Sum Frame of a Matrix — T54397_en

Let M be a square matrix $N \times N$. This matrix has different **frames**. Frame 0 is formed by rows 0 and $N-1$ and columns 0 and $N-1$. Frame 1 is formed by rows 1 and $N-2$ and columns 1 and $N-2$, excluding the parts that are part of frame 0, etc.
In the following example, you have that the frame 0 is formed by all the positions where there is a 0, the frame 1 the positions where there is a 1, and the frame 2 the positions where there is a 2:

```
0  0  0  0  0
0  1  1  1  0
0  1  2  1  0
0  1  1  1  0
0  0  0  0  0
```

You must implement the function `int sumaMarc(const Matriu& m, int x);` with the following specification:

`PRE:` m a matrix $N \times N$ and $0 \leq x < N/2 + (N \bmod 2)$.

`POST:` Returns the **sum** of the elements of the **frame** x of M.

Observation

You only need to send the function we ask for and the functions you define. The rest will be ignored.

Input

A matrix $N \times N$ and $0 \leq x < N/2 + (N \bmod 2)$.

Output

The **sum** of the elements of the **frame** x of M.

Sample input 1

```
5
1  1  1  1  1
1  2  2  2  1
1  2  3  2  1
1  2  2  2  1
1  1  1  1  1

0
1
2
```

Sample output 1

```
El marc 0 suma 16
El marc 1 suma 16
El marc 2 suma 3
```

Sample input 2

```
4
1  2  3  1
2  1  3  2
2  3  5  3
1  2  2  1

0
1
```

Sample output 2

```
El marc 0 suma 22
El marc 1 suma 12
```

Sample input 3

```
6
1  1  1  1  0  7
1  0  2  2  2  1
4  2  3  5  2  2
1  2  0  3  0  1
1  1  2  2  2  1
1  1  1  1  1  0

0
1
2
```

Sample output 3

```
El marc 0 suma 28
El marc 1 suma 19
El marc 2 suma 11
```

Problem information

Author: PRO1

Generation: 2026-01-25T12:53:54.562Z