

Java Interview Questions

Core Java

1. What is Functional Interface (@Functional Interface) when this come in java version
2. Static and default methods in Interface(How to call these methods and its Purpose)
3. What is new Date And Time API in Java8
4. What is MetaSpace in java8
5. What is Completable Future in Java8
6. What is Stream API (Explain Intermediate and Terminal Operation)
7. Employee List Sort based on salary, AGE, Department
8. Difference between Map and Flat Map
9. What is Optional classes and its methods?
10. What is Lambda Expression (write customize lambda expression and call from custom functional interface)
11. What is Predicate, Consumer, Supplier, Function?
12. What is Overloading and Overriding explain in details
13. Overriding scenario (private, static, final)
14. What is Wrapper Classes?
15. Explain Class Loading Systems or Class Loaders in Java
16. How Memory Management in JAVA (Memory areas)
17. What is Garbage collector and How this is working in java (Major and Minor GC) Types of GC
18. How to create thread in Java
19. Thread Life Cycle

20. Explain Various Thread Methods
21. What is Synchronization Concept in Multithreading how to achieve?
22. What is Executor Framework? Explain in Detail
23. Wait And Notify Methods in Multithreading
24. What is checked and unchecked Exceptions in java
25. Try Catch Finally (Scenarios)
26. Throw and Throws Difference and example its uses.
27. What is Exception Chaining (How Exception is occurred and its propagation)?
28. Try with Resources in Exception handling

29. What is String Constant Pool in JAVA SCP
30. Memory Management in String in java (SCP)
31. Explain SOLID Principle
32. How to create your own Immutable class in Java
33. How to create Singleton class in java and break
34. How HashMap/HashSet Works Internally
35. What is Java8 improvement w.r.t to HashMap internally (linked List convert to binary/balanced tree for better performance)
36. Internal working concurrent Hashmap and Synchronized HasMap
37. Priority queue and Blocking queue Internal Working
38. What is Generics and Its Uses?
39. What is Fail Fast and Failsafe Iterator?

Spring boot

1. Explain IOC Container and Its types
2. Dependency Injection Types
3. How to check Objects in spring boot application
4. JPA Internal Working (mapping)
5. REST WS vs SOAP
6. Protocols w.r.t web services design
7. GraphQL
8. gRPC
9. Hibernate First and Second Level Cache
10. Annotation in Hibernate
11. joins in Hibernate (Cross join)
12. PK Foreign Key, composite key in Hibernate
13. Security in Hibernate
- 14. Spring Security**
- 15. JWT security**
16. Annotations in spring boot
17. @Service @Repository @Controller @Component (can we interchange these annotations)
18. @Qualifier
19. AOP
20. Application context and its Configuration
- 21 @Value
- 22 @profile and in application.properties spring.active.profiles =dev
23. Global Exception Handling (@ControllerAdvice, @RestControllerAdvice, @ExceptionHandler @ResponseBodyExceptionHandler)

24. *** **Transtion Managment in Spring boot (@Transtional and @EnabaleTranstionalManagement annotaions)**

25. Unit Test cases (Mockito framework Mock InjectMock , Spy, private method mocking)

26. How to Connect Multiple DB in spring boot

27. Docker in Spring boot application

28. K8s management

29. CICD pipeline knowledge ?

30. Event Driven Arch Test Driven Arch

31. Kafka and RabbitMQ basic working arch

Micro services (MS)

1 Advantages of MS

2 Diff between MS and monolithic

3 Doman Driven Design in MS

4 Bounded context in MS

5 Service Discovery and Registry

6 API Gateway (Zuul or spring cloud gateway)

7 Load balancing

8 Distributed configuration in MS

9 Distributed tracing (Zipkin slueth , splnk)

10. How MS communicate with each other (Rest, Client, Kafka, Rabbit MQ)

11. Database Transactions and consistency in MS (SAGA Design pattern)

12 CQRS Design pattern MS

- 13 How to provide security to MS
- 14 Testing in MS
- 15 Logging in MS (ELK)
- 16 Blue Green Deployment
- 17 Performance scalability (Horizontal, Vertical scaling)
- 18 Rate limiting and throating in MS
- 19 Polyglot persistence in MS
- 20 Server less Arch

Database

- 1 Window Function (Calculate Dense Rank , Highest Salary 2nd ,3rd etc)
- 2 Highest salary as Department
- 3 Joins in SQL
- 4 How to do Optimization in SQL --> Partition, Indexing, View
- 5 DDL, DML, TCL Types
- 6 Primary key, Unique Key, Forien Key difference
- 7 PLSQL vs MYSQL
- 8 what is procedure and Functions ?
- 9 PLSQL overview
- 10 How to run stored procedure in java ? How to call stored procedure
- 11 PLSQL Cursor
- 12 Exception faced while running stored procedure in JAVA