CSE18R272-LAB MANUAL

KALASALINGAM ACADEMY OF RESEARCH AND EDUCATION

COMPUTER SCIENCE AND EDUCATION

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Section : A5

Course Name : Java Programming

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 ?

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 ?

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 ?

Code:

import java.io.\*;

import java.util.\*;

public class StringTokenizerDemo {

public static void main(String args[]) {

int n;

int sum = 0;

Scanner sc = new Scanner(System.in);

System.out.println("Enter integers with one space gap:");

String s = sc.nextLine();

StringTokenizer st = new StringTokenizer(s, " ");

while (st.hasMoreTokens()) {

String temp = st.nextToken();

n = Integer.parseInt(temp);

System.out.println(n);

sum = sum + n;

}

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

sc.close();

}

}

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 ?

Code:

import java.util.\*;

public class Main

{

public int sumOfDigits(String stng)

{

int l = stng.length();

int sum = 0;

for (int i = 0; i < l; i++)

{

if (Character.isDigit(stng.charAt(i)))

{

String tmp = stng.substring(i,i+1);

sum += Integer.parseInt(tmp);

}

}

return sum;

}

public static void main (String[] args)

{

Main m= new Main();

String str1 = "jayachandra120";

System.out.println("The given string is: "+str1);

System.out.println("The sum of the digits in the string is: "+m.sumOfDigits(str1));

}

}

5.

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

Code:

import java.util.\*;

public class Main

{

public String makeWithEvenCharacters(String stng)

{

int len = stng.length();

String fin\_str = "";

for (int i = 0; i < len; i = i + 2)

{

fin\_str += stng.charAt(i);

}

return fin\_str;

}

public static void main (String[] args)

{

Main m= new Main();

String str1 = "Lucky 2020";

System.out.println("The given string is: "+str1);

System.out.println("The new string is: "+m.makeWithEvenCharacters(str1));

}

}

6.

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

Code :

public class GFG {

static boolean isPalindrome(String str)

{

int i = 0, j = str.length() - 1;

while (i < j) {

if (str.charAt(i) != str.charAt(j))

return false;

i++;

j--;

}

return true;

}

public static void main(String[] args)

{

String str = "Lucky";

if (isPalindrome(str))

System.out.print("it is palindrom");

else

System.out.print("it is not palindrom");

}

}