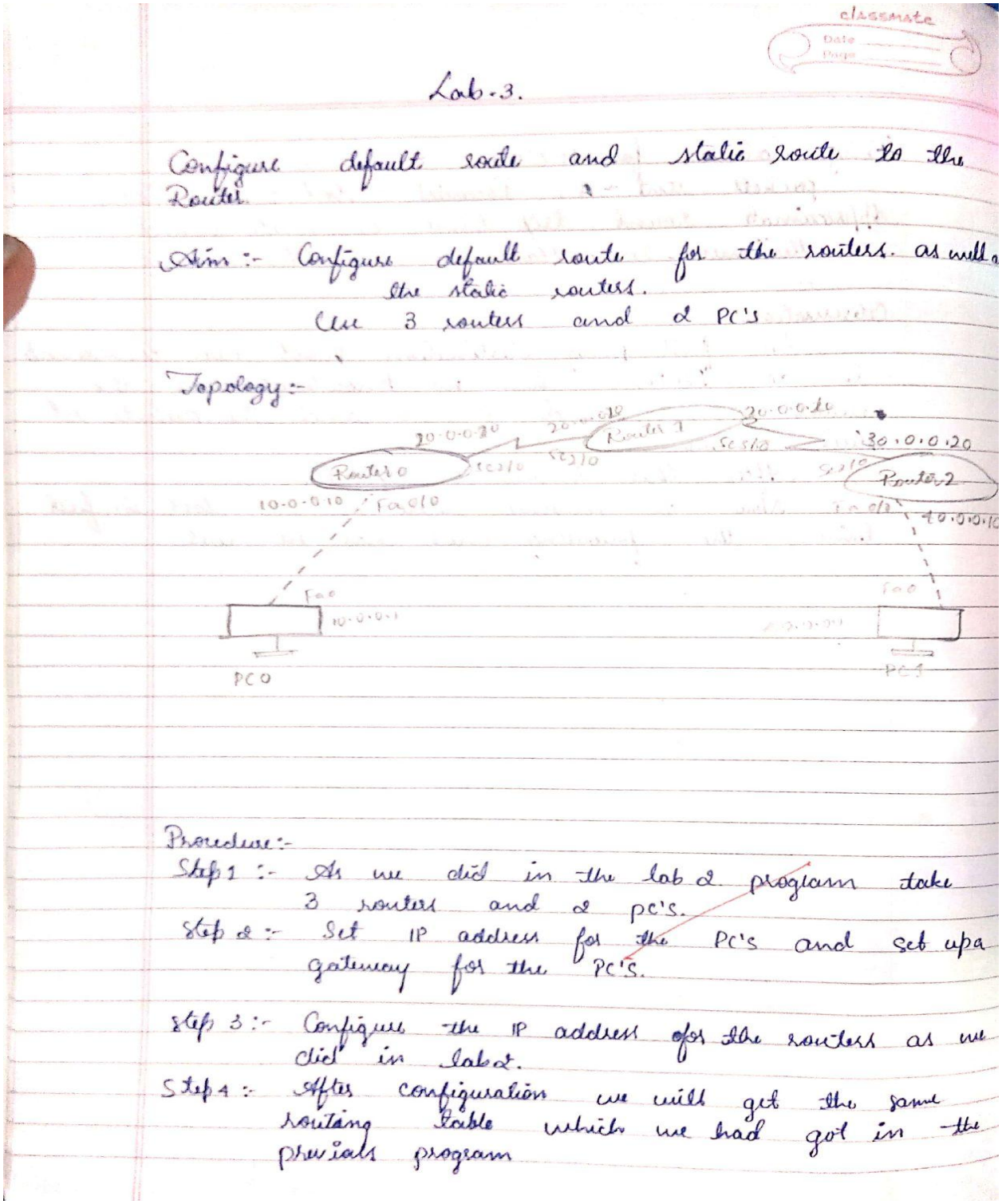
WEEK 3

Configure default route, static route to the Router

OBSERVATION:



Lab-3.

Configure default route and static route to the Router.

Aim :- Configure default route for the routers. as well as the static routers.
Use 3 routers and 2 PC's

Topology :-

Procedure :-

Step 1 :- As we did in the lab 2 program take 3 routers and 2 pc's.

Step 2 :- Set IP address for the PC's and set upa gateway for the PC's.

Step 3 :- Configure the IP address for the routers as we did in lab 2.

Step 4 :- After configuration we will get the same routing table which we had got in the previals program

Ex:- Configure Router 0 IP address

Go to CLI.

Router > enable

Router # config t.

Router (config t) # interface fastethernet 0/0

Router (config t-if) # ip address 10.0.0.10 255.0.0.0

Router (config -if) # no shut

exit

Router (config) # interface serial 2/0

Router (config -if) # ip address 20.00.10 255.0.0.0

Router (config -if) # no shut

exit.

Ripeate this for other 2 routers as well.

