Mutable String

1. **What is Mutable String in Java? Explain with an example.**
   Answer: Mutable strings are those strings whose content can be changed without creating a new object. StringBuffer and StringBuilder are mutable versions of String in java, whereas the java String class is immutable.

   Program:
   ```java
   public class Mutable {
       public static void main(String[] args) {
           StringBuffer sb = new StringBuffer("Rajan");
           System.out.println(sb);
           sb.append(" Rajbhar");
           System.out.println(sb);
       }
   }
   ```

2. **Write a program to reverse a String.**
   Input: "PWSKILLS"
   Output: "SLLIKSWP"

   Program:
   ```java
   public class ReverseString {
       public static void main (String[] args) {
           String str = "PWSKILLS";
           String rev = "";
           for (int i = str.length()-1; i>=0; i--){
               rev += str.charAt(i);
           }
           System.out.println(rev);
       }
   }
   ```

3. **Write a program to reverse a sentence while preserving the position.**
   Input: "Think Twice"
   Output: "kniht eciwt"

Program:

```java
public class ReverseSen {
    public static void main(String[] args) {
        String str = "Think Twice";
        String str2 = "";
        String srr[] = str.split(" ");
        for(int i = 0; i<srr.length; i++){
            for (int j = srr[i].length()-1; j>=0; j--){
                str2 = str2 +srr[i].charAt(j);
            }
            str2 = str2 + " ";
        }
        System.out.println(str2);

    // OR
        String str3 = "";
        for(String num : srr){

            for (int j = num.length()-1; j>=0; j--){
                str3 = str3 +num.charAt(j);
            }
            str3 = str3 + " ";
        }
        System.out.println(str2);
    }

}
```

4. Write a program to sort a string Alphabetically.

Program:

```java
public class SortAlpha {
public static void main (String[] args) {
    String str = "zyxwvutsrqponmlkjihgfedcba";
    str = str.toLowerCase();
```

```java
        System.out.println(str);


        char a[] = str.toCharArray();
        char temp = 0;
        for(int i = 0; i<a.length; i++){
            for(int j = i+1; j<a.length; j++){
                if(a[i]>a[j]){
                    temp = a[i];
                    a[i] = a[j];
                    a[j] = temp;
                }
            }
        }
        for(int i = 0; i<a.length; i++){
            System.out.print(a[i]);
        }
        // Arrays.sort(str1);
        // System.out.println(str1);
    }
}
```