PROGRAMING PRACTICE

Create the function: process_matrix

Process_matrix function:

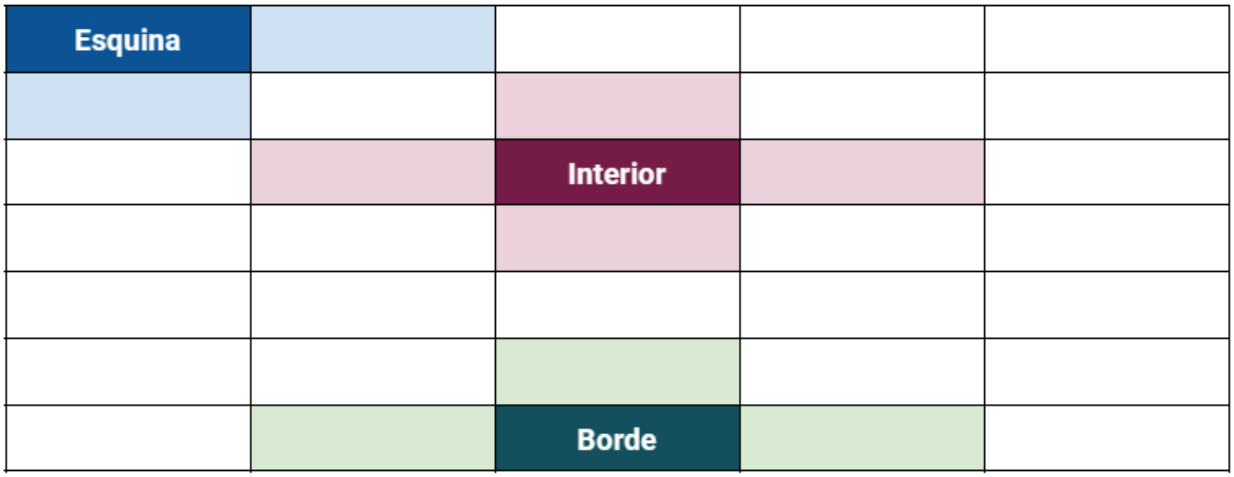
Receive an array (list of list) of number as a parameter and returns another with the same size and number of elements.

process_matrix transforms the elements of the original matrix.

Transformation:

The following transformation applies: each matrix element starts to have the average of its old value and its neighbor's value as its value.

Neighbors:



Esquina = Corner

Interior = Inside

Borde = Edge

Example:

Before

4	5			
6		0		
	-1	**7**	8	
		9		
		2		
	2	**5**	1	

After:

(4 + 5 + 6) / 3 = 5				
		(7 -1 + 0 +8 + 9) / 5 = 4.6		
		(5 + 2 + 2 +1) / 4 = 2.5		

The same should be applied to every one of the elements of the matrix.

What is this for?

Transforming each point into the average of its neighbors is an image filter. The big difference is in the size of the images, represented as pixel matrices (3 numbers representing the red, green, and blue components). They are much larger than what we have seen here.

By averaging the values, we remove details and edges. That is, we blur the image. You have created an Instagram filter to eliminate open pores, wrinkles, and crow's feet.