Assignment-2

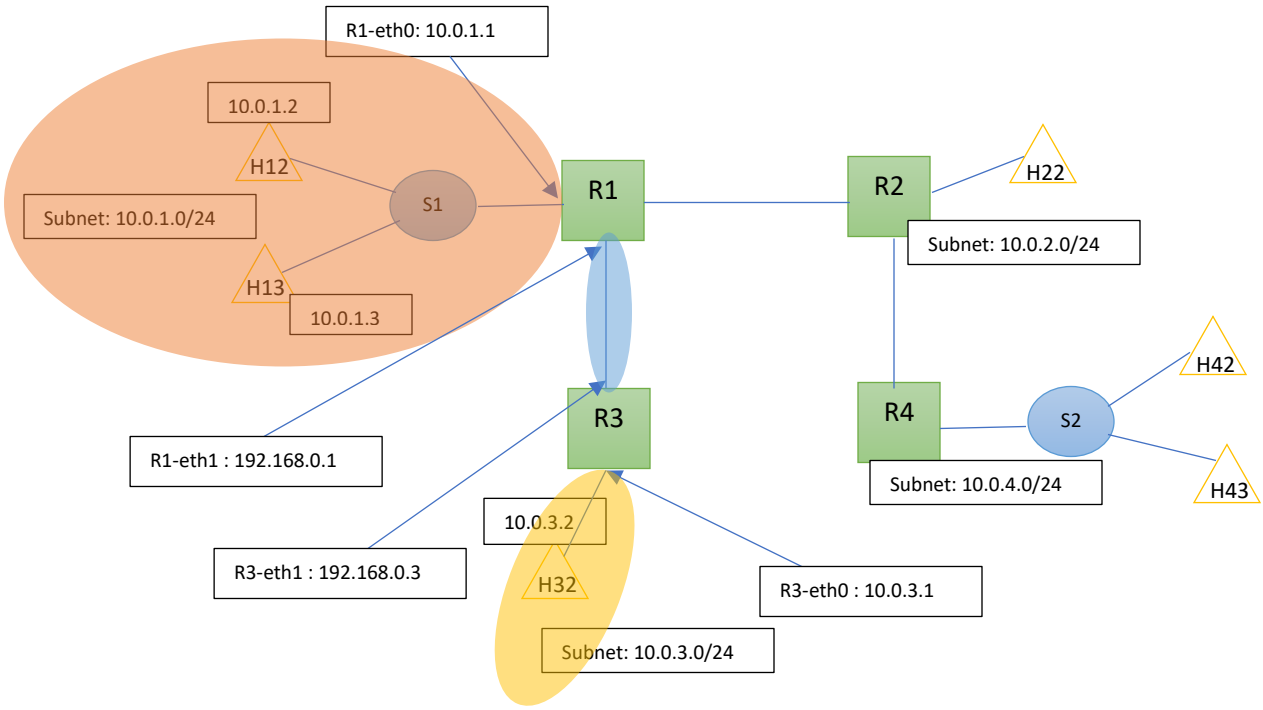
Problem Objective

Implement routing logic (IP Forwarding mechanism) in an Mininet.

- Study ARP (Explore why we require ARP support)
- Study ICMP (Explore why we require ICMP)

  Note: You can capture ARP packets using wireshark and verify.

a) Create the topology with proper IP assignment as in the below figure.
For router functionality use **addNode** API of mininet rather than the switch. You can refer to the following links for router IP assignment in Mininet.
https://github.com/mininet/mininet/blob/master/examples/linuxrouter.py
http://intronetworks.cs.luc.edu/current/html/mininet.html



Study the IP assignment carefully. And notice the usage of addNode API.

1. Pls submit a zip file containing:
   a. The topology file (**assignment2_routing1.py**).
   b. PDF file containing the snapshot of traceroute output from H12 to H43; and H32 to H22, and H2 to H32 (**assignment2_output1.pdf)**.
2. Modify the routing such that H22 is not pingable from H12. Make sure all other hosts are connected.
   a. Include the modified python file (**assignment2_routing2.py**)
   b. Include the diff of the python files in 1a and 2a using Linux diff command.

- You can make suitable assumption about IP assignment and routing if something found missing or required additionally. Record the same clearly in the Pdf file of your submission.