

Course : Test Driven Development in Java

Practical course - 3d - 21h00 - Ref. DDJ

Price : 1940 CHF E.T.



This course will provide you with all the knowledge you need to develop your Java applications around the best unit testing and recipe tools and practices. You'll learn how to integrate testing into your development cycle, refactoring, emergent design and agile practices.

Teaching objectives

At the end of the training, the participant will be able to:

- ✓ Mastering the Test Driven Development approach and implementation
- ✓ Integrate testing into the Java application development cycle
- ✓ Get to grips with the main testing and continuous integration tools

Intended audience

Software development engineers or project managers.

Prerequisites

Knowledge of object programming with Java.

Course schedule

1 TDD definition and principles

- Testing in the development process. Process, quality and testing. Test typology.
- The origins of TDD. Agility and testing.
- Development cycle. The 3A's.
- Exception handling.
- Refactoring and emergent design.
- Scenario management. TDD benefits?

Hands-on work

Designing and integrating tests into the project development cycle.

PARTICIPANTS

Software development engineers or project managers.

PREREQUISITES

Knowledge of object programming with Java.

TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more. Participants also complete a placement test before and after the course to measure the skills they've developed.

2 Automated testing with the JUnit framework

- The need for a test framework. JUnit.
- Alternatives (TestNG) and complementary tooling.
- JUnit best practices.

Hands-on work

JUnit implementation.

3 Agile development best practices

- TDD and RDBMS data management, graphical interfaces, Web interfaces.

Hands-on work

Implementing practices.

4 Mock and Stub objects

- The theory.
- Applying theory without using a library.
- Discover the market's libraries.
- Detailed study of Mockito.

Hands-on work

Using Mock objects.

5 Test writing techniques

- Fixtures. Qualities of test code.
- Responsibility-based testing, implementation.
- TDD styles.

Hands-on work

Improve the quality of written tests.

6 Legacy code testing

- What is legacy code?
- Legacy code evolution cycle.
- Functional tests with Fit and FitNesse.
- Functional testing and TDD.
- Functional testing with FitNesse.

7 The tools

- Open Source and commercial tools.
- Hardware test architecture.
- Study of a continuous integration tool.
- Study and choose a continuous integrator.
- Study of a test coverage tool.
- Study of a test management and communication tool between the project owner and the project manager: FitNesse.

Hands-on work

Implementation of several tools.

TEACHING AIDS AND TECHNICAL RESOURCES

- The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
- At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
- A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at psh-accueil@orsys.fr to review your request and its feasibility.

Dates and locations

REMOTE CLASS

2026 : 24 June, 30 Sep., 16 Nov.