**1. What is a Mutable String in Java? Explain with an example.**In Java, strings created using the String class are immutable, meaning their value cannot be changed once created. However, classes like StringBuilder and StringBuffer are mutable and allow modification of string content without creating a new object.

### **Example:**

public class MutableStringExample {

public static void main(String[] args) {

StringBuilder mutableString = new StringBuilder("PWSKILLS");

mutableString.append(" JAVA");

System.out.println("Modified String: " + mutableString);

}

}

// Output: Modified String: PWSKILLS JAVA

**2. Write a Java Program (WAP) to reverse a String.**

### **Input: "PWSKILLS"**

### **Output: "SLLIKSPW"**

### **Code:**

public class ReverseString {

public static void main(String[] args) {

String original = "PWSKILLS";

String reversed = new StringBuilder(original).reverse().toString();

System.out.println("Reversed String: " + reversed);

}

}

// Output: Reversed String: SLLIKSPW

**3. Write a Java Program (WAP) to reverse a sentence while preserving the position of words.**

### **Input: "Think Twice"**

### **Output: "kniht eciwt"**

### **Code:**

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());

}

}

// Output: Reversed Sentence: kniht eciwt

**4. Write a Java Program (WAP) to sort a String alphabetically.**

### **Input: "PWSKILLS"**

### **Output: "IKLLPSSW"**

### **Code:**

import java.util.Arrays;

public class SortString {

public static void main(String[] args) {

String original = "PWSKILLS";

char[] charArray = original.toCharArray();

Arrays.sort(charArray);

String sortedString = new String(charArray);

System.out.println("Sorted String: " + sortedString);

}

}