FL#4

1. Design SUSAN/Moravec/Harris corner detector.
   A. Input : Image
   B. Output : Corner map

2. Design morphological thinning process as below.

x	0	x
0	p	x
x	x	x

x	x	x
0	p	x
1	0	x

x	0	0
0	p	1
x	0	0

x	x	x
0	p	0
x	x	x

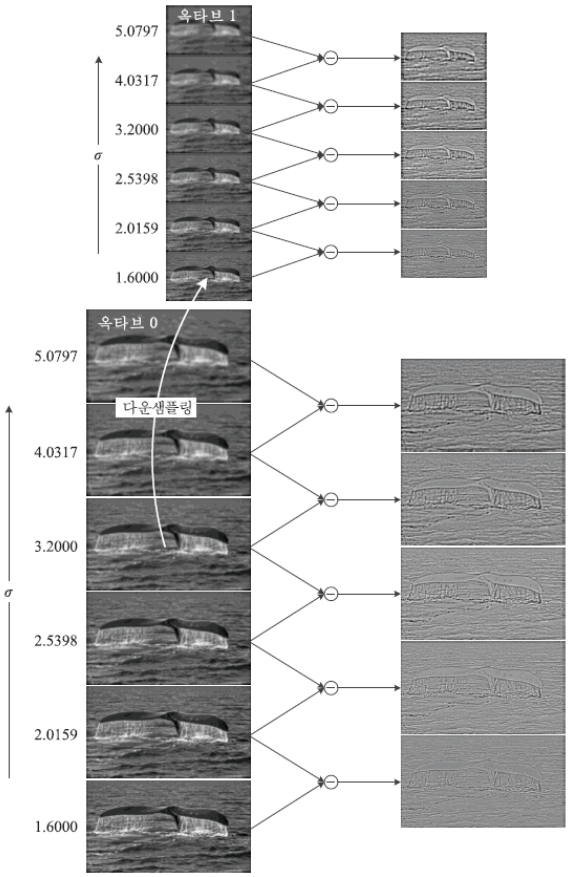
n_5	n_6	n_7
n_4	p	n_0
n_3	n_2	n_1

$s_4 = n_0 \cdot (n_1 + n_2 + n_6 + n_7) \cdot (n_2 + n_3') \cdot (n_6 + n_5')$

```
for(j=1 to M-2)
 for(i=1 to N-2) {
  if(e(j,i)=1 and
  ((n0' and (n4 and(n5 or n6 or n2 or n3)and(n6 or n7') and(n2 or n1'))) // n0=비에지, s0=참
   or (n4' and(n0 and(n1 or n2 or n6 or n7)and(n2 or n3')and(n6 or n5'))) // n4=비에지, s4=참
   or (n2' and(n6 and(n7 or n0 or n4 or n5)and(n0 or n1')and(n4 or n3'))) // n2=비에지, s2=참
   or (n6' and(n2 and(n3 or n4 or n0 or n1)and(n4 or n5') and(n0 or n7'))))) // n6=비에지, s6=참
   eout(j,i)=0;
 }
```

   A. Input : Binary edge map (by Sobel filer in FL#3, problem 1)
   B. Output : Binary thinned image

3. Design a part of SIFT method.
   A. Design an image pyramid and find its difference map.
   B. Input : Image
   C. Output : Image pyramid and difference map.


옥타브 1
5.0797
4.0317
3.2000
2.5398
2.0159
1.6000
σ
옥타브 0
다운샘플링
5.0797
4.0317
3.2000
2.5398
2.0159
1.6000
σ