

I. EXERCISES

1) Solution:

$$\begin{aligned}
& (A \bullet B)^c \\
&= ((A \oplus B) \ominus B)^c \\
&= (A \oplus B)^c \oplus \hat{B} \\
&= (A^c \ominus B)^c \oplus \hat{B} \\
&= A^c \circ \hat{B}
\end{aligned}$$

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

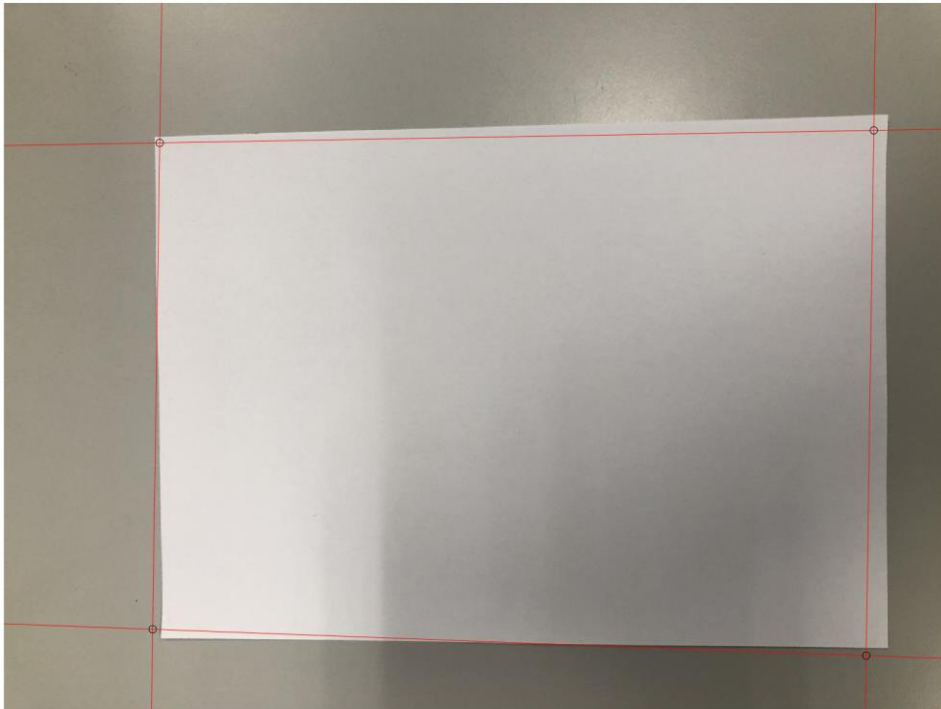
<2> Erosion

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

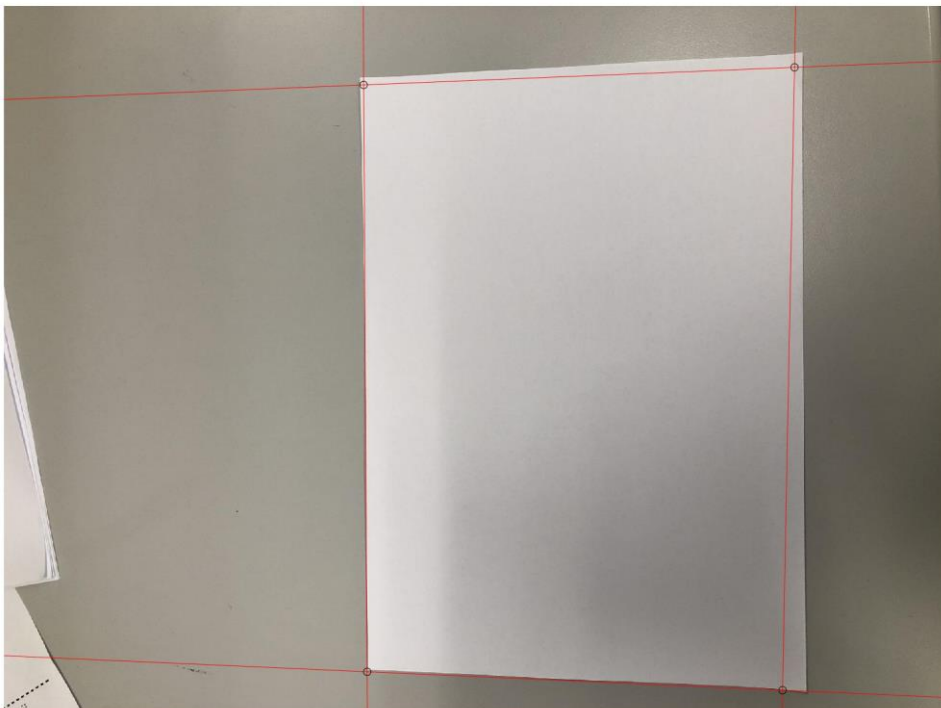
II. PROGRAMMING TASKS

1) Hough Transform

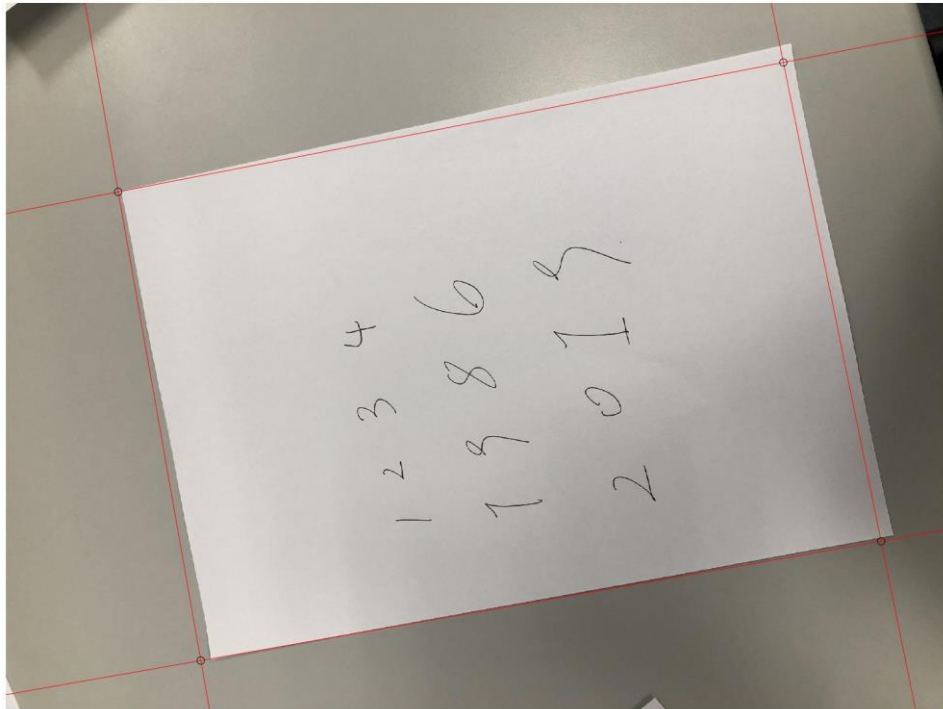
a)