IP Routing table:-

Router 0:

Router # show ip route

C 10.0.0.0/8 is directly connected, Fast Ethernet 0/0

C 20.0.0.0/8 is directly connected, serial 2/0.

Router 1: Same output as we got in Lab2

Router 2: —x—

Now ping output in PC0.

PC > ping 40.0.0.1.

Reply from 10.0.0.10 : destination host unreachable

ping statistics for 40.0.0.1 :

packets : sent 4 received = 0 lost = 4
(100% loss)

Observation :-

PC1 is not reachable since we haven't set up the ip route yet.

Now set up default route in router 0 and router 2. But for router 1 configure it has we did in lab 2 (By giving the ip address which it does not have knowledge about other networks).

In all 3 Routers CLI write config t then set route

Router 0 :

ip route 0.0.0.0 0.0.0.0 20.0.0.20

Router 1 :-

ip route 40.0.0.0 255.0.0.0 30.0.0.20

ip route 10.0.0.0 255.0.0.0 20.0.0.10

Router 2:

IP route 0.0.0.0 0.0.0.0 30.0.0.10

new IP route table.

Route 0.

C 10.0.0.0/8 is directly connected, FastEthernet 0/0

C 20.0.0.0/8 is directly connected, serial 2/0

S* 0.0.0.0/0 [1/0] via 20.0.0.20

Router 1.

S - 10.0.0.0/8 [1/0] via 20.0.0.10

C 20.0.0.0/8 is directly connected, serial 2/0

C 30.0.0.0/8 is directly connected, serial 3/0

S 40.0.0.0/8 [1/0] via 30.0.0.20

Router 2.

C 30.0.0.0/8 is directly connected, Serial2/0
C 40.0.0.0/8 is directly connected, FastEthernet0/0.
S* 0.0.0.0/0 [1/0] via 30.0.0.10

Ping messages:

ping in PC0.

PC> ping 40.0.0.1

pinging 40.0.0.1 with 32 bytes of data.

Reply from 40.0.0.1 bytes=32 time=2ms TTL=125.
Reply from 40.0.0.1 bytes=32 time=2ms TTL=125
Reply from 40.0.0.1 bytes=32 time=2ms TTL=125
Reply from 40.0.0.1 bytes=32 time=2ms TTL=125

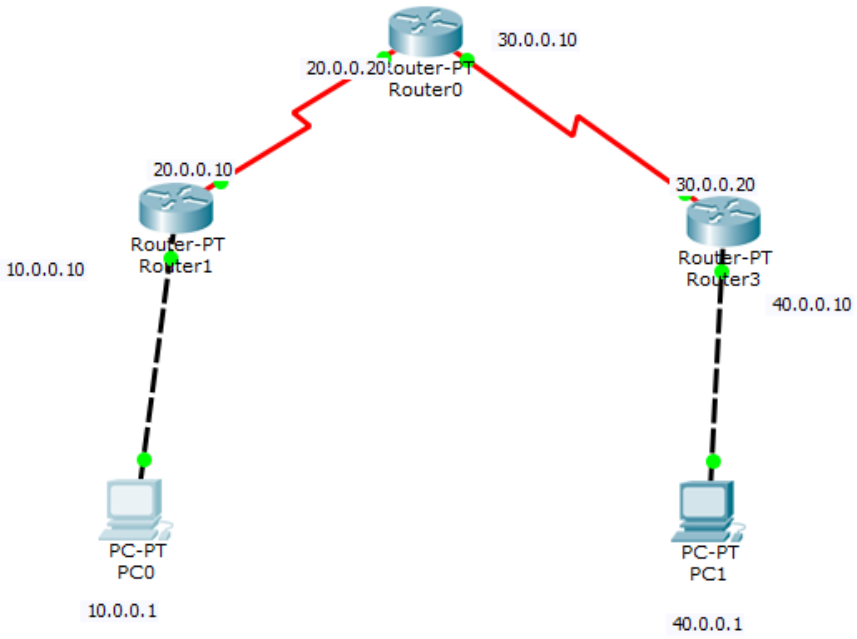
ping statistics for 40.0.0.1
packets sent=4, Received=4, lost=0 (0% loss).
Approximate round trip times in milli-seconds
Minimum=2ms, Maximum=2ms. Average=2ms.

