Solution 14:

//Code for basic calculator operations

package com.hsbc.pack;

public static Calculator{

public void add(int num1,int num2){

int num3=num1+num2;

System.out.println(“Addition is=”+ num3);

}

public void sub(int num1,int num2){

int num3=num1-num2;

System.out.println(“Subtraction is=”+ num3);

}

public void mul(int num1,int num2){

int num3=num1\*num2;

System.out.println(“Multiplication is=”+ num3);

}

public void div(int num1,int num2){

int num3=num1/num2;

System.out.println(“Division is=”+ num3);

}

public static void main(String args[]){

Calculator ob=new Calculator(); //creation of object

ob.add(4,2);

ob.sub(4,2);

ob.mul(4,2);

ob.div(4,2);

}

}

Solution 15:

//code to print number of objects created of a class

package hsbc.com.pack;

public class Sample{

public static int count;

Sample(){

count++; // incrementing number of objects

}

public static void main(String args[]){

Sample ob1=new Sample();

Sample ob2=new Sample();

Sample ob3=new Sample();

System.out.println(ob3.count); // printing number of objects

}

}

Solution 16:

package com.hsbc.demo.example;

import java.util.ArrayList;

import java.util.Arrays;

import java.util.Collections;

import java.util.Comparator;

import java.util.List;

public class Caller6 {

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

Student1 s1=new Student1("Prince",101,23);

Student1 s2=new Student1("Vikram",102,21);

Student1 s3=new Student1("Arun",103,24);

Student1 s4=new Student1("Tarun",104,21);

Student ss1=new Student("Prince",101,23);

Student ss2=new Student("Vikram",102,21);

Student ss3=new Student("Arun",103,24);

Student ss4=new Student("Tarun",104,21);

Student st[]=new Student[] {

ss1,ss2,ss3,ss4

};

List<Student1> p=new ArrayList<Student1>();

p.add(s1);

p.add(s2);

p.add(s3);

p.add(s4);

MyComparator comp=new MyComparator();

Arrays.sort(st);

Collections.sort(p, comp);

System.out.println(st.length);

for(Student1 objs:p) {

System.out.println(objs);

}

}

static {

System.out.println("Class loading....");

}

}

class MyComparator implements Comparator<Student1>{

@Override

public int compare(Student1 o1, Student1 o2) {

// TODO Auto-generated method stub

if(o1.age>o2.age)

return 1;

else if (o1.age<o2.age)

return -1;

else

return 0;

}

}

class Student1 {

public Student1() {

super();

}

public Student1(String name, int rollNo, int age) {

super();

this.name = name;

this.rollNo = rollNo;

this.age = age;

}

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

public int getRollNo() {

return rollNo;

}

public void setRollNo(int rollNo) {

this.rollNo = rollNo;

}

public int getAge() {

return age;

}

public void setAge(int age) {

this.age = age;

}

@Override

public String toString() {

return "Student1 [name=" + name + ", rollNo=" + rollNo + ", age=" + age + "]";

}

String name;

int rollNo;

int age;

}

class Student implements Comparable<Student>{

public Student() {

super();

}

public Student(String name, int rollNo, int age) {

super();

this.name = name;

this.rollNo = rollNo;

this.age = age;

}

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

public int getRollNo() {

return rollNo;

}

public void setRollNo(int rollNo) {

this.rollNo = rollNo;

}

public int getAge() {

return age;

}

public void setAge(int age) {

this.age = age;

}

@Override

public String toString() {

return "Student [name=" + name + ", rollNo=" + rollNo + ", age=" + age + "]";

}

String name;

int rollNo;

int age;

@Override

public int compareTo(Student o) {

// TODO Auto-generated method stub

if(this.age>o.age)

return -1;

else if (this.age<o.age)

return 1;

else

return 0;

}

}

Solution 17:

