

1. What is Mutable String in Java? Explain with an Example:

In Java, a mutable string is a string whose content can be changed after it has been created. Unlike `String` objects, which are immutable, `StringBuilder` and `StringBuffer` are mutable classes that allow you to modify the contents of the string.

Example:

```
public class MutableStringExample {
    public static void main(String[] args) {
        // Using StringBuilder for mutable string
        StringBuilder sb = new StringBuilder("Hello");
        sb.append(" World"); // Modify the string
        System.out.println("Modified String: " + sb.toString());
    }
}
```

2. WAP to Reverse a String:

Input: "PWSKILLS"

Output: "SLLIKSPW"

```
public class ReverseString {
    public static void main(String[] args) {
        String str = "PWSKILLS";
        String reversed = new StringBuilder(str).reverse().toString();
        System.out.println("Reversed String: " + reversed);
    }
}
```

3. WAP to Reverse a Sentence While Preserving the Position:

Input: "Think Twice"

Output: "kniht eciwt"

```
public class ReverseSentence {
    public static void main(String[] args) {
        String sentence = "Think Twice";
        String[] words = sentence.split(" ");
        StringBuilder reversedSentence = new StringBuilder();

        for (String word : words) {
            reversedSentence.append(new StringBuilder(word).reverse().toString()).append(" ");
        }
    }
}
```

```
        System.out.println("Reversed Sentence: " + reversedSentence.toString().trim());
    }
}
```

4. WAP to Sort a String Alphabetically:

```
public class SortStringAlphabetically {
    public static void main(String[] args) {
        String str = "programming";
        char[] charArray = str.toCharArray();
        Arrays.sort(charArray);
        String sortedString = new String(charArray);
        System.out.println("Sorted String: " + sortedString);
    }
}
```