Spring Frameworks

Duration: 30-35 Hours
Prerequisites
- Knowledge of Core & Adv Java Programming

Course Contents

1. **Spring 3.X**
   - Introduction to spring framework
   - Spring - environment setup
   - Steps to use Spring Framework in applications
   - Understanding IOC and Dependency Injection
   - Working with Bean Factory and Application Context.
   - Bean Definition
   - Working with multiple configuration files
   - Most popular namespaces e.g. beans,
   - Best practices when working with namespaces
   - Advanced XML Dependency Injection
   - Externalizing constant values into properties files
   - Working with a high number of configuration files
   - Bean Scopes and Bean Life Cycle
   - Bean Post Processors
   - Bean Definition Inheritance
   - Dependency Injection
   - Injecting Inner Beans
   - Injecting Collection Type
   - Annotation-Based Dependency Injection
   - Autowiring and component scanning
   - Annotation Based Configuration(@Required,@Autowired, @Qualifier)
   - JSR-250 Annotations(@Resource,@PostConstruct ,@PreDestroy)
   - Component and Stereotype Annotations
   - Using MessageSource To Get Text From Property Files

2. **Aspect-Oriented Programming (AOP) with Spring**
   - Introduction on Spring AOP
   - Aspect-oriented programming concepts
   - Integration with Spring IoC
   - Defining pointcut expressions
   - Implementing an advice: @Around, @Before, @After, and so on
   - AspectJ APIs and annotations

3. **Data Access and JDBC with Spring**
   - Introduction to Spring JDBC
   - How Spring integrates with existing data access technologies
   - Spring JDBC APIs
   - Spring JDBC development
   - Data Access Exception hierarchy
   - Result transformations
   - Implementing Row Mapper
   - Parameter mapping
   - Named Parameter JDBC Template

4. **Transactions management in spring.**
   - Spring Declarative Transactions Management
   - Spring Programmatic transaction management

5. **Hibernate with Spring**

6. **Working with Spring MVC**
   - Introduction to Spring MVC framework
   - Creating many Spring MVC Web Applications
   - Writing an annotation based controller class -@Controller, @RequestMapping
   - @PathVariable annotation
   - Handling an HTML form using @RequestParam annotation
   - Understanding @ModelAttribute Annotation
   - Data Binding with Date, Collection
   - Data Binding with a User-Defined Type, BindingResult
   - @InitBinder annotation, WebDataBinder, CustomDateEditor
   - Writing your own custom property editor class
   - Form Validations
   - Form Validation (customizing error messages using Spring MessageSource)