

Java Spring

Mode: Classroom

Duration: 40 hours

Course Outline:

Chapter 1: Introduction to Spring

1. What is Spring?
2. Overview of the Spring Framework
3. Spring Philosophies
4. Spring Documentation
5. Java 5 Language Features

Chapter 2: A First Look at Spring

1. A Simple Example
2. Wiring Beans
3. Configuring a Properties File
4. Schema-Based Configuration

Chapter 3: Beans and Containers

1. Spring Containers
2. Spring Configuration File
3. Spring Beans
4. Using the Container
5. The BeanFactory Interface
6. Singleton vs. Prototype
7. Bean Naming
8. Dependency Injection
9. Setter Injection
10. Constructor Injection

Chapter 4: The Application Context

1. The ApplicationContext Interface
2. Accessing Application Components
3. Accessing Resources
4. Internationalization with MessageSource
5. Application Events

Chapter 5: Data Validation and Conversion

1. The Validator Interface
2. The Errors Interface
3. The ValidationUtils Class
4. Validator Example
5. Testing the Validator
6. Property Editors
7. Custom Property Editors

Chapter 6: Aspect-Oriented Programming

1. Aspect-Oriented Programming
2. AOP Concepts
3. AOP Proxies
4. The AOP Alliance

5. Types of Advice
6. AOP Example
7. Introductions

Chapter 7: Using JDBC with Spring

1. A Simpler Approach
2. The `JdbcTemplate` Class
3. Exception Translation
4. Updating with the `JdbcTemplate`
5. Queries using the `JdbcTemplate`
6. Mapping Results to Java Objects

Chapter 8: Using Hibernate with Spring

1. What is Hibernate?
2. Hibernate Sessions
3. The `HibernateTemplate`
4. Sample Class and Mapping File
5. Creating and Saving a New Entity
6. Locating an Existing Entity
7. Updating an Existing Entity
8. Hibernate Query Language
9. Executing Queries

Chapter 9: Spring Web MVC - Part 1

1. Spring Web MVC
2. The `DispatcherServlet`
3. Writing a Controller
4. A Simple View Page
5. Configuring the Controller
6. Adding a View Resolver
7. Adding a Message Bundle
8. Adding Business Classes
9. Adding Test Data
10. Accessing a Database
11. Adding a Form
12. Updating the Database
13. Integrating Hibernate

Chapter 10: Spring Web MVC - Part 2

1. Handler Mappings
2. View Resolution
3. Chaining View Resolvers
4. Controllers
5. `AbstractWizardFormController`