

Hands-on course , 2  
day(s)  
Ref : DEC

### Participants

This training is for any  
Developer, Project Manager  
or Software Architect.

### Pre-requisites

Basic knowledge of the Java  
language.

### Next sessions

# Using the Eclipse Environment

## OBJECTIVES

*Eclipse is a very open and modular development platform which can be extended with numerous open source and commercial tools. This two day training focusses on the tools available for Java developers. General concepts are presented. The Java Development Toolkit is described; its edition, compilation, debugging and unit test functionalities are detailed.*

### [1\) Introduction](#)

### [2\) Programming with the Java Development Toolkit](#)

### [3\) Unit Testing: JUnit](#)

### [4\) Debugging](#)

### [5\) Controlling Versions: introduction to SVN](#)

### [6\) Automating Tasks: introduction to Maven](#)

### [7\) Configuring Eclipse](#)

## 1) Introduction

- Objectives and principles of Eclipse.
- Basic concepts: view, editor, perspective, workspace.
- Launching Eclipse.
- Managing Views and Perspectives.
- Managing Resources (creation, destruction, copy, ...).
- Project management.

### Workshop

*Creating projects, managing resources, basic functionalities.*

## 2) Programming with the Java Development Toolkit

- Main concepts.
- Code organization and code edition.
- Completion mechanisms.
- Assisted correction mechanisms.
- Code generation functionalities.
- Refactoring functionalities.
- Launching programs.

### Workshop

*Developing a minimal application using all functionalities provided by the environment.*

## 3) Unit Testing: JUnit

- Principles of unit testing.
- General presentation of JUnit.
- Implementing test cases and test suites.
- Launching tests.

### Workshop

*Testing the application of lab n.2.*

## 4) Debugging

- Debug perspective in Eclipse.
- Different breakpoints and watchpoints.
- Inspecting variables or expressions.
- Controlling the execution.
- Distributed debugging.

### Workshop

*Debugging the application of lab n.2.*

## 5) Controlling Versions: introduction to SVN

- General concepts of Version Control.
- Concepts of projects, revisions, branches, tags, etc.
- Main functionalities provided to the developer.
- Managing conflicts and branches.
- SVN Perspective.

### Workshop

*Controlling the versions of the application developed in labs n.2, n.3 and n.4.*

## 6) Automating Tasks: introduction to Maven

- Fundamental concepts: Project, Target, Task, Property.

- Definition of the structure of a project. Dependencies between projects.
- Preview of some core tasks:., compilation, archives generation, etc.
- The prospects offered by the Maven Eclipse plug-ins.

#### **Workshop**

*Implementing a Maven project for completing a previous lab.*

### **7) Configuring Eclipse**

- Managing Preferences Properties.
- Installing plug-ins and features.