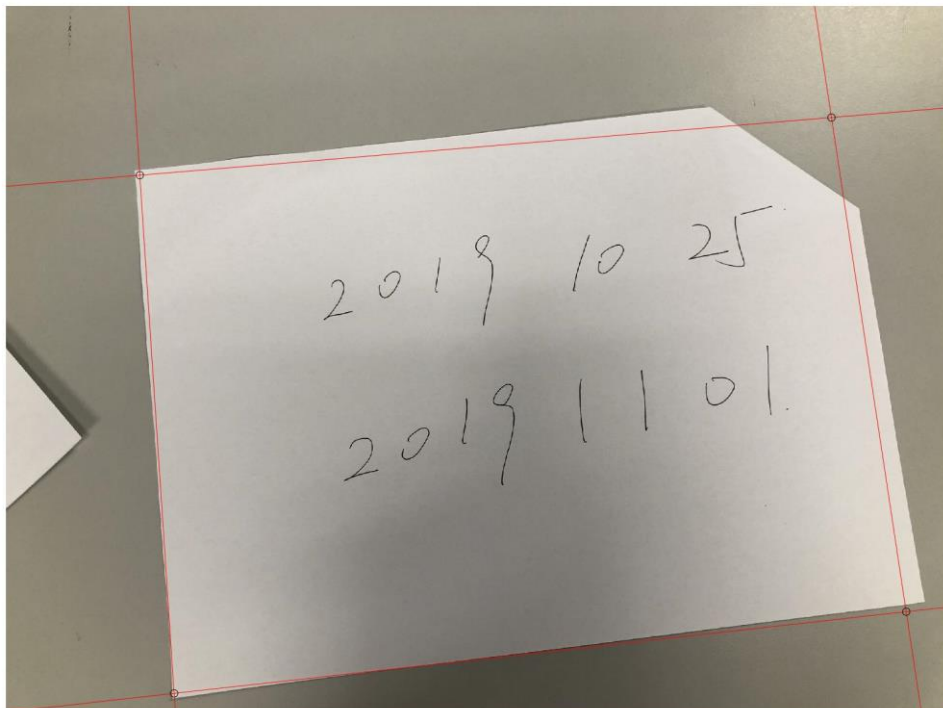
b)



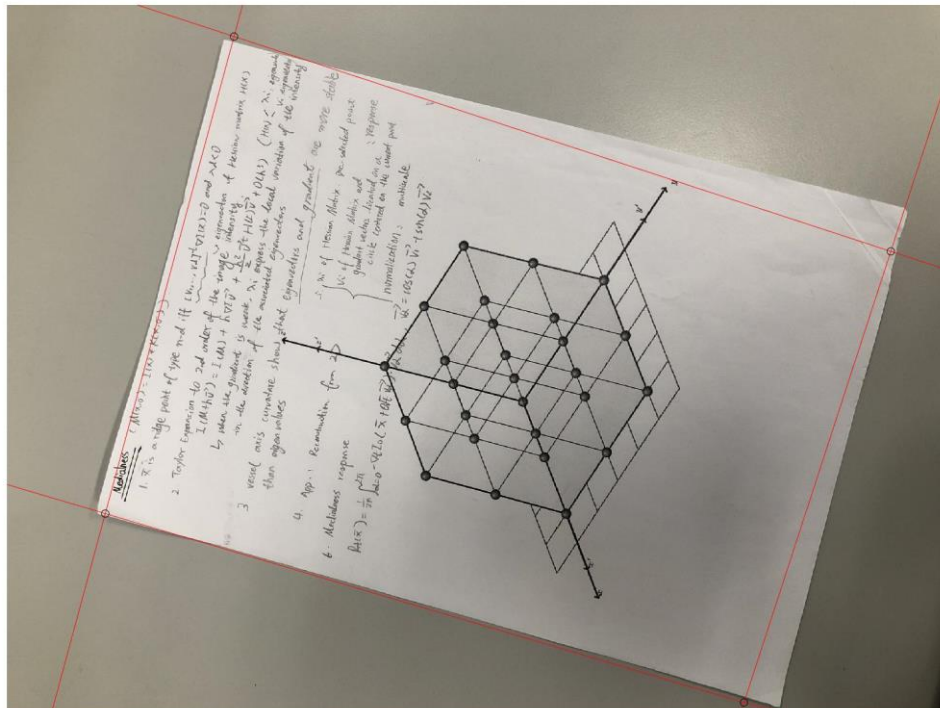
c)



