

Interview Theory Questions

1. What is polymorphism in Java?

Polymorphism is the ability of an object to take on multiple forms. In Java, it refers to the ability of different classes to be treated as objects of a common superclass.

2. What is a constructor in Java?

A constructor is a special method in a class that is used to initialize objects of that class. It has the same name as the class and is called when an object is created.

3. How is a default constructor different from a parameterized constructor?

Default Constructor: A constructor with no parameters. If no constructor is defined in a class, Java provides a default constructor automatically.

Parameterized Constructor: A constructor with parameters that allows you to initialize object properties with specific values.

4. Explain the concept of constructor chaining.

Constructor chaining refers to the process of calling one constructor from another constructor in the same class or in a superclass. This helps avoid code duplication and ensures that common initialization code is executed.

5. Explain the difference between compile-time polymorphism and runtime polymorphism.

Compile-time polymorphism (also known as static polymorphism) is achieved through method overloading and is resolved at compile-time.

Runtime polymorphism (also known as dynamic polymorphism) is achieved through method overriding and is resolved at runtime.

6. What is method overloading in Java?

Method overloading is a feature that allows a class to have multiple methods with the same name but different parameter lists. The methods must differ in terms of the number or types of parameters.

7. Can a class have multiple constructors?

Yes, a class can have multiple constructors, including default and parameterized constructors. This is known as constructor overloading.

8. What is the purpose of a default constructor?

A default constructor is automatically provided by Java if a class does not explicitly define any constructors. It initializes instance variables to default values and can be used to create objects without providing any arguments.