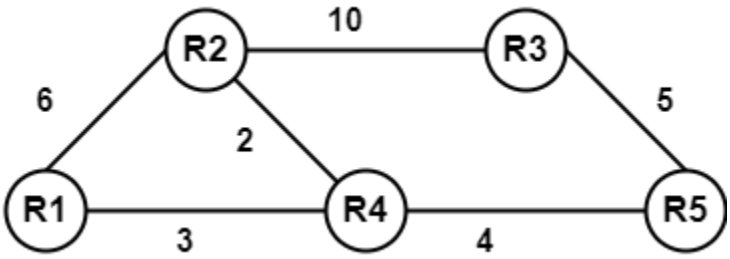
CSE421 Assignment 3

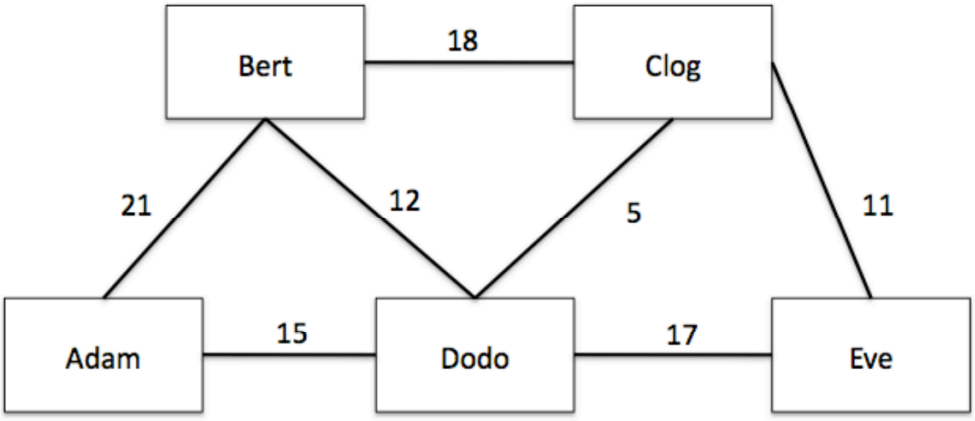
1.



Refer to the network topology above. If the routers are using distance vector routing protocol:

a. Calculate the routing table of router R1 after convergence.
b. How many steps did it take to achieve convergence?
c. If the link between router R4 and R5 is broken after the routing tables are converged for all the routers in the network, will it pose any problem? Explain briefly.

2. The CS department at Brac bought new Sun Fire V210 servers. They decided to run a distance-vector protocol for routing between these servers (even though it is a rather small network). They are currently configured as in the picture below, with respective edge costs.



The CS staff asked for your help. Write down each step of building the distance vector routing table for ‘Eve’ so they can compare it to the output of their implementation. You can use abbreviations e.g., ‘A’ for Adam and ‘E’ for Eve. The initial routing table at node A is:

Destination	Cost	Next Hop
B	**21**	**B**
C	**∞**	**—**
D	**15**	**D**
E	**∞**	**—**

a. Show the initial routing table of node E:

Destination	Cost	Next Hop
A		
B		
C		
D		

b. Show the routing table of node E after one iteration of the algorithm:

Destination	Cost	Next Hop
A		
B		
C		
D		

c. Show the routing table of node E after two iterations of the algorithm:

Destination	Cost	Next Hop
A		
B		
C		
D		