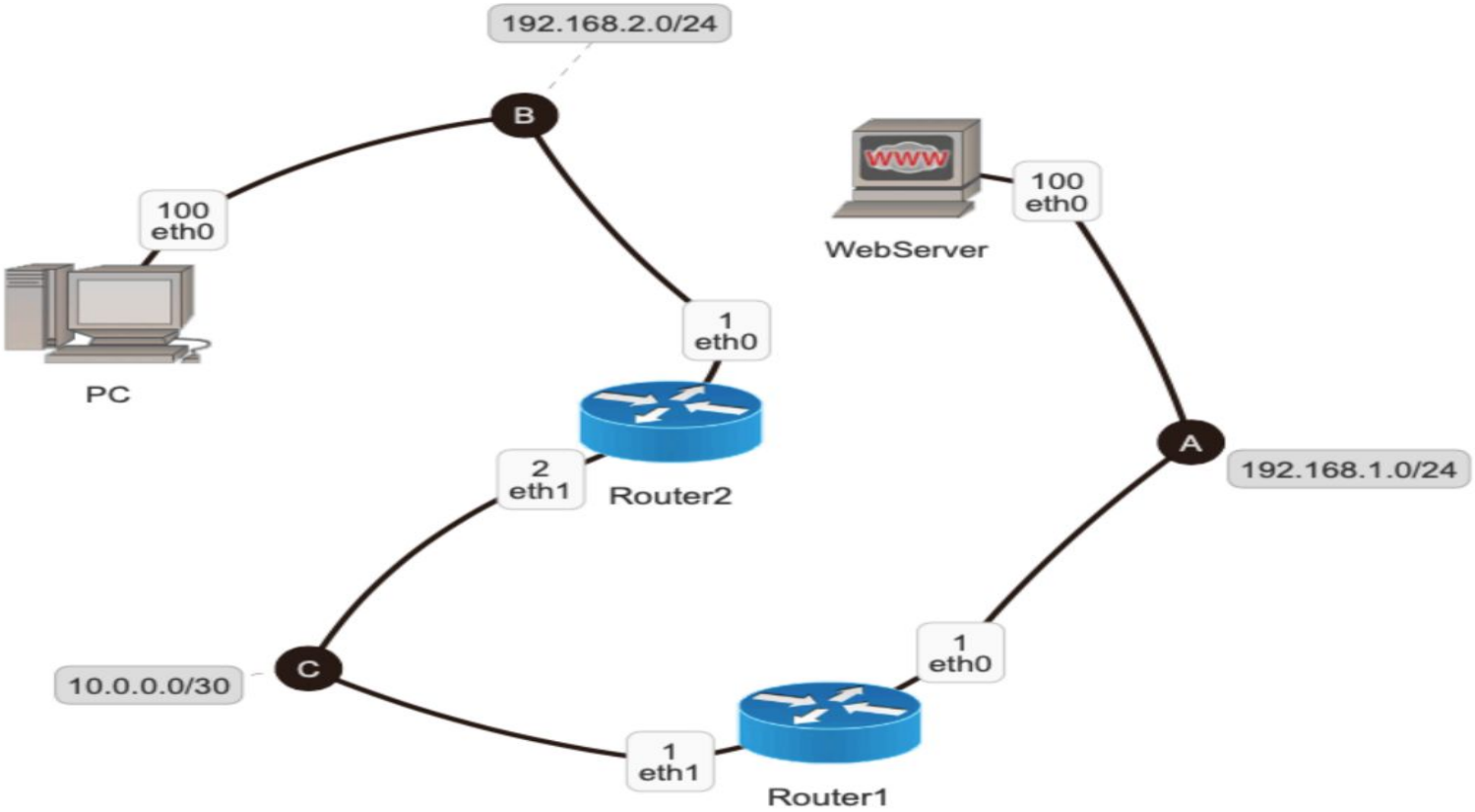
Lab 04

CT106H - Computer network

Exercise 17

Construct the following network



Exercise 17

After building the network, start it

On the server, start `apache2` using the following command

```
/etc/init.d/apache2 start
```

