

**Maimoona Khilji**  
**BS-DS**  
**Semester 6**

**MATLAB image dilation and erosion**

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Course Code: Image Processing and Analysis

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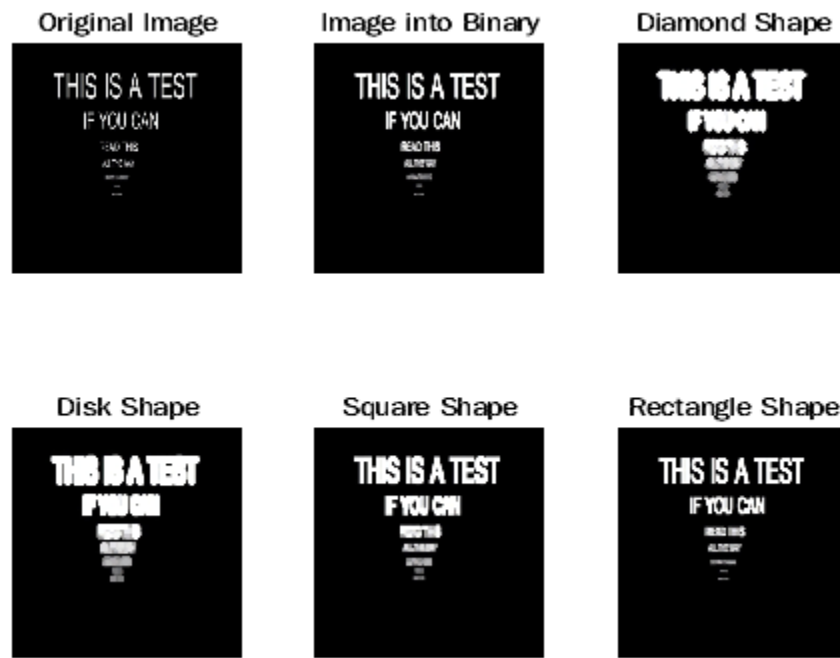
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## Task

Implement dilation and erosion on image,  
Use strel function with different shape type and parameters. And compare results

### Dilation

```
task10.m x Figure 1 x +
1 %dilation
2 f=imread("text.jpg");
3 subplot(2,3,1)
4 imshow(f);
5 title("Original Image");
6
7 b=[0 1 0; 1 1 1; 0 1 0];
8 g =imdilate(f,b);
9 subplot(2,3,2)
10 imshow(g);
11 title("Image into Binary");
12
13 b=strel("diamond",5);
14 g1 =imdilate(f,b);
15 subplot(2,3,3)
16 imshow(g1);
17 title("Diamond Shape");
18
19 b=strel("disk",5);
20 g2 =imdilate(f,b);
21 subplot(2,3,4)
22 imshow(g2);
23 title("Disk Shape");
24
25 b=strel("Square",5);
26 g3 =imdilate(f,b);
27 subplot(2,3,5)
28 imshow(g3);
29 title("Square Shape");
30
31 b=strel("rectangle",[2 4]);
32 g4 =imdilate(f,b);
33 subplot(2,3,6)
34 imshow(g4);
35 title("Rectangle Shape");
36
```



## Erosion

```
task10.m x +
1 %erosion
2 title("Erosion");
3 f=imread("text.jpg");
4 subplot(2,3,1)
5 imshow(g1);
6 title("Original Image");
7
8 b=strel("diamond",5);
9 g1 =imdilate(f,b);
10 subplot(2,3,2)
11 imshow(g1);
12 title("Diamond Shape");
13
14 b=strel("disk",5);
15 g2 =imdilate(f,b);
16 subplot(2,3,3)
17 imshow(g2);
18 title("Disk Shape");
19
```

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```
19  
20     b=strel("square",5);  
21     g3 =imdilate(f,b);  
22     subplot(2,3,4)  
23     imshow(g3);  
24     title("Square Shape");  
25  
26     b=strel("rectangle",[2 4]);  
27     g4 =imdilate(f,b);  
28     subplot(2,3,5)  
29     imshow(g4);  
30     title("Rectangle Shape");
```

Original Image



Diamond Shape



Disk Shape



Square Shape



Rectangle Shape



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