



WEB DEVELOPER

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100 JAVA INTERVIEW Q/A



◀ SWIPE ➡



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1. What is Java?

A high-level, object-oriented programming language.

2. What is JVM?

Java Virtual Machine, it runs Java bytecode.

3. What is JDK?

Java Development Kit, includes tools to compile and run Java programs.

4. What is JRE?

Java Runtime Environment, provides runtime libraries for Java.

5. What is a class in Java?

A blueprint for creating objects.

6. What is an object in Java?

An instance of a class.

7. What is inheritance in Java?

Acquiring properties of one class into another.

8. What is polymorphism?

One method behaving differently based on context.

9. What is encapsulation?

Wrapping data and methods together in a class.

10. What is abstraction?

Hiding complex details and showing only essential features.

11. What is method overloading?

Multiple methods with the same name but different parameters.

12. What is method overriding?

Redefining a method in a subclass.

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13. What is a constructor?

A special method used to initialize objects.

14. What is a default constructor?

A constructor provided by Java with no parameters.

15. What is a parameterized constructor?

A constructor that takes arguments.

16. What is the this keyword?

Refers to the current object instance.

17. What is the super keyword?

Refers to the parent class object.

18. What is a static variable?

A variable shared among all instances of a class.

19. What is a static method?

A method that belongs to the class, not the object.

20. What is the main method in Java?

`public static void main(String[] args)`, the entry point of a Java program.

21. What is an abstract class?

A class that cannot be instantiated and may have abstract methods.

22. What is an interface in Java?

A contract that defines a set of abstract methods.

23. What is a final class?

A class that cannot be extended.

24. What is the difference between an interface and an abstract class?

Interfaces have no method implementations, abstract classes can.

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25. What is the instanceof operator?

Tests whether an object is an instance of a specific class or interface.

26. What is a package in Java?

A namespace for organizing classes and interfaces.

27. What is the import statement?

Used to include Java packages into your code.

28. What is the access modifier?

Defines the visibility of a class, method, or variable (public, private, protected).

29. What is public access?

Accessible from anywhere in the program.

30. What is private access?

Accessible only within the class.

31. What is protected access?

Accessible within the same package and subclasses.

32. What is the default access modifier?

No modifier means package-private access.

33. What is the final keyword?

Used to declare constants, methods that cannot be overridden, or classes that cannot be inherited.

34. What is garbage collection in Java?

Automatic memory management that frees up memory by removing unused objects.

35. What is the difference between == and equals()?

== compares references, equals() compares content.

36. What is a String in Java?

A sequence of characters, immutable.

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37. What is a `StringBuilder`?

A mutable sequence of characters.

38. What is a wrapper class?

Provides object methods for primitive data types (e.g., `Integer` for `int`).

39. What is autoboxing?

Automatic conversion of primitive types to their corresponding wrapper objects.

40. What is unboxing?

Automatic conversion of wrapper objects to their corresponding primitive types.

41. What is a `NullPointerException`?

Thrown when accessing an object reference that is null.

42. What is exception handling in Java?

Managing runtime errors using `try`, `catch`, and `finally`.

43. What is checked exception?

An exception checked at compile-time.

44. What is unchecked exception?

An exception that occurs at runtime.

45. What is the difference between `throw` and `throws`?

`throw` is used to explicitly throw an exception, `throws` declares exceptions that might be thrown.

46. What is finally block?

A block of code that is executed after a `try-catch`, regardless of whether an exception is thrown.

47. What is the `try-with-resources` statement?

A `try` block that automatically closes resources.

48. What is serialization?

Converting an object into a byte stream.

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49. What is deserialization?

Reconstructing an object from a byte stream.

50. What is the transient keyword?

Used to skip fields during serialization.

51. What is multithreading in Java?

Running multiple threads concurrently.

52. What is the synchronized keyword?

Used to control access to a method or block of code in a multithreaded environment.

53. What is a thread in Java?

A lightweight process.

54. What is thread safety?

A concept that ensures multiple threads do not cause errors when accessing shared resources.

55. What is a daemon thread?

A background thread that terminates when all non-daemon threads finish.

56. What is the Runnable interface?

Represents a task that can be executed by a thread.

57. What is the Thread class?

A class that represents a thread of execution.

58. What is the difference between Runnable and Thread?

Runnable defines a task, Thread represents the thread itself.

59. What is the wait() method?

Causes the current thread to wait until another thread invokes notify().

60. What is the notify() method?

Wakes up a single waiting thread.

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61. What is the notifyAll() method?

Wakes up all threads waiting on an object's monitor.

62. What is a deadlock?

A situation where two or more threads are blocked forever, each waiting on the other.

63. What is join() method in Java threads?

Forces one thread to wait until another completes.

64. What is the Java Collections Framework?

A set of classes and interfaces that implement commonly reusable data structures.

65. What is a List in Java?

An ordered collection that allows duplicate elements.

66. What is a Set in Java?

A collection that does not allow duplicate elements.

67. What is a Map in Java?

A collection that maps keys to values.

68. What is the difference between ArrayList and LinkedList?

ArrayList uses dynamic arrays, LinkedList uses doubly linked lists.

69. What is the difference between HashSet and TreeSet?

HashSet is unordered, TreeSet is ordered and sorted.

70. What is HashMap?

A map implementation that uses hash tables to store key-value pairs.

71. What is TreeMap?

A map that stores key-value pairs in a sorted order.

72. What is Iterator in Java?

An object used to iterate over elements of a collection.

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73. What is fail-fast behavior in Java?

Throws `ConcurrentModificationException` if a collection is modified while iterating.

74. What is Comparable interface?

Used to define the natural ordering of objects.

75. What is Comparator interface?

Used to define custom ordering for objects.

76. What is hashCode() method?

Returns a hash code value for an object.

77. What is equals() method?

Checks if two objects are equal based on content.

78. What is the difference between hashCode() and equals()?

`hashCode()` is used in hashing, `equals()` checks content equality.

79. What is Lambda expression in Java?

A concise way to represent an anonymous function.

80. What is functional interface?

An interface with exactly one abstract method.

81. What is a stream in Java 8?

A sequence of elements supporting functional-style operations.

82. What is the difference between forEach() and map() in streams?

`forEach()` performs an action on each element, `map()` transforms elements.

83. What is Optional in Java 8?

A container class to handle null values more gracefully.

84. What is method reference?

A shorthand for calling a method using `::` syntax.

85. What is a default method in Java?

A method with an implementation in an interface.

86. What is the Predicate functional interface?

Represents a boolean-valued function.

87. What is the Supplier functional interface?

Provides a value without taking any input.

88. What is the Consumer functional interface?

Represents an operation that accepts a single input and returns no result.

89. What is the Function functional interface?

Represents a function that takes an input and returns an output.

90. What is immutability in Java?

An object whose state cannot be changed after it's created.

91. What is reflection in Java?

A feature to inspect and manipulate classes, methods, and fields at runtime.

92. What is dynamic binding?

Method call resolution at runtime.

93. What is static binding?

Method call resolution at compile-time.

94. What is a singleton class?

A class that allows only one instance.

95. What is enum in Java?

A special type to define a collection of constants.

96. What is the volatile keyword?

Ensures that the value of a variable is always read from the main memory.

97. What is assert in Java?

A keyword to test assumptions in code.

98. What is the transient keyword?

Marks fields to be ignored during serialization.

99. What is the instanceof operator used for?

Checks if an object is an instance of a specific class or interface.

100. What is the Java memory model?

Defines how Java threads interact through memory, ensuring visibility of variables across threads.