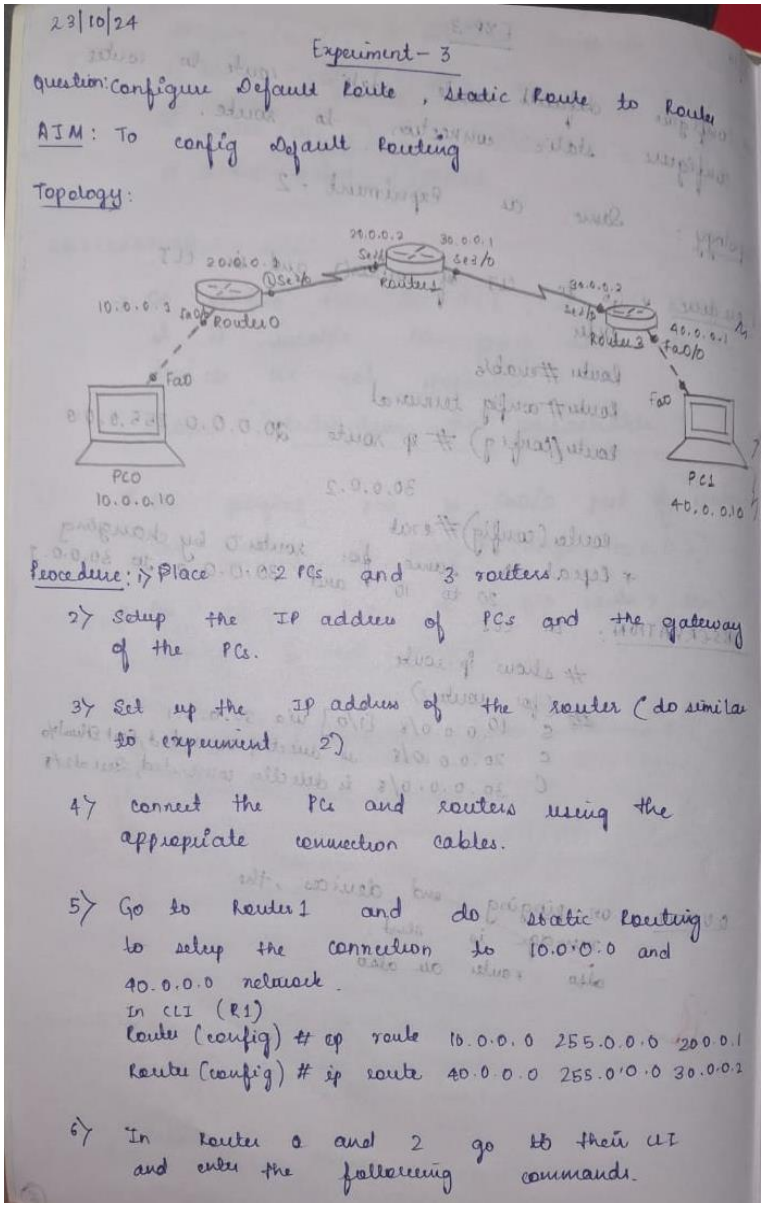
23|10|2024 Week-4(Experiment 3b)

Observation Book:



23|10|24

Experiment – 3

Question: Configure Default Route, Static Route to Router

AIM: To config Default Routing

Topology:

Procedure: 1) Place 2 PCs and 3 routers.

2) Setup the IP address of PCs and the gateway of the PCs.

3) Set up the IP address of the router (do similar to experiment 2)

4) connect the PCs and routers using the appropriate connection cables.

5) Go to Router 1 and do static routing to setup the connection to 10.0.0.0 and 40.0.0.0 network.

In CLI (R1)

Router (config) # ip route 10.0.0.0 255.0.0.0 20.0.0.1

Router (config) # ip route 40.0.0.0 255.0.0.0 30.0.0.2

6) In Router 0 and 2 go to their CLI and enter the following commands.

CLI (Router0)

Router (config) # ip route 0.0.0.0 0.0.0.0 20.0.0.2

CLI (Router2)

Router (config)# ip route 0.0.0.0 0.0.0.0 30.0.0.1

This step is called default routing, in this if any network or packet other than connected network will be passed to specified router

7) Once the configuration is complete we can now ping from the end device to other.

PC0
ping 40.0.0.10

OBSERVATION:

1) On pinging from one end device to the other,

ping 40.0.0.10

Pinging 40.0.0.10 with 32 bytes of data:

Reply from 40.0.0.10: bytes = 32 time = 2ms TTL = 253
Reply from 40.0.0.10: bytes = 32 time = 2ms TTL = 253
Reply from 40.0.0.10 bytes = 32 time = 5ms TTL = 253
Reply from 40.0.0.10 bytes = 32 time = 10ms TTL = 253

ping statistics for 40.0.0.1:
Packets: sent = 4, received = 4 lost = 0 (0% loss)

2) In Router0

Router # show ip route

Gateway of last route is 20.0.0.2 to network 0.0.0.0

C 10.0.0.0/8 is directly connected, FastEthernet0/0
C 20.0.0.0/8 is directly connected, Serial2/0
S* 0.0.0.0/0 [1/0].

(similar output for Router2)

In Router1

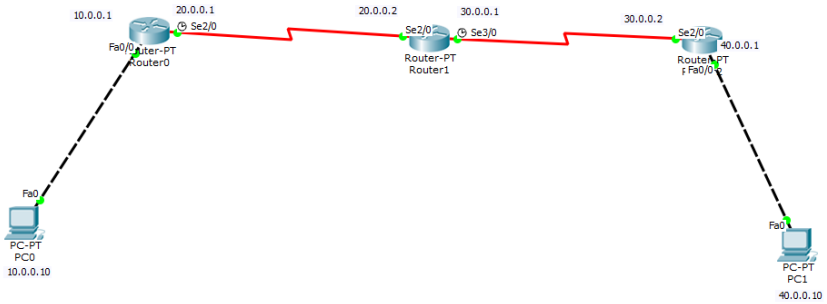
Router # show ip route

Gateway of last resort is not set

S 10.0.0.0/8 [1/0] via
C 20.0.0.0/8 is directly connected, Serial2/0
C 30.0.0.0/8 is directly connected, Serial3/0
S 40.0.0.0/8 [1/0] via

Through this experiment, we learnt on how to connect 3 or more networks by the concept of static and default routing, and we also sent messages from end device to other.

Topology:



Output: