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**Q1) Count Even and Odd in 1D array/2D array.**

import java.util.Scanner;

class EvenOddcount

{

public static void main(String args[])

{

int even=0,odd=0;

Scanner scan=new Scanner(System.in);

System.out.print("Enter the array size:\n");

int size=scan.nextInt();

System.out.print("Enter the elements of the array:\n");

int arr[]=new int[size];

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

{

System.out.printf("Enter the element arr[%d]:" ,i);

arr[i]=scan.nextInt();

}

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

{

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

{

even++;

}

else

{

odd++;

}

}

System.out.println("Total even numbers of an array:"+even);

System.out.println("Total even numbers of an array:"+odd);

}

}

**Output:**

Enter the array size:

10

Enter the elements of the array:

Enter the element arr[0]:56

Enter the element arr[1]:98

Enter the element arr[2]:32

Enter the element arr[3]:1

Enter the element arr[4]:5

Enter the element arr[5]:9

Enter the element arr[6]:67

Enter the element arr[7]:89

Enter the element arr[8]:90

Enter the element arr[9]:45

Total even numbers of an array:4

Total even numbers of an array:6

**Q2) Count negative and positive in 1D array/2D array.**

import java.util.Scanner;

public class CountPositiveNegative

{

private static Scanner sc;

public static void main(String args[])

{

int Size,i;

int positiveCount=0,negativeCount=0;

sc=new Scanner(System.in);

System.out.print("Enter number of elements in an array:");

Size=sc.nextInt();

int[] a=new int[Size];

System.out.print("Enter "+Size +" elements of an array:");

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

{

a[i]=sc.nextInt();

}

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

{

if(a[i]>=0)

{

positiveCount++;

}

else

{

negativeCount++;

}

}

System.out.println("Total number of positive numbers in this array="+positiveCount);

System.out.println("Total number of negative numbers in this array="+negativeCount);

}

}

**Output:**

Enter number of elements in an array:5

Enter 5 elements of an array:23

1

7

9

78

Total number of positive numbers in this array=5

Total number of negative numbers in this array=0

**Q3) Find the square of each element of your 1D array/2D array replace the value in array.**

public class Square

{

public static void main(String args[])

{

int arr[]= {3,9,5,7,2};

int sqr;

System.out.println("Given Array : ");

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

{

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

}

System.out.println();

System.out.println("Array after squaring elements: ");

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

{

sqr=arr[i]\*arr[i];

arr[i]=sqr;

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

}

}

}

**Output:**

Given Array :

3 9 5 7 2

Array after squaring elements:

9 81 25 49 4

**Q4) Sum of each row in 2D array**

public class SumRow

{

public static void main(String args[])

{

int rows,cols,sumRow,sumCol;

int a[][]={

{1,2,3},{4,5,6},{7,8,9}

};

rows=a.length;

cols=a[0].length;

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

{

sumRow=0;

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

{

sumRow=sumRow + a[i][j];

}

System.out.println("Sum of" + (i+1)+"row:"+sumRow);

}

}

}

Output:

Sum of1row:6

Sum of2row:15

Sum of3row:24

**Q5) Sum of column in 2D array**

public class SumColumn

{

public static void main(String args[])

{

int rows,cols,sumRow,sumCol;

int a[][]={

{1,2,3},

{4,5,6},

{7,8,9}

};

rows=a.length;

cols=a[0].length;

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

{

sumCol=0;

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

{

sumCol=sumCol + a[j][i];

}

System.out.println("Sum of" + (i+1) +"column:" +sumCol);

}

}

}

**Output:**

Sum of1column:12

Sum of2column:15

Sum of3column:18

**Q6) Sum of URT , ULT , LRT , LLT**

public class Q6

{

static void sum(int mat[][], int r, int c)

{

int i, j;

int upper\_right\_sum = 0;

int lower\_left\_sum = 0;

int upper\_left\_sum = 0;

int col=c-1;

/\*calculate sum of upper right triangle\*/

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

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

{

if (i <= j)

{

upper\_right\_sum += mat[i][j];

}

}

System.out.println("Upper Right sum is " + upper\_right\_sum);

/\*calculate sum of lower left triangle\*/

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

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

{

if (j <= i)

{

lower\_left\_sum += mat[i][j];

}

}

System.out.println("Lower Left sum is " + lower\_left\_sum);

/\*calculate sum of upper left triangle\*/

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

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

{

upper\_left\_sum += mat[i][j];

}

col--;

}

System.out.println("Upper Left sum is " + upper\_left\_sum);

}

public static void main (String[] args)

{

int r = 3;

int c = 3;

int mat[][] = { { 6, 5, 4 },

{ 1, 2, 5 },

{ 7, 9, 7 } };

sum(mat, r, c);

}

}

**Output:**

Upper Right sum is 29

Lower Left sum is 32

Upper Left sum is 25