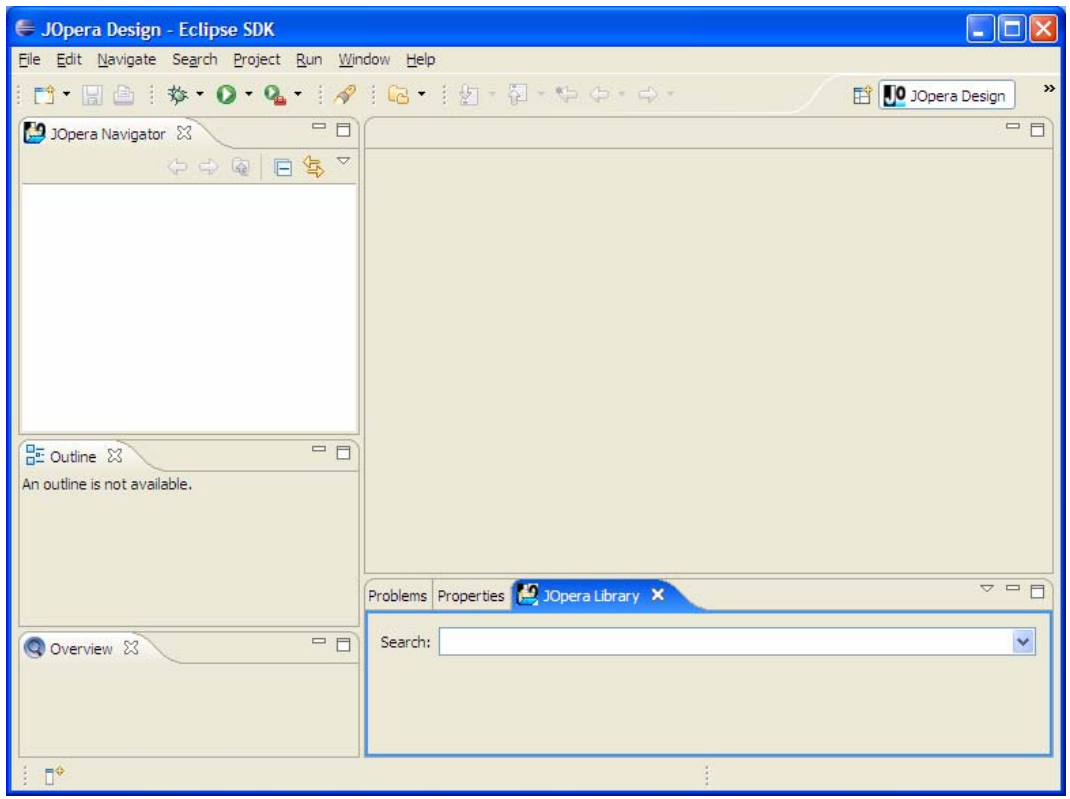
JOpera Overview

- JOpera is a visual Workflow Management Tool
- It is primarily used for Scientific Workflows and Web service composition
- It is built on the Eclipse platform (so that you can easily extend it writing Eclipse plugins)
- It features process development, execution and monitoring tools
- It was recently extended to support streaming

