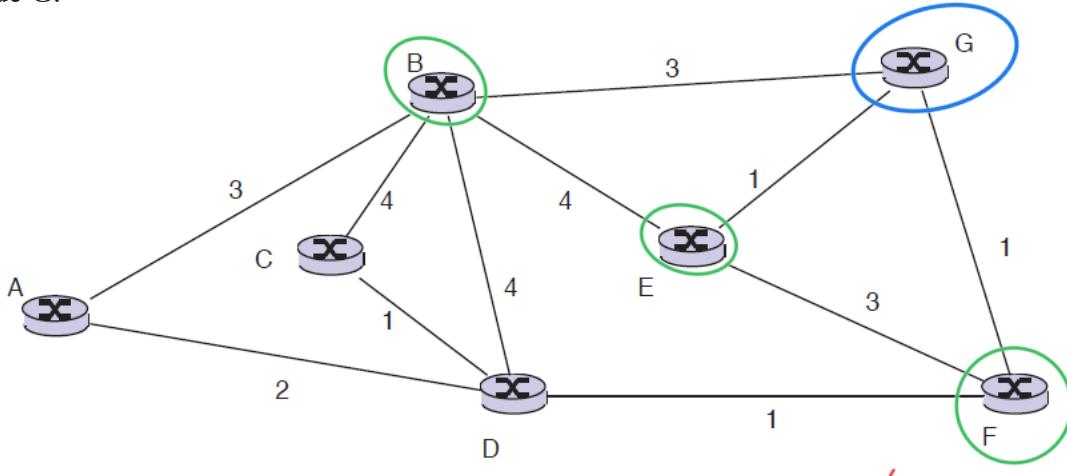


# COMP 9121 Week 5

(1) In the graph below, use the Distance Vector routing (without split horizon or reverse poisoning) to find the minimum distance from each node to node G. Assume that exchanges of routing information and routing table updates are synchronous (i.e., they happen at the same time at all nodes). Fill out the table below to find the shortest distance from each node to node G.



	A	B	C	D	E	F
Initial	-1, $\infty$					
1	-1, $\infty$	G, 3	-1, $\infty$	-1, $\infty$	G, 1	G, 1
2	B, 6	G, 3	B, 7	F, 2	G, 1	G, 1
3	D, 4	G, 3	D, 3	F, 2	G, 1	G, 1
4	D, 4	G, 3	D, 3	F, 2	G, 1	G, 1

End  
when  
our  
answer  
Same  
to  
previous  
one

(2) Following (1), assume that the link between nodes F and G is disconnected. Do NOT use split horizon or reverse poisoning. Fill out the table below to find the shortest distance from each node to node G.

	A	B	C	D	E	F
Initial	D, 4	G, 3	D, 3	F, 2	G, 1	G, 1
1	D, 4	G, 3	D, 3	F, 2	G, 1	E, 4 X
2	D, 4	G, 3	D, 3	F, 4 X	G, 1	E, 4 X
3	D, 6	G, 3	D, 5	F, 4	G, 1	E, 4
4	D, 6	G, 3	D, 5	F, 5	G, 1	E, 4
5	B, 6	G, 3	D, 6	F, 5	G, 1	E, 4
6	B, 6	G, 3	D, 6	F, 5	G, 1	E, 4
7						
8						

因为 F 的  
neighbour 有  
E ↑ D  
因为在  
上一行  
↑  
D, 3  
D, 3

又因为不进行下面  
的判断，所以为 D, 3

X

D的最短路径已含 F, 所以 F 不能  
再从 D 学习最短路径

(3) Following (1), assuming that the link between nodes F and G is broken, use split horizon  
with reverse poisoning to find the shortest distance from all nodes to G.

因为不

if

Reverse

✓

	A	B	C	D	E	F
Initial	D, 4	G, 3	D, 3	F, 2	G, 1	G, 1
	D, 4	G, 3	D, 3	F, 2	G, 1	E, 4
	D, 4	G, 3	D, 3	F, 5	G, 1	E, 4
	B, 6	G, 3	D, 6	F, 5	G, 1	E, 4
	B, 6	G, 3	D, 6	F, 5	G, 1	E, 4