//Code to demonstrate basic string operations

package hsbc.com.pack;

public class Calculator {

public static void main(String args[]){

String str ="The quick brown fox jumps over the lazy dog";

char char\_at = str.charAt(12);

System.out.println("1)Character at location 12: " +

char\_at);

int firstIndex = str.indexOf("is");

if(firstIndex==-1) {

System.out.println("2)Given string does not contain the word 'is' ");

}

else {

System.out.println("2)Given string does not contain the word 'is' ");

}

System.out.println("3)"+str+" and killed it");

System.out.println("4)"+str.endsWith("dogs"));

String str1="The quick brown Fox jumps over the lazy Dog";

System.out.println("5)Comparing " + "string " + " and " + "string1"

+ " : " + str.equals(str1));

String str2="THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG";

System.out.println("6)Comparing " + "string" + " and " + "string2"

+ " : " + str.equals(str2));

int strIndex = str.indexOf('a');

System.out.println("7)Index of char 'a'" +

" is found at : " + strIndex);

int lastIndex = str.lastIndexOf('e');

System.out.println("8)Last occurrence of char 'e'" +

" is found at : " + lastIndex);

System.out.println("9)The size of "+ "the String is "+ str.length());

String replaceString=str.replaceAll("The","A");

System.out.println("11)"+replaceString);

String [] s="the quick brown fox jumps over the little lazy dog.".split("fox");

System.out.println(s[0]);

System.out.println(s[1]);

System.out.println("14) "+str.toUpperCase() );

System.out.println("15) "+str.toLowerCase() );

}

}

Solution 18:

//Code to check if two strings are equal or not

package hsbc.com.pack;

public class Test {

public static void main(String[] args) {

     String s1 = new String("HSBC");

         String s2 = new String("HSBC");

         System.out.println(s1 == s2);

         System.out.println(s1.equals(s2));

     }

}

Solution 19:

//copy elements from one array to another

package hsbc.com.pack;

public class Test {

public static void main(String[] args) {

         int a[] = {1, 8, 3};

         int b[] = new int[a.length]; // Create an array b[] of same size as a[]

         for (int i=0; i<a.length; i++)  // Copy elements of a[] to b[]

              b[i] = a[i];

         System.out.println("Contents of a[] ");

         for (int i=0; i<a.length; i++)

             System.out.print(a[i] + " ");

         System.out.println("\n\nContents of b[] ");

         for (int i=0; i<b.length; i++)

           System.out.print(b[i] + " ");

     }

}

Solution 20:

//Code to calculate sum and average of elements of array

package hsbc.com.pack;

public class Average {

public static void main(String[] args){

double[] arr = {13, 2.9, 26.3, 90, 3.3};

double total = 0;

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

total = total + arr[i];

}

double average = total / arr.length;

System.out.println("The average is:"+ average);

System.out.println("The average is:"+ total);

}

}

Solution 21:

//Sum of two matrices

package hsbc.com..pack;

import java.util.Scanner;

class AddMatrix{

  public static void main(String args[]){

    int row, column, c, d;

    Scanner in = new Scanner(System.in);

  System.out.println("Enter the number of rows and columns of matrix");

    row = in.nextInt();

    column = in.nextInt();

    int first[][] = new int[row][column]; //creating matrix

    int second[][] = new int[row][column];

    int sum[][] = new int[row][column];

    System.out.println("Enter the elements of first matrix"); //input of matrix

    for (c = 0; c < row; c++)

      for (d = 0; d < column; d++)

        first[c][d] = in.nextInt();

System.out.println("Enter the elements of second matrix");

    for (c = 0 ; c < row; c++)

      for (d = 0 ; d < column; d++)

        second[c][d] = in.nextInt();

    for (c = 0; c < row; c++)

      for (d = 0; d < column; d++)

        sum[c][d] = first[c][d] + second[c][d];

System.out.println("Sum of the matrices:");

    for (c = 0; c < row; c++){

      for (d = 0; d < column; d++)

        System.out.print(sum[c][d] + "\t");