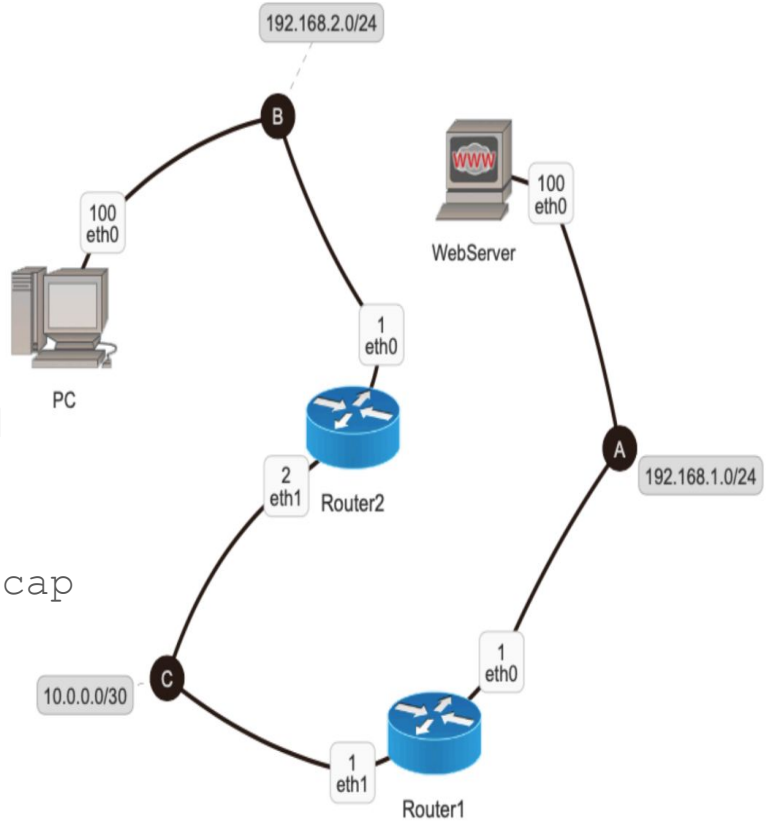
On the PC, open a web browser using the `links` command

On the server, capture the packages sending from the PC

```
tcpdump -s 1536 -w /hostlab/BT17_webserver.pcap
```

On the PC, access the website provided by the server:

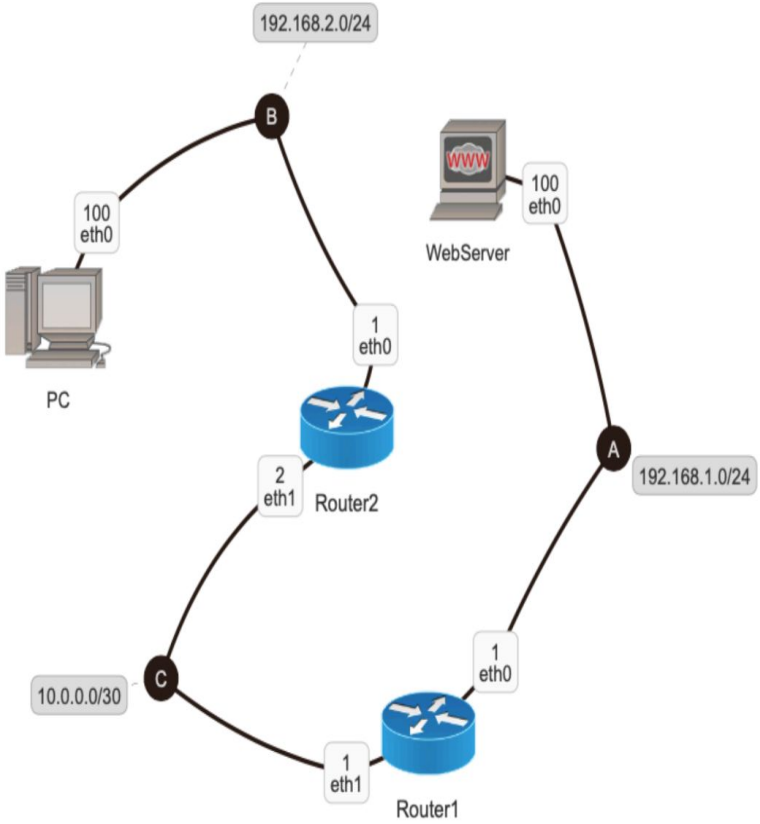
- Press F10 to get into the Menu bar
- Select Go to URL and type http://192.168.1.100/



