Effective Automated Integration and Unit Testing
Course Summary

Description

This course is all about the current state of the art in automated testing frameworks; it covers leading automated testing frameworks: JUnit, EasyMock, and FitNesse providing students with the foundations they need to start applying these frameworks on their projects. The course also covers the best practices for putting testing in action and ways to avoid the most common pitfalls when working with automated testing frameworks.

Topics

- Automated Testing
- JUnit in Depth
- EasyMock in Depth
- Integration Testing
- Fit and Fitness in Depth
- Avoiding testing pitfalls
- Alternative testing frameworks
- Testing best practices
- Integrating testing into the development process

Audience

This course is designed for java developers who want to learn and apply effective automated integration and unit testing best practices to their projects.

Prerequisites

Students should have Java and JEE development experience.

Duration

Four days

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Course Outline

I. Automated Testing Overview
   A. This module provides a tour of automated testing products and techniques providing students with an overview of the major types of testing tools and products in use on modern projects.
   B. The focus of this module is to create a map of the different tools and products available today so that students can choose the best tools for their project.

II. JUnit in Depth
   A. This module provides students with in depth coverage of Unit testing with JUnit 4, providing students with plenty of hands on experience with JUnit and systematic exploration of all the Junit features.

III. Easy Mock in Depth
   A. This module introduces the ideas of testing with mock objects and provides an in depth coverage of the Easy Mock Testing Framework.
   B. Students will systematically explore the features of easy mock using numerous labs.

IV. Integration Testing with FitNesse
   A. This module introduces students to integrated testing with FitNessse providing with a systematic exploration of the features and capabilities of FitNesse and the ability to start applying FitNesse on their projects.

V. Testing Patterns, Pitfalls and Best Practices
   A. This module builds on the foundations of previous modules to show students the best practices and techniques that they can use to combine unit testing, mock objects, and integration testing to implement an effective testing for their projects.
   B. Also common pitfalls will be discussed along with ways to avoid them.