SIRIUS DESKTOP TRAINING - BASICS

Course Goals

- Learn how to create a simple modeling environment with Sirius
- Learn the methodological and technical bases for building a modeling workbench

Our added -value
The course is designed by the creators of the Sirius Project and other Eclipse committers. Many hands-on exercises (50%)
Duration: 28 hours (8 half days)
Audience: Architects, developers
Prerequisites: Basic knowledge of Java development and experience using the Eclipse IDE.

1 - MDE and Eclipse overview

- Introduction to MDE and Domain Specific Modeling concepts
- Overview of the Eclipse modeling technologies (EMF, GMF)

Exercises

- Environment installation and configuration
- Models creation using the tree editor

Duration: 1h

2 - Sirius overview

- The Sirius approach
- Architecture
- End-user's features
- Overview of navigation languages

Exercises

- Hands-on with provided examples

Duration: 3.5h

3 - Introduction to meta-modeling with EMF

- Basic concepts of EMF
- The Ecore meta-model
- The first modeling tool created by EMF
- The generation model: GenModel
- Links between meta-models

Exercises

- Development of a basic EMF modeler based on a specific meta-model, model instances creation
- First customizations of the modeler

Duration: 2.5 h

4 - Navigation with AQL

- Overview
- Syntax
- Tuning queries

Exercises

- Navigation and advanced querying with system services

Duration: 3.5h

5 - Diagram representation

- Specific interpreters
- The viewpoints specification file
- Mapping between semantic and graphical notions
- Specification of a graphical representation

Exercises

- Creation of “class-diagram-like” graphical viewpoints
- Discovery of available shapes

Duration: 3,5h

6 - Editing with diagrams

- Java services
- Other edition tools
  - Editing the label
  - Double-click
  - Contextual menus
  - ...

Exercises

- Enhancement of the sample modeler with extended tools

Duration: 7h

7 - Creating advanced viewpoints

- Conditional styles
- Filters
- Mappings specialization
- Validation rules and quick-fixes
- Internationalisation
- Properties Views
- Best practices

Exercises

- Enhancement of the sample modeler with validation rules, quick-fixes and dynamic elements

Duration: 2.5h

8 - Other representation types

- Table
- Matrix
- Tree

Exercises

- Enhancement of the sample modeler with tables, matrix and trees

Duration: 3.5h

9 - Modeler deployment

- Componentization extension
- Feature creation
- Creation and export of an update site
- Installation of an update site
- Build with Maven/Tycho

Exercises

- Creation of a build for the sample modeler

Duration: 1h