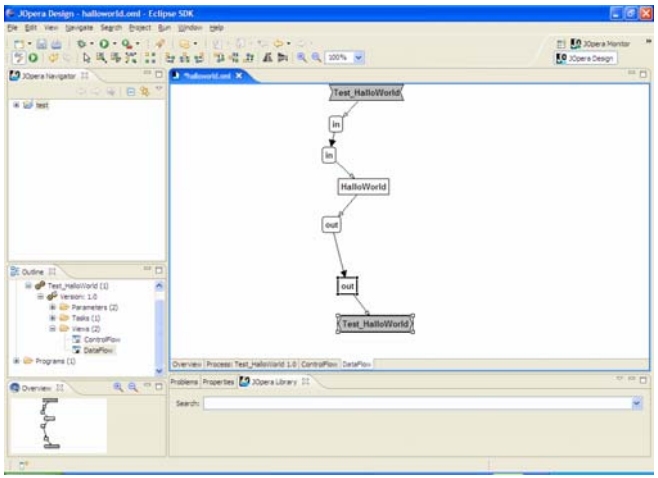
JOpera Visual Components

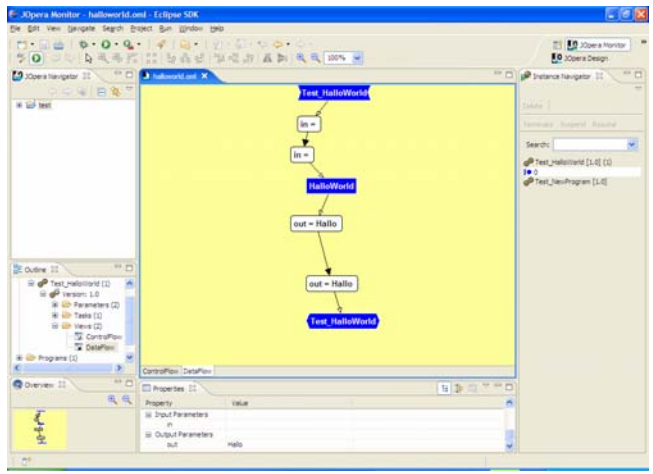
- JOpera Navigator
- Outline
- Overview
- JOperaLibrary
- JOpera Editor
- JOpera Monitor



JOpera Editor/Monitor

- Two different modes:
  - One for editing processes, one for monitoring execution
- Monitoring mode also has
  - Instance Navigator
  - Kernel Memory Inspector





Building Blocks

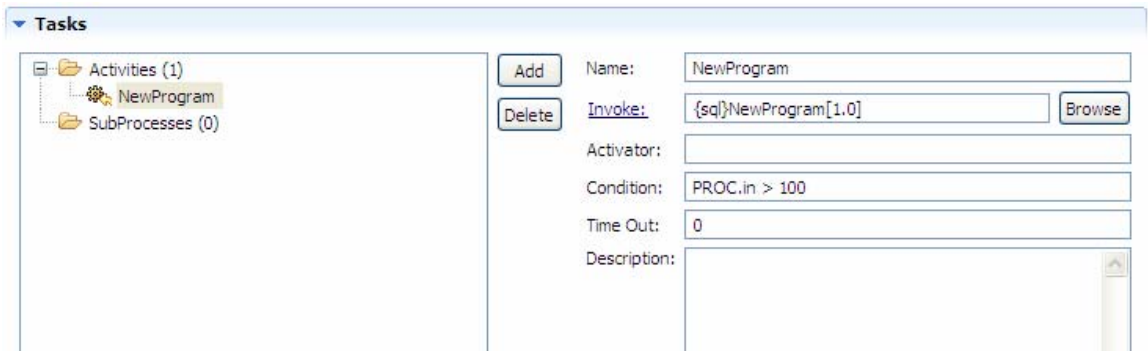
- Process:
  - Tasks
  - Control Flow
  - Data Flow
  - Input- / Outputparameters
  - Constants
- Tasks
  - Processes
  - Programs
- Programs/Components
  - Adapter
  - Input- / Outputparameters

Data Flow

- Connects Input / Output Parameters and Constants
- Input Parameters of the Process connect with Input parameters of Tasks
- Output Parameters of Tasks with Input Parameters of Tasks or with Output Parameters of the Process
- Constants can only connect with Input parameters of tasks or Output parameters of Processes
- Watch out for data types!

