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Coding · Matters
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Price: R12,200.00 excl. VAT
Duration: 4 days
Delivery: Virtual classroom or on-site training

Spring MVC and Spring Boot

Description

Spring MVC is an important module in the core Spring framework for building web applications. Spring Boot makes it easy to create production-ready applications.

The Spring MVC and Spring Boot course is for Java programmers who have completed the Spring Core Development course. This course will teach you how to develop web-based Java applications and REST web services in a consistent, productive way using Spring MVC and Spring Boot.

Objectives

After you have completed the Spring MVC and Spring Boot course, you will be able to:

- Use Spring MVC to develop web-based Java applications and REST web services.
- Integrate into the business layer with Spring DAO, transaction and ORM support.
- Integrate into the web layer of enterprise applications using Spring MVC and Spring Boot.

Intended Audience

You should attend the Spring MVC and Spring Boot course if:

- You are a Spring developer and you want to learn how to use Spring MVC and Spring Boot to develop web-based applications and/or REST web services.
- You are a Java developer and you need to support systems in an environment that uses Spring MVC and/or Spring Boot.

Prerequisites

Before you attend the Spring MVC and Spring Boot course:

- You must have attended our Java Programming course or already be comfortable with the fundamentals of the Java programming language.
- You must have attended our Spring Core Development course or already be comfortable with the fundamentals of Java programming using the Spring Framework.
- It would be useful to have some knowledge of basic XML.

Course Contents

Spring Framework Review

- Decoupling components using dependency injection (DI).
- Managing cross-cutting concerns with aspect oriented programming.
- Using templates to reduce boilerplate code.
- Containers and Beans.
- Configuration using XML, annotations and JavaConfig.
- Component scanning and stereotypes.

- Resources and resource loading.

Data Access and Transactions

- Spring DAO as a JDBC abstraction layer.
- Simplifying JDBC development with JdbcTemplate.
- SQLException translation.
- Programmatic and declarative transactions.
- Object-relational mapping (ORM).
- Hibernate and JPA.
- The Spring Data project.

Web Development with Spring MVC

- Spring MVC as the Model-View-Controller implementation.
- DispatcherServlet as a "Front Controller" design pattern.
- Controller interface for handling requests.
- Returning models and views with ModelAndView.
- @RequestMapping to map requests to handlers.
- Servlet listeners for Spring container initialization.
- Resolving and redirecting views.
- Integrating different view technologies.
- REST web service server applications using MVC.

Testing

- Testing with JUnit5.
- Mocking concepts.

Security

- Form vs Basic authentication.
- Securing an MVC application.
- Authentication Providers.
- Spring Security concepts.

Spring Boot

- Simplifying application development with Spring Boot.
- Spring Initializr, starters and auto-configuration.
- Metrics and monitoring with Spring Boot Actuator.
- Integration with Spring Data.
- Testing with @SpringBootTest and other annotations.

Integration with the JEE Architecture

- SOAP and REST Web services.
- REST web service client applications.

- JMS for receiving and sending messages.
- Accessing EJBs.

** *The lecturer reserves the right to modify the contents of the course to suit the needs of the delegates.*