**Q1.**

import java.util.\*;

public class JavaApplication1 {

public static void main(String[] args) {

Scanner in=new Scanner(System.in);

int[] arr1=new int[10];

System.out.println("Enter the 10 numbers");

for(int i=0;i<10;i++){

arr1[i]=in.nextInt();

}

System.out.println("Enter the number you want to check");

int a=in.nextInt();

int j=0;

for(int i=0;i<10;i++){

if(a==arr1[i]){

j++;

}

}

if(j==0){

System.out.println("The number you entered is not in the array");

}

else {

System.out.println("The number you entered is "+j+" times in the array");

}

}

}

**Q2.**

import java.util.\*;

public class JavaApplication2 {

public static void main(String[] args) {

Scanner in=new Scanner(System.in);

int[] arr1=new int[10];

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

int j=0;

int k=0;

int l=0;

int m=0;

for(int i=0;i<10;i++){

arr1[i]=in.nextInt();

if(arr1[i]>0){

j++;

}

if(arr1[i]<0){

k++;

}

if((arr1[i]%2)==0){

l++;

}

if((arr1[i]%2)!=0){

m++;

}

}

System.out.println("There are "+j+" positive numbers");

System.out.println("There are "+k+" negative numbers");

System.out.println("There are "+l+" even numbers");

System.out.println("There are "+m+" odd numbers");

}

}

**Q3.**

import java.util.\*;

public class JavaApplication3 {

public static void main(String[] args) {

Scanner in=new Scanner(System.in);

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

int n=in.nextInt();

double[] arr1=new double[n];

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

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

arr1[i]=in.nextDouble();

}

double[] arr2=new double[n];

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

arr2[n-1-i]=arr1[i];

}

System.out.println("The array entered by you is");

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

System.out.println(arr1[i]);

}

System.out.println("The array in reverse order is");

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

System.out.println(arr2[i]);

}

}

}

**Q4.**

import java.util.\*;

public class JavaApplication4 {

public static void main(String[] args) {

Scanner in=new Scanner(System.in);

int[][] mat=new int[5][5];

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

for(int i=0;i<5;i++){

for(int j=0;j<5;j++){

mat[i][j]=in.nextInt();

}

}

System.out.println("The matrix entered by you is");

for(int i=0;i<5;i++){

for(int j=0;j<5;j++){

System.out.print(mat[i][j]+"\t");

}

System.out.println();

}

}

}

**Q5.**

#include <iostream>

using namespace std;

int main()

{

int n;

cin>>n;

double a[n][n];

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

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

cin>>a[i][j];

}}

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

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

cout<<a[i][j]<<" ";

}

cout<<endl;

}

cout<<endl;

double b[n][n];

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

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

cin>>b[i][j];

}}

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

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

cout<<b[i][j]<<" ";

}

cout<<endl;

}

cout<<endl;

double c[n][n];

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

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

c[i][j]=0;

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

c[i][j]=a[i][k]\*b[k][j]+c[i][j];

}}}

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

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

cout<<c[i][j]<<" ";

}

cout<<endl;

}

cout<<endl;

return 0;

}

**Q6.**

import java.util.\*;

public class JavaApplication6 {

public static void main(String[] args) {

Scanner in = new Scanner(System.in);

System.out.println("Enter the order of square matrix");

int n=in.nextInt();

boolean b=false;

int[][] mat1=new int[n][n];

System.out.println("Enter the values in the matrix");

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

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

mat1[i][j]=in.nextInt();

}

}

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

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

if(mat1[i][j]==0){

b=true;

}

else{

b=false;

}

if(b==false)

break;

else

continue;

}

continue;

}

if(b==true){

System.out.println("The matrix is Upper triangular matrix");

}

else{

System.out.println("The matrix is not an Upper triangular matrix");

}

}

}

**Q7.**

import java.util.\*;

public class JavaApplication7 {

public static void main(String[] args) {

Scanner in=new Scanner(System.in);

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

int n=in.nextInt();

int m=in.nextInt();

int[][] mat=new int[n][m];

System.out.println("Enter the values in matrix");

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

for(int j=0;j<m;j++){

mat[i][j]=in.nextInt();

}

}

System.out.println("The matrix entered by you is");

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

for(int j=0;j<m;j++){

System.out.print(mat[i][j]+"\t");

}

System.out.println();

}

int[] min=new int[n];

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

min[i]=mat[0][0];

}

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

for(int j=0;j<m;j++){

min[i]=(min[i]<mat[i][j])?min[i]:mat[i][j];

}

}

int minimum=min[0];

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

minimum=(minimum<min[i])?minimum:min[i];

}

System.out.println("The minimum number is "+minimum);

}

}

**Q8.**

import java.util.\*;

public class JavaApplication8 {

public static void main(String[] args) {

Scanner in=new Scanner(System.in);

int x=in.nextInt();//enter suborder

int n=in.nextInt();

int a[][]=new int[n][n];

int i,j;

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

for(j=0;j<n;j++){

a[i][j]=in.nextInt();

}

}

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

for(j=0;j<n;j++){

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

}

System.out.println();

}

double e=Math.pow(n/x, 2);

for(int y=0;y<n/x;y++){

for(int z=0;z<n/x;z++){

for(i=((x)\*y);i<(x)\*y+x;i++){

for(j=((x)\*z);j<(x)\*z+x;j++){

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

}

System.out.println( );

}

System.out.println( );

System.out.println( );

}

System.out.println( );

System.out.println( );

}

}

}

}

**Q9.**

import java.util.\*;

public class JavaApplication9 {

public static void main(String[] args) {

Scanner in=new Scanner(System.in);

int n=in.nextInt();

int[][] mat=new int[n][n];

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

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

mat[i][j]=in.nextInt();

}

}

int[][] mat1=new int[n][n];

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

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

mat1[i][j]=mat[n-1-j][i];

}

}

int[][] mat2=new int[n][n];

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

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

mat2[i][j]=mat[n-1-i][n-1-j];

}

}

System.out.println("The matrix entered by you is");

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

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

System.out.print(mat[i][j]+"\t");

}

System.out.println("");

}

System.out.println("The matrix rotated by 90 is");

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

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

System.out.print(mat1[i][j]+"\t");

}

System.out.println("");

}

System.out.println("The matrix rotated by 180 is");

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

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

System.out.print(mat2[i][j]+"\t");

}

System.out.println("");

}

}

}