Mallu Likhitha

CAPG49LSRB456

1. What is difference in Overloading and Over riding

When two or more methods in the same class have the same name but different parameters, it’s called Overloading.

When the method signature (name and parameters) are the same in the superclass and the child class, it’s called Overriding.

2.If both the functions are statis can we over ride

No, we cannot override static methods because method overriding is based on dynamic binding at runtime and the static methods are bonded using static binding at compile time. So, we cannot override static methods.

3. Difference between Final , Finally and Finalize

Final is a keyword and it can be used to mark a variable unchangeable. Actually, it is used to apply restrictions on class, method and variable. Final class can't be inherited, final method can't be overridden and final variable value can't be changed

Finally is a code block. It is used with try-catch block for handling exception. finally code block will be executed whether exception is handled or not

Finalize is a method of Object class. It is invoked before an object is discarded by the garbage collector , allowing it to clean up its state

4.What are maker Interfaces

Marker Interfaces

A marker interface is an interface that has no methods or constants inside it. It provides run-time type information about objects, so the compiler and JVM have additional information about the object. A marker interface is also called a tagging interface.

Though marker interfaces are still in use, they very likely point to a code smell and should be used carefully. The main reason for this is that they blur the lines about what an interface represents since markers don't define any behavior. Newer development favors annotations to solve some of the same problems.

5.What is Singleton class

In object-oriented programming, a singleton class is a class that can have only one object (an instance of the class) at a time. After the first time, if we try to instantiate the Singleton class, the new variable also points to the first instance created. So whatever modifications we do to any variable inside the class through any instance, affects the variable of the single instance created and is visible if we access that variable through any variable of that class type defined.

6.What is the underlying Data structure for Arraylist and Linkedlist

Both ArrayList and LinkedList are two different implementations of the List interface. ArrayList is a resizable-array implementation, whereas LinkedList is a Doubly-linked list implementation of the List interface.

ArrayList is a resizable array implementation in java. The backing data structure of ArrayList is an array of Object class. Like arrays, Linked List is a linear data structure.

7.What is hash collitition

A collision, or more specifically, a hash code collision in a HashMap, is a situation where two or more key objects produce the same final hash value and hence point to the same bucket location or array index.

8.

Lambda Expressions were added in Java 8.

A lambda expression is a short block of code which takes in parameters and returns a value. Lambda expressions are similar to methods, but they do not need a name and they can be implemented right in the body of a method.

The simplest lambda expression contains a single parameter and an expression:

parameter -> expression

To use more than one parameter, wrap them in parentheses:

(parameter1, parameter2) -> expression

9.Whats is functional interface

A functional interface is an interface that contains only one abstract method. They can have only one functionality to exhibit. From Java 8 onwards, lambda expressions can be used to represent the instance of a functional interface. A functional interface can have any number of default methods.

10.What are optional classes in Java 8

Optional is a container object used to contain not-null objects. Optional object is used to represent null with absent value. This class has various utility methods to facilitate code to handle values as ‘available’ or ‘not available’ instead of checking null values.

Class Declaration

public final class Optional<T> extends Object

11.Whats is factory design pattern and Adapter and difference bew them

A Factory Pattern or Factory Method Pattern says that just define an interface or abstract class for creating an object but let the subclasses decide which class to instantiate. In other words, subclasses are responsible to create the instance of the class.

An Adapter pattern acts as a connector between two incompatible interfaces that otherwise cannot be connected directly. An Adapter wraps an existing class with a new interface so that it becomes compatible with the client's interface

12.What are Solid principles

SOLID principles are object-oriented design concepts relevant to software development. SOLID is an acronym for five other class-design principles: Single Responsibility Principle, Open-Closed Principle, Liskov Substitution Principle, Interface Segregation Principle, and Dependency Inversion Principle.

13. What does @component and @scan do in Sprinboot annaotation

@Component is an annotation that allows Spring to automatically detect our custom beans. In other words, without having to write any explicit code, Spring will: Scan our application for classes annotated with @Component.

With Spring, we use the @ComponentScan annotation along with the @Configuration annotation to specify the packages that we want to be scanned. @ComponentScan without arguments tells Spring to scan the current package and all of its sub-packages.

14.Whats is the Diference bew JPA , Hibernate and ORM

ORM: Object Relational Mapping is concept/process of converting the data from Object oriented language to relational DB and vice versa. For example in java its done with the help of reflection and jdbc.

Hibernate: Its the implementation of above concept.

JPA: Its the one step above ORM. Its high level API and specification so that different ORM tools can implement so that it provides the flexibility to developer to change the implementation from one ORM to another (for example if application uses the JPA api and implementaion is hibernate. In future it can switch to IBatis if required. But on the other if application directly lock the implementation with Hibernate without JPA platform, switiching is going to be herculean task)

15.What is indexing in Database

Indexing is a way to optimize the performance of a database by minimizing the number of disk accesses required when a query is processed. It is a data structure technique which is used to quickly locate and access the data in a database. Indexes are created using a few database columns.

16. What are 4 types of Drivers in Jdbc

There are 4 types of JDBC drivers:

JDBC-ODBC bridge driver

Native-API driver

Network Protocol driver

Thin driver

17. What is difrence bew @component and @bean and @service

The difference is that @Bean is applicable to methods, whereas @Component is applicable to types.

@Component is a generic stereotype for any Spring-managed component. @Service annotates classes at the service layer.

18. What is difference bew SOAP and restful services techinically

The main difference is that SOAP is a protocol while REST is not. Typically, an API will adhere to either REST or SOAP,

depending on the use case and preferences of the developer.

19. Difference in POST and PUT

The difference between POST and PUT is that PUT requests are idempotent. That is, calling the same PUT request multiple

times will always produce the same result. In contrast, calling a POST request repeatedly have side effects of creating

the same resource multiple times.

20. is react uni directional or Bi directional

React, a Javascript library, uses unidirectional data flow. The data from the parent is known as props. You can only transfer

data from parent to child and not vice versa. This means that the child components cannot update or modify the data on their

own, makeing sure that a clean data flow architecture is followed.