Computer Vision HW4

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Homework 4

Mathematical Morphology - Binary Morphology

(a) Dilation

```
///kernel
int kernel[5][5]={0,1,1,1,0,

1,1,1,1,1,
1,1,1,1,1,
0,1,1,1,0};
```

(b) Erosion

(c) Opening step:

1.erosion

2.dilation $B \circ K = (B \ominus K) \oplus K$

(d) Closing

step:

1.dilation 2.erosion

 $B \bullet K = (B \oplus K) \ominus K$

(e) Hit-and-miss transform

step:

1.make a complement array 2.Use J & K to erosion

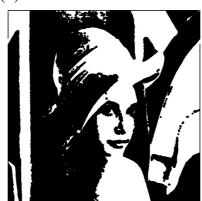
$$A \otimes (J, K) = (A \ominus J) \cap (A^c \ominus K)$$

result image:

(a)Dilation



(b)Erosion



(c)Opening



(d)Closing



(e)hit & miss

