

# JAVA QUESTIONNAIRE

## DIFFERENCES:

1. Static vs Non-Static keyword or Static vs non-static members
2. JVM vs JRE vs JDK
3. Local vs Global variable
4. Static vs non-static block or SIB (static initialization block) vs NSIB(non-static initialization block) or IIB(Instance Initialization block)
5. Heap vs Stack
6. Method vs Constructor
7. Abstraction vs Encapsulation
8. Abstract class vs Interface
9. Overloading vs Overriding
10. Mutable vs immutable class
11. super vs this keyword
12. super() vs this() statement
13. String vs StringBuffer vs StringBuilder vs StringTokenizer
14. Equal operator (==) vs equals()
15. concat() and + operator
16. Error vs Exception
17. Checked exception vs unchecked exception
18. Array vs ArrayList
19. ArrayList vs Vector
20. List vs Set vs Queue
21. HashTable vs HashMap
22. HashSet vs TreeSet
23. throw vs throws vs throwable
24. throw vs throws vs Try-Catch
25. final vs finally vs finalize
26. Difference between Serialization and Deserialization in Java

## THEORETICAL(EXPLAIN WITH REAL TIME EXAMPLE)

1. What is class
2. What is object
3. What is classloader
4. Can we have empty .java class?
5. Can we compile empty .java file?
6. Can we execute empty .java file?
7. Is it mandatory to have class name and .java file name same?
8. Can we have multiple main() in a class?
9. What is constructor and why to use it
10. Fundamental of OPPS
11. Why java doesn't support multiple inheritance
12. What is chaining of constructor
13. Can we execute a program without main() method?
14. What if the static modifier is removed from the signature of the main method?
15. What is Abstraction and how to achieve it
16. What is Encapsulation and how to achieve it
17. What is polymorphism and how many types of polymorphism we have in java

18. Do we have constructor in Abstract class, if yes then why we can't create an object of Abstract class?
19. Do we have constructor in Interface, if no then how its participating in inheritance, as in inheritance chaining of constructor is mandatory?
20. What do you mean by early binding or compile time binding or static binding
21. What do you mean by late binding or run time binding or dynamic binding
22. What is the use of packages, list out its advantages
23. What is immutable class and how can we achieve it
24. What is String constant pool
25. How to move String object from non-constant pool area to String constant pool area
26. What are the possible ways to create String class object and also explain the major difference between them
27. Draw Exception diagram
28. Can we declare multiple catch block for a single try block?
29. What is unreachable code in java, explain with example
30. What should be the argument in catch block when you are not aware of exception thrown by try block
31. Draw collection framework diagram
32. What is the use of Iterator interface
33. What is the use of Collections class
34. What are all the Classes and Interfaces that are available in the collections?
35. What is generic and why to use it
36. Which one best for insertion LinkedList or ArrayList
37. How to read data from text file or property file or excel file
38. List out the possible ways to terminate Finally block execution
39. Is it possible to increase or decrease the visibility of class members?
40. Which access specifier is used for default constructor
41. What is meant by Serialization?
42. What is Synchronization?
43. What is Thread life cycle
44. Can we declare the static variables and methods in an abstract class?
45. Can we make constructors static?
46. Can we make the abstract methods static in Java?
47. What are the main uses of this keyword?
48. Can we assign the reference to this variable?
49. Can this keyword be used to refer static members?
50. How can constructor chaining be done using this keyword?
51. Why is Inheritance used in Java?
52. What is aggregation?
53. What is composition?
54. How can constructor chaining be done by using the super keyword?
55. What are the main uses of the super keyword?
56. What is object cloning?
57. Why is method overloading not possible by changing the return type in java?
58. Can we overload the methods by making them static?
59. Can we overload the main() method?
60. Why can we not override static method?
61. What is the final class?
62. What is the difference between the final method and abstract method?
63. Can we declare an interface as final?
64. Can you use abstract and final both with a method?
65. What is a marker interface?
66. How to make a read-only class in Java?
67. How to make a write-only class in Java?

68. Explain the hierarchy of Java Exception classes?
69. Is it necessary that each try block must be followed by a catch block?
70. What is finally block?
71. What is exception propagation?
72. What is the purpose of toString() method in Java?
73. What are the advantages of Java inner classes?
74. What is a nested class?
75. What are the types of inner classes (non-static nested class) used in Java?
76. What are the disadvantages of using inner classes?
77. Is there any difference between nested classes and inner classes?
78. Can a class have an interface?
79. Can an Interface have a class?
80. How to set the Permissions to a file in Java?
81. What do you mean by autoboxing and unboxing? When does it occur?
82. What is the reflection?
83. What is a singleton class?

