

Java Interview Questions & Answers

1. What is Java?

Answer: Java is a high-level, object-oriented, platform-independent language.

2. Difference between JDK, JRE, JVM?

Answer: JDK: development kit; JRE: runtime environment; JVM: virtual machine.

3. What is a Class and Object?

Answer: Class is a blueprint; object is an instance of a class.

4. Explain method overloading.

Answer: Multiple methods with same name but different parameters.

5. Explain method overriding.

Answer: Subclass provides specific implementation of a parent method.

6. What is JVM heap?

Answer: Memory area for object storage.

7. What is garbage collection?

Answer: Automatic memory management process.

8. What are Java interfaces?

Answer: Abstract types with method signatures.

9. Difference between abstract class and interface?

Answer: Abstract class can have implementation; interface cannot (Java 7).

10. What is the 'final' keyword?

Answer: Indicates constant value or non-overridable method.

11. What is Java exception handling?

Answer: Try, catch, finally blocks to handle errors.

12. Difference between checked and unchecked exceptions?

Answer: Checked: compile-time; unchecked: runtime.

13. What is multithreading?

Answer: Concurrent execution of threads.

14. What is synchronization?

Answer: Controlling access to shared resources in multithreading.

15. Explain Java Collections Framework.

Answer: Provides data structures like List, Set, Map.

16. Difference between ArrayList and LinkedList?

Answer: ArrayList: index-based; LinkedList: node-based.

17. What is Java Stream API?

Answer: Process collections in functional style.

18. Explain JIT compiler.

Answer: Just-In-Time compiler improves performance at runtime.

19. What is serialization?

Answer: Converting object to byte stream.

20. What is Java reflection?

Answer: Ability to inspect and modify classes at runtime.