

<https://course.acciojob.com/idle?question=29252997-01f8-4628-a8fb-984c366aa8f6>

- EASY
- Max Score: 20 Points

Diagonal Difference!

Given a square matrix of size N , calculate the absolute difference between the sums of its diagonals.

Input Format

The first line contains a single integer N , the number of rows and columns in the square matrix .

Each of the next N lines describes a row, and consists of N space-separated integers .

Output Format

Print the absolute difference between the sums of the two diagonals of the matrix as a single integer.

Example 1

Input

```
3
11 2 4
4 5 6
10 8 -12
```

Output

```
15
```

Explanation:-

Sum across the primary diagonal: $11 + 5 + (-12) = 4$

Sum across the secondary diagonal: $4 + 5 + 10 = 19$

Difference: $|4 - 19| = 15$

Example 2

Input

```
1 2 3
4 5 6
9 8 9
```

Output

2

Explanation:- The left-to-right diagonal sum $= 1 + 5 + 9 = 15$.

The right to left diagonal $= 3 + 5 + 9 = 17$.

Their absolute difference is $|15 - 17| = 2$.

Constraints

$1 \leq n \leq 10^3$

$-10^3 \leq \text{mat}[i][j] \leq 10^3$

Note: $|x|$ is the absolute value of x ($|x|$ is always non negative for all x)

Topic Tags

- **2D-Arrays**

My code

// in java

```
import java.util.*;  
import java.lang.*;  
import java.io.*;
```

```
public class Main
```

```
{  
    public static void main (String[] args) throws java.lang.Exception  
    {  
        //your code here  
        Scanner s=new Scanner(System.in);  
        int n=s.nextInt();  
        int arr[][]=new int[n][n];  
        for (int i=0;i<n;i++)  
            for(int j=0;j<n;j++)  
                arr[i][j]=s.nextInt();  
        int sum=0;  
        int i=0;  
        while(i<n)  
        {  
            sum=sum+arr[i][i];  
            i++;  
        }  
        int su=0;  
        int j=0;  
        while(j<n)  
        {  
            su=su+arr[j][n-j-1];  
            j++;  
        }  
        int dif=0;  
        if(sum>su) dif=sum-su;
```

```
    else dif =su-sum;
    System.out.print(dif);
  }
}
```