

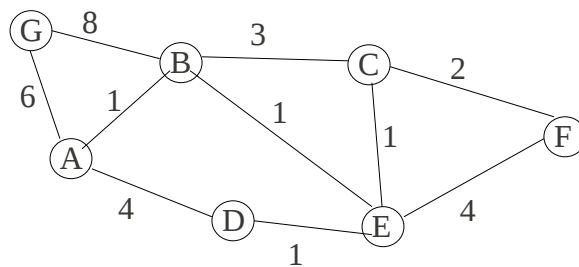
Assignment 3 (CMPT371)

Due date: August 1 (Monday)

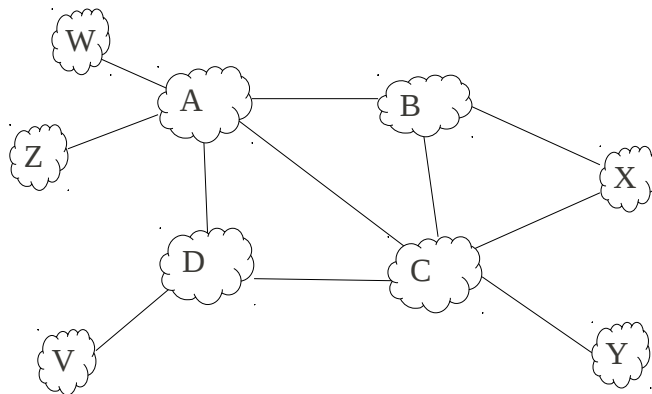
--- You can submit your assignment online (zip file) at www.course.cs.sfu.ca under Assignment3-files OR you can bring it to me in East Concourse Student Computing Facility – ECSCF (AQ3144, Burnaby Campus) on Monday August 1st from 2:00 to 4:30 pm.

Chapter4

1. Problem P4
2. Problem P10
3. Problem P16
4. Problem P24
5. For the following graph :



- (a) Use Dijkstra's algorithm to compute the low-cost path from A to all network nodes.
 - (b) Suppose node E is chosen as a centre node in centre-based broadcast routing algorithm. Draw the resulting centre-based routing tree. Is the resulting tree a minimum-cost tree?
 - (c) Suppose that all links have unit cost and suppose that node G is the broadcast source. Using arrows like those shown in figure 4.44 indicate links over which packets will be forwarded using RPF (Reverse Path Forwarding), and the links, over which packets will not be forwarded.
6. In the following figure, let A,B,C,D,V,X,Y,W and Z are ASs. Assume that V,X,Y and Z are stub networks and A,B,C and D are backbone provider networks.



Suppose that A would like to have traffic destined to W from only B and the traffic destined to Z from either B or D. How should A advertise its routes to B, C and D? What AS routes does C receive?