Week 6 extra

Develop a Java program to find the transpose of a given matrix of order MXN.

import java.util.Scanner;

class Transpose

{

public static void main(String args[])

{

int i, j;

System.out.println("Enter total rows: ");

Scanner s = new Scanner(System.in);

int row = s.nextInt();

System.out.println("Enter total columns: ");

int column = s.nextInt();

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

System.out.println("Enter the matrix:");

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

{

for(j = 0; j < column; j++)

{

array[i][j] = s.nextInt();

}

System.out.print("");

}

System.out.println("The matrix before Transpose is ");

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

{

for(j = 0; j < column; j++)

{

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

}

System.out.println("");

}

System.out.println("The matrix after Transpose is ");

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

{

for(j = 0; j < row; j++)

{

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

}

System.out.println();

}

}

}

Develop a Java program which has the (only) class CircleDemo that has members-

radius, area and perimeter. Include methods to do the following.

a. accept the radius from the user

b. find the area of the circle

c. find the perimeter of the circle

d. Display all the details

import java.util.Scanner;

class CircleDemo

{

double radius;

double area;

double perimeter;

double pi=3.14;

void accept()

{

System.out.println("Enter the radius of circle");

Scanner ss= new Scanner(System.in);

radius=ss.nextDouble();

}

void display()

{

area=pi\*radius\*radius;

perimeter=2\*pi\*radius;

System.out.println("The radius of circle:"+radius);

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

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

}

public static void main(String args[])

{

CircleDemo c=new CircleDemo();

c.accept();

c.display();

}

}

Develop a Java program to create a class Actor with id, name, no\_of\_movies,

no\_of\_years\_exp. Calculate the average\_performance for each of the actor and print

the name of the actor with highest average.

import java.util.Scanner;

class Actor

{

String name;

String id;

int no\_of\_movies;

int no\_of\_years\_exp;

double avg;

void accept()

{

Scanner xx=new Scanner(System.in);

System.out.print("Enter the name of the actor:");

name =xx.next();

System.out.print("Enter the id:");

id =xx.next();

System.out.print("Enter the no. of movies:");

no\_of\_movies =xx.nextInt();

System.out.print("Enter years of experience:");

no\_of\_years\_exp =xx.nextInt();

}

void average()

{

avg = (no\_of\_movies/no\_of\_years\_exp);

}

}

class ActorMain

{

public static void main(String ss[])

{

int n;

Scanner xx = new Scanner(System.in);

System.out.println("Enter the number of actors:");

n =xx.nextInt();

Actor ac[] = new Actor[n];

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

{

System.out.println("Enter details of actor"+(i+1));

ac[i] = new Actor();

ac[i].accept();

ac[i].average();

}

double temp=0;

String name2="0";

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

{

if(ac[i].avg > temp)

{

temp=ac[i].avg;

name2=ac[i].name;

}

}

System.out.println("The name of the Actor with highest average "+temp+" is: " +name2);

}

}

Develop a Java program to accept the values of a double array through command line.

Display the sorted array.

class sorted

{

public static void main(String sss[])

{

double[] arr=new double[sss.length];

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

{

arr[i]=Double.parseDouble(sss[i]);

}

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

{

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

{

if(arr[i]>arr[j])

{

double c=arr[i];

arr[i]=arr[j];

arr[j]=c;

}

}

}

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

{

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

}

}

Design a Java program to accept a double array- Full. create two more arrays pos,

neg. Check every element of Full array and push the positive

numbers to pos array and negative numbers to neg. Count the number of

positives, negatives and zeros and display.

import java.util.Scanner;

class number

{

public static void main(String args[])

{

int positive=0,negative=0,zero=0,i,n;

double temp=0.0;

Scanner ss=new Scanner(System.in);

System.out.println("Enter the size of the array:");

n=ss.nextInt();

double[]full=new double[n];

double[]pos=new double[n];

double[]neg=new double[n];

System.out.println("Enter the elements of the array:");

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

{

full[i]=ss.nextInt();

}

System.out.println("array with positive numbers:");

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

{

if(full[i]>0)

{

temp=full[i];

pos[i]=temp;

positive++;

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

}

}

System.out.println("Number of positive numbers :"+positive);

System.out.println("array with negative numbers:");

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

{

if(full[i]<0)

{

temp=full[i];

neg[i]=temp;

negative++;

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

}

}

System.out.println("Number of negative numbers :"+negative);

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

{

if(full[i]==0)

{

zero++;

}

}

System.out.println("Number of Zeros :"+ zero);

}

}

Design a Java program to accept a string. Count and display the number of

vowels, consonants and spaces in the string

import java.util.Scanner;

class Count

{

public static void main(String args[])

{

String line;

int vowels=0,consonants=0,spaces=0;

Scanner xx=new Scanner(System.in);

System.out.println("Enter the String");

line=xx.nextLine();

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

{

if(line.charAt(i)=='a'||line.charAt(i)=='e'||line.charAt(i)=='i'||line.charAt(i)=='o'||line.charAt(i)=='u')

{

++vowels;

}

else if(line.charAt(i)>='a'&&line.charAt(i)<='z')

{

++consonants;

}

else if(line.charAt(i)==' ')

{

++spaces;

}

}

System.out.println("No. of Vowels:"+vowels);

System.out.println("No. of consonants:"+consonants);

System.out.println("No. of spaces:"+spaces);

}

}

Design a Menu driven Java program to create a class Operators which has members-

operand1, operand2, result1, result2. The program should display the categories of

operators like Arithmetic, Logical, Relational and Arithmetic assignment. Include

four methods that calculates and displays the results of any two operations of its kind.

Pass the operands as parameters to the method, calculate the result and update the

members. Loop the choice this the user wishes to stop.