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

For example, the square matrix ***arr*** is shown below:

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

- The left-to-right diagonal = $1 + 5 + 9 = 15$.
- The right-to-left diagonal = $3 + 5 + 9 = 17$.

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

Function description

Complete the ***diagonalDifference*** function with the following parameter:

- ***int arr[n][m]***: a 2-D array of integers

Return

- ***int***: the absolute difference in sums along the diagonals

Input Format

The first line contains a single integer, ***n***, the number of rows and columns in the square matrix ***arr***.
Each of the next ***n*** lines describes a row, ***arr[i]***, and consists of ***n*** space-separated integers ***arr[i][j]***.

Constraints

- $-100 \leq arr[i][j] \leq 100$

Sample Input

```
STDIN       Function
-----       --------
3           arr[][] sizes n = 3, m = 3
11 2 4      arr = [[11, 2, 4], [4, 5, 6], [10, 8,
4 5 6
10 8 -12
```

Sample Output

```
15
```

Explanation

The primary diagonal is:

```
11
   5
     -12
```

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

The secondary diagonal is:

```
     4
   5
10
```

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

Change Theme Language C#

```
class Result
    {
     * The function is expected to return an INTEG
     * The function accepts 2D_INTEGER_ARRAY arr a
     */

    public static int diagonalDifference(List<List
    {
       int diagR = 0;
        int diagL = 0;
        int vertic = arr[0].Count - 1;
        int auxR = 0;
        int auxL = vertic;

        while (vertic >= 0)
            {
                diagR += arr[auxR][auxR];
                diagL += arr[auxR][auxL];
                auxR++;
                auxL--;
                vertic--;
            }
        return Math.Abs(diagR - diagL);
    }

}
```

Line: 30 Col: 22

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Test against custom input

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16% 41/100

Problem Solving

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Test case 0
Test case 1
Test case 2
Test case 3

Compiler Message
Success

Input (stdin) Download

```
1 3
2 11 2 4
3 4 5 6
```