Task 2

1.Spring is a Java-based framework that provides comprehensive infrastructure support for developing Java applications. It facilitates building enterprise-level applications using concepts like dependency injection, aspect-oriented programming, and more.

2. Spring Boot is an extension of the Spring framework that aims to simplify the process of setting up and configuring Spring applications. It provides auto-configuration and convention-over-configuration features, reducing the need for manual configuration.

3. Relation between Spring Platform and Spring Boot: Spring Boot is built on top of the Spring framework. It leverages many of the components and functionalities provided by the Spring platform to simplify and streamline application development.

4. Relation between Spring Platform and Spring Framework: The Spring platform encompasses the entire ecosystem of Spring projects, including the Spring Framework, Spring Boot, Spring Data, Spring Security, and more. The Spring Framework is the core component of this platform, providing fundamental features for building enterprise applications.

5.Dependency Injection (DI) in Spring: Dependency Injection is a design pattern used to manage dependencies between objects. In Spring, DI is achieved through inversion of control (IoC) containers, such as the ApplicationContext. Spring manages the creation and injection of dependent objects into classes, reducing coupling and enhancing testability and flexibility.

6. Inversion of Control (IoC) and its Relation to Spring: Inversion of Control is a design principle where control of object creation and lifecycle is shifted from the application code to a framework or container. Spring's IoC container is responsible for instantiating, configuring, and managing application objects. It allows developers to focus on business logic while the framework handles object dependencies and lifecycle management.

Task 3