Faysal Aziz

Mastering Testing in Spring Boot Applications

- 1-Day Course

FA-0319 · 1-Day

Software Development

Introduction

This intensive one-day course is tailored for developers working with Java Spring Boot who aim to master various testing strategies. The training covers unit testing, integration testing, and end-to-end testing, providing a comprehensive understanding of testing methodologies in the Spring Boot ecosystem.

Learning outcomes

- Develop expertise in writing unit tests for Spring Boot applications.

- Understand and implement integration testing effectively.

- Gain proficiency in setting up and executing end-to-end tests.

- Familiarize with best practices and tools for testing Spring Boot applications.

Prerequisites

- Proficiency in Java and basic knowledge of Spring Boot.

- Familiarity with software testing concepts.

- Experience and understanding of build tools like Maven or Gradle.

Training outline

1. Introduction to Testing in Spring Boot

1. Overview of Testing Types
2. Setting Up a Testing Environment
3. Understanding the Spring Boot Testing Framework

2. Unit Testing in Spring Boot

1. Writing Unit Tests with JUnit
2. Mocking with Mockito
3. Testing Service Layer Components
4. Lab Session: Writing Unit Tests for a Sample Application

3. Integration Testing in Spring Boot

1. Configuring Integration Tests with Spring Boot Test
2. Testing Repository Layer with DataJPA
3. Testing Controllers with MockMvc
4. Lab Session: Implementing Integration Tests

4. End-to-End Testing

1. Overview of E2E Testing in Spring Boot
2. Setting Up Selenium for E2E Testing
3. Writing and Executing E2E Tests
4. Lab Session: End-to-End Testing of a Spring Boot Web Application

5. Best Practices and Tools

1. Test Coverage Analysis
2. Continuous Integration with Testing
3. Tools and Frameworks

The course offers a blend of theoretical concepts and practical sessions, ensuring participants can apply their learning immediately to real-world scenarios. By the end of the day, attendees will be able to effectively write and manage different types of tests in Spring Boot applications, improving the quality and reliability of their software.

© 2026 Faysal Aziz · Kuala Lumpur