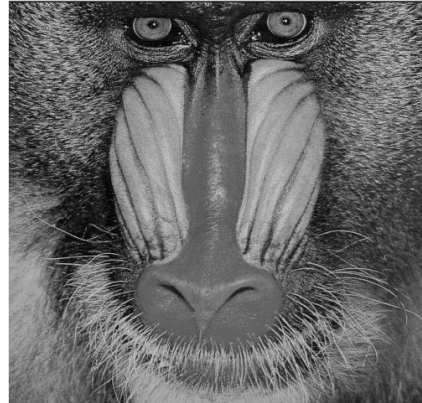


資工 3A 410715936 黃駿瑜

(一)

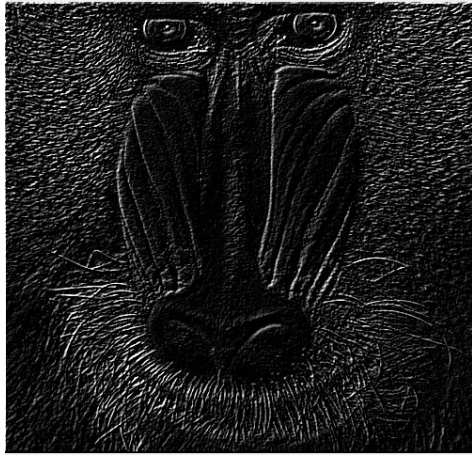
```
>> load('mandrill.mat');  
>> m = im2uint8(ind2gray(X,map));  
>> imshow(m);
```



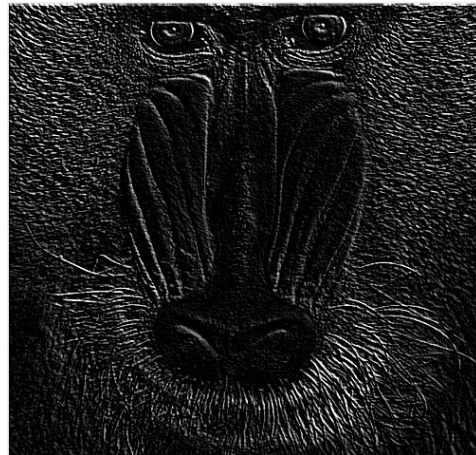
(二) 請對 f 加入 10%鹽和胡椒雜訊得到 fn ，列印出 f, fn 影像。

```
>> a = [-1 -1 0;-1 0 1;0 1 1];  
>> b = [0 -1 -1;1 0 -1;1 1 0];  
>> c = [-1 -1 -1;2 2 2; -1 -1 -1];  
>> d = [-1 2 -1;-1 2 -1;-1 2 -1];  
>> e = [-1 -1 -1;-1 8 -1;-1 -1 -1];  
>> f = [1 1 1;1 1 1;1 1 1];  
>> g = [-1 0 1; -1 0 1;-1 0 1];  
>> h = [0 -1 0;-1 4 -1;0 -1 0];
```

```
>> imshow(uint8(filter2(a,m)));
```



```
>> imshow(uint8(filter2(b,m)));
```



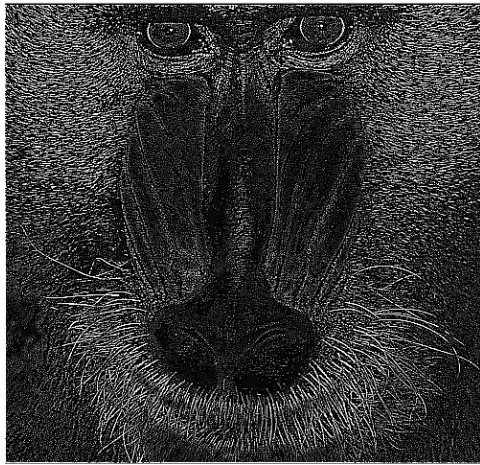
```
>> imshow(uint8(filter2(c,m)));
```



```
>> imshow(uint8(filter2(d,m)));
```



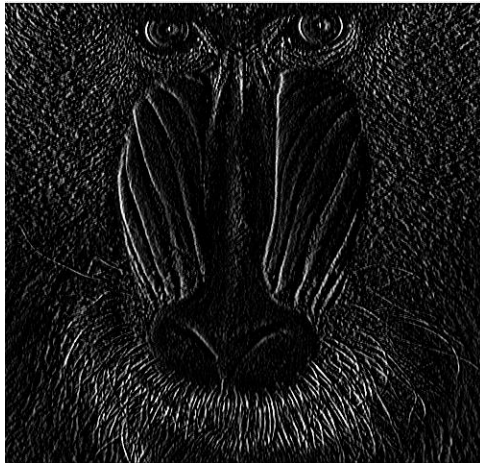
```
>> imshow(uint8(filter2(e,m)));
```



```
>> imshow(uint8(filter2(f,m)));
```



```
>> imshow(uint8(filter2(g,m)));
```



```
>> imshow(uint8(filter2(h,m)));
```



(三) 並從下列選項選出各個濾波器(a) – (h)的功能(複選, , 在相對欄位打√)

(1) 高通濾波器 (2) 低通濾波器 (3) 偵測垂直方向 (4) 偵測水平方向

(5) 偵測 135 度方向 (6) 偵測 45 度方向 (7) 邊緣偵測

(8) 模糊濾波器 (9) 全相(方位)偵測

▪ (a) – (h) 遮罩(masks) 定義如下:

(a)

-1	-1	0
-1	0	1
0	1	1

(b)

0	-1	-1
1	0	-1
1	1	0

(c)

-1	-1	-1
2	2	2
-1	-1	-1

(d)

-1	2	-1
-1	2	-1
-1	2	-1

(e)

-1	-1	-1
-1	8	-1
-1	-1	-1

(f)

1	1	1
1	1	1
1	1	1

(g)

-1	0	1
-1	0	1
-1	0	1

(h)

0	-1	0
-1	4	-1
0	-1	0

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(A)	√				√		√		
(B)	√					√	√		
(C)		√		√				√	
(D)		√	√					√	
(E)		√						√	√
(F)		√						√	√
(G)	√		√				√		
(H)		√						√	√