class EvenOdd

{

public static void main(String []args)

{

int arr[] = {10,22,53,80,55,30};

int count=0, count1=0;

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

{

if(arr[i]%2==0)

{

count++;

}

else

{

count1++;

}

}

System.out.println("Total even numbers present in the array are "+count);

System.out.println("Total odd numbers present in the array are "+count1);

}

}

**PS C:\Users\Arvind\Desktop\java> javac EvenOdd.java**

**PS C:\Users\Arvind\Desktop\java> java EvenOdd**

**Total even numbers present in the array are 4**

**Total odd numbers present in the array are 2**

**PS C:\Users\Arvind\Desktop\java>**

import java.util.Scanner;

class StudentArray

{

public static void main(String A[])

{

Scanner sc = new Scanner(System.in);

System.out.println("Enter the marks of Physics, Chemistry, Maths respectively: ");

int phy = sc.nextInt();

int chem = sc.nextInt();

int maths = sc.nextInt();

int total = phy+chem+maths;

int arr[] = {phy, chem, maths}, flag=0, max;

max = arr[0];

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

{

if(arr[i]>max)

{

max = arr[i];

}

else

{

flag=0;

}

}

System.out.println("Total marks of the student is "+total);

System.out.println("Highest marks :"+max);

}

}

**PS C:\Users\Arvind\Desktop\java> javac StudentArray.java**

**PS C:\Users\Arvind\Desktop\java> java StudentArray**

**Enter the marks of Physics, Chemistry, Maths respectively:**

**55**

**66**

**85**

**Total marks of the student is 206**

**Highest marks :85**

import java.util.Scanner;

class Transpose

{

public static void main(String args[])

{

Scanner sc = new Scanner(System.in);

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

int row = sc.nextInt();

int col = sc.nextInt();

int arr[][] = new int[row][col];

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

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

{

for(int j=0; j<col; j++)

{

arr[i][j] = sc.nextInt();

}

}

System.out.println("Matrix: ");

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

{

for(int j=0; j<col; j++)

{

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

}

System.out.println();

}

System.out.println("Transpose of matrix: ");

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

{

for(int j=0; j<col; j++)

{

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

}

System.out.println();

}

}

}

**PS C:\Users\Arvind\Desktop\java> javac Transpose.java**

**PS C:\Users\Arvind\Desktop\java> java Transpose**

**Enter the number of rows and columns of matrix:**

**3**

**3**

**Enter the matrix elements:**

**1**

**2**

**3**

**4**

**5**

**6**

**7**

**8**

**9**

**Matrix:**

**1 2 3**

**4 5 6**

**7 8 9**

**Transpose of matrix:**

**1 4 7**

**2 5 8**

**3 6 9**

import java.util.Scanner;

class Matrix

{

void square(int m, int n, int[][] a)

{

if (m == n)

System.out.println("Matrix is a square matrix.");

else

System.out.println("Matrix is not a square matrix.");

}

int Sum(int a, int b, int[][] arr)

{

int sum=0;

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

{

for(int j=0;j<b;j++)

{

if(i==j)

{

sum = sum + arr[i][j];

}

}

}

return sum;

}

}

class TwoDimMatrix

{

public static void main(String args[]).

{

Scanner sc = new Scanner(System.in);

Matrix m = new Matrix();

int row, col;

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

row = sc.nextInt();

col = sc.nextInt();

int arr[][] = new int[row][col];

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

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

{

for (int j = 0; j < col; j++)

{

arr[i][j] = sc.nextInt();

}

}

System.out.println("Matrix: ");

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

{

for (int j = 0; j < col; j++)

{

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

}

System.out.println();

}

m.square(row, col, arr);

System.out.println("Sum of the diagonal elements of matrix is "+m.Sum(row, col, arr));

}

}

**PS C:\Users\Arvind\Desktop\java> javac TwoDimMatrix.java**

**PS C:\Users\Arvind\Desktop\java> java TwoDimMatrix**

**Enter the number of rows and columns of the matrix:**

**3**

**3**

**Enter the matrix elements:**

**1**

**2**

**3**

**4**

**5**

**6**

**7**

**8**

**9**

**Matrix:**

**1 2 3**

**4 5 6**

**7 8 9**

**Matrix is a square matrix.**

**Sum of the diagonal elements of matrix is 15**

package calculator;

public class Add

{

public int add(int a, int b) //save by Add.java in calculator

{

return (a+b);

}

}

package calculator;

public class Sub

{

public int sub(int a, int b) //save by Sub.java in calculator

{

return (a-b);

}

}

package calculator;

public class Mult

{

public int mul(int a, int b) //save by Mult.java in calculator

{

return (a\*b);

}

}

package calculator;

public class Div

{

public int div(int a, int b) //save by Div.java in calculator

{

return (a/b);

}

}

//save by Operation.java

import calculator.\*;

class Operation

{

public static void main(String args[])

{

Add a = new Add();

System.out.println("Addition: "+a.add(45,29));

Sub s = new Sub();

System.out.println("Substraction: "+s.sub(45,29));

Mult m = new Mult();

System.out.println("Multiplication: "+m.mult(5,9));

Div d = new Div();

System.out.println("Division: "+d.div(63,9));

}

}

**OUTPUT:**

**PS C:\Users\Arvind\Desktop\java> javac Operation.java**

**PS C:\Users\Arvind\Desktop\java> java Operation**

**Addition: 74**

**Substraction: 16**

**Multiplication: 45**

**Division: 7**

**PS C:\Users\Arvind\Desktop\java>**

import java.util.\*;

class Student{

int p, c, m, total;

String name;

Scanner sc = new Scanner(System.in);

void setData(){

System.out.print("Enter name: ");

name = sc.next();

System.out.print("Enter the Physics marks: ");

p = sc.nextInt();

System.out.print("Enter the Chemistry marks: ") ;

c = sc.nextInt();

System.out.print("Enter the Maths marks: ") ;

m = sc.nextInt();

total = p+c+m;

}

void getData(){

System.out.println(name+"\twith total marks: "+total);

}

}

class StudentArray{

public static void main(String args[]){

Scanner sc = new Scanner(System.in);

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

int n = sc.nextInt();

Student arr[] = new Student[n];

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

arr[i] = new Student();

arr[i].setData();

}

int max=0, max\_id=-1;

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

if(arr[i].total>max){

max = arr[i].total;

max\_id = i;

}

}

System.out.println("Student with Maximum total Score is: ");

arr[max\_id].getData ();

}

}

**OUTPUT:**

PS C:\Users\Arvind\Desktop\java> javac StudentArray.java

PS C:\Users\Arvind\Desktop\java> java StudentArray

Enter the number of Student

5

Enter name: om

Enter the Physics marks: 52

Enter the Chemistry marks: 48

Enter the Maths marks: 68

Enter name: mohib

Enter the Physics marks: 50

Enter the Chemistry marks: 45

Enter the Maths marks: 65

Enter name: hamza

Enter the Physics marks: 55

Enter the Chemistry marks: 45

Enter the Maths marks: 65

Enter name: parth

Enter the Physics marks: 50

Enter the Chemistry marks: 50

Enter the Maths marks: 50

Enter name: sagar

Enter the Physics marks: 55

Enter the Chemistry marks: 50

Enter the Maths marks: 70

Student with Maximum total Score is:

sagar with total marks: 175