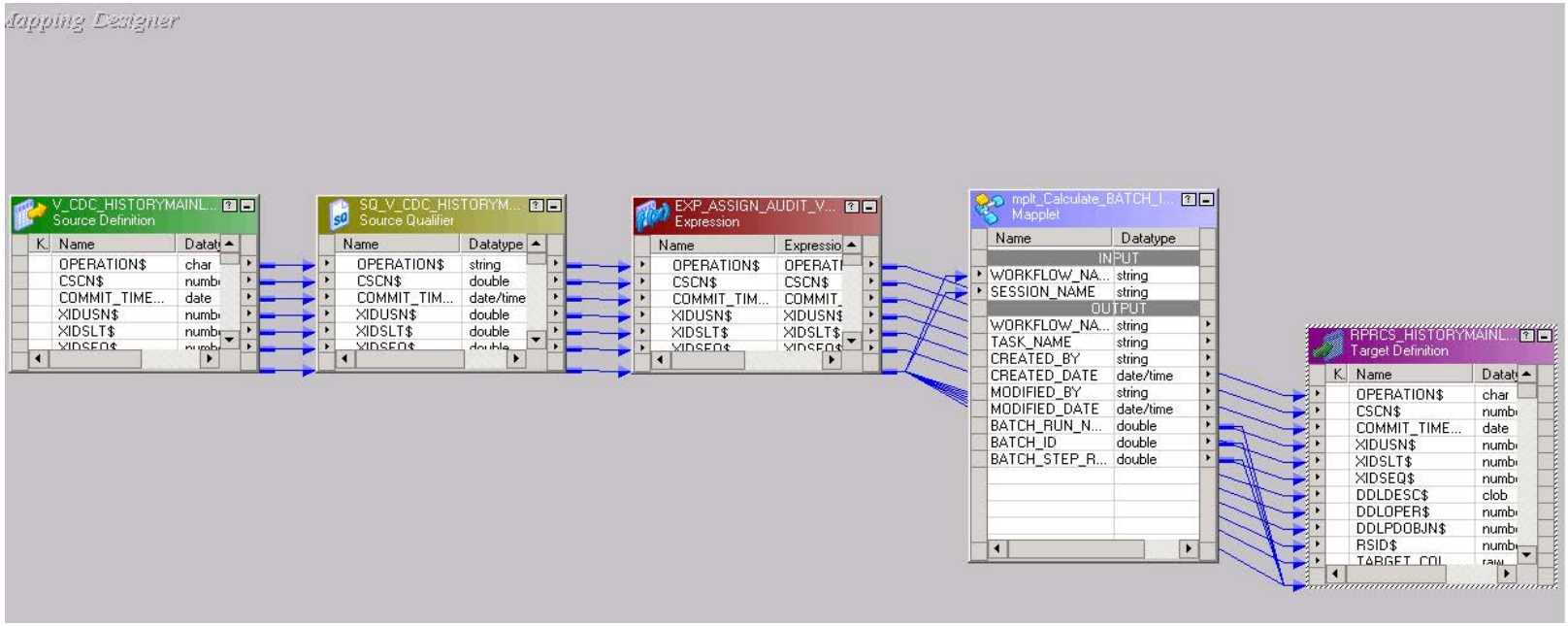
Mapplet Components

- **Mapplet input:** You can pass data into a mapplet using source transformations. When you use an Input transformation, you pipeline in the mapping
- **Mapplet output:** Each mapplet must contain one or more Output data from the mapplet into the mapping
- **Mapplet ports:** Mapplet ports display only in the Mapping Designer. Mapplet ports consist of input ports from Input transformations and output transformations. If a mapplet uses source definitions rather than input, it does not contain any input ports in the mapping



A Sample Mapplet

- Sample Mapplet in a Mapping



Creating a Mapplet

- Active Mapplet : contain one or more active transformations
- Passive Mapplet : contain only passive transformations

When we add transformations to a mapplet, keep the following restrictions in mind

- If we use a Sequence Generator transformation, we must use a reusable Sequence Generator transformation
- We cannot include the following objects in a mapplet
    - Normalizer transformations
    - COBOL sources
    - XML Source Qualifier transformations
    - XML sources
    - Target definitions
    - Other Mapplets

