Spring Framework – Introduction Tasks

1. Introduction to Spring Framework

- Understand what Spring Framework is.
- List problems Spring solves in Java applications.
- Differentiate Spring vs traditional Java development.
- Explain real-world use cases of Spring.

2. Spring Modules Overview

- Study core Spring modules.
- Understand Spring Core, Context, Beans modules.
- Explain Spring MVC module.
- Explain Spring ORM and JDBC modules.

3. Inversion of Control (IoC)

- Understand what IoC is.
- Explain IoC with real-world example.
- Explain how Spring implements IoC.
- List benefits of IoC.

4. Dependency Injection (DI)

- Understand Dependency Injection concept.
- Differentiate constructor vs setter injection.
- Explain field injection and its drawbacks.
- Explain how DI improves loose coupling.

5. Spring Container

- Understand what Spring Container is.
- Differentiate BeanFactory vs ApplicationContext.
- Explain responsibilities of Spring Container.
- Explain bean lifecycle at high level.

6. Spring Beans Basics

- Understand what a Spring Bean is.
- Explain bean scopes.
- Explain bean configuration approaches.
- Explain @Component-based configuration.

7. Advantages of Spring Framework

- Explain advantages of using Spring.
- Explain how Spring supports testability.
- Explain integration support in Spring.
- Explain why Spring is popular in enterprise applications.