Q1 - what is mutable string in java explain with an example ?

Ans - **Mutable** means changing over time or that can be changed. In a **mutable string**, we can change the value of the string and **JVM** doesn’t create a new object. In a **mutable string**, we can change the value of the string in the same object.

To create a **mutable string in java**, Java has two classes [**StringBuffer**](https://javagoal.com/string-in-java/#14) and [**StringBuilder**](https://javagoal.com/string-in-java/#10)

Example - StringBuffer str1 = **new** StringBuffer("JavaGoal");

StringBuilder str2 = **new** StringBuilder("Learning");

After execution of the above line, the **JVM** will create two objects in memory and return the reference to the variable.

str1.append(".com");

str2.append(" website")

After execution of the above line, the **JVM** will change the value in existing objects. It will not create new objects.

Q2 - write a program to reverse a string ?

Input- PWSKILLS

Output - SLIKKSPW

Ans - **public** **class** reverese {

**public** **static** **void** main(String[] args) {

String input = "PWSKILLS";

String reverse = *inputreverse*(input);

System.***out***.println(reverse);

}

**public** **static** String inputreverse(String str) {

StringBuilder str1 = **new** StringBuilder();

**for**(**int** i = str.length()-1; i>=0; i--) {

str1.append(str.charAt(i));

}

**return** str1.toString();

}

}

Q3 - write a program to reverse while preserving the position

Input - Think Twice

Output- kniht eciwt

Ans - public class reverse {

public static void main(String[] args) {

String str1="Think Twice";

String str2="";

String arr[]=str1.split(" ");

for(String elem:arr)

{

for(int i=elem.length()-1 ; i>=0;i--)

{

str2=str2+ elem.charAt(i);

}

str2=str2+" ";

};

System.out.println("Before Reversing: " + str1);

System.out.println("After Reversing: "+str2);

}

}

Q4- Write a program to sort a string alphabetically .

Ans - import java.util.Arrays;

public class sort {

public static void main(String[] args) {

String inputString = "openai";

String sortedString = sortStringAlphabetically(inputString);

System.out.println(sortedString);

}

public static String sortStringAlphabetically(String input) {

char[] chars = input.toCharArray();

Arrays.sort(chars);

return new String(chars);

}

}