Core Java Interview Questions (2025 Edition)

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Role: Java Spring Boot Developer (3.8 Years Experience)

1. What are the main features of Java?

2. Explain JDK, JRE, and JVM.

3. What is the difference between path and classpath?

4. What are access modifiers in Java?

5. Difference between '==' and 'equals()'?

6. What is the difference between final, finally, and finalize()?

7. What is the static keyword used for?

8. What is a constructor?

9. Difference between constructor and method?

10. What is method overloading and overriding?

11. Explain the four main OOPs principles.

12. What is abstraction?

13. What is encapsulation?

14. What is inheritance?

15. What is polymorphism?

16. What is an abstract class?

17. What is an interface?

18. Difference between abstract class and interface?

19. Can we achieve multiple inheritance in Java?

20. What is the difference between IS-A and HAS-A relationships?

21. What is the Collection framework?

22. Difference between List, Set, and Map?

23. What is ArrayList and LinkedList difference?

24. What is HashMap and HashTable difference?

25. What is ConcurrentHashMap?

26. What is the difference between HashSet and TreeSet?

27. What is the difference between Iterator and ListIterator?

28. What is fail-fast and fail-safe in collections?

29. How does HashMap work internally?

30. Can HashMap have null keys and values?

31. What is exception handling in Java?

32. Difference between checked and unchecked exceptions?

33. What is try-catch-finally?

34. Can we have multiple catch blocks?

35. What is the use of throw and throws?

36. What is custom exception in Java?

37. What is difference between Error and Exception?

38. Can finally block be skipped?

39. What happens if exception occurs in finally block?

40. What is try-with-resources in Java?

41. What is a thread in Java?

42. Difference between process and thread?

43. How to create a thread in Java?

44. Difference between Runnable and Thread class?

45. What is synchronization?

46. What is volatile keyword?

47. What is thread safety?

48. What is deadlock?

49. What is the difference between wait() and sleep()?

50. What is ExecutorService in Java?

51. What is a lambda expression?

52. What is a functional interface?

53. What is Stream API in Java 8?

54. Difference between map() and flatMap()?

55. What is Optional class?

56. What is default and static method in interface?

57. What is method reference in Java 8?

58. What are Collectors in Stream API?

59. What is the purpose of forEach() method?

60. What is the difference between intermediate and terminal operations in streams?

61. Explain JVM architecture.

62. What is Garbage Collection and how it works?

63. What are different memory areas in JVM?

64. What is memory leak?

65. What are strong, weak, soft, and phantom references?

66. What is the difference between heap and stack memory?

67. What is serialization and deserialization?

68. What is transient keyword in Java?

69. What is reflection API in Java?

70. What's new in Java 17 or later versions?