Introduction to Spring Boot 2

Duration: 21 hours

Prerequisites: Java SE programming experience equivalent to completing the Java Programming course and knowledge of Spring equivalent to completing the Introduction to Spring 5, Spring MVC and Spring REST course.

Course Description: As the Spring framework has grown, creating and configuring Spring applications has become more and more complex. Spring Boot takes an "opinionated" view of an application (via intelligent defaults) that minimizes configuration and boilerplate Spring code. Spring Boot makes it easier to use Spring's many frameworks, and adds advanced capabilities such as health monitoring. This course introduces Spring Boot from the ground up, including overviews of building blocks such as Maven. It covers the key features and capabilities of Spring Boot, and teaches experienced Spring developers the skills they need to use Spring Boot productively. This course covers Spring Boot 2 and Spring 5 - the current releases of these frameworks.

The standard platform does all labs with the Eclipse IDE, and the lab instructions include detailed directions for setting up and using it. The course can be made available for all major development environments, including IBM RAD and IntelliJ.

Students Will Learn

- Overview of Spring Core (focus on `@Configuration`) and Maven/Gradle
- When to use Spring Boot
- Using Spring Boot starters and `start.spring.io` to easily create new applications
- Understanding and using Spring Boot's auto-configuration
- Customizing your application configuration
- Understanding and using Spring Boot's Spring Data / Spring Data JPA capabilities
- Understanding and using Spring Boot's Web capabilities
- Using embedded servlet containers
- Using Spring Boot Data REST
- Using Spring Security with Spring Boot
- Understanding and using Spring Boot's Actuator
- Using Actuator endpoints to monitor and manage applications
- Working with Spring DevTools
- Spring CLI

Overview

Spring Configuration Overview

- Spring Review
- Using the Spring Container
- Overview of XML and @Component
- Dependency Injection (DI) in Spring
  - Dependencies in Configuration Classes
  - Injecting Configuration Classes

Introduction to Spring Boot

- Maven Overview
  - Core Maven Concepts
  - The Project Object Model (POM)
- Spring Boot Overview
  - Dependency Management
  - Configuration with Spring Boot

- Using Java-based Configuration (`@Configuration`)
  - Integrating Configuration of Different Types
- Importing Between XML and `@Configuration`

Configuration and Customization

- Working with Properties
- Overview of YAML
- Configuring File Logging
- Using the Spring TestContext Framework
- Auto-Configuration Overview
- Customizing SpringApplication

Spring Boot Web/REST and Security

- DispatcherServlet Review
- Web Starters and Configuration Using `spring-boot-starter-web`
- Using Embedded Servers (Tomcat, Netty)
- Deploying to an External Server
- Spring Security Overview
- Auto-configuration and Customization Using `spring-boot-starter-security`
- Overview of Spring Boot Data REST

Spring Boot CLI

- Overview of Spring Boot CLI
- Installing and Running the CLI
- Grabbing / @Grab
  - Programming with Spring Boot
- Spring Boot Hello World / SpringApplication
- SpringApplication Overview
  - `@SpringBootApplication`
  - `CommandLineRunner`
  - `ApplicationRunner`

Spring Boot Database Support

- JDBC Auto-Configuration Using `spring-boot-starter-jdbc`
- Embedded Database Auto-Configuration
- Configuring DataSource Properties
- Spring Boot's JPA Support Using `spring-boot-starter-data-jpa`
- Spring Data Overview
  - Using the `CrudRepository/JpaRepository` Methods
  - Defining Queries with Spring Boot Data

Spring Boot Actuator and DevTools

- Overview of spring-boot-starter-actuator
  - Actuator Endpoints
  - Configuring Endpoint Access
  - Customizing Actuators and Health Checks
- Overview of `spring-boot-starter-devtools`

Related Bootcamp

Track	Duration	Price
Java Programmer	126 hours	$3,580

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