Solution 14:

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:

package hsbc.com..pack;

public class Counter

{

public static int count; // static variable is used so that value doesnt change

Counter()

{

count++; // incrementing number of objects

}

public static void main(String[] args)

{

Counter ob1=new Counter();

Counter ob2=new Counter();

Counter ob3=new Counter();

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

}

}

Solution 16:

package hsbc.com..pack;

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 Example {

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

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>(); //lists

p.add(s1);

p.add(s2);

p.add(s3);

p.add(s4);

MyComparator comp=new MyComparator(); //comparison

Arrays.sort(st);

Collections.sort(p, comp);

System.out.println(st.length);

for(Student1 objs:p) {

System.out.println(objs);

}

class MyComparator implements Comparator<Student1> //comparison based on age

{

public int compare(Student1 o1, Student1 o2) {

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;

}

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;

}

public String toString() {

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

}

String name;

int rollNo;

int age;

public int compareTo(Student o) { //comparison based on age

if(this.age>o.age)

return -1;

else if (this.age<o.age)

return 1;

else

return 0;

}

}

Solution 17:

package hsbc.com..pack;

public class StringPractice

{

public static void main(String[] args) {

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

System.out.println("Character at 12th index "+ s.charAt(11));

String word="";

boolean flag=false;

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

{

char ch=s.charAt(i);

if(Character.isLetter(ch))

{

word=word+ch;

}

else

{

if(word.equals("is"))

{

System.out.println("It contains is");

flag=true;

break;

}

else

{

word="";

}

}

}

if (flag==false)

System.out.println("It does not contain is");

String a=s+" and killed it"; //adding 'and killed it' to existing string

System.out.println("After appending: "+a);

word=""; //checking if string ends with dogs

for(int i=s.length()-1;i<s.length();i--)

{

char ch=s.charAt(i);

if(Character.isLetter(ch))

{

word=ch+word;

}

else

{

if(word.equals("dog"))

{

System.out.println("Ends with 'dog'");

break;

}

else

{

System.out.println("Does not end with 'dog'");

}

}

}

// Checking whether the String is equal to “The quick brown Fox jumps over the lazy Dog”

if(s.compareTo("The quick brown Fox jumps over the lazy Dog")==0)

System.out.println("Equal");

else

System.out.println("Not Equal");

//Checking whether the String is “THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG”

if(s.compareTo("THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG")==0)

System.out.println("Equal");

else

System.out.println("Not Equal");

//Finding the index position of the character a

System.out.println(s.indexOf("a"));

//Finding the last index position of the character “e”

System.out.println(s.lastIndexOf("e"));

//Finding the length of the String.

System.out.println(s.length());

//Checking whether the String matches to “The quick brown Fox jumps over the lazy Dog”

if(s.compareTo("The quick brown Fox jumps over the lazy Dog")==0)

System.out.println("Equal");

else

System.out.println("Not Equal");

//Replacing the word “The” with the word “A”

word="";

String the="";

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

{

char ch=s.charAt(i);

if(Character.isLetter(ch))

{

word=word+ch;

}

else

{

if(word.equals("The")||word.equals("the"))

{

the=the+" A";

word="";

}

else

{

the=the+" "+word;

word="";

}

}

}

System.out.println("After replacing "+ the);

String d[]=s.split(" ",s.length());

System.out.println("After splitting");

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

{

System.out.println(d[i]);

}

the=s+" ";

word="";

System.out.println("Animal Names");

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

{

char ch=t.charAt(i);

if(Character.isLetter(ch))

{

word=word+ch;

}

else

{

if(word.equals("fox")||word.equals("dog"))

{

System.out.println(word);

word="";

}

else

{

word="";

}

}

}

//Printing the above string in completely lower case

System.out.println("String in lowercase: "+s.toLowerCase());

//Printing the above string in completely upper case

System.out.println("String in uppercase: "+s.toUpperCase());

}

}

Solution 18:

package hsbc.com..pack;

public class Test

{

    public static void main(String[] args)

    {

        String s1 = new String("HELLO");

        String s2 = new String("HELLO");

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

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

    }

}

Solution 19:

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[] "); // printing array a[]

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

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

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

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

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

    }

}

Solution 20:

package hsbc.com..pack;

public class Average {

public static void main(String[] args)

{

double[] arr = {19, 12.89, 16.5, 200, 13.7};

double total = 0;

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

total = total + arr[i];

