Prepare this Java QNA Questions

1. What is inheritance in Java, and why is it useful ? What are the access specifiers that allow inheritance in Java?

2. Can a class be inherited by multiple classes in Java? If not, how can you achieve multiple inheritance?

3. What is the difference between single, multilevel, and hierarchical inheritance?

4. Can a constructor be inherited in Java? Why or why not?

5. What is the difference between String, StringBuilder, and StringBuffer in Java?

6. Why are strings immutable in Java?

7. How does the intern() method work with strings?

8. What is the difference between == and .equals() when comparing strings in Java?

9. Can you explain the difference between a literal string and a new string object?

10. What is widening typecasting, and when is it done automatically in Java?

11. What is narrowing typecasting, and why does it require explicit casting?

12. What happens when you try to cast incompatible data types in Java?

13. Is it possible to convert a double to a byte using narrowing casting? If yes, how does Java handle it?

14. What is the difference between compile-time and runtime polymorphism in Java?

15. Can you explain the significance of the instanceof operator with respect to polymorphism?

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21. What is abstraction in Java, and how is it implemented?

22. What is the difference between an abstract class and an interface in Java?

23. Can you declare an abstract class without any abstract methods? Why would you do that?

24. Why can't an abstract class be instantiated in Java?

25. How does abstraction improve software design in OOP?

26. What happens if a class implements an interface but does not provide an implementation for all of its methods?

27. What is exception handling in Java, and why is it important?

28. What is the difference between checked and unchecked exceptions in Java?

29. What is the try-catch-finally block in Java, and how does it work?

30. What is the purpose of the finally block? Can a finally block be skipped?

31. Can you throw an exception manually in Java? If so, how?

32. What is the difference between throw and throws in Java?

33. What happens when an exception is thrown but not caught in Java?

34. Can you have multiple catch blocks for a single try block? How does Java decide which one to execute?

35. What is the purpose of the Throwable class in Java?