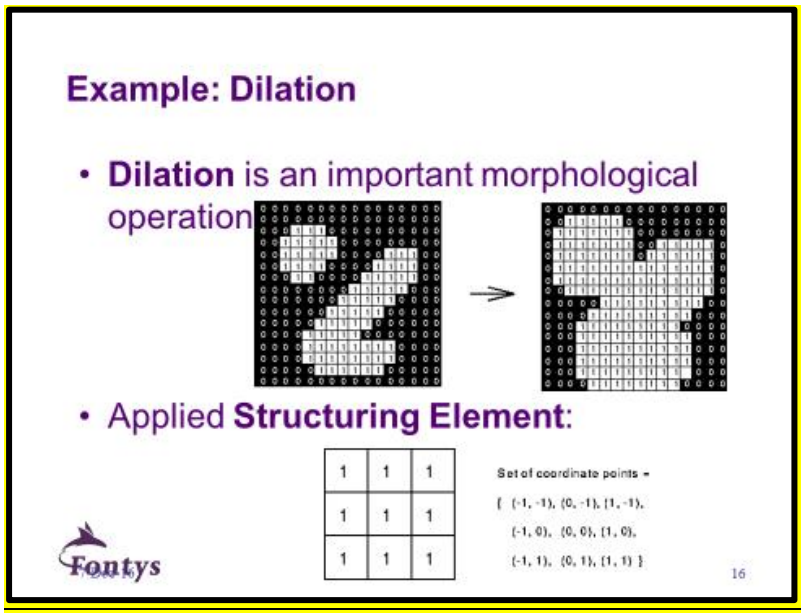
IPV Assignment 4 (week 4)

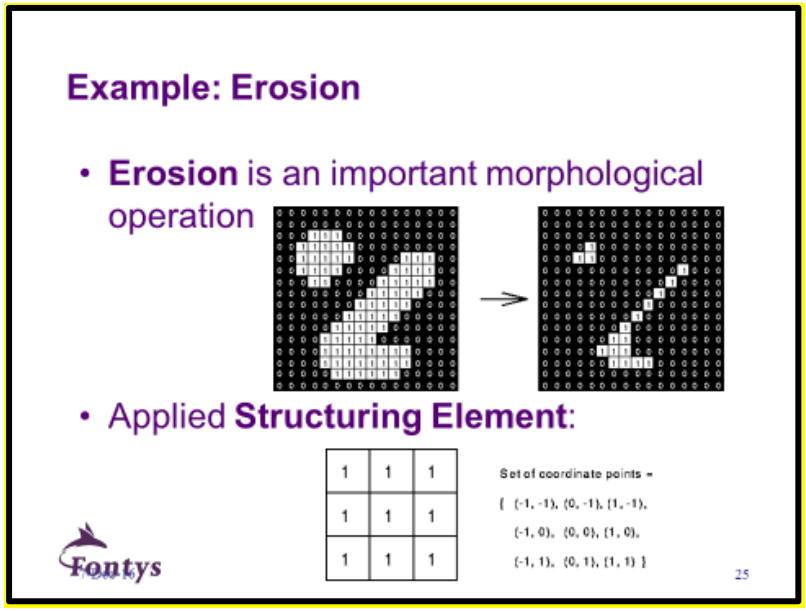
Goal: Morphological operations and applications