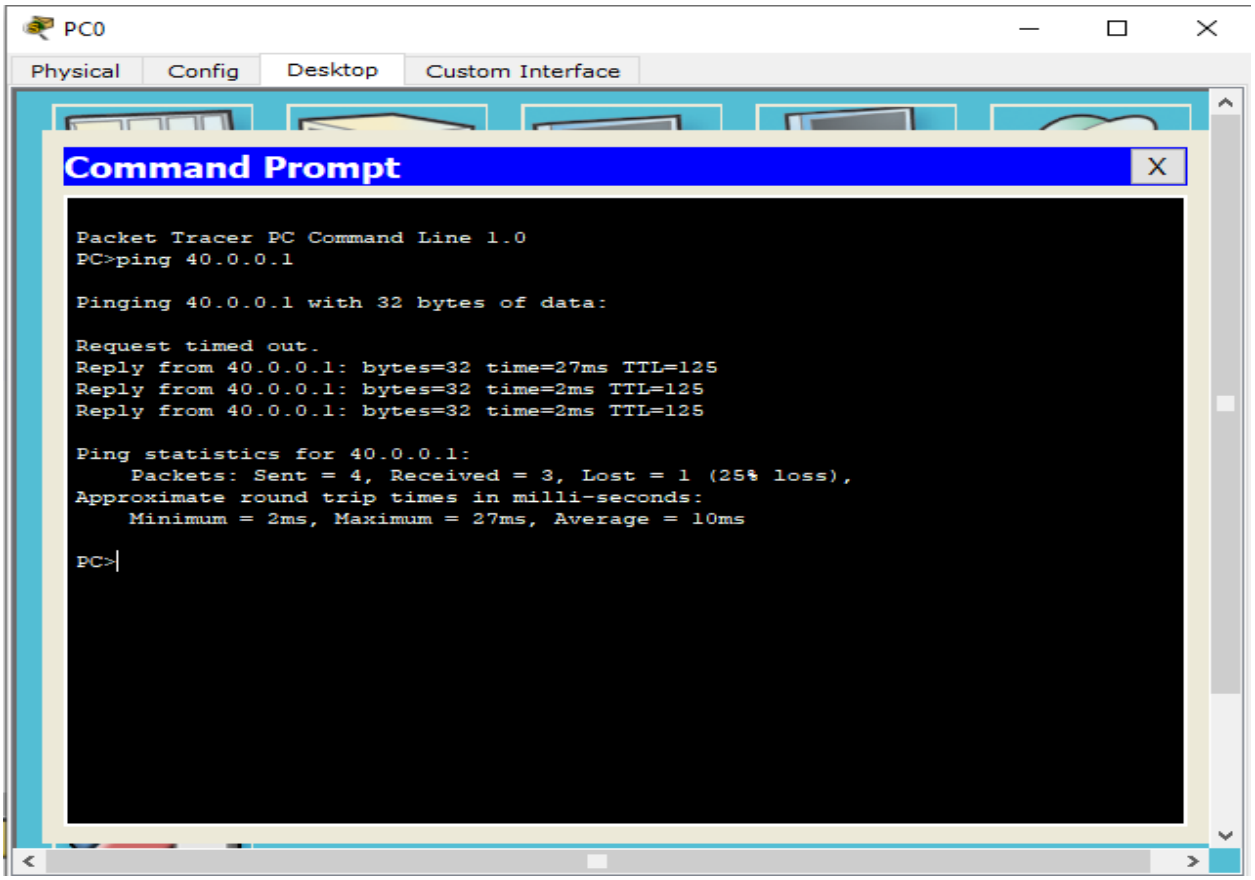
Observation:-

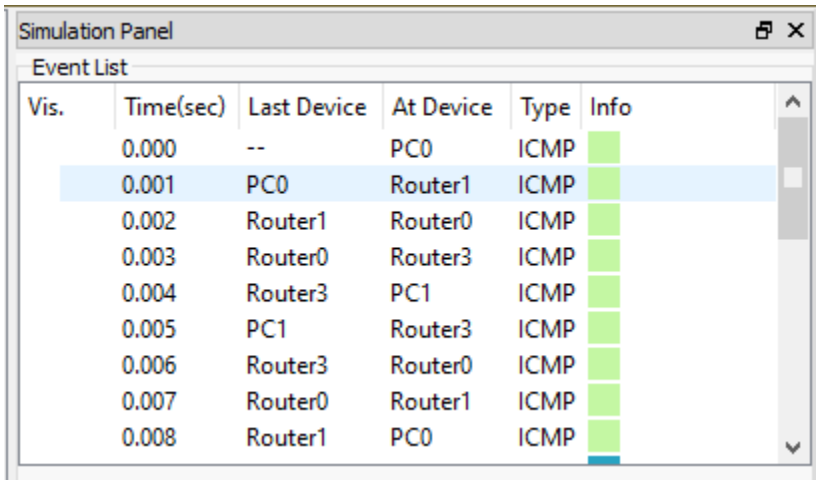
After setting a default route in routes 0 and router 2 whatever packet we send it will be redirected to the router 1. Then router 1 has the complete knowledge about all other networks.

Then Router 1 will send the packet to the respective network (Router). Then the receiver or destination device will receive the data (packet), it will send the acknowledgement after receiving the packet.

OUTPUT SCREENS:






Simulation Panel
Event List
Vis.
Time(sec)
Last Device
At Device
Type
Info
0.000 -- PC0 ICMP
0.001 PC0 Router1 ICMP
0.002 Router1 Router0 ICMP
0.003 Router0 Router3 ICMP
0.004 Router3 PC1 ICMP
0.005 PC1 Router3 ICMP
0.006 Router3 Router0 ICMP
0.007 Router0 Router1 ICMP
0.008 Router1 PC0 ICMP