## PROGRAMS TO BE PRACTICE

### STRING CLASS:

1. How to reverse a string in java?  
Or  
Write a java program to reverse a given string using recursive method.
2. How do you remove all white spaces from a string in java?  
Or  
Write a java program to remove all white spaces from a given string.
3. How to find duplicate characters in a string in java?  
Or  
Write a java program to find duplicate characters and their count in a given string. For example, in a string "Better Butter", duplicate characters and their count is t : 4, e : 3, r : 2 and B : 2.
4. How you will check given strings are Anagram or not?  
Or  
Write a java program to check whether two given strings are anagram or not. Two strings are said to be anagram if they contain same set of characters but in different order. For example, "Mother In Law" and "Hitler Woman" are anagrams.
5. How to count occurrences of each character in a string in java?  
Or  
Write a java program to count the number of occurrences of each character in a given string. For example, If "Java J2EE Java JSP J2EE" is the given string then occurrences of each character in this string is E=4, 2=2, v=2, =4, P=1, S=1, a=4, J=5.
6. How to reverse each word of a string in java?  
Or  
Write a java program to reverse each word of a given string. For example, If "Java Concept Of The Day" is input string then output should be "avaJ tpecnoC fO ehT yaD".
7. Check whether given String is a palindrome or not?
8. Reverse the string with preserving the position of spaces  
Or  
Write a java program to reverse a string with preserving the position of spaces. For example, if "I Am Not String" is the given string then the reverse of this string with preserving the position of spaces is "g ni rtS toNmAI".
9. Percentage of uppercase, lowercase, digits and special characters in a string  
Or  
Write a java program to find the percentage of uppercase letters, lowercase letters, digits and other special characters(including space) in the given string.
10. Write a java program to prove strings are immutable in java.
11. Write a program to store String object from non-constant pool area to String constant pool area.
12. Write a java program to find number of characters, number of words and number of lines in a text file?

13. Finding the First Repeated And Non-Repeated Character In A String.

Or

Given a string, your code must find out the first repeated as well as non-repeated character in that string. For example, if "JavaConceptOfTheDay" is the given string, then 'J' is a first non-repeated character and 'a' is a first repeated character.

14. String to Integer and Integer to String Conversion program.

15. Find the Count of numbers in the Given String "hey1234876hey"?

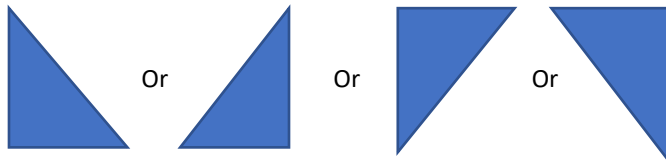
16. Write a Java Program to Exchange Name is James to James is Name?

17. Find longest substring without repeating characters.

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LOGICAL CALCULATIONS:

1. WAP for reverse number
2. WAP for palindrome
3. Write a program to generate 5 Random nos. between 1 to 100, and it should not follow with decimal point.
4. Write a program to Find Factorial of Given number
5. Write a program to find sum of all integers greater than 100 and less than 200 that are divisible by 7
6. WAP swap two number without using temp variables
7. Write a program to convert given no. of days into months and days. (Assume that each month is of 30 days)  
Example :Input - 69 Output - 69 days = 2 Month and 9 days
8. Write a program to generate a Triangles(1 & 2) or Invert Triangles(3 & 4)



9. Write a program to find whether given no. is Armstrong or not?  
Example : Input - 153 Output -  $1^3 + 5^3 + 3^3 = 153$ , so it is Armstrong no.
10. WAP for perfect number?
11. Write a program to find top two maximum numbers in the given array. You should not use any sorting functions. You should iterate the array only once. You should not use any kind of collections in java.
12. WAP to find first largest number or 2<sup>nd</sup> largest number or 3<sup>rd</sup> largest number
13. WAP to find 1<sup>st</sup> smallest number or 2<sup>nd</sup> smallest number or 3<sup>rd</sup> largest number
14. how to find out sum of each digit in the given number using recursion logic. For example, if the number is 259, then the sum should be  $2+5+9 = 16$ .
15. How to get distinct elements from an array by avoiding duplicate elements?
16. Write a program to find the sum of the first 1000 prime numbers
17. Write a program to remove duplicates from sorted array
18. How do you check the equality of two arrays in java?  
Or  
Write a java program to check the equality of two arrays using different methods.
19. WAP check given number is anagram or not?
20. How to find duplicate elements in an array?  
Or  
Write a java program to find duplicate elements in the given array.