Question	Q1	Q2	Q3	Q4	Q5	Q6	SUM
score	0	2	1	3	2	2	10

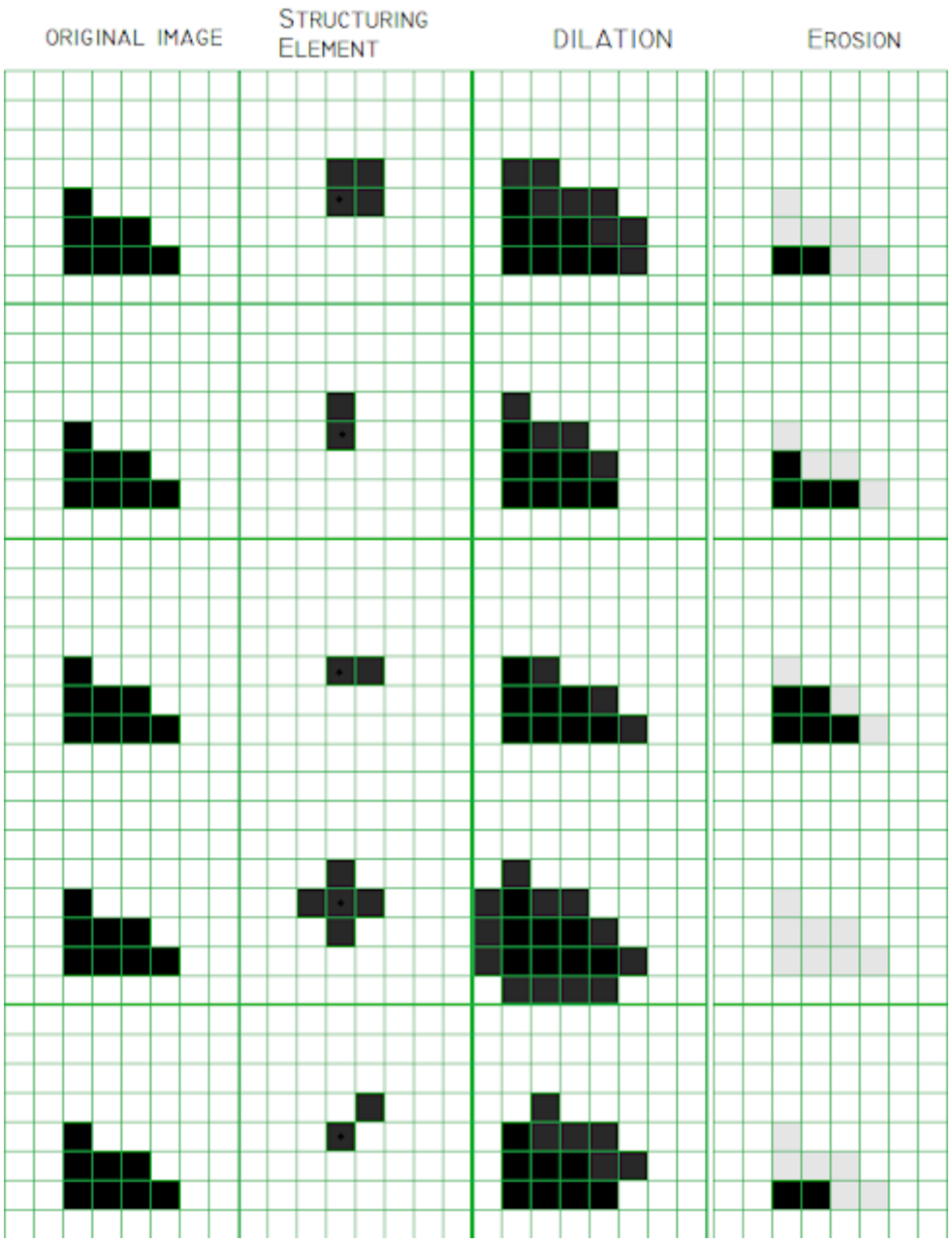
Q1: Dilation and Erosion (do it yourself)

Create your own matlab live scripts to implement the following dilation and erosion examples in matlab.





Q2: implement dilation and erosion in MATLAB respectively as below figure.



☞ ftp://qiftp.tudelft.nl/DIPimage/docs/Introduction_to_DIPimage.pdf Finish the following parts:

- the part 7 binary morphology

Q3: write down all the commands you used in perform **the part 7 binary morphology** in your .mlx file

Q4: Goal: Make your own demo for binary morphology.

Must have:

- choose your own images
- explain how/why you design **SE(Structuring Element)/mask/kernel**
- show the comparison of the original image and processed images to demonstrate the applications (see below)

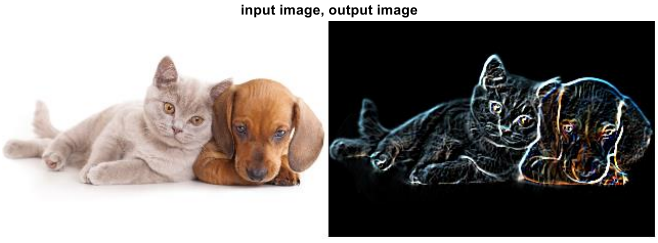
Requirements:

- you need to use morphological operations(erosion, dilation, opening and closing)
- **you can choose at least 3 applications**: Applications: segmentation, image contour extraction, handwritten digits and contrast-enhancement

Q5: **edge detection**--implement in matlab.

Must have:

- use input image **puppy-and-kitten.jpg**
- you need to explain:
  - ✓ the steps you use to achieve the goal
  - ✓ how/why you design **SE(Structuring Element)/mask/kernel**
  - ✓ show the comparison of the original image and processed images to demonstrate the applications (see below)

input	
output	input image, output image 

Q6: use morphological operations to implement in matlab.

Must have:

- use input image
- you need to explain:
  - ✓ the steps you use to achieve the goal
  - ✓ show the comparison of the original image and processed images to demonstrate the applications (see below)

input	output