      System.out.println();

    }

  }

}

Solution 22:

//Squaring the given 2D array

package hsbc.com.pack;

import java.util.Scanner;

class SquareMatrix{

public static void main(String args[])

  {

    int row, column, c, d;

    Scanner s = new Scanner(System.in);

    System.out.println("Enter the number of rows and columns of matrix");

    row = s.nextInt();

    column = s.nextInt();

    int mat1[][] = new int[row][column]; //creating matrix

    int squareMat1[][] = new int[row][column];

    System.out.println("Enter the elements of first matrix"); //input of matrix

    for (c = 0; c < row; c++)

      for (d = 0; d < column; d++)

        Mat1[c][d] = s.nextInt();

    for (c = 0; c < row; c++)

      for (d = 0; d < column; d++)

        squareMat1[c][d] = squareMat1[c][d] \* squareMat1[c][d]; //squaring each //element through loop

    System.out.println("Square of the matrices:");

    for (c = 0; c < row; c++)

    {

      for (d = 0; d < column; d++)

        System.out.print(squareMat1[c][d] + "\t");

      System.out.println();

    }

  }

}

Solution 23:

//Code to print occurance of each element in array

package com.hsbc.pack;

import java.util.\*;

public class Frequancy{

public static void main(String[] args){

Scanner sc = new Scanner(System.in);

int[] arr = new int[100];

int[] freq = new int[100];

int size, i, j, count;

System.out.println(“nEnter size of array: “);

size = sc.nextInt(); // general program not just for 10 numbers

System.out.println(“Enter elements in array: “);

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

arr[i] = sc.nextInt(); //inputing array

freq[i] = -1;

}

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

count = 1;

for(j=i+1; j<size; j++){

if(arr[i]==arr[j]){

count++;

freq[j] = 0;

}

}

If(freq[i] != 0){

freq[i] = count;

}

}

System.out.println(“nFrequency of all elements of array : n”);

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

if(freq[i] != 0){

System.out.println(arr[i] + ” occurs ” + freq[i] + ” times” + “n”);

}

}

}

}

Solution 24:

//Using overloading to calculate area and perimeter of different shapes

package com.hsbc.pack;

public class CalcArea{

public void perimeter(int height){

int perimeter=4\*height;

System.out.println("perimeter of sqare:"+perimeter);

}

public void perimeter(int height,int length){

int perimeter=2\*(length+height);

System.out.println("area of rectangle:"+perimeter);

}

public void area(int height){

int area=height\*height;

System.out.println("area of sqare:"+area);

}

public void area(int height,int length){

int area=length\*height;

System.out.println("area of rectangle:"+area);

}

public static void main(String args[]){

int a=10,b=20;

area(a);

area(a,b);

perimeter(a);

perimeter(a,b);

}

}

Solution 25:

public class EmpData

{

private String empName

private int empId;

private int empAge;

private String empdesgn;

private String empLocation;

private String empExpInYrs;

EmpData(String empName)

{

//Default constructor

this.empName=empName;

empId=1;

empAge=22;

empdesgn="Trainee software engineer";

empLocation="Pune";

empExpInYrs=1;

}

EmpData(String empName, int empId)

{

//Default constructor

this.empName=empName;

this.empId=empId;

empAge=22;

empdesgn="Trainee software engineer";

empLocation="Pune";

empExpInYrs=1;

}

EmpData(String empName, int empId, int empAge)

{

this.empName=empName;

this.empId=empId;

this.empAge=empAge;

empdesgn="Trainee software engineer";

empLocation="Pune";

empExpInYrs=1;

}

EmpData(String empName,int empId, int empAge, String empdesgn)

{

this.empName=empName;

this.empId=empId;

this.empAge=empAge;

this.empdesgn=empdesgn;

empLocation="Pune";

empExpInYrs=1;

}

EmpData(String empName,int empId, int empAge, String empdesgn, String empLocation)