Exercise 17

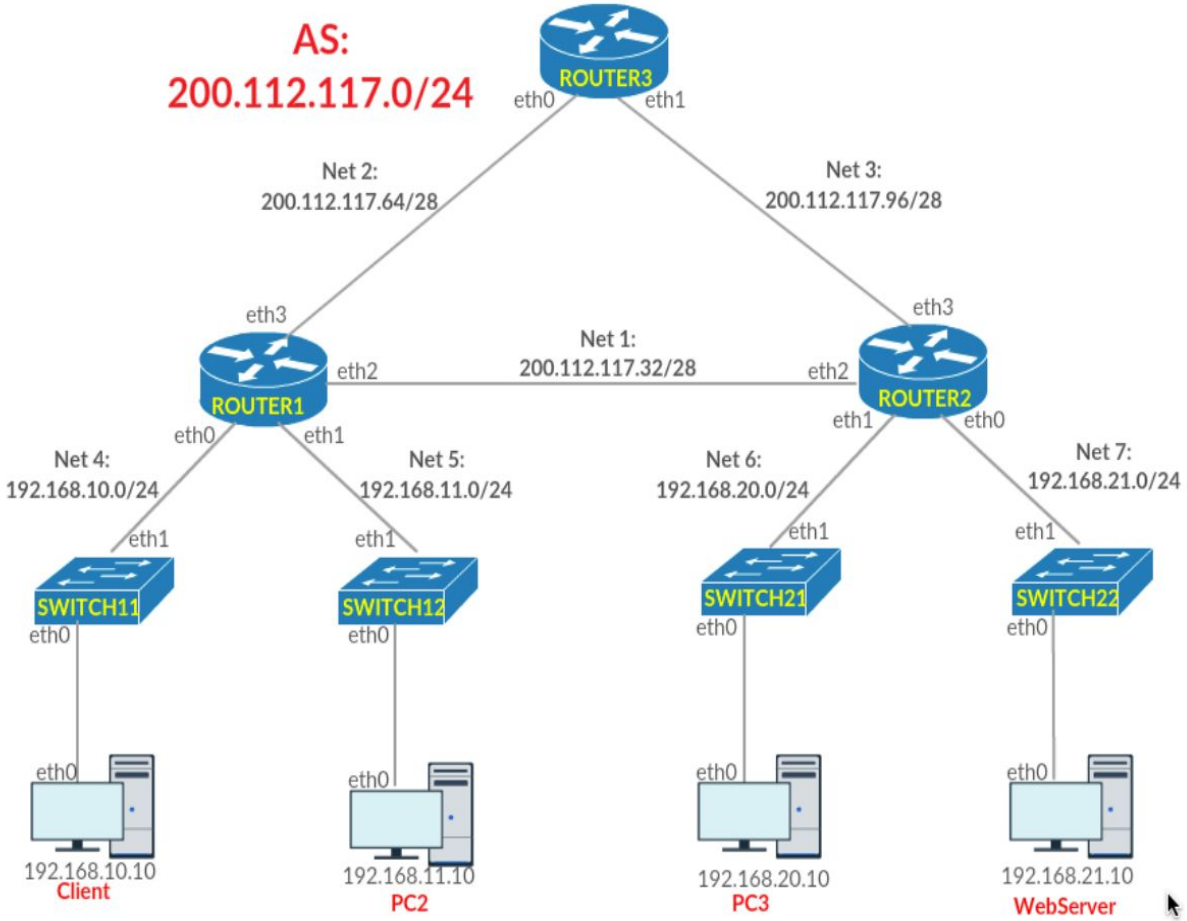
Use Wireshark to open BT17_webserver.pcap

