

Mastering Spring from Basic To Advance

Duration : 7 days(56 hours)

Prerequisites :

- ✓ Strong knowledge of Java
- ✓ Basic of Webservices / Spring

Module 1 Introduction to Spring

- Overview of Spring Technology
 - Motivation for Spring, Spring Architecture
 - The Spring Framework
- Spring Introduction
 - Declaring and Managing Beans
 - ApplicationContext - The Spring Container
 - XML and @Component/@Named Config
- Dependencies and Dependency Injection (DI)
 - Examining Dependencies
 - Dependency Inversion / Dependency Injection (DI)
 - DI in Spring - XML and @Autowired

Module 2 Configuration in Depth

- Java Based Configuration (@Configuration)
 - Overview, @Configuration, @Bean
 - Dependency Injection
 - Resolving Dependencies
- Integrating Configuration types
 - XML and @Component Pros/Cons
 - @Configuration Pros/Cons
 - Choosing a Configuration Style
 - Integrating with @Import and
- Bean Scope and Lifecycle
 - Singleton, Prototype Scopes
 - Configuring Scope
 - Bean Lifecycle / Callbacks

Module 3 Spring MVC

- Introduction to Spring MVC
 - Handler Mapping
 - Controllers
 - Validations
 - Views

Module 4 Spring Boot

- Spring Boot Overview
 - Spring POMs
 - Spring Boot Starters
 - SpringApplication – Apps With main()
 - CommandLineRunner and ApplicationRunner
- **Working with Properties**
 - Boot Property Files
 - Using Application Properties & YAML Configuration
 - SpringBootApplication
 - EnableAutoConfiguration
 - SpringBootConfiguration
 - Embedded server and its uses
- **Spring Boot Actuator**

Module 5 RESTFUL WEB SERVICES

- REST Overview
- REST and Spring MVC
- Spring support for REST
 - @RequestMapping/@PathVariable, @RequestBody, @ResponseBody, HTTP Method conversion
 - URI Templates and @PathVariable
 - Writing RESTful Controllers / @RestController

Module 6 : Accessing Data with Spring Boot and Database Support

- Data Access Introduction
- Spring Data JDBC
- Basic Auto-configuration - Data source

- Configuration Properties
- Spring Boot's JPA Support - spring-boot-starter-data-jpa

Module 7 : Spring Transaction (TX) Management

- Overview
- Declarative TX Management (REQUIRED, etc.)
- TX Scope and Propagation
- Configuration and Boot Auto-Configuration
- Pointcut-based Configuration of Transactions

Module 8 : Spring Testing

- Testing and JUnit 5 Overview
- Writing Tests - Test Classes, asserts, Naming Conventions
- Running Tests - IDE, Maven, ...
- Test Fixtures - setup and teardown
- Spring TestContext Framework
 - Overview
 - Configuration
 - Running Tests

Module 9 : Spring Boot Security

- Adding the spring boot security starter
- Apply the security configuration by writing our own authorization and authentication

Module 10 : Spring Boot and Redis

- What is Caching in Spring Boot?
- How to configure Caching in Spring Boot
- Redis
 - Features of Redis
 - Redis Types
 - Spring Boot with Redis