Pooja Kumari

LAB # 3&4 - Task # 3

Write short answers to the following questions.

What is Spring?

Spring Boot is an extension of the Spring framework that simplifies the process of building production-ready, stand-alone, and highly customizable Spring-based applications. It includes a set of conventions to accelerate development. It provides a wide range of features for various aspects of application development, including Dependency Injection, Aspect-Oriented Programming, data access, transaction management, and more. Spring is highly configurable but requires developers to make many decisions about configuration, project setup and configurations for external Servlet containers like Tomcat.

What is Spring Boot?

Spring Boot is an extension of the Spring framework that simplifies the process of building production-ready, stand-alone, and highly customizable Spring-based applications. Designed to simplify the process of building and deploying production-ready applications. It aims to provide a set of opinionated defaults and conventions to reduce boilerplate code and configuration. Spring Boot is ideal for creating stand-alone, self-contained applications with minimal setup and configuration and with embedded web servers like Tomcat and Jetty.

What is the relation between Spring platform and Spring Boot?

Spring Boot is built on top of the Spring platform. Spring Boot leverages the core components of the Spring framework but enhances it with features like auto-configuration and simplified dependency management to make it easier to create Spring applications.

What is the relation between Spring platform and Spring framework?

The Spring platform encompasses the entire Spring ecosystem, including the core Spring framework, Spring Boot, Spring Data, Spring Security, and more. The Spring framework is the foundational component of the Spring platform, providing features such as dependency injection and aspect-oriented programming.

What is Dependency Injection and how is it done in the Spring platform/framework?

Dependency Injection is a design pattern that allows objects to receive their dependencies (such as services or components) from an external source rather than creating them internally. In Spring.

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What is Inversion of Control (IoC) and how is it related to Spring?

Inversion of Control (IoC) is a principle where the control over the flow of a program's execution is shifted from the program itself to a container or framework. Spring implements IoC by managing the creation and lifecycle of application objects. Developers configure the dependencies, and Spring takes care of injecting them when needed. This reduces tight coupling between components.

This can be achieved using.

1. XML Configuration
2. Java Classes
3. Annotaions