Open Frames and discover the Transmission Control Protocol Header



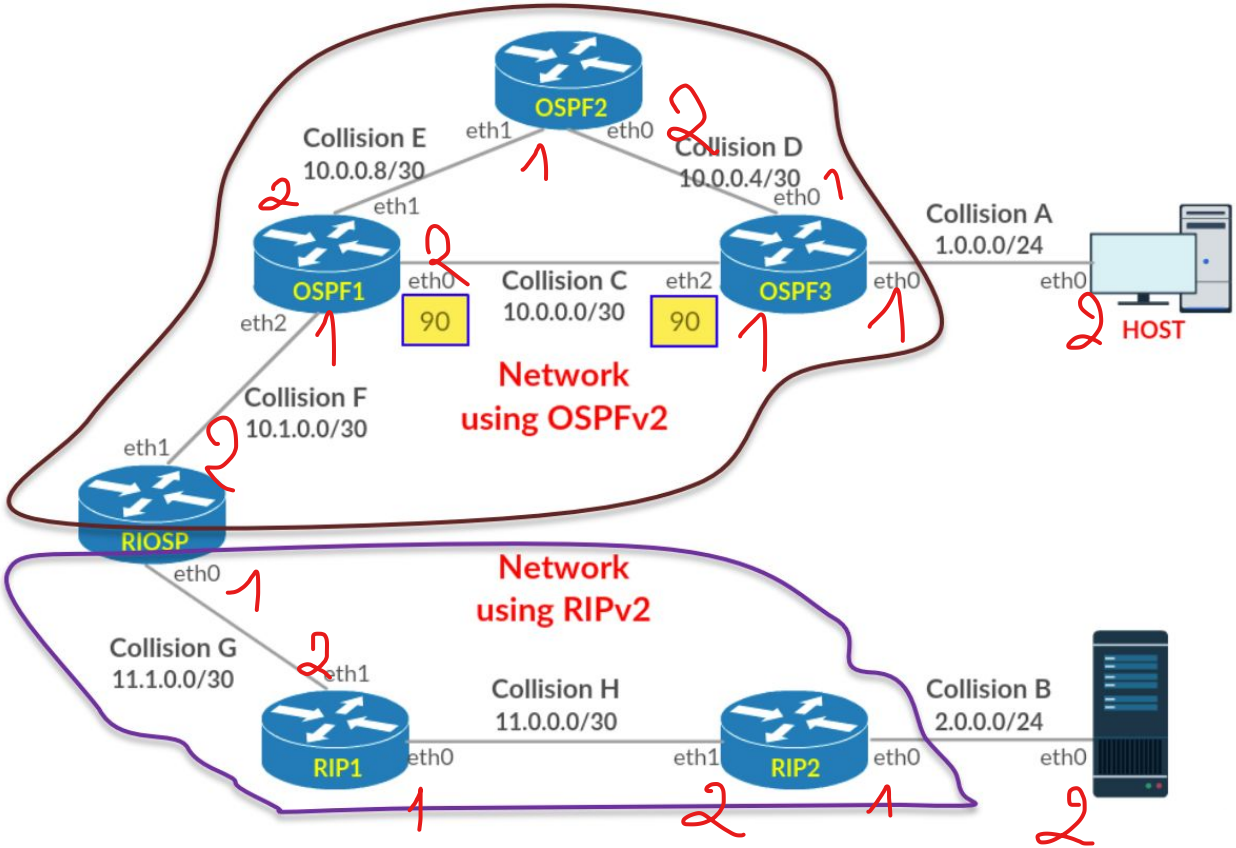
Exercise 18

Construct the following network. All Routers use the RIPv2 protocol



Exercise 19

- Construct the following network.
- Make sure the PC can view the website provided by the Server
- Change the content of the Website provided by the Server to: “HELLO, My name is *Yourname*, from CT106H”



