

**Assignment 2**  
**Due date: Nov. 11 at 11:55 pm**

**Part 1. Written questions**

**Programming Questions**

Q1. Implement median and adaptive median filter in python (please note that you cannot use the available filters in any libraries). Compare the results of both filters on circuitboard-gaussian and circuitboard-saltandpep (the images have been uploaded in the moodle). What does this comparison tell you.

Q2. Implement Laplacian and gradient filters (use Sobel kernels for gradient filter). Apply them to a greyscale image of your choice. Why do we use these two filters in digital image processing? Compare them together and explain your observation.

Q3. What is the difference between histogram stretching and histogram equalization? Implement both of them, apply them to pollen-lowcontrast image, and compare both approaches.