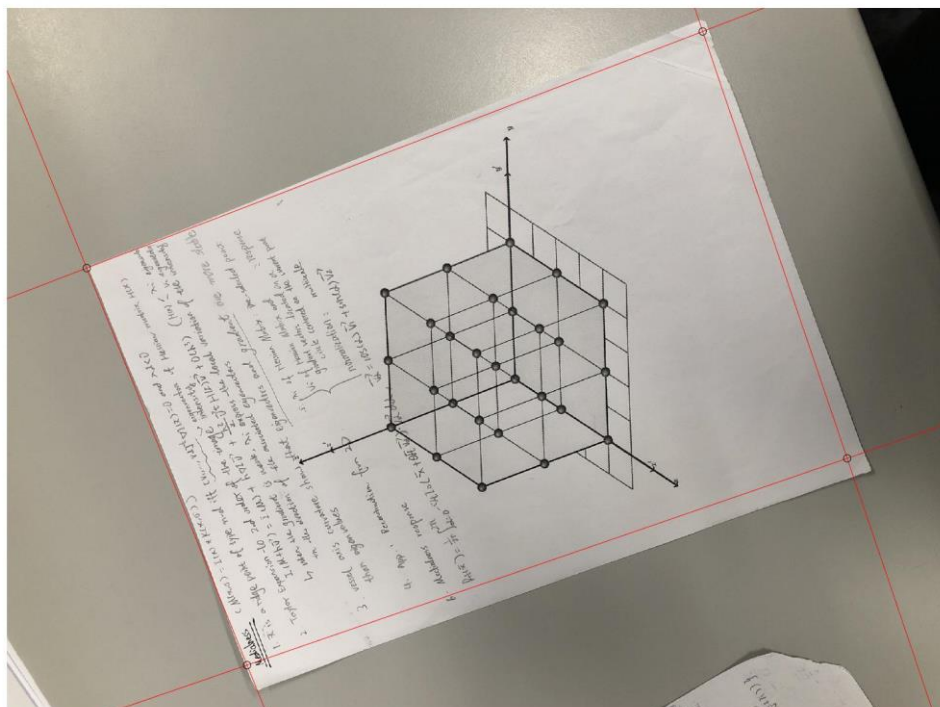
d)



e)



f)

