CSE18R272-LAB MANUAL

KALASALINGAM ACADEMY OF RESEARCH AND EDUCATION

COMPUTER SCIENCE AND EDUCATION

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Section: A5

Course name: java programming

Course Code: CSE18R272

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1.Write a program called CountVowelsDigits, which prompts the user for a String, counts the number of vowels (a, e, i, o, u, A, E, I, O, U) and digits (0-9) contained in the string, and prints the counts and the percentages

SOURCE CODE:

```
import java.io.*;
public class Main
{
    public static void main(String[] args) throws IOException {
      BufferedReader br  = new BufferedReader(new InputStreamReader(System.in));
            String line = br.readLine();
    int vowels = 0, digits = 0;

    line = line.toLowerCase();
    for(int i = 0; i < line.length(); ++i)
    {
       char ch = line.charAt(i);
       if(ch == 'a' || ch == 'e' || ch == 'i'
          || ch == 'o' || ch == 'u') {
          vowels++;
       }

       else if( ch >= '0' && ch <= '9')
       {
          ++digits;
       }

    }

    System.out.println("Vowels: " + vowels);
    System.out.println("the percentage of vowels "+ (((float)vowels/(float)line.length())*100));
    System.out.println("Digits: " + digits);
```

```
        System.out.println("the percentage of vowels "+ (((float)digits/(float)line.length())*100));
      }


}
```

2.Write a program called ReverseString, which prompts user for a String, and prints the reverse of the String by extracting and processing each character.

SOURCE CODE:

```
import java.io.*;
public class MyClass {
   public static void main(String args[]) throws IOException {
      BufferedReader br=new BufferedReader(new InputStreamReader(System.in));
      String s=br.readLine();
      MyClass mc=new MyClass();
      String r=mc.ReverseString(s);


      System.out.println("Given String is : "+s);
      System.out.println("Reverse String is : "+r);
   }


   String ReverseString(String s)
   {
      String rev="";
      for(int i=s.length()-1;i>=0;i--)
        rev=rev+s.charAt(i);
       return rev;
   }
}
```

3.Write a Java Program that reads a line of integers, and then displays each integer, and the sum of all the integers

SOURCE CODE:

```
import java.io.*;
import java.util.*;
public class MyClass {
   public static void main(String args[]) throws IOException {
      BufferedReader br=new BufferedReader(new InputStreamReader(System.in));
      String s=br.readLine();
      StringTokenizer st =new StringTokenizer(s,",");
      String token;
      int sum=0;
      while(st.hasMoreTokens())
      {
         token =st.nextToken();
         sum+=Integer.parseInt(token);

      }
       System.out.println("sum ="+sum);

   }
}
```

4. Write a Java program to return the sum of the digits present in the given string. If there is no digits the sum return is 0.

SOURCE CODE:

```
import java.io.*;
public class MyClass {
   public static void main(String args[]) throws IOException {
      BufferedReader br=new BufferedReader(new InputStreamReader(System.in));
      String s=br.readLine();

      int sum=0;
      for(int i=0;i<s.length();i++)
      {
         if(Character.isDigit(s.charAt(i)))
```

```
        {

            sum+=Integer.parseInt(Character.toString(s.charAt(i)));

        }
      }

      System.out.println("sum is  : "+sum);

   }
}
```

5.Write a Java program to return a new string using every characters of even positions from a given string.

SOURCE CODE:

```
import java.io.*;
import java.lang.*;
import java.util.*;
public class Main
{
     public static void main(String[] args) throws IOException {
        BufferedReader br  = new BufferedReader(new InputStreamReader(System.in));
              String line = br.readLine();
      int sum=0;
      String even="";
      for(int i =0;i<line.length();i++){
         if(Character.isDigit(line.charAt(i)))

            sum += Integer.parseInt(Character.toString(line.charAt(i)));
      }
      System.out.println("the sum is "+ sum);
      for(int i =0;i<line.length();i+=2){
         even+=line.charAt(i);
```

```
    }
    System.out.println("the even string is "+ even);

   }

}
```

6.Write a Java program that checks whether a given string is palindrome or not.

SOURCE CODE:

```
import java.io.*;
import java.lang.*;
import java.util.*;
public class Main
{
   public static void main(String[] args) throws IOException {

      StringBuffer sb=new StringBuffer(line);

      StringBuffer rev=new StringBuffer(line);
       if(rev.compareTo(sb.reverse())==0)
         System.out.println(line +" is plaindrome");
       else
         System.out.println(line+"is not palindrome");



   }
```

}