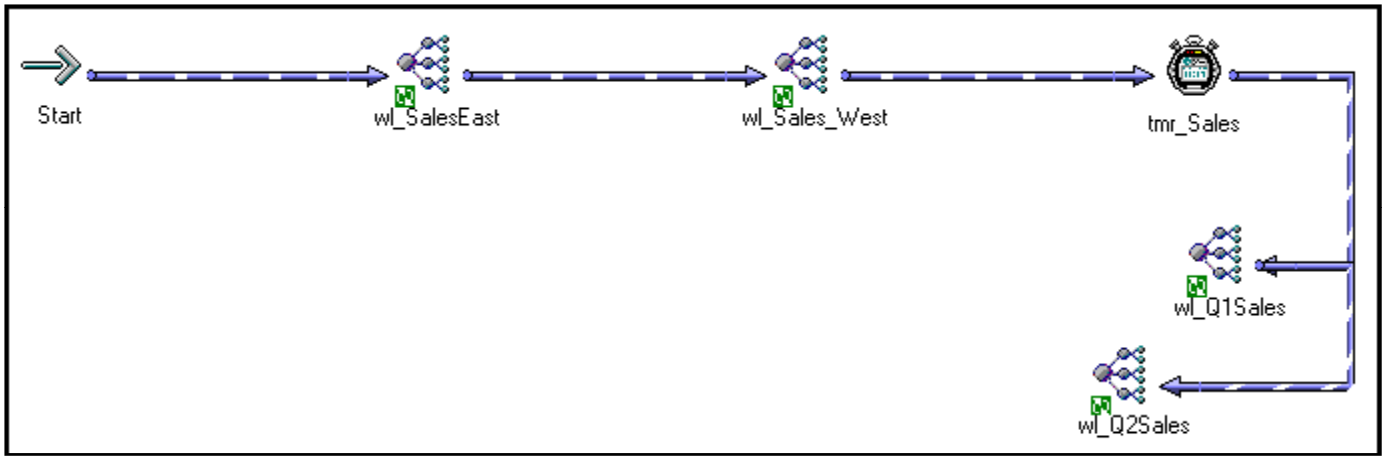
Rules and Guidelines

- A mapplet must contain at least one Input transformation or source definition with at least one port connected to a transformation in the mapplet
- A mapplet must contain at least one Output transformation with at least one port connected to another transformation in the mapping
- We can connect an Input transformation to multiple transformations in a mapplet. However, we cannot connect a single port in the Input transformation to multiple transformations in the mapplet
- To keep existing mappings valid when you edit a mapplet used in a mapping
  - Do not delete connected ports in an Input or Output transformation
  - Do not change the datatype, precision, or scale of connected ports in an Input or Output transformation
  - Do not change a passive mapplet to an active mapplet or an active mapplet to a passive mapplet

Worklets

- A worklet is an object that represents a set of tasks. It can contain any task available in the Workflow Manager. You can also nest a worklet in another worklet
- Create a worklet when you want to reuse a set of workflow logic in several workflows
- When the Informatica Server executes a worklet, it expands the worklet. The Informatica Server then runs the worklet as it would any other workflow, executing tasks and evaluating links in the worklet
- The worklet does not contain any scheduling or server information
- To execute a worklet, include the worklet in a workflow. The worklet executes on the Informatica Server you choose for the workflow
- The Workflow Manager does not provide a parameter file or log file for worklets. The Informatica Server writes information about worklet execution in the workflow log

