SPRING BOOT INTERVIEW QUESTIONS

1. **What is Spring Boot?**
    - ➔ Spring Boot is java framework that makes it easier to create and run Java applications.
    - ➔ It simplifies the configuration and setup process, allowing developers to focus more on writing code for their applications.
    - ➔ Spring Boot, a module of the Spring framework, facilitates Rapid Application Development (RAD) capabilities
    - ➔ Spring Boot solve many developer's problem
        - Configurations
        - Dependency Management
        - Embedded Server
        - And many more
2. **Why Spring Boot over Spring?**
    - ➔ Spring boot provide many advantages over normal spring framework
        - **Easy to use**
        - **Production Ready applications**
        - **Rapid Development-** Auto-configuration enable developers to quickly develop apps
        - **Provide Dependency Management**
        - **Autoconfiguration**
        - **Embedded server**
3. **Working of Spring Boot**
    - ➔ Spring boot starts by scanning in the starter dependencies in pom.xml
    - ➔ Then **download and auto-configure** the module as you included in pom.xml
    - ➔ For example we have to create web application then we have to put **spring-boot-starter-web** dependency in pom.xml
      When we start the project spring boot downloads all the dependency required for the web and configure the things like spring mvc

4. **How spring boot starts?**
    - ➔ Starts by calling main () method of your main class
    - ➔ The **run()** method of SpringApplication is called. This method starts the application by creating an application context and initializing it.
    - ➔ Once the application context is initialized, the run () method starts the application's embedded web server.
5. **Top Spring Boot Annotations**
    - ➔ @**SpringBootApplication:** It combines three annotations
        - **@configuration**
        - **@EnableAutoConfiguration**
        - **@ComponentScan**

      It is typically placed on the main class of the application.
    - ➔ **@Component:** It is used to mark a class as a Spring bean that will be managed by the Spring container.
    - ➔ **@Autowired:** This annotation is used to automatically inject dependencies into a Spring managed bean.
    - ➔ **@Service:** This annotation is used to indicate that a class represents a service component in the application. It is typically used to annotate classes that contain business logic.
    - ➔ **@RestController:** Mark class as REST controller. It is a specialized version of the **@Controller** annotation that includes the **@ResponseBody** annotation by default.
    - ➔ **@RequestMapping: used to** map specific url to method. Used on class as well as method level.
    - ➔ **@Repository:** mark class as DAO, mostly used on class that has database persistence logic.
6. **What are the Spring Boot Starters:**
    - ➔ Starters are a collection of **pre-configured dependencies** that make it easier to develop particular kinds of applications.
    - ➔ These starters include all of the dependencies, version control, and configuration needed to make certain features of a Spring Boot application functional.

7. **What are the key dependencies of Spring Boot?**
    a. Spring-boot-starter-parent
    b. Spring-boot-maven-plugin
    c. Spring-boot-starter-test
    d. Spring-boot-starter-security
    e. Spring-boot-starter-web
    f. Spring-boot-starter-actuator
8. **What is Spring-Boot-Starter-Parent?**
    a. Spring Boot Starter Parent is a starter project that provides the default configuration for spring based applications.
        i. The dependency management feature manages the versions of common dependencies
        ii. Provide the default compiler level as java 1.8 and UTF-8 source encoding.
        iii. Provides a default configuration for Maven plugins such as maven-surefire-plugin, maven-jar-plugin, and maven-failsafe-plugin.
        iv. Executes a repackage goal with a repackage execution id.
        v. Resource filtering and configuring profile-specific files
9. **Can we use only spring boot dependency feature and configure maven plugin manually?**
    a. Yes
    b. We don't inherit from the spring-boot-starter-parent po,.
    c. Include the spring-boot-dependencies dependency inside the dependency Management section as an import scope.
10. **What is Spring Boot CLI and what are its benefits?**
    Command line tool to create/run and manage spring boot applications
    →spring