**Strings**

**🔹 Basic String Interview Questions**

1. What is a String in Java? Is it mutable or immutable?
2. Difference between String, StringBuilder, and StringBuffer.
3. Why are strings immutable in Java?
4. How is memory managed for Strings in Java?
5. How does == differ from .equals() for strings?
6. How to reverse a string in Java?
7. How to find the length of a string?
8. What is the substring method in Java?

**🔹 Coding Questions (Easy to Medium)**

1. ✅ Check if a string is a palindrome.
2. ✅ Count vowels and consonants in a string.
3. ✅ Remove duplicate characters from a string.
4. ✅ Check if two strings are anagrams.
5. ✅ Print all substrings of a given string.
6. ✅ Count the number of words in a string.
7. ✅ Find the first non-repeating character in a string.
8. ✅ Check if a string contains only digits.

**🔹 Intermediate to Advanced Questions**

1. 🔁 Implement your own substring() method.
2. 🧠 Longest common prefix among a set of strings.
3. 🔁 Reverse words in a sentence.
4. **🔥** Find the longest palindromic substring.
5. **🔥 Check if one string is a rotation of another.**
6. **🔍** Find the first occurrence of a substring in a string.
7. 🚫 Remove all occurrences of a given character.
8. 🧮 Compress the string (e.g., aabcc → a2b1c2).

**🔹 Competitive / DSA-Level**

1. ⭐ KMP (Knuth-Morris-Pratt) pattern matching algorithm.
2. ⭐ Rabin-Karp Algorithm for pattern searching.
3. ⭐ Z-algorithm for pattern matching.
4. ⭐ Longest Common Subsequence (LCS).
5. ⭐ Edit Distance between two strings.