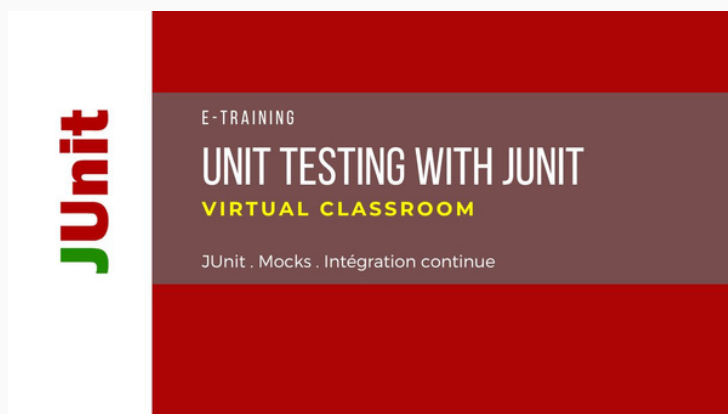


Module: Unit testing with JUnit

The objective of this training is to learn how to test your code with the JUnit reference framework. In particular, you will be able to: understand the principles of testing, implement JUnit, implement unit tests and integration tests, use JUnit in continuous integration.

Prerequisites : OO Programming, good Java practice.



Ways to take this course: Online Instructor Led
Online self-paced
Video On Demand

Video conference tool: ZOOM

Duration: 14 H (2 days)

Integration Tests

Introduction
Servers and databases
Data Access Layers testing
REST API testing
Web Application testing

Go further

Test Driven Development
Continuous integration
Jenkins Integration
Behavior Driven Development

OUTLINE

Introduction

Unit testing
Typology of tests
What is the cost of testing
What tests to perform?
XP Programming, TDD
Practices and recommendations
Automate testing
The Java ecosystem for testing

Unit Testing

TestCase, constraints, conventions
Structure of a test
Getting started with JUnit
Write a good unit test
Hamcrest assertions and constraints
Assertions, failure and error
Running Tests

Unit testing: continued

Exception throwing test
Tests with timeout
Parameterized tests, dynamic tests
Repeated and nested tests
TestSuite, filtering and tagging
Disabling a test
Using annotations (JUnit 4)
Best practices

Mocks

How to implement it
Static vs dynamic Mock
The different mocks
Mock frameworks
EasyMock, JMockit, PowerMock
Mockito
Best practices