Java OOP Interview Questions and Answer

1) What is inheritance in Java?
Inheritance allows one class (child) to acquire properties and behaviors of another class (parent), promoting code reuse and hierarchy.

2) Why use this keyword?
The this keyword refers to the current object instance. It helps distinguish between class fields and parameters with the same name.

3)Method Overriding vs Overloading
Overriding: Redefining a method in a subclass with the same signature.
Overloading: Defining multiple methods with the same name but different parameters in the same class.

4) What is object instantiation?
It’s the process of creating an object from a class using the new keyword, allocating memory and initializing fields.

5) Single vs Multiple Inheritance
Single Inheritance: A class inherits from one superclass.
Multiple Inheritance: Java doesn’t support it with classes but allows it via interfaces.

6) What is encapsulation?
Encapsulation is the bundling of data and methods within a class, restricting direct access using access modifiers like private.

7) What is constructor overloading?
Defining multiple constructors in a class with different parameter lists to initialize objects in varied ways.

8) Can we override static methods? No, static methods belong to the class, not instances. They can be hidden but not overridden.

9) What is runtime polymorphism? It’s the ability of Java to decide which method to invoke at runtime using method overriding and dynamic method dispatch.

10) Difference between class and object
Class: Blueprint or template defining properties and behaviors.
Object: Instance of a class with actual values and memory allocation.