**20 String Algorithm based Coding Interview Questions**

Here is my collection of some of the most frequently asked String based coding questions from programming interview. Remember, there are many algorithms to solve the same problem, and you should know that, mainly to handle the follow-up question better.  
  
Also remember to solve the same question using both recursion and iteration, as interviewer really like to ask iterative version if you come up with a recursive algorithm and vice-versa.  
  
Nevertheless, if you see your favorite question is not included in the list, feel free to suggest, I will include it.  
  
You can also post question asked to you on your interview and you have not found its solution yet. Some questions are still unsolved or solution is not yet posted on my blog. Also, the difficulty level increases as you move questions.

**1) How to Print duplicate characters from String?**

For example, if String is "Java" then the program should print "a". Bonus points if your program is robust and handles different kinds of input e.g. String without duplicate, null or empty String etc. Bonus points if you also write unit tests for normal and edge cases.

**2) How to check if two Strings are anagrams of each other?**

A simple coding problem based upon String, but could also be asked with numbers. You need to write a Java program to check if two given strings are anagrams of Each other. Two strings are anagrams if they are written using the same exact letters, ignoring space, punctuation, and capitalization. Each letter should have the same count in both strings. For example, the Army and Mary are an anagram of each other.

**3) How to program to print first non repeated character from String?**

One of the most common string interview questions: Find the first non-repeated (unique) character in a given string. for Example, if given String is "Morning" then it should print "M". This question demonstrates the efficient use of the hash table data structure.

**4) How to reverse String in Java using Iteration?**

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**5) How to check if a String contains only digits?**

You need to write a program to check a String contains only numbers by using Regular expression in Java. You can use Java API but a solution without using Java API will be better because that is what interviewer can always ask.

**6) Determine how many unique characters of the alphabet are in a given String?**

You need to write a program to print all duplicate character and their count in Java. For example, if given String is "Java" then your program should print

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**7) How to count a number of vowels and consonants in a String?**

One of easiest String question you will ever see. You have to write a Java program which will take a String input and print out a number of vowels and consonants on that String. For example, if the input is "Java" then your program should print "2 vowels and 2 consonants".

**8) How to count the occurrence of a given character in String?**

If the interviewer asks you to count the occurrence of more than one character than you can either use an array, hash table or any additional data structure. In order to solve this problem, you are not allowed to do so. Your method must return a count of a given character, for example, if input String is "Java" and given character is 'a' then it should return 2. Bonus point if you handle case, null and empty String and come up with unit tests.

**10) How to replace each given character to other**

Write a Java program to replace a given character in a String to other provided character, for example, if you are asked to replace each blank in a String with %20, similar to URL encoding done by the browser so that Server can read all request parameters. For example, if the input is "Java is Great" and asked to replace space with %20 then it should be "Java%20is%20Great".

**12) How to reverse words in a sentence without using a library method?**

Write a program, which takes a String word and returns sentence on which words are reversed in order like if the input is "Java is best programming language", the output should be "language programming best is Java".

**13) How to check if String is Palindrome?**

Another easy coding question based upon String, I am sure you must have done this numerous time. Your program should return true if String is a palindrome, otherwise false. For example, if the input is "radar", the output should be true, if the input is "madam" output will be true, and if the input is "Java" output should be false.

**14) How to remove duplicate characters from String? (solution)**

This is one of the interesting String question, which also has lots of variants. You need to remove duplicate characters from a given string keeping only the first occurrences. For example, if the input is ‘bananas’ the output will be ‘bans’. Pay attention to what output could be, because if you look closely original order of characters are retained the in output.  
  
  
**16) Write a program to check if a String contains another String like indexOf ()? (solution)**

Write a program to that inputs 2 strings and checks to see if the second string is contained within the first string without using the indexOf method.

**17) How to return highest occurred character in a String? (solution)**

You need to write a function to implement an algorithm which will accept a string of characters and should find the highest occurrence of the character and display it. For example if input is "aaaaaaaaaaaaaaaaabbbbcddddeeeeee" it should return "a". The characters will only be lower case vowels.

**18) Write a program to remove a given character from String? (**[**solution**](http://javarevisited.blogspot.com/2015/04/how-to-remove-given-character-from.html)**)**

**20) How to sort String on their length in Java? (solution)**

Write a program that rearranges the characters of a string length of 4 in alphabetical order.