Unit Testing with jUnit

Course Summary

Description

This course teaches students how to create unit tests using the JUnit testing framework. The course assumes the students are familiar with testing concepts and Java. During the Unit Testing with JUnit course, you'll learn how to write a single test case, define a test suite, validate proper and improper unit tests, and perform automated testing using the JUnit test runner and your IDE.

Topics

- Testing Concepts
- Testing Tools
- Setting up the Testing Infrastructure
- JUnit Test Framework
- Mock Objects

Audience

This course is designed for Java developers wanting to adopt JUnit for their unit test framework.

Prerequisites

There are no prerequisites for this course.

Duration

One day

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Course Outline

I. Testing Concepts
   A. Test Plans, Test Cases, and Test Suites
   B. Unit Testing
   C. Integration Testing
   D. Continuous Testing
   E. Robustness Testing
   F. Acceptance Testing

II. Testing Tools
   A. Unit and Integration Testing with JUnit and Mock Objects
   B. Automated testing

III. Setting up the Testing Infrastructure
   A. Defining the test strategy
   B. Picking the tools
   C. Configuring the IDE
   D. Configuring the build system
   E. Reporting

IV. JUnit Test Framework
   A. Understanding JUnit and its capabilities
   B. Creating unit tests
   C. Creating integration tests
   D. Annotations
   E. Tests, Suites, and Configurations
   F. Integrating JUnit into build system

V. Mock Objects
   A. What they are
   B. When and how to use them effectively
   C. Creating mocks
   D. Replacing Mock Objects with Live Objects