ASSIGNMENT -6

String Handling

a) Write a java program to input a string and a separating character from standard input device and produce a list of strings as output by splitting the original string by separating character.

Example: input string = India_is_my_country

separator = _(underscore)

output = India is my country

CODE :-

```
import java.util.*;
class String_splitting{
   public static void main(String[] args) {
      Scanner sc = new Scanner(System.in);
      int start = 0;
      int end = -1;
      String ans = "";
      String arr[] = new String[100];
      int j = 0;
      System.out.print("Enter a String : ");
      String str = sc.next();
      System.out.print("Enter a separator : ");
      String sep1 = sc.next();
      char sep = sep1.charAt(0);
      for (int i = 0; i < str.length() ; i++){
         if((str.charAt(i)) == sep){
            end = i;
            ans = str.substring(start , end);
```

```
            arr[j] = ans;
            j++;
            start = i + 1;
          }
       }
       arr[j] = str.substring(start , str.length());
       for(int i = 0; i <= j ; i++){
            System.out.print(arr[i] +  " , ");
       }
    }
}
```

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b) Write a java program to input two strings str1, str2, and a length k, and output whether both string has a common substring of length k (k>=2). If found, write the initial index of matching substring of both str1 and str2. Str1= "RogerFederer" str2="ASRomaFC" length=2 output = True, 0, 2

CODE :-

```
import  java.util.*;
public class String_matching{
   public static int match(String str1,String str2,int index,int k) {
      int x = -1;
      int length = 0;
      int idx = index;
      for(int i=0;i<str2.length();i++){
         if(str1.charAt(index)==str2.charAt(i)){
            index++;
            length++;
            if(length>=k){
               return i-length+1;
            }
```

```
            if(index>=str1.length()) return x;
          }
          else{
            length=0;
            index = idx;
          }
        }
        return x;
    }
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        String str1 = sc.next();
        String str2 = sc.next();
        int k = sc.nextInt();
         for(int i=0;i<str1.length();i++){
           int x = match(str1, str2, i, k);
           if(x!=-1){
             System.out.println("True "+i+" "+x);
             return;
           }
         }
         System.out.println("False");
    }
}
```

---

c) Write a java program to input a string and perform inserting, replacing, and deleting a substring using build-in methods.

CODE :-

```
import java.util.*;
```

```
public class String_operations{
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("ENTER A STRING: ");
        String str = sc.next();
        while (true) {
            System.out.println("ENTER : ");
            System.out.println("1 TO INSERT");
            System.out.println("2 TO REPLACE");
            System.out.println("3 TO DELETE");
            System.out.println("4 TO DISPLAY");
            System.out.println("5 TO EXIT");
            System.out.println("ENTER YOUR CHOICE");
            int ch = sc.nextInt();
            if(ch==1){
                System.out.print("Enter substring to insert: ");
                String insertStr = sc.next();
                System.out.print("Enter position to insert at: ");
                int pos = sc.nextInt();
                str = str.substring(0, pos) + insertStr + str.substring(pos);
            }
            else if(ch==2){
                System.out.print("Enter substring to replace: ");
                String oldStr = sc.next();
                System.out.print("Enter new substring: ");
                String newStr = sc.next();
                str = str.replace(oldStr, newStr);
            }
            else if(ch==3){
```

```
            System.out.print("Enter substring to delete: ");
            String delStr = sc.next();
            str = str.replace(delStr, "");
        }
        else if(ch==4){
            System.out.println("Current string: " + str);
        }
        else if(ch==5){
            System.out.println("Exiting program...");
            sc.close();
            System.exit(0);
        }
        else{
            System.out.println("ENTER VALID CHOICE");
        }
    }
  }
}
```

---

d) Write a java program to perform character circular left and right shift with the given number of times.

Example: oliver output: left by 2 -> iverol right by 5 -> livero

CODE :-

```
import java.util.Scanner;


public class String_rotate {
   public static void main(String[] args) {
      Scanner sc = new Scanner(System.in);
      System.out.print("ENTER A STRING : ");
```

```
        String str = sc.next();
        int len = str.length();
        System.out.print("ENTER LENGTH TO BE ROTATED ON THE LEFT : ");
        int l = sc.nextInt();
        l = l % len;
        String s1 = str.substring(l);
        String s2 = str.substring(0, l);
        System.out.println("Left rotation by " + l + " -> " + s1 + s2);

        System.out.print("ENTER LENGTH TO BE ROTATED ON THE RIGHT : ");
        int r = sc.nextInt();
        r = r % len;
        s1 = str.substring(len - r);
        s2 = str.substring(0, len - r);
        System.out.println("Right rotation by " + r + " -> " + s1 + s2);

    }
}
```
