CSE18R272-LAB MANUAL

KALASALINGAM ACADEMY OF RESEARCH AND EDUCATION

COMPUTER SCIENCE AND EDUCATION

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Course Name : Java Programming

Course Code : CSE18R272

Section : A5

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 Main {

public static void main(String args[]) throws IOException {

BufferedReader br=new BufferedReader(new InputStreamReader(System.in));

String s=br.readLine();

Main mc=new Main();

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 Main {

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 Main {

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");

}

}

EXERCISE 5:

1.Write a Java program to sort a list of names in ascending order.

SOURCE CODE:

import java.io.\*;

public class Main

{

public static void main(String[] args) throws IOException{

String name[] = new String[5];

String temp="";

int i=0;

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

for(i=0;i<5;i++){

name[i]=br.readLine();

}

for (i = 0; i < 5; i++)

{

for (int j = i + 1; j < 5; j++)

{

if (name[i].compareTo(name[j])>0)

{

temp = name[i];

name[i] = name[j];

name[j] = temp;

}

}

}

System.out.println("names in alphabetical order");

for(i=0;i<5;i++){

System.out.println(name[i] + " ");

}

}

}

2.Write a Java program to concatenate a given string with itself of a given number of times.

SOURCE CODE:

import java.io.\*;

public class Main

{

public static void main(String[] args) throws IOException{

String name;

String temp="";

int n;

int i=0;

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

name=br.readLine();

n = Integer.parseInt(br.readLine());

for(i=0;i<n;i++){

temp+=name;

}

System.out.println("printing name as given no of times " + temp);

}

}

3.Write a Java program to counts occurrences of a certain character in a given string.

SOURCE CODE:

import java.io.\*;

public class Main

{

public static void main(String[] args) throws IOException{

String name;

int i=0;

int count=0;

char ch;

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

name=br.readLine();

ch = br.readLine().charAt(0);

for(i=0;i<name.length();i++){

if(name.charAt(i)==ch){

count++;

}

}

System.out.println("the input is | "+ name);

System.out.println("total num of occurences of "+ ch + " is " + count);

}

}