COMP4421 (Fall 2018)

Assignment #2

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I. EXERCISES

1) Solution:

$$(A \bullet B)^{c}$$

$$= ((A \oplus B) \ominus B)^{c}$$

$$= (A \oplus B)^{c} \oplus \hat{B}$$

$$= (A^{c} \ominus B)^{c} \oplus \hat{B}$$

$$= A^{c} \circ \hat{B}$$

2) Solution:

<1> Dilation

0	0	0	0	1	1	1	1
0	0	0	1	1	1	1	1
0	0	0	1	1	1	1	1
0	1	1	1	1	1	1	1
1	1	1	1	1	1	1	0
1	1	1	1	1	0	0	0
1	1	1	1	1	0	0	0
1	1	1	1	0	0	0	0

<1> Erosion

0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0

<2> Dilation

0	0	0	0	0	1	1	0
0	0	0	0	1	1	1	1
0	0	0	1	1	1	1	1
0	0	1	1	1	1	1	0
0	1	1	1	1	1	0	0
1	1	1	1	1	0	0	0
1	1	1	1	0	0	0	0
0	1	1	0	0	0	0	0

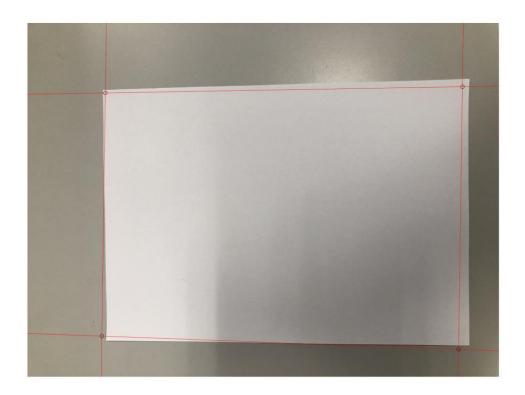
<2> Erosion

0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	1	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0

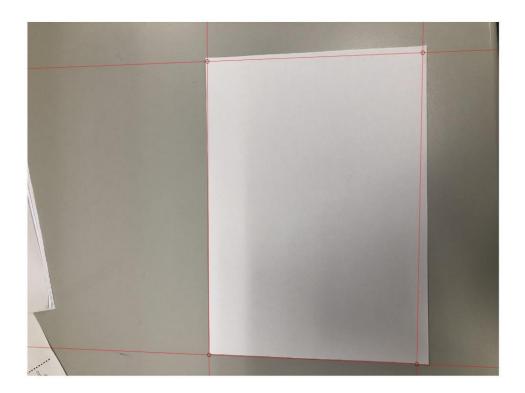
II. PROGRAMMING TASKS

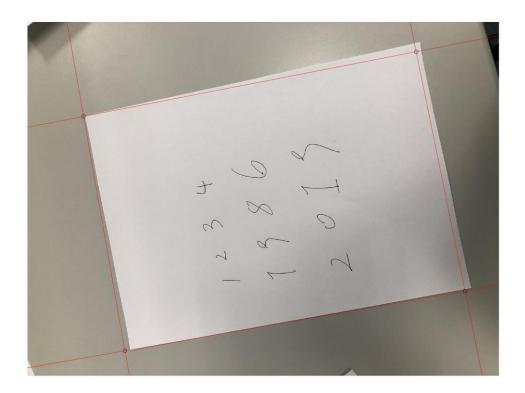
1) Hough Transform

a)

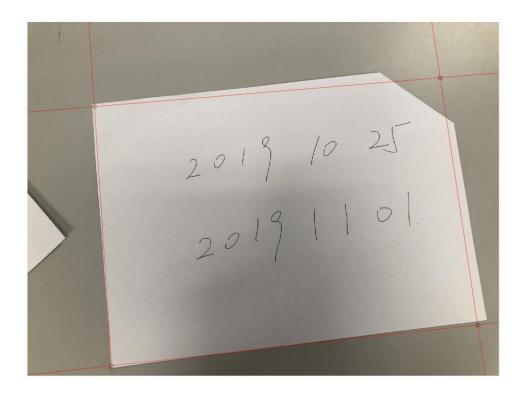


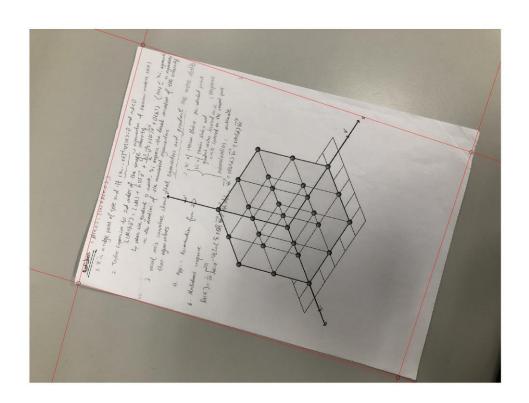
b)



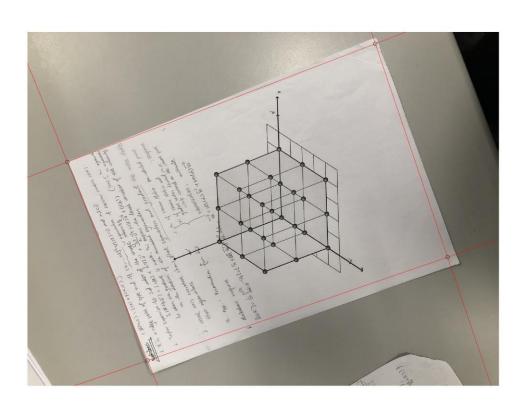


d)





f)



2) Image Warping

a)



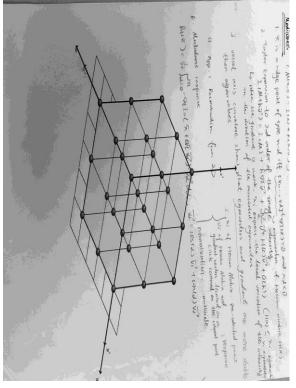
b)





d)





f)

