

Hands-on course , 5  
day(s)  
Ref : DFJ

### Participants

Java Developers, JAVA/JEE  
project managers

### Pre-requisites

Good knowledge of Web  
technologies. Experience  
in programming Web  
applications in Java required.

### Next sessions

# Developping with Java/JEE frameworks

## OBJECTIVES

*This course will enable you to develop Java applications using frameworks, which are currently the basis of many JEE architectures. You'll learn how to integrate best practices in development and be independent in working with the frameworks that are so critical to the JEE ecosystem.*

### 1) Introduction

### 2) Industrially employed frameworks

### 3) The Hibernate framework

### 4) The Spring framework

### 5) The Struts framework

## 1) Introduction

- Presentation and comparison of 2-tier, 3-tier, and n-tier architectures.
- Overview of the JEE ecosystem, leading frameworks, their role in the development of Java applications.

## 2) Industrially employed frameworks

- Organizing Java development.
- Ant, a task-automation framework.
- Maven, to simplify the production and management of builds.
- JUnit, a framework for creating and running unit tests.

### **Workshop**

*Setting up the development environment in Eclipse.*

## 3) The Hibernate framework

- Overview of persistence.
- The Hibernate project.
- Creating an object/relational map. Context, persistent classes.
- Working with persistent data. Object lifecycle. Database syncing.
- Common errors to avoid.

### **Workshop**

*Creating a map Writing HQL queries*

## 4) The Spring framework

- Overview of the role of the light container.
- Overview of interface programming.
- Combining Spring/Hibernate.
- Third-party framework support.
- Demonstration of AOP (Aspect-Oriented Programming).

### **Workshop**

*Creating the context, combining with Hibernate.*

## 5) The Struts framework

- Introduction to the MVC model.
- Components of Struts.
- Implementing a Web navigation process.
- JSP tag libraries.
- Application deployment.

### **Workshop**

*Creating an HMI to benefit from developments completed with Hibernate and Spring.*