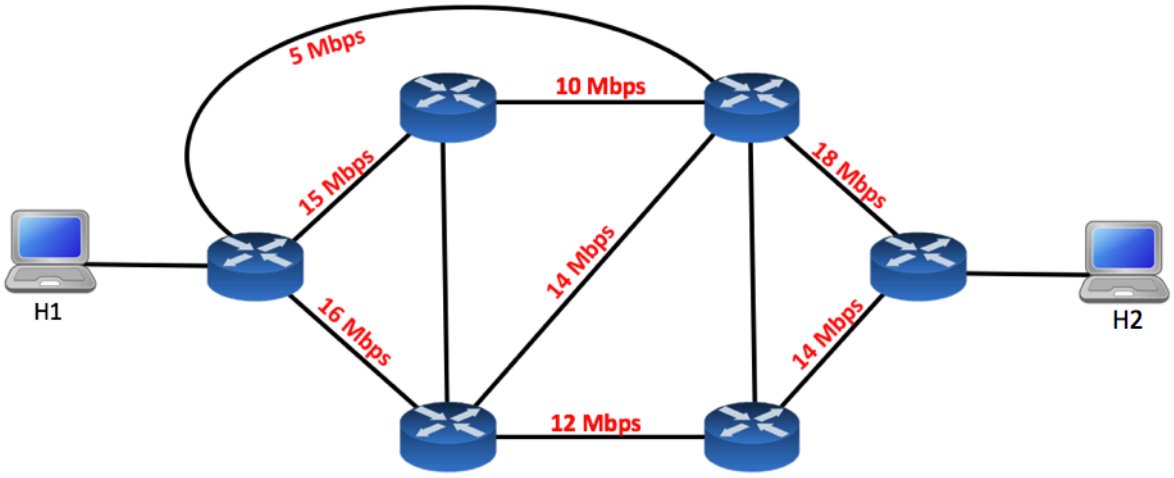
CS – 736 Data Communication – Project

Objective:

Implement a shortest path algorithm to compute the shortest path between host H1 and H2. Your network topology and the link properties should be as shown below.



Deliverables:

1. You have to develop a python application for RYU SDN controller which implements a shortest path algorithm to compute the shortest path between hosts H1 and H2.
2. Initiate a TCP session to transfer data from host H1 to H2 on port 6585
3. Verify the path used by the packets (E.g. Print the shortest path computation output in terminal)
4. You must turn in your python application code along with the following information which tells us the platform in which your code was tested:
    a. RYU version
    b. Mininet version
    c. OpenVswitch version
    d. Mention the IP Addresses that you used, in case if you changed the default assignments.

(You can use the virtualBox VM image which was used for demonstration or you can build your own platform. We will be using VirtualBox VM Image, mention the changes that you made in case of any)

Bonus Project: (10 Points in Final Grade**)**

Implement a shortest path algorithm that computes the shortest path between all nodes for the same topology (page 1) considering that you have atleast one host connected to each OpenFlow enabled switch.