

## ASSIGNMENT

### MUTABLE STRINGS

Q.1 What is a mutable string in java? Explain with an example.

Ans. Once a string is created and we made some changes to that string and the changes made are reflected in the same object, then this type of string is called a mutable string.

Mutable strings are created using StringBuilder and StringBuffer classes.

Example-

```
mutableStrings.java ×
1 public class mutableStrings {
2     public static void main(String[] args) {
3         // Immutable
4         String str = "Hello";
5         str.concat("Everone");
6         System.out.println(str);
7
8         // mutable
9         StringBuilder sb = new StringBuilder("Hello");
10        sb.append(" Everyone");
11        System.out.println(sb);
12
13        StringBuffer sb1 = new StringBuffer("Hello");
14        sb1.append(" Everyone");
15        System.out.println(sb1);
16    }
17 }

Console ×
<terminated> mutableStrings [Java Application] C:\Users\dell6\AppData\Local\Programs\Eclipse Adoptium\jdk-17.0.2.8-hotspot\bin\javaw.exe (15-Feb-2023, 12:
Hello
Hello Everyone
Hello Everyone
```

Q.2 WAP to reverse a string.

INPUT: "PWSKILLS"

OUTPUT: "SLLIKSWP"

Ans.

```
mutableStrings.java reversingString.java ×
1 public class reversingString {
2
3     public static void main(String[] args) {
4
5         String str = "PWSKILLS";
6         String revStr = "";
7
8         for(int i=str.length()-1;i>=0;i--) {
9             revStr+=str.charAt(i);
10        }
11        System.out.println("Reversed String is "+revStr);
12    }
13 }

Console ×
<terminated> reversingString [Java Application] C:\Users\dell6\AppData\Local\Programs\Eclipse Adoptium\jdk-17.0.2-hotspot\bin\javaw.exe (15-Feb-2023, 12:14:02 pm - 1
Reversed String is SLLIKSWP
```

Q.3 WAP to reverse a sentence while preserving the position.

INPUT: "Think Twice"

OUTPUT: "kniht eciwT"

Ans.

```
mutableStrings.java reversingString.java reversingSentence.java ×
1 public class reversingSentence {
2     public static void main(String[] args) {
3
4         String sentence = "Think Twice";
5         String[] arr =sentence.split(" ");
6         String ans = "";
7
8         for(String elem : arr) {
9             for(int i=elem.length()-1;i>=0;i--) {
10                ans+=elem.charAt(i);
11            }
12            ans+=" ";
13        }
14        System.out.println("Reversed Sentence: "+ans);
15    }
16 }
17

Console ×
<terminated> reversingSentence [Java Application] C:\Users\dell6\AppData\Local\Programs\Eclipse Adoptium\jdk-17.0.2-hotspot\bin\javaw.exe (15-Feb-2023
Reversed Sentence: kniht eciwT
```

Q.4 WAP to sort a string alphabetically.

Ans.

```
1 import java.util.Arrays;
2 public class sortAlphabetically {
3     public static void main(String[] args) {
4         String str = "Java Program";
5
6         // convert to array
7         char[] arr = str.toCharArray();
8
9         // sort array
10        Arrays.sort(arr);
11
12        // convert back this array to string
13        str = new String(arr);
14        System.out.println(str);
15    }
16 }
17
```

Console ×

<terminated> sortAlphabetically [Java Application] C:\Users\dell6\AppData\Local\Programs\Eclipse Adoptium\jdk-17.0.2.8-hotspot\bin

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