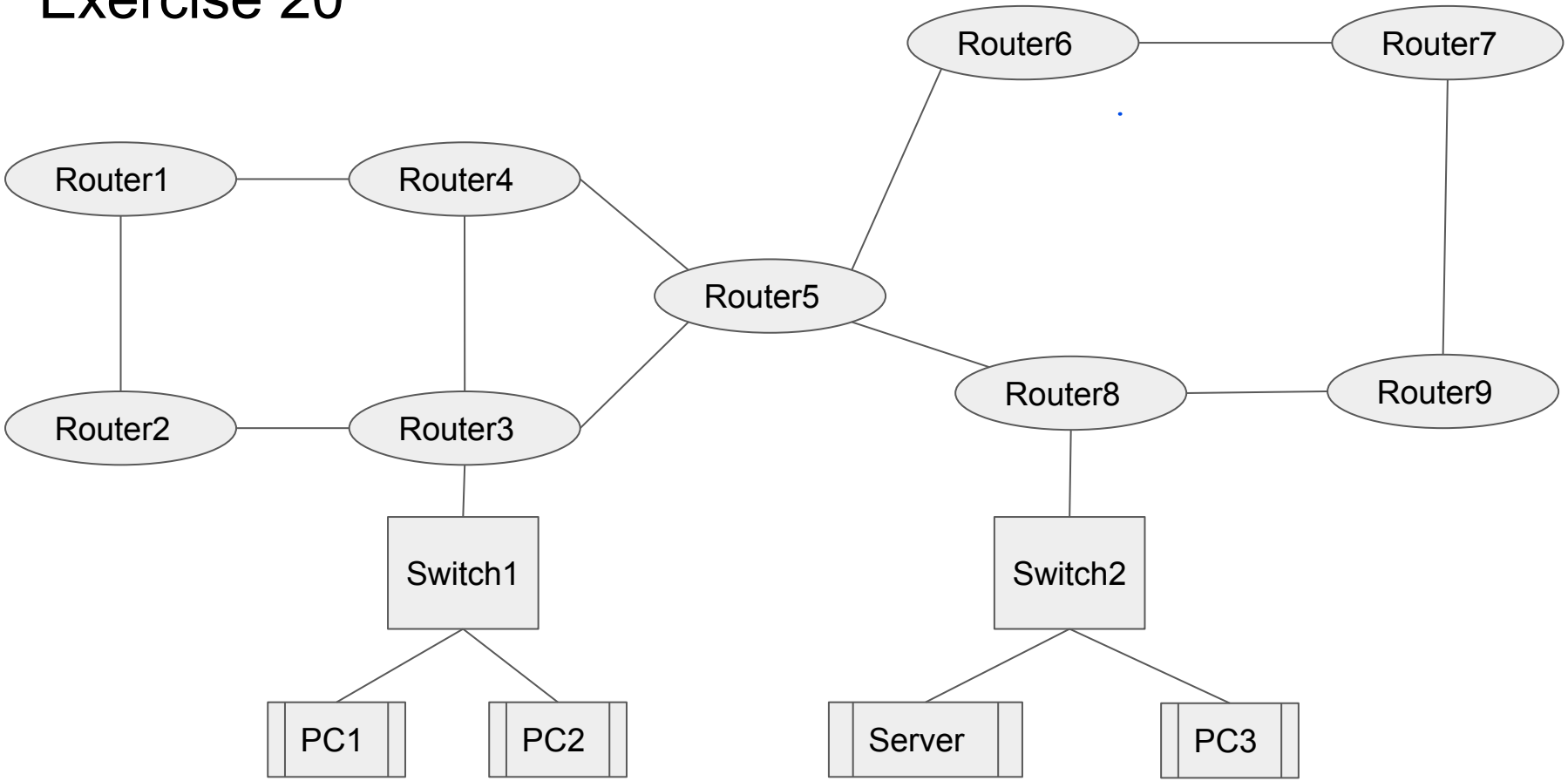
Exercise 20

Exercise 20

Construct the network on the next slide such that:

- Router 1, 2, 3, 4, 5 use the RIPv2 protocol.
  - The original network address is 182.182.182.128/26. What are the netmask and broadcast addresses of this original network?
  - Assign the network address to each LAN on the network by subnetting the original network. What are the netmask and broadcast addresses of each subnetwork?
- Router 5, 6, 7, 8, 9 use the OSPFv2 protocol.
  - The original network address is 190.190.190.0/25. What are the netmask and broadcast addresses of this original network?
  - Assign the network address to each LAN on the network by subnetting the original network. What are the netmask and broadcast addresses of each subnetwork?
- The Server provides a web service which shows “CT106H is easy!”

Exercise 20


Router6
Router7
Router1
Router4
Router5
Router8
Router9
Router2
Router3
Switch1
Switch2
PC1
PC2
Server
PC3