Workflow with Multiple Worklets

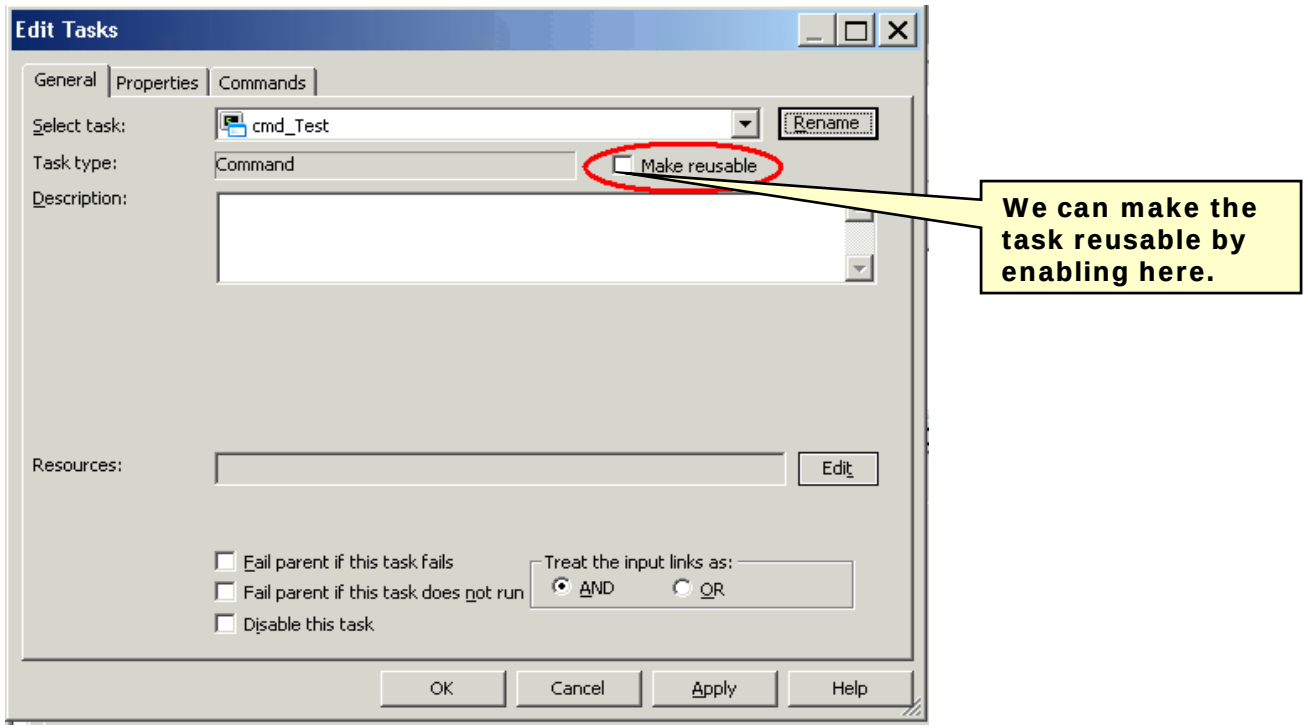


Reusable Workflow Tasks

- Workflows can contain reusable task instances and non-reusable tasks. Reusable tasks can be used in multiple workflows in the same folder
- The Workflow Manager stores each reusable task separate from the workflows that use the task
- You can view a list of reusable tasks in the Tasks node in the Navigator window
- You can see a list of all reusable Session tasks in the Sessions node in the Navigator window
- Tasks you create in the Task Developer are reusable
- Workflow tasks that can be created as reusable are
  - Command
  - Session
  - Email

Reusable Workflow Tasks

- Tasks you create in the Workflow Designer and Worklet Designer are non-reusable by default. However, you can edit the general properties of a task to promote it to a reusable task



Questions?

Try it Out

Problem Statement:

1. Create the reusable expression transformation exp_SimpleInterest to calculate simple interest for the given principle amount, period and interest rate.

2. Create the expression transformation in Mapping to calculate the age in no. of days, no. of Months or in no. of years from the given date of birth and promote the transformation as reusable.

3. We have several fact tables that require a series of dimension keys. Create a mapplet containing a series of Lookup transformations to find each dimension key. So that the mapplet can be used in each fact table mapping.

Test Your Understanding

1. What are the reusable objects in Informatica?
2. What is a reusable transformation?
3. What is a mapplet?
4. What is a worklet?
5. What is a reusable Workflow Tasks? What are the workflow Tasks that can be reused?

Reusable Objects : Summary

- Informatica allows reusability of certain objects
- Reusable transformations can be used in multiple mappings
- A Mapplet is a reusable object that you create in the Mapplet Designer
- A worklet is a reusable object that represents a set of tasks
- Reusable workflow Tasks can be reused in multiple workflows

Reusable Objects : Source

- The PDF manuals (Informatica Power center 8.1.1 Docs) comes with Informatica Software
- www.informatica.com

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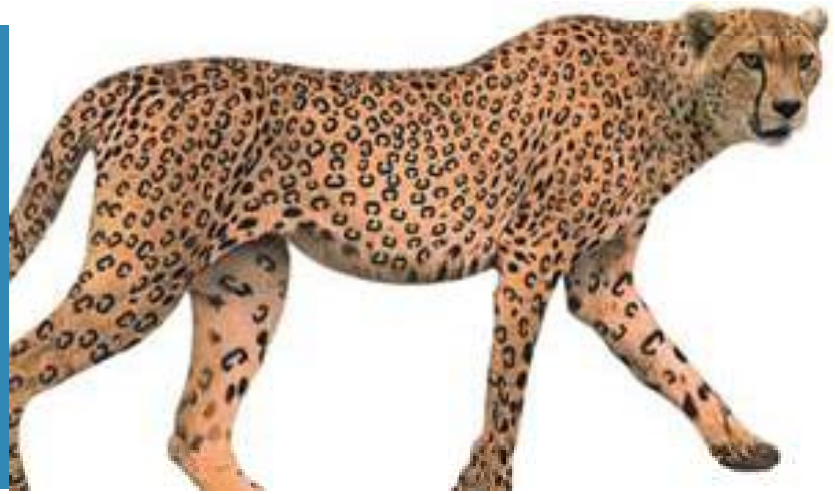
You have completed the Session “Reusable Objects” of Informatica 9x



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