Assignment No – 3

Que-1 :

```
package assignment3;


public class Q1 {
    public static void main(String[] args) {
        String str = "Its Programming Language";


        System.out.println("Length: " + str.length());
        System.out.println("Uppercase: " + str.toUpperCase());
        System.out.println("Lowercase: " + str.toLowerCase());
        System.out.println("Character at index 5: " + str.charAt(5));
        System.out.println("Substring from index 3: " + str.substring(3));
        System.out.println("Substring from index 5 to 10: " + str.substring(5, 10));



        String strWithSpaces = "   Programming Language  ";
        System.out.println("Trimmed String: '" + strWithSpaces.trim() + "'");


        System.out.println("Replace 'r' with 'e': " + str.replace('r', 'e'));
        System.out.println("Index of 'Language': " + str.indexOf("Language"));
        System.out.println("Last index of 'o': " + str.lastIndexOf('o'));


        String[] wd = str.split(" ");
        System.out.println("Split by space:");
```

```
        for (String w : wd) {
            System.out.println(w);
        }

        System.out.println("Starts with 'Hello': " + str.startsWith("Hello"));
        System.out.println("Ends with 'Language': " + str.endsWith("Language"));
        System.out.println("Concatenated String: " + str.concat("\n Yes it is. "));
    }
}
```

Que-2 :

```
package assignment3;

public class Q2 {
    public static void main(String[] args) {
        StringBuffer sb = new StringBuffer("Nandini ");

        sb.append(" Maheshwaram");
        System.out.println("After append: " + sb);

        sb.insert(8, "Narsappa");
        System.out.println("After insert: " + sb);

        sb.delete(8, 17);
        System.out.println("After delete: " + sb);
```

```
        sb.replace(8, 20, " Mahi");
        System.out.println("After replace: " + sb);

        sb.reverse();
        System.out.println("After reverse: " + sb);

        System.out.println("Capacity: " + sb.capacity());

        System.out.println("Length: " + sb.length());

        System.out.println("Substring from index 0: " + sb.substring(0));

        System.out.println("Substring from index 0 to 5: " + sb.substring(0, 5));
    }
}
```

Que-3 :

```
package assignment3;

import java.util.Scanner;

public class Q3 {
    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);
```

```
        System.out.println("Enter student record in the format
Rollno#Name#Class:");
        String record = scanner.nextLine();


        String[] tokens = record.split("#");


        if (tokens.length == 3) {
            System.out.println("Roll Number: " + tokens[0]);
            System.out.println("Name: " + tokens[1]);
            System.out.println("Class: " + tokens[2]);
        } else {
            System.out.println("Invalid record format. Please enter in the format
Rollno#Name#Class.");
        }
    }
}
```

Que-4 :

```
package assignment3;


import java.util.Scanner;


public class Q4 {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.println("Enter a string:");
```

```
        String input = scanner.nextLine();
        scanner.close();
        String result = removeVowels(input);
        System.out.println("Output: " + result);
    }

    public static String removeVowels(String str) {
        String vowels = "aeiouAEIOU";
        StringBuilder result = new StringBuilder();
        for (int i = 0; i < str.length(); i++) {
            char ch = str.charAt(i);
            if (vowels.indexOf(ch) == -1) {
                result.append(ch);
            }
        }
        return result.toString();
    }
}
```

Que-5 :

```
package assignment3;

public class Q5 {
    public static void main(String[] args) {
```

```
        String str1 = new String("Java");
        String str2 = new String("Java");

        System.out.println("String Comparison:");
        System.out.println("str1 == str2: " + (str1 == str2));
        System.out.println("str1.equals(str2): " + str1.equals(str2));

        StringBuffer sb1 = new StringBuffer("Java");
        StringBuffer sb2 = new StringBuffer("Java");

        System.out.println("\nStringBuffer Comparison:");
        System.out.println("sb1 == sb2: " + (sb1 == sb2));
        System.out.println("sb1.equals(sb2): " + sb1.equals(sb2));

        System.out.println("sb1.toString().equals(sb2.toString()): " +
sb1.toString().equals(sb2.toString()));
    }
}
```