{

this.empName=empName;

this.empId=empId;

this.empAge=empAge;

this.empdesgn=empdesgn;

this.empLocation=empLocation;

empExpInYrs=1;

}

EmpData(String empName,int empId, int empAge, String empdesgn, String empLocation, int empExpInyrs)

{

//Default constructor

this.empName=empName;

this.empId=empId;

this.empAge=empAge;

this.empdesgn=empdesgn;

this.empLocation=emplocation;

this.empExpInYrs=empExpInyrs;

}

public static void main(String args[])

{

EmpData myobj = new EmpData();

myobj.EmpData("roy");

myobj.EmpData("roy",1);

myobj.EmpData("roy",1,22);

myobj.EmpData("roy",1,22, "TSE");

myobj.EmpData("roy",1,22, "TSE","pune" );

myobj.EmpData("roy",1,22,"TSE","pune",1);

}

Solution 26:

//overloading fuctions to support int and double values

package com.hsbc.pack;

public class Calculator {

public void add(int num1,int num2){

System.out.println("Addition of two int is="+ (num1+num2));

}

public void add(int num1,double num2){

System.out.println("Addition of int and double is="+ (num1+num2));

}

public void add(double num1,int num2){

System.out.println("Addition of double and int is="+ (num1+num2));

}

public void add(double num1,double num2){

System.out.println("Addition of two double is="+ (num1+num2));

}

public void sub(int num1,int num2){

System.out.println("Subtraction of two int is="+ (num1- num2));

}

public void sub(int num1,double num2){

System.out.println("Subtraction of int and double is="+ (num1- num2));

}

public void sub(double num1,int num2){

System.out.println("Subtraction of double and int is="+ (num1- num2));

}

public void sub(double num1,double num2){

System.out.println("Subtraction of two double is="+ (num1- num2));

}

public void mul(int num1,int num2){

System.out.println("Multiplication of two int is="+ (num1\*num2));

}

public void mul(int num1,double num2){

System.out.println("Multiplication of int and double is="+ (num1\*num2));

}

public void mul(double num1,int num2){

System.out.println("Multiplication of double and int is="+ (num1\*num2));

}

public void mul(double num1,double num2){

System.out.println("Multiplication of two double is="+ (num1\*num2));

}

public void div(int num1,int num2){

System.out.println("Division of two int is="+ (num1/num2) );

}

public void div(int num1,double num2){

System.out.println("Division of int and double is="+ (num1/num2));

}

public void div(double num1,int num2){

System.out.println("Division of double and int is="+ (num1/num2));

}

public void div(double num1,double num2){

System.out.println("Division of two double is="+ (num1/num2));

}

public static void main(String args[]){

Calculator ob=new Calculator(); //creation of object

ob.add(4,2);

ob.add(4,2.0);

ob.add(4.0,2);

ob.add(4.0,2.0);

ob.sub(4,2);

ob.sub(4,2);

ob.sub(4,2);

ob.sub(4,2);

ob.mul(4,2);

ob.mul(4.0,2);

ob.mul(4,2.0);

ob.mul(4.0,2.0);

ob.div(4,2);

ob.div(4.0,2);

ob.div(4,2.0);

ob.div(4.0,2.0);

}

}

Solution 27:

package com.hsbc.pack;

class Computer {

static {

System.out.println("Class Loading..");

Computer c = new Computer();

}

public static void main(String[] args) {

System.out.println("Class Executing");

}

}

Solution 28:

//Code to demonstrate use of varagrs

package com.hsbc.pack;

public class VariableArguments {

    public void varagrs(String str, int ...a) {

System.out.println("String: " + str);

         System.out.println("Number of arguments is= "+ a.length);

         for (int i =0;i<a.length();i++ )

             System.out.println(i + " ");

    }

    public static void main(String args[])

    {

        varagrs("Jay", 100, 200);

        varagrs("Viru", 900, 100);

    }

}