



Spring Boot Interview Questions

◆ Basics & Core Concepts

- 1. What is Spring Boot? 😞 How is it different from the Spring Framework?
- 2. What are the main features of Spring Boot? ⚡
- 3. Explain the concept of 'convention over configuration' in Spring Boot. 🔑
- 4. What are the advantages of using Spring Boot for building applications? 💡
- 5. What is Spring Boot Starter? 🚀 Name some commonly used starters.
- 6. How does Spring Boot handle configuration? ✂ Explain the application.properties or application.yml.
- 7. What is @SpringBootApplication annotation? 📄
- 8. What is the use of the @EnableAutoConfiguration annotation in Spring Boot? 🔁
- 9. What are the different ways to run a Spring Boot application? ▶
- 10. What is the role of pom.xml (for Maven) or build.gradle (for Gradle) in Spring Boot? 📄

◆ Dependency Injection

- 1. What is Dependency Injection in Spring Boot? 📌
- 2. What are the different types of Dependency Injection in Spring? 🔁
- 3. How does Spring Boot handle bean creation and management? 🧐💻
- 4. What are the scopes of Spring beans? 🌱
- 5. What is the difference between @Component, @Service, @Repository, and @Controller annotations in Spring Boot? 📊
- 6. What is the difference between @Autowired and @Inject annotations? 🚗

◆ Spring Boot Auto Configuration

- 1. What is auto-configuration in Spring Boot? 🔑
- 2. How does Spring Boot automatically configure beans in the application? ⚙
- 3. Explain how to disable specific auto-configurations. ✖
- 4. What is the role of @ConfigurationProperties in Spring Boot? 🏠

◆ Spring Boot Application Properties

- 1. How do you externalize configuration in Spring Boot? 📁
- 2. What are application profiles in Spring Boot? How do you manage them? 🎯
- 3. How would you configure logging in Spring Boot? 💻
- 4. How do you manage multi-environment configuration in Spring Boot? 🌐

◆ Spring Boot and Spring MVC

- 1. What is Spring MVC? How is it used in Spring Boot? 🌐
- 2. What is the role of @RestController and @Controller annotations in Spring Boot? 💻
- 3. How do you handle exceptions in Spring Boot applications? 🚗

- 4. What is the use of `@RequestMapping`, `@GetMapping`, `@PostMapping`, etc., in Spring Boot? 🔑
- 5. What are some ways to handle CORS in Spring Boot? 🔄
- 6. What is Spring Boot's embedded server? Name the different types. 🖨️
- 7. How do you configure and use an embedded Tomcat server in Spring Boot? 🧑

◆ Spring Boot Testing

- 1. How do you test Spring Boot applications? 🛠️
- 2. What are the annotations used for unit testing in Spring Boot? ✅
- 3. Explain the difference between `@WebMvcTest` and `@SpringBootTest`. 🧑 🏠
- 4. How do you write integration tests in Spring Boot? 🔗
- 5. How do you mock beans in Spring Boot testing? 🧑 🧠

◆ Spring Boot Security

- 1. What is Spring Security? How is it integrated with Spring Boot? 🛡️
- 2. What are the common Spring Security components?
- 3. What are the different ways to implement authentication in Spring Boot? 🔑
- 4. What is the role of `@PreAuthorize` and `@Secured` annotations? 🔒
- 5. How do you configure role-based authorization in Spring Boot? 🏷️
- 6. What is CSRF (Cross-Site Request Forgery), and how does Spring Security protect against it? 🚫
- 7. How do you configure HTTP Basic Authentication in Spring Boot? 🗉
- 8. How do you configure JWT (JSON Web Token) authentication in Spring Boot? 📄
- 9. What is the difference between stateless and stateful authentication in Spring Security? ⚖️
- 10. How does Spring Security handle session management? 💻
- 11. What are Security Filters in Spring Security, and how do they work? 🔗
- 12. How do you implement custom authentication and authorization logic in Spring Security? 🧑
- 13. How can you protect your Spring Boot application from brute-force attacks? 🔒
- 14. How do you handle OAuth2 and social login (e.g., Google, Facebook) in Spring Security? 🌐

◆ Spring Boot Data & JPA

- 1. What is Spring Data JPA? 📊
- 2. How does Spring Boot integrate with databases? 🗄️
- 3. What are Spring Boot's support for different database configurations? 🧩
- 4. How do you configure a `DataSource` in Spring Boot? ⚙️
- 5. Explain how to use Spring Data repositories in Spring Boot. 📖
- 6. What is the difference between `@Entity`, `@Table`, and `@Id` annotations? 🏷️
- 7. How do you handle database migrations in Spring Boot (e.g., with Flyway or Liquibase)? 🔗
- 8. What are Spring Boot's data access features like transaction management, CRUD, etc.? 🔄

◆ Spring Boot Profiles & Environments

- 1. What are Spring Profiles? How are they used in Spring Boot? 🌿
- 2. How do you define multiple profiles in Spring Boot? 🌱
- 3. What is the role of `@Profile` annotation in Spring Boot? 📄
- 4. How do you activate and manage Spring Boot profiles? 📋

◆ Spring Boot Actuator

- 1. What is Spring Boot Actuator? ⚙️
- 2. How do you enable and configure Spring Boot Actuator endpoints? 📢
- 3. What are the common actuator endpoints available in Spring Boot? 🔑
- 4. How can you customize actuator endpoints? ✨
- 5. How do you secure Spring Boot Actuator endpoints? 🗝️

◆ Spring Boot WebSocket

- 1. What is WebSocket? How does Spring Boot support WebSockets? 🌐
- 2. How do you create a WebSocket application using Spring Boot? 🖱️
- 3. What is `@ServerEndpoint` and how is it used in Spring Boot? 💬

◆ Spring Boot Microservices

- 1. How does Spring Boot facilitate the development of microservices? 🌍
- 2. What is Spring Cloud? How does it relate to Spring Boot? ☁️
- 3. How would you implement service discovery with Spring Boot (using Eureka)? 🔍
- 4. What is Spring Cloud Config, and how is it used with Spring Boot? ⚙️
- 5. How does Spring Boot handle load balancing in a microservice architecture? ⚖️
- 6. How do you implement Circuit Breaker pattern using Spring Boot (e.g., with Hystrix)? 🚧

◆ Spring Boot Caching & Performance

- 1. How can you enable caching in Spring Boot? 📦
- 2. How does Spring Boot handle caching with different caching providers (e.g., Redis)? 🔄
- 3. How do you enable and configure async processing in Spring Boot? ⌚