}

double average = total / arr.length; // calculating average

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

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

}

}

Solution 21:

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];   //adding each element through loop

    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:

package hsbc.com..pack;

import java.util.Scanner;

class SquareMatrix  
{  
  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 square[][] = 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();

    for (c = 0; c < row; c++)  
      for (d = 0; d < column; d++)  
        square[c][d] = square[c][d] \* square[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(square[c][d] + "\t");

      System.out.println();  
    }  
  }  
}

Solution 23:

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(“Enter 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]) //finding duplicate element

{

count++;

freq[j] = 0;

}

}

}

if(freq[i] != 0)

{

freq[i] = count; //if frequency is not counted for this element

}

}

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:

package com.hsbc.pack;

public class CalcArea

{

public void area(int height) // 1 argument for square

{

int area=height\*height; //calculating area of square

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

}

public void area(int height,int length) // 2 argument for recctangle

{

int area=length\*height;

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

}

public void perimeter(int height)

{

int perimeter=4\*height;

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

}

public void perimeter(int height,int length)

{

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

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

}

public static void main(String args[])

{

int a=5,b=10;

area(a);

area(a,b);

perimeter(a);

perimeter(a,b);

}

}

Solution 25:

package hsbc.com..pack;

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("aman");

myobj.EmpData("aman",1);

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

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

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

myobj.EmpData("aman",1,22,"TSE","Pune",1);

}

Solution 26:

// Overloading with Calculator Example

package hsbc.com..pack;

class Calculator {

public void add(int a, int b) {

System.out.println("The sum of a and b is " + (a+b));

}

public void add(double a, double b) {

System.out.println("The sum of c and d is " + (a+b));

}

public void add(double a, int b) {

System.out.println("The sum of c and a is " + (a+(double)b));

}

public void add(int a, double b) {

System.out.println("The sum of b and d is " + (b+(double)a));

}

public void diff(int a, int b) {

System.out.println("The difference of a and b is " + (a-b));

}

public void diff(double a, double b) {

System.out.println("The difference of c and d is " + (a-b));

}

public void diff(double a, int b) {

System.out.println("The difference of c and a is " + (a-(double)b));

}

public void diff(int a, double b) {

System.out.println("The difference of b and d is " + ((double)a-b));

}

public void mul(int a, int b) {

System.out.println("The product of a and b is " + (a\*b));

}

public void mul(double a, double b) {

System.out.println("The product of c and d is " + (a\*b));

}

public void mul(double a, int b) {

System.out.println("The product of c and a is " + (a\*(double)b));

}

public void mul(int a, double b) {

System.out.println("The product of b and d is " + ((double)a\*b));

}

public void div(int a, int b) {

float c = (float)a/b;

System.out.println("The division of a and b is " + c);

}

public void div(double a, double b) {

double c = a/b;

System.out.println("The division of c and d is " + c);

}

public void div(int a, double b) {

double c = (double)a/b;

System.out.println("The division of b and d is " + c);

}

public void div(double a, int b) {

double c = a/(double)b;

System.out.println("The division of c and a is " + c);

}

}

public class Solution26 {

public static void main(String[] args) {

int a = 2;

int b = 1;

double c = 12.12;

double d = 55.55;

Calculator ob = new Calculator();

ob.add(a, b);

ob.add(c, d);

ob.add(c, a);

ob.add(b, d);

ob.diff(a, b);

ob.diff(c, d);

ob.diff(c, a);

ob.diff(b, d);

ob.mul(a, b);

ob.mul(c, d);

ob.mul(c, a);

ob.mul(b, d);

ob.div(a, b);

ob.div(c, d);

ob.div(c, a);

ob.div(b, d);

}

Solution 27:

package hsbc.com..pack;

public class ObjectCreation{

public static void main(String args[]) throws ClassNotFound Execption

{

System.out.println(“Hello World”);

Class.forName(“com.hsbc.pack.Computer”);

}

Static //static block runs before main method

{

System.out.println(“Class loading..”);

}

class Computer

{

public static Computer computer;

static

{

System.out.println(“Computer class loaded”);

Computer=new Computer(); // object creation before class loading

System.out.println(computer);

}

}

Solution 28:

package com.hsbc.pack;

public class VariableArguments

{

    public void varagrs(String str, int ...a) // …a is used to collect variable arguments

{

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

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

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

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

    }

    public static void main(String args[])

    {

        varagrs("Aman", 100, 200);

        varagrs("Vishal", 900, 100);

    }

}