Control Flow

- Mostly inferred from the Data Flow
- Exceptions are loops or more advanced workflow patterns
- Conditions can be used to determine when a task gets executed:
- In the Process View: (you can only depend on input of processes and output of tasks)



Components

- Web Services
- SQL
- UNIX
- Java
- Java Snippets

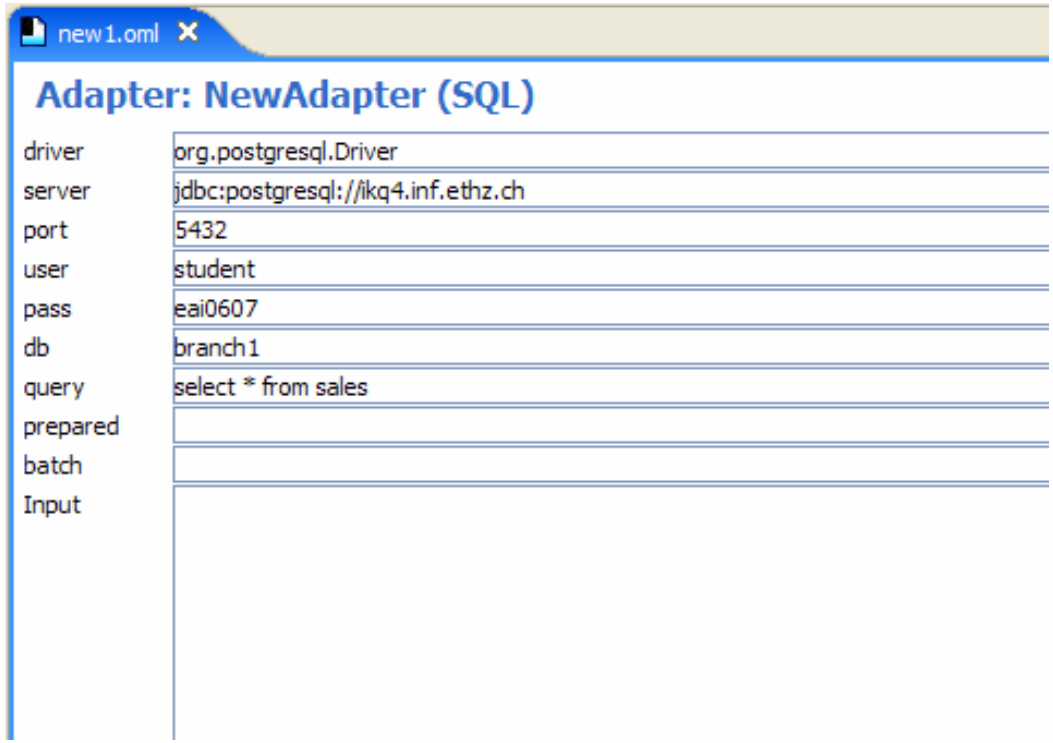
- Grid Services
- XML (XQuery/XPath/XSLT)
- SSH
- And many more

JavaSnippet Component

- Use the Parameters as variable names
- Watch out for types
- Use as Java, but without imports (or use fully qualified names)

