**Spring, Spring Boot, Spring Data and Spring Data JPA**

1. What is spring core and what are the important components under the spring core?
2. What is inversion of control (IOC) and Dependency Injection (DI)?
3. Difference between loosely coupling vs tightly coupling?
4. Explain about spring beans, context and SpEL?
5. What are the responsibilities of spring IOC container? Types of IOC containers?
6. How can we add beans to Spring context?
7. When will we get NoUniqueBeanDefinitionException? How can we avoid it?
8. What are the different ways to name a bean?
9. Explain about @Primary annotation?
10. Explain about @Component annotation?
11. What are the stereotype annotations?
12. Difference between @Bean and @Component?
13. Difference between @PostConstruct and @PreDestroy annotation?
14. How can we add a bean into the spring context programmatically?
15. Explain about autowiring by method calls?
16. Explain about autowiring by method parameter?
17. Explain @Autowired on field, setter method and constructor and which is better approach?
18. How Autowiring works with multiple beans of same type?
19. What is Circular Dependency?
20. What are the bean scopes in spring? Difference between Singleton and Prototype?
21. Explain about Eager and Lazy instantiation?
22. Important features of Spring boot?
23. Explain about @SpringBootApplication annotation?
24. How can you change the default port and context-path of the application?
25. How can we start the application with random port number?
26. How can we print Autoconfiguration report on the console?
27. How can we exclude the Autoconfiguration classes?
28. Can we configure multiple paths for a single method? Which annotation, provide example?
29. Explain about devtools?
30. Explain spring MVC architecture and internal flow?
31. Can we register direct view name for a particular URL without Controller class?
32. What is Lombok library? What are the annotations available as part of it?
33. Explain about @RequestParam and @PathVaribale annotations?
34. Annotations between javax.validation.constraints and org.hibernate.validator.constraints?
35. What is SpringData and explain the interface hierarchy?
36. Explain about Derived query methods?
37. Implement One-To-One Relationship?
38. What is cascading in JPA? What are the cascade types supported by JPA?
39. Implement One-To-Many and Manty-To-One?
40. Implement Many-To-Many?
41. How to implement Sorting? Difference between Static and Dynamic Sorting?
42. How to implement Pagination?
43. What are the annotations used for Custom queries in spring DATA?
44. Explain about JPQL? Give Example?
45. Give example on @Query with native and JPQL query?
46. Give example on @NamedQuery with native and JPQL query?
47. Give example on @NamedNativeQuery with native and JPQL query?
48. Give example on @Query with positional and names parameters?
49. Can we create multiple named and named native queries?
50. How can you print logs in color on the console?
51. Provide example on @Slf4j, @CommonsLog and @Log4j2?
52. What are the API paths provided by actuator?