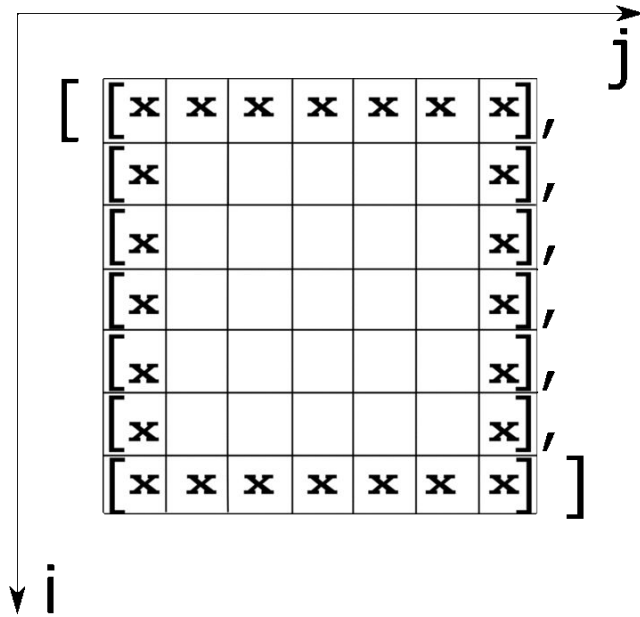

Lesson 7

Exam Part 1

Medium Filter

[	[	0,0	0,1	0,2	0,3	0,4	0,5	0,6	,
	[	1,0	1,1	1,2	1,3	1,4	1,5	1,6	,
	[	2,0	2,1	2,2	2,3	2,4	2,5	2,6	,
	[...							,
	[...							,
	[...							,
	[	6,0	6,1	6,2	6,3	6,4	6,5	6,6]



1. The value of pixel P is the average of the values of the 8 pixels surrounding P.
2. Don't apply the filters on the x pixels (the edges)

Exercise

1. Import “link.png” and “bird2.png” and store them in a dictionary;
2. Write a library with a `sum_mask`, `noise` and a medium filter function (the medium filter has not to count the edges of the image);
3. Perform the medium filter both on the starting images and the noised ones (use a loop in the dictionary);
4. Store these images into the same dictionary of the starting ones;
5. Save the 4 modified images (use a loop in the dictionary);
6. Send us by email:
 - a. Both scripts (library and main)
 - b. The 4 filtered images
7. Optional - write a function that perform a normalized histogram, apply it to all the 6 images and save the data on 2 files (1 file for the 3 histograms of each image) - store all the histograms in a single dictionary;