https://course.acciojob.com/idle?question=820babd6-75fe-4d0a-be01-4e025fd055b4

- EASY
- Max Score: 30 Points

Matrix Diagonal Product

Given a square matrix mat, return the product of the matrix diagonals.

Only include the product of all the elements on the primary diagonal and all the elements on the secondary diagonal that are not part of the primary diagonal.

Input

First line consist of a single integer n denoting dimension of n*n matrix and then next n lines contains n integers each where jth integer (1 <= j <= n) in the ith line (1<= i <= n) denote a[i][j] element of matrix

Output

Output product of elements in primary diagonal and elements in secondary diagonal that are not part of primary diagonal.

Constraints:

1 <= N <= 10^3 0 <= a[i][j] <= 100

Sample Input:

```
3
1 2 3
4 5 6
7 8 9
```

Sample Output:

```
945
```

Explaination

Explanation: Diagonals sum: 1 x 5 x 9 x 3 x 7 = 945 Notice that element mat[1][1] = 5 is counted only once.

Topic Tags

- **2D-Array**

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 c=0;long sum=1;
       while(c<n)
         {sum*=arr[c][c];c++;}

       c=0;long sum2=1;
       while(c<n)
         {sum2*=arr[c][n-c-1];c++;}
       long ans =sum*sum2;
       if(n%2==1)
       ans =ans/arr[n/2][n/2];
          System.out.print(ans);
         }
}
```