

TELECOM NMS DEVELOPER

1. What is a Generic Class and Generic Methods ?

Ans - Generic class in Java is a class that can be used to store objects of different types. This is done by using type parameters, which are placeholder names for the actual types of the objects that will be stored in the class.

Generic methods are methods that introduce their own type parameters. This is similar to declaring a generic type, but the type parameter's scope is limited to the method where it is declared. Static and non-static generic methods are allowed

2. What is Java Reflection ?

Ans - It allows an executing Java program to examine or "introspect" upon itself, and manipulate internal properties of the program.

3. What is Lambda Expression ?

Ans - Lambda expressions basically express instances of functional interfaces (An interface with a single abstract method is called a functional interface).

4. What is Java Predicate ?

Ans - A Java Predicate is a functional interface that represents a boolean-valued function of one argument.

It is instantiated by using the Predicate keyword followed by Constructor and variable name.

5. What is Method Referencing ?

Ans - Method references are a special type of lambda expressions.

They're often used to create simple lambda expressions by referencing existing methods.

6. What is Serialization and Deserialization ?

Ans - Serialization in Java allows us to convert an Object to stream that we can send over the network or save it as file or store in DB for later usage.

Deserialization is the process of converting Object stream to actual Java Object to be used in our program.

7. What is JDBC ?

Ans - JDBC stands for Java Database Connectivity.

JDBC is a Java API to connect and execute the query with the database. It is a part of JavaSE (Java Standard Edition). JDBC API uses JDBC drivers to connect with the database.

8. What is API ?

Ans - API (Application programming interface) is a document that contains a description of all the features of a product or software.

It represents classes and interfaces that software programs can follow to communicate with each other. An API can be created for applications, libraries, operating systems, etc.

9. What is Annotations ?

Ans - An annotation is a form of syntactic metadata that can be added to Java source code. Classes, methods, variables, parameters and Java packages may be annotated. Like Javadoc tags, Java annotations can be read from source files.

10. What is Singleton Design Pattern ?

Ans – It define a class that has only one instance and provides a global point of access to it.

Example - In the gaming industry, the Singleton Pattern can be used to manage a game's global leaderboard.

11. What is Strategy Design Pattern ?

Ans - Strategy pattern is used when we have multiple algorithm for a specific task and client decides the actual implementation to be used at runtime.

12. What is Servlet ?

Ans - Java Servlets are the Java programs that run on the Java-enabled web server or application server.

They are used to handle the request obtained from the web server, process the request, produce the response, and then send a response back to the web server.

13. What is JSP ?

Ans - JSP stands for Java Server Pages. It is a server-side technology which is used for creating web applications. It is used to create dynamic web content. JSP consists of both HTML tags and JSP tags.

They are easy to maintain. No recompilation or redeployment is required. Less coding is required in JSP. JSP has access to the entire API of JAVA. JSP are extended version of Servlet.

14. What is Scriptlet ?

Ans - A JSP scriptlet is used to contain any code fragment that is valid for the scripting language used in a page.

15. What is Spring Core and Spring Framework ?

Ans - Spring framework helps develop various types of applications using the Java platforms. It provides an extensive level of infrastructure support. Spring also provides the “Plain Old Java Objects” (POJOs) mechanisms using which developers can easily create the Java SE programming model with the full and partial JAVA EE(Enterprise Edition).

Core (spring-core) is the framework's core that controls features such as Inversion of Control and dependency injection. Beans (spring-beans) deliver BeanFactory, an advanced execution of the factory pattern.

1. Can performance database operations using JDBC and ORM etc.
2. Can do Web related projects..
3. Can do Unit testing using Junit.

16. What is Spring MVC ?

Ans - A Spring MVC is a Java framework which is used to build web applications. It follows the Model-View-Controller design pattern. It implements all the basic features of a core spring framework like Inversion of Control, Dependency Injection.

17. What is Spring REST ?

Ans - REST stands for Representational State Transfer.

Spring Data REST builds on top of Spring Data repositories, analyzes your application's domain model and exposes hypermedia-driven HTTP resources for aggregates contained in the model.

18. What is CRUD operations ?

Ans - The CRUD stands for Create, Read/Retrieve, Update, and Delete.

19. What is HTTP Methods ?

Ans - GET: It reads a resource.

PUT: It updates an existing resource.

POST: It creates a new resource.

DELETE: It deletes the resource.

20. What is JUnit ?

Ans - JUnit is a test automation framework for the Java programming language. JUnit is often used for unit testing.

21. What is JWT ?

Ans - JSON Web Tokens (JWTs) are a standardized way to securely send data between two parties. They contain information (claims) encoded in the JSON format. These claims help share specific details between the parties involved.

22. What is Integration Testing ?

Ans - Integration testing plays an important role in the application development cycle by verifying the end-to-end behavior of a system.

23. What is Hibernate ?

Ans - Hibernate is a Java framework that simplifies the development of Java application to interact with the database. It is an open source, lightweight, ORM (Object Relational Mapping) tool. Hibernate implements the specifications of JPA (Java Persistence API) for data persistence.

24. What is Spring JPA ?

Ans - Java Persistence API (JPA) is a Java specification that provides certain functionality and standard to ORM tools.

Spring Boot JPA is a Java specification for managing relational data in Java applications. It allows us to access and persist data between Java object/class and relational database. JPA follows Object-Relation Mapping (ORM). It is a set of interfaces.

25. What is Spring MicroServices ?

Ans - Microservices are a modern approach to software whereby application code is delivered in small, manageable pieces, independent of others.

Microservices are an architectural style that develops a single application as a set of small services.

26. What is Mono and Flux in Spring Reactor ?

Ans - A Mono object represents a single or empty value. This means it can emit only one value at most for the onNext() request and then terminates with the onComplete() signal. In case of failure, it only emits a single onError() signal.

A Flux is a Reactive Stream publisher that can emit 0 to N elements.

27. What is the @Autowired Annotation ?

Ans - @Autowired is one of the core annotations in Spring, used for automatic dependency injection. In simpler terms, it allows Spring to automatically wire the required beans (dependencies) into your classes, eliminating the need for manual configuration.

28. What is Mocking ?

Ans - It involves creating fake objects that stand in for real objects within the system. These fake objects, known as mock objects, can be used to test how different parts of the system interact with each other in a controlled environment.

29. What is Spring Boot Actuator ?

Ans - Spring Boot Actuator is a module that provides production-ready features to monitor and manage your Spring Boot application. It offers various endpoints and metrics that can be used for monitoring, health checks, auditing, and managing your application.

30. What is Maven and Monolithic architecture ?

Ans - Maven is a build automation tool used primarily for Java projects. Maven creates outstanding dependency management for your projects. The Maven project is hosted by The Apache Software Foundation, where it was formerly part of the Jakarta Project.

A monolithic architecture is a traditional model of a software program, which is built as a unified unit that is self-contained and independent from other applications.