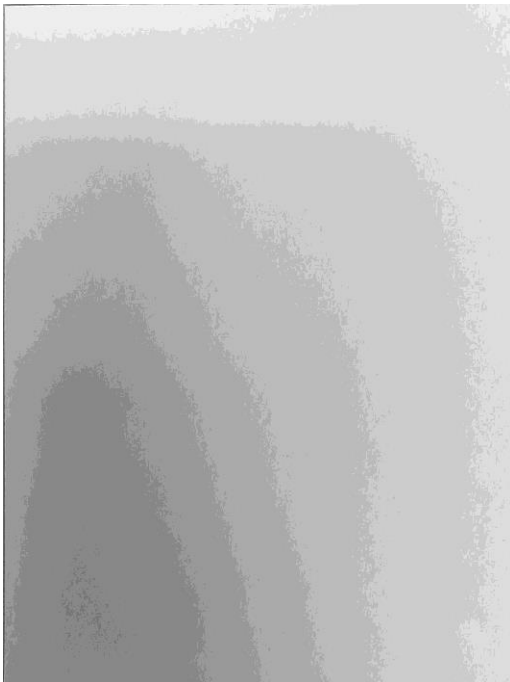


2) Image Warping

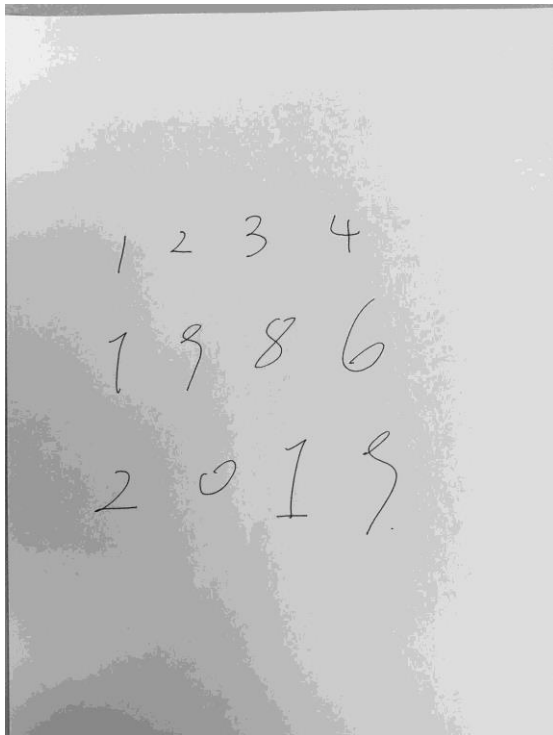
a)



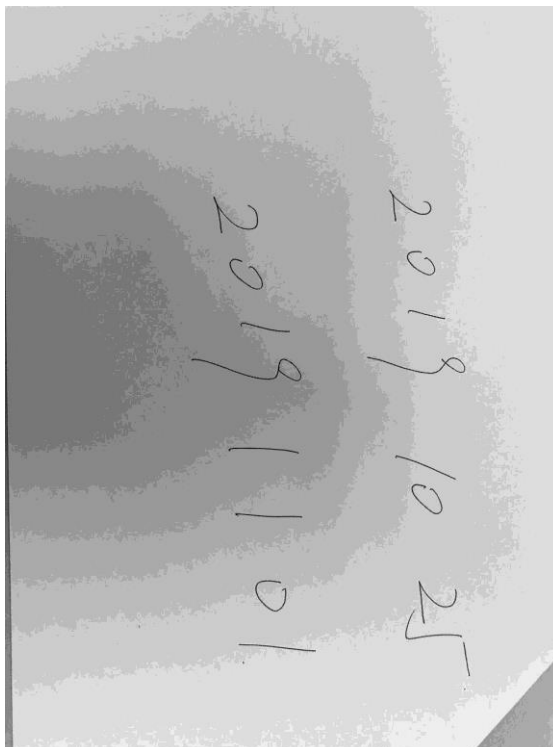
b)



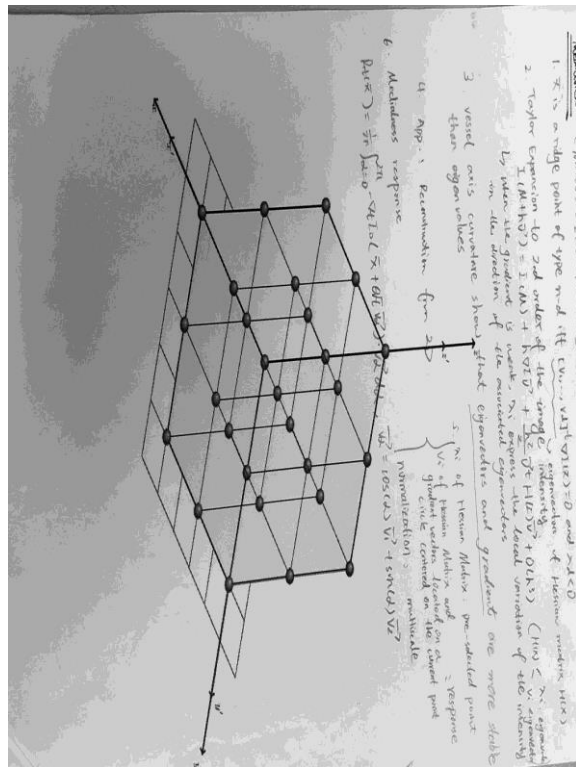
c)



d)



e)



f)

