Department of Electrical and Computer Engineering

ENCS3320-Computer Networks
Project#2

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Part1:

WireShark is an a free and open-source packet analyzer. Its widely used for network troubleshooting, analysis, software and communications protocol development and education.

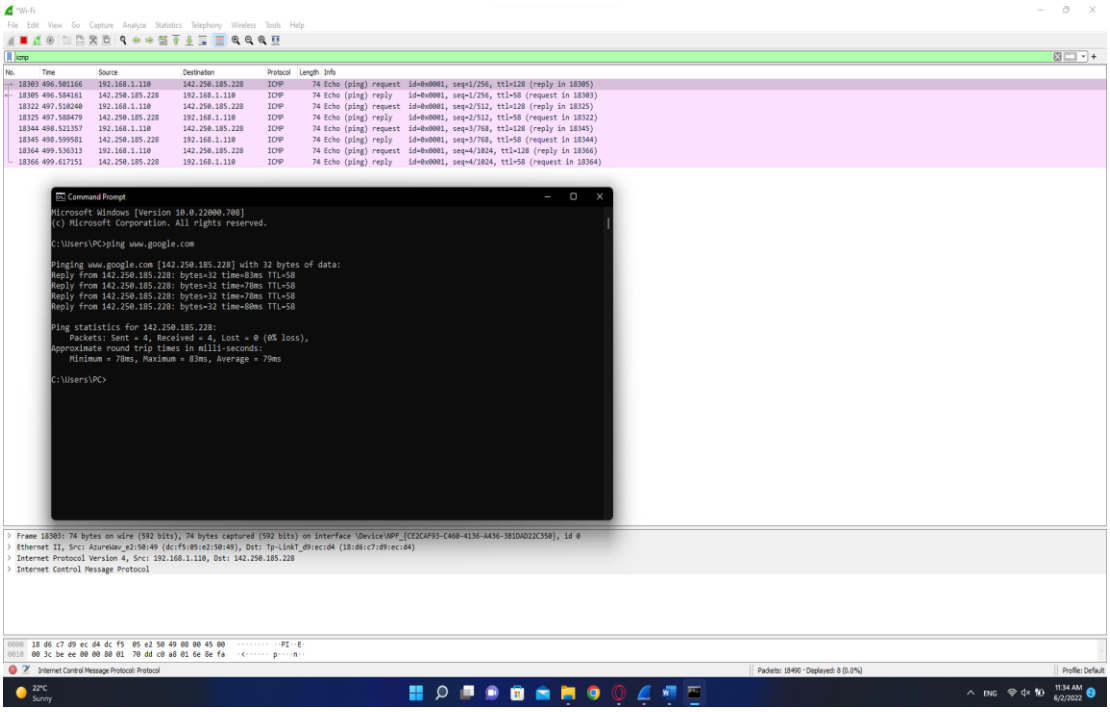
We will be observing our ICMP and DNS packets that are sent and received to our device.

ICMP (“Internet Control Message Protocol”): is a supporting protocol in internet protocol suite. It is used by network devices, including routers, to send error messages and operational information indicating success or failure when communicating with another device.

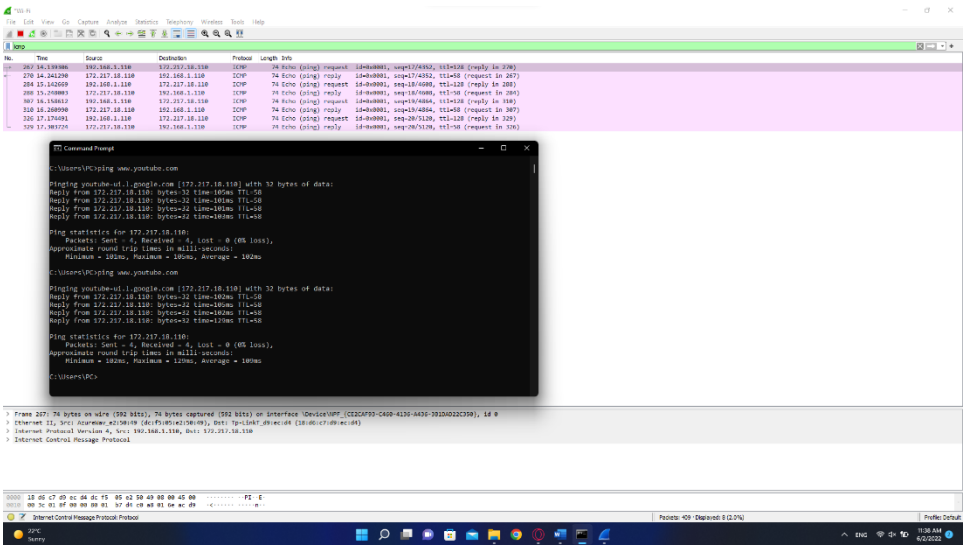
DNS (“Domain Name System”): The Domain Name System is the hierarchical and decentralized naming system used to identify computers reachable through the Internet or other Internet Protocol networks. The resource records contained in the DNS associate domain names with other forms of information.

Here are screenshots for the ICMP:

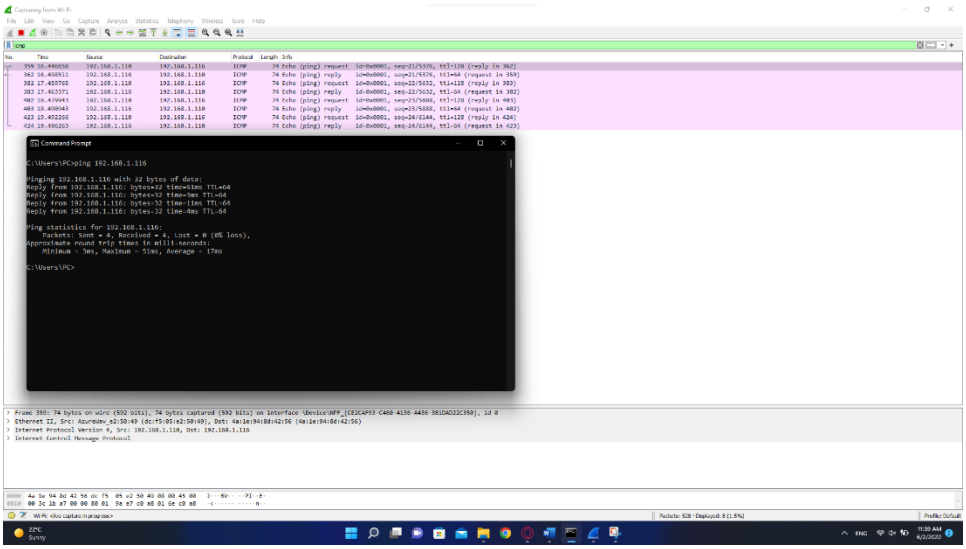
Pinging www.google.com



Pinging www.youtube.com:

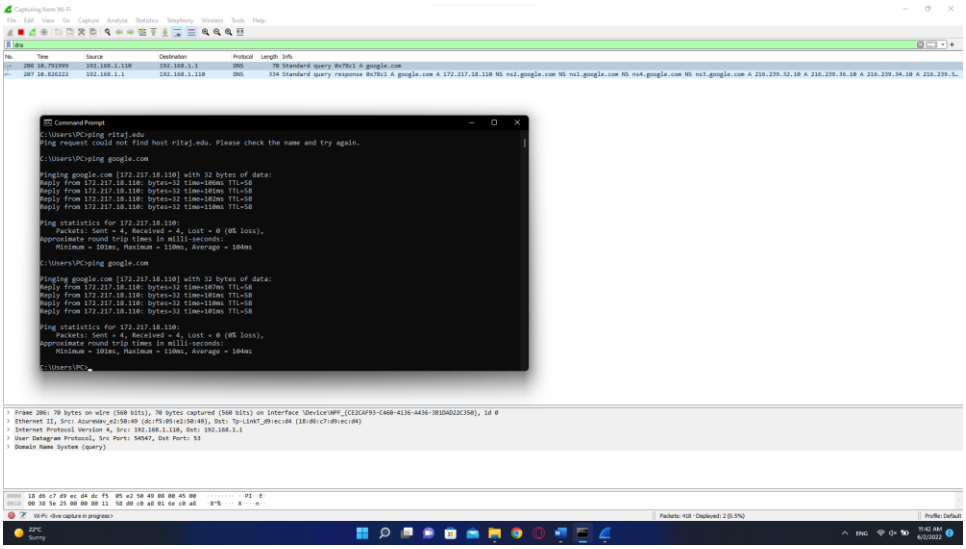


Pinging 192.168.1.116 (My Phone IP address):

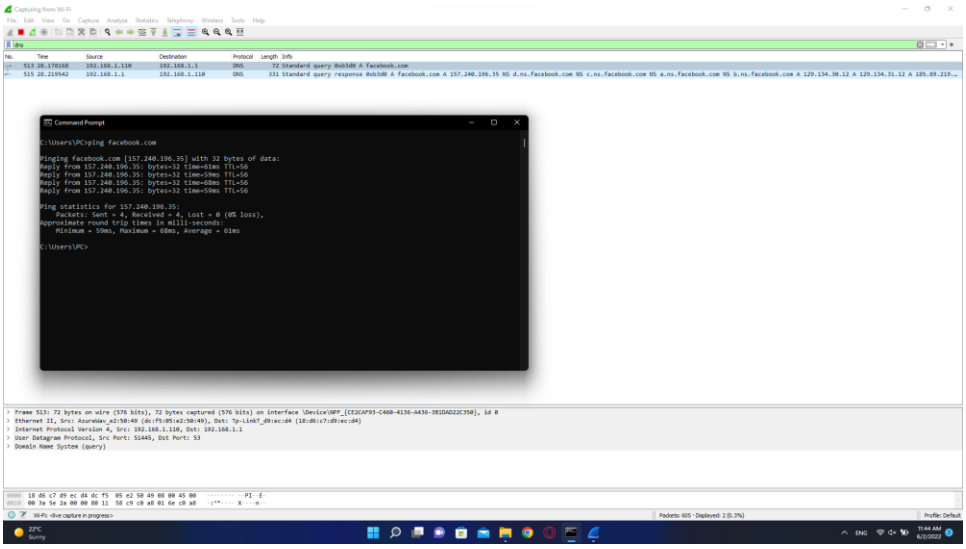


Screenshots for the DNS packets:

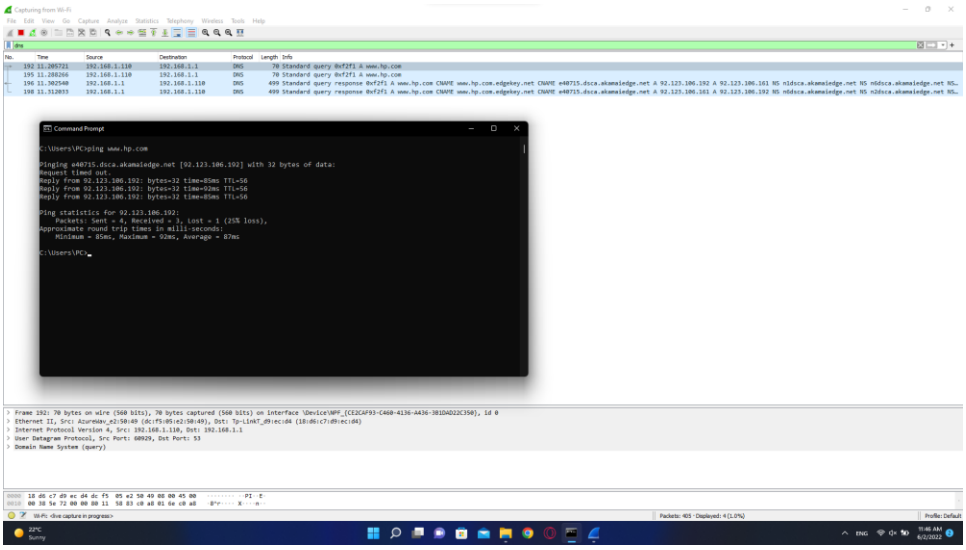
Pinging www.google.com



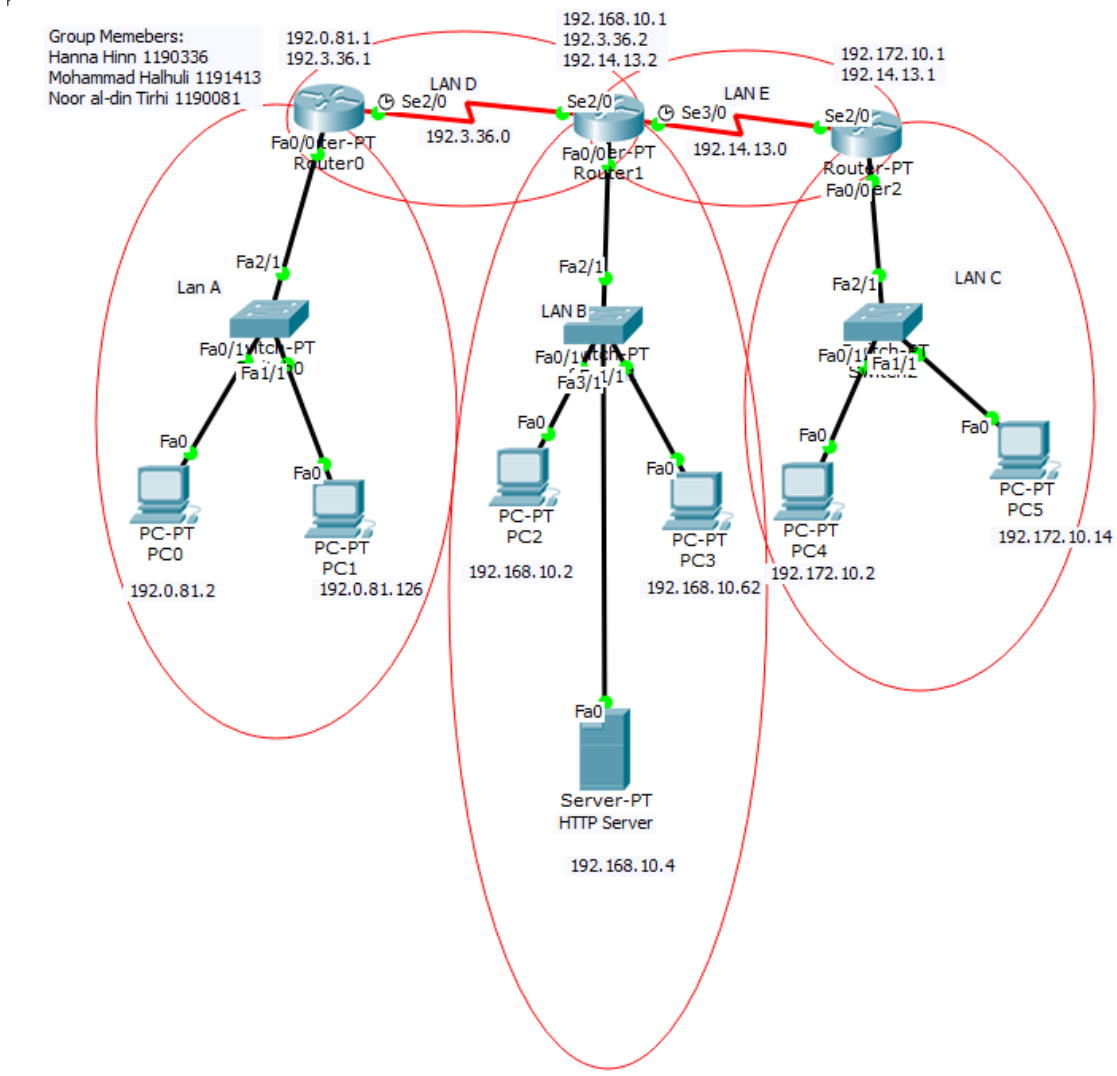
Pinging **Error! Hyperlink reference not valid.**:



Pinging www.hp.com:



Part2:



1- <u>IP assignment:</u>

3 members in the group, each member ID is used for one router subnet:

Router 0: 1- Fa0/0 IP address = 192.00.81.1/25 first host address in LAN A

2- Se2/0 IP address = 192.03.36.1/30 first host address in LAN D

Router 1: 1- Fa0/0 IP address = 192.168.10.1/26 first host address in LAN B

2- Se2/0 IP address = 192.03.36.2/30 second host address in LAN D

3- Se3/0 IP address = 192.14.13.1/30 first host address in LAN E

Router 2: 1- Se2/0 IP address = 192.14.13.2/30 second host address in LAN E

2- Fa0/0 IP address = 192.172.10.1/28 first host address in LAN C

PC0 and PC1 IP = 192.00.81.2 and 192.00.81.126 respectively.

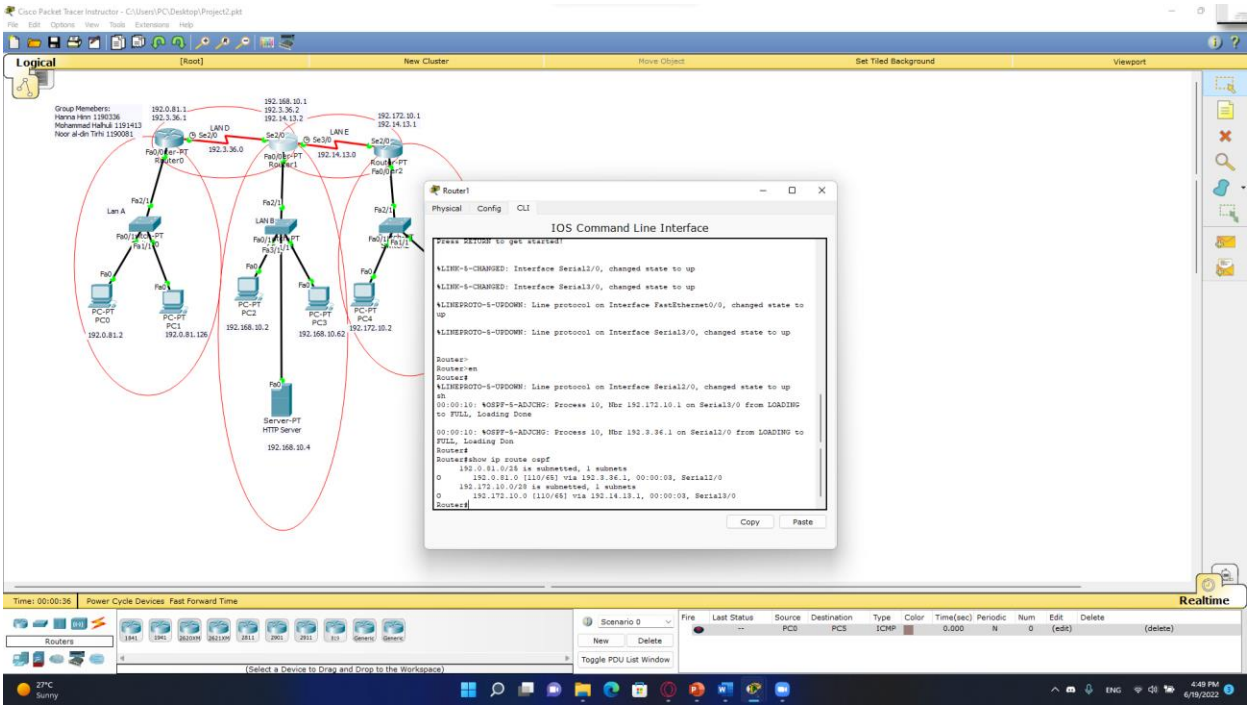
PC2, PC3 and HTTP server =

192.168.10.2, 192.168.10.62 and 192.168.10.4 respectively

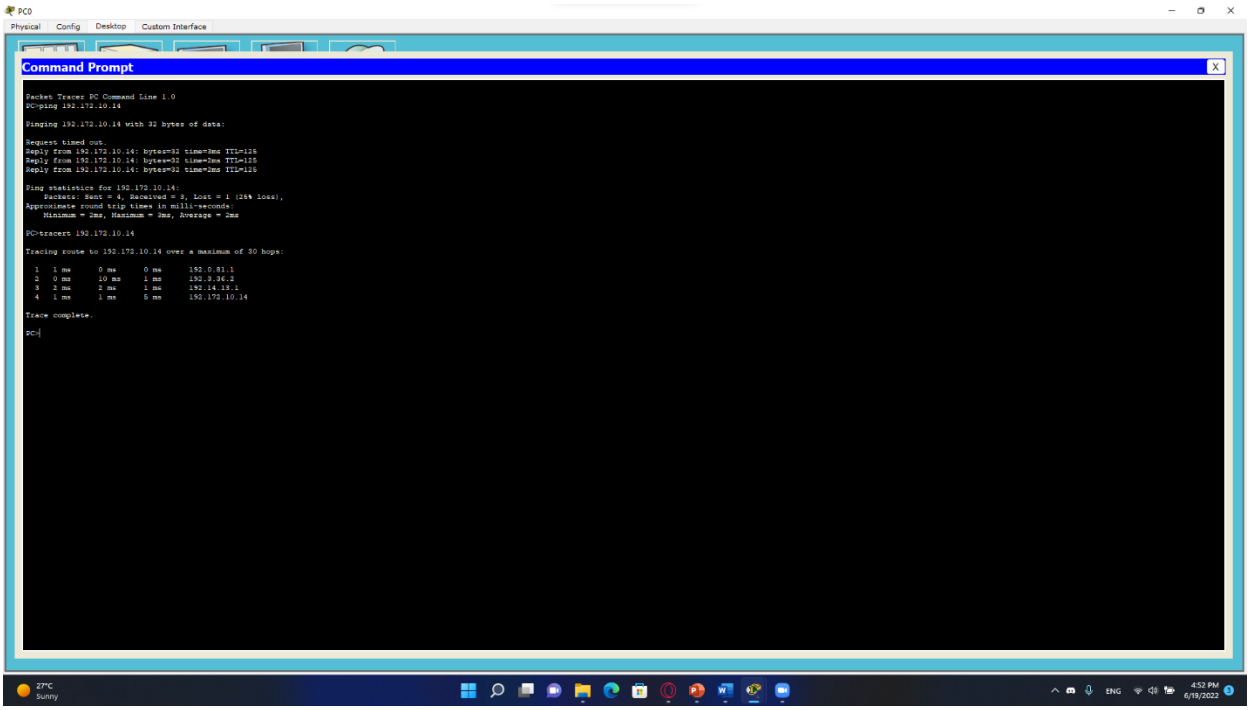
PC4 and PC5 IP = 192.172.10.2 and 192.172.10.14 respectively

2- *Routing Protocol:*

Router 1 routing table:



Trace route from PC0 to PC5 screenshot



HTTP test from PC0 to HTTP sever