1. **Introduction to Spring Framework**

- Why Spring
- Spring Framework architecture
- Object Coupling Problem
- Loose coupling and Tight coupling
- Dependency Injection and its types
- Bean Lifecycle
- Bean scopes (singleton and prototype)
- Assignments

2. **Spring Configurations**

- What is Autowiring?
- Different types of Autowiring?
- Implementing autowiring in different ways
- Spring bean definition and inheritance
- Specifying default values using @value annotation
- Autowiring bean using @Autowired
- Resolving bean using @Qualifier
- Defining a component using @Component
- Using @PostConstruct and @PreDestroy

- Automatic Bean discovery in a Spring application
- Using Spring Expression Language
- Assignments

3.Aspect Oriented Programming and DAO

- What is Aspect Oriented Programming (AOP)
- AOP terminologies
- Implementing MethodBeforeAdvice
- Implementing AfterReturningAdvice, Implementing MethodInterceptor
- Implementing ThrowsAdvice
- What is AspectJ
- AspectJ provided annotations like @Aspect,@Before etc.
- Data Access Object (DAO)pattern

- Using property files
- Assignments

4.Data Access

- Using Jdbc Template
- Binding variables in database query
- Mapping database rows to Java class
- Jdbc Batch Processing
- What is Hibernate
- Working With Hibernate
- Integrating Hibernate with Spring
- Database Transaction
- Spring support for Database transactions
- Assignments

5.Spring Web

- Spring MVC Architecture,
- MVC Components
- Setup Spring MVC Application
- Writing a Spring MVC application
- Exception Handling
- Assignments

6.Integrating Spring with Other frameworks

- Understand Struts 2 and JSF
- Integration Spring with Struts
- Developing a Struts 2 application
- Integrating JSF with Spring
- Developing a JSF application
- Spring Web Flow
- Assignments

7.Spring Security

- Spring features for Securing applications
- Implementing Remember me feature

- Storing Encrypted Passwords
- Restricting the number of login attempts
- Logging with Log4j
- Assignments

8. Spring Batch

9.Spring Integration

- Introduction to messages , channels, and Endpoints
- Receiving Messages
- Common Endpoints
- Endpoint API
- Message Flow components
- Introduction to Adapters.