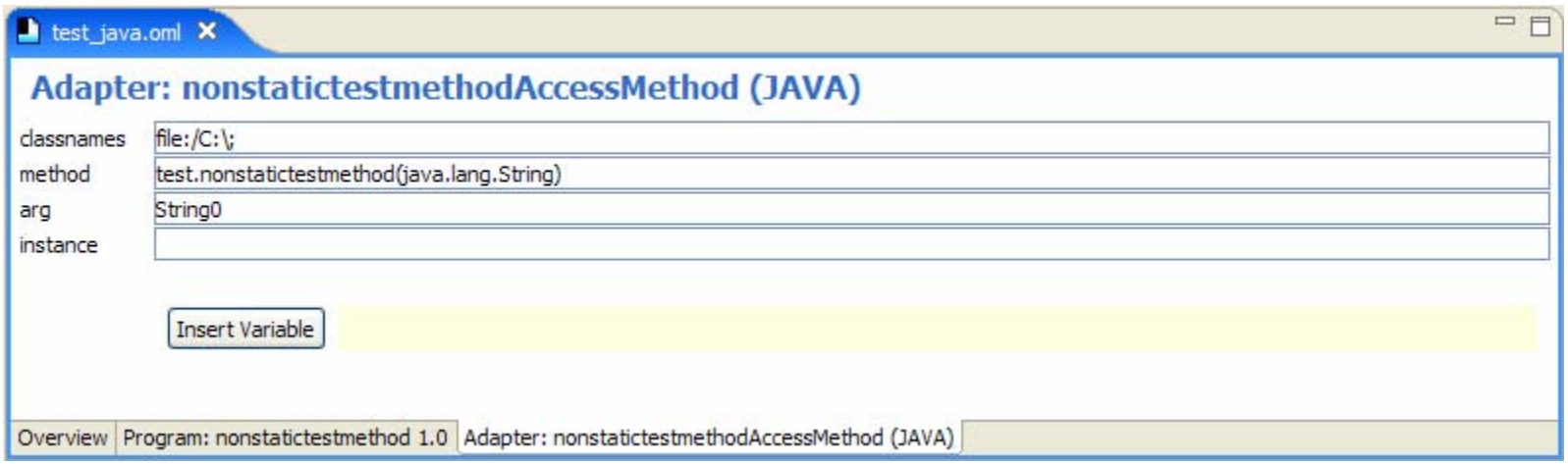
SQL Component

- Use Systemparams to handle result and query



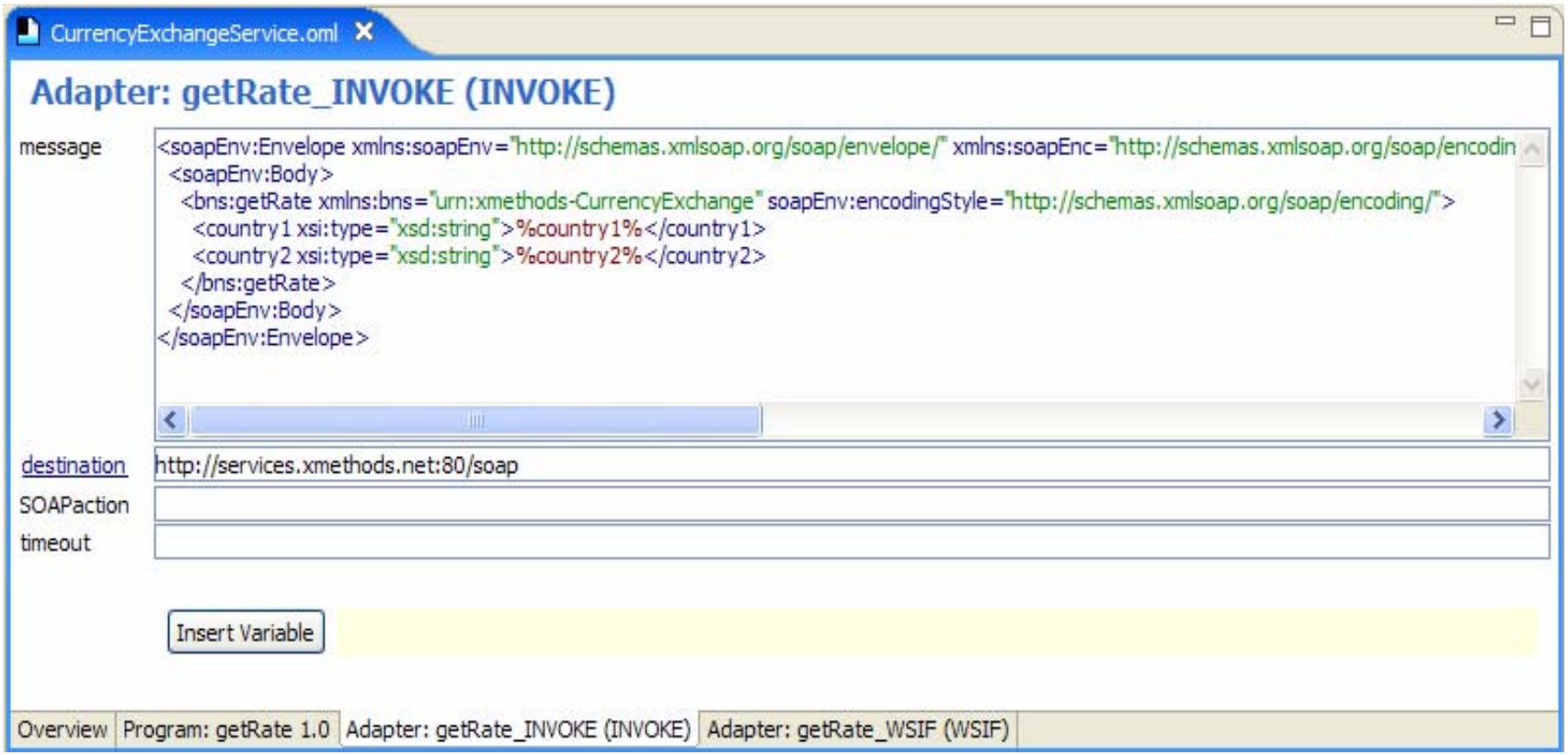
Java Component

- Use the Java Import Wizard (File -> Import -> JOpera -> Java Import Wizard)



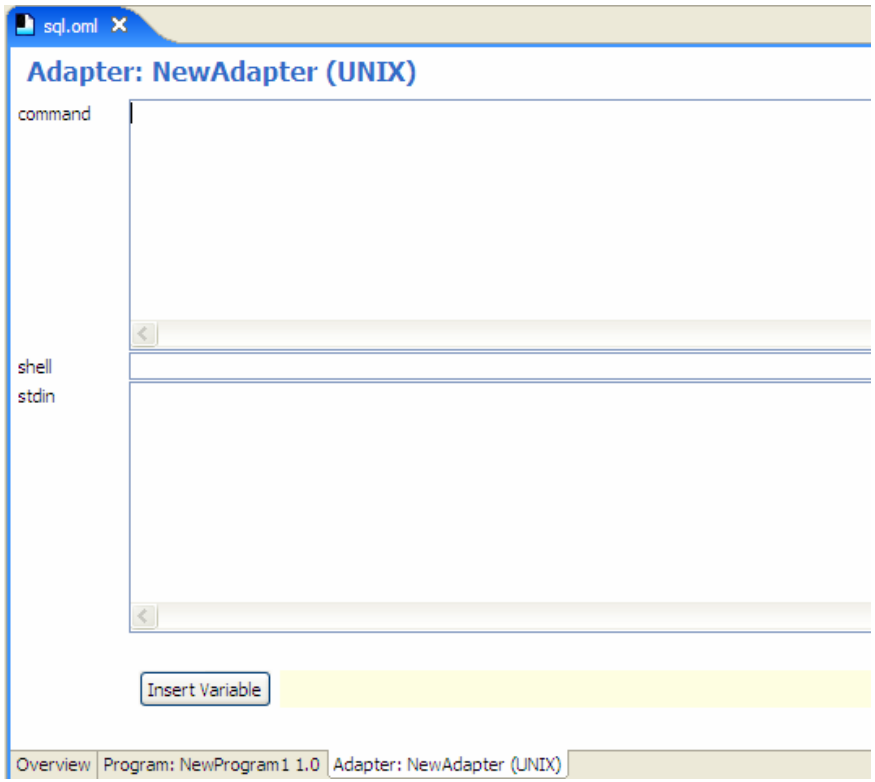
Web Service Component

- Use the WSDL Import Wizard



Unix Component

- Also a SSH Component available



Help/Problems

- Online Help System contained in the JOpera installation (Help -> Help Contents -> JOpera)
- Problems view gives good pointers. Also use the Memory Inspector
- Help is not complete
- Send mail to help@jopera.org if there are problems
- Do not forget to include:
  - Comprehensive error description
  - OML Files you need
  - Error messages (including stack traces)

Shortcuts

- Create new project:
  - File -> New -> Project… -> JOpera -> JOpera Project
- Create new OML file:
  - File -> New -> Other… -> JOpera -> OML File
- Start process:
  - Run -> Run… -> JOpera Process -> Browse… (select process) -> Run
- Create new program:
  - Wizard for Java / WebServices
  - Outline -> Programs -> New Program -> Add Parameters & Adapter