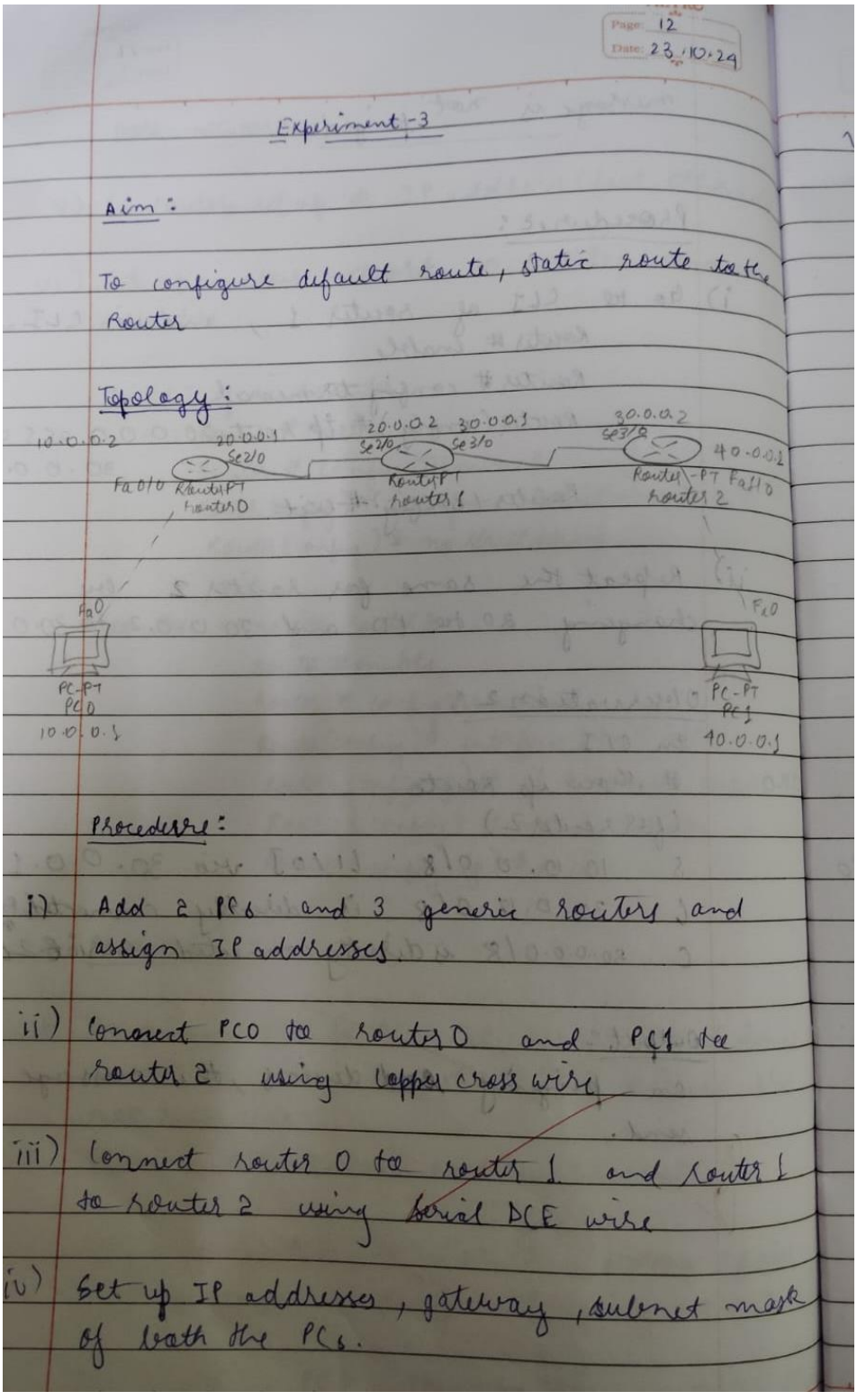
Program 4

Aim: Configure default route, static route to the Router(Part 2).

Topology , Procedure and Observation:



Page: 12
Date: 23/10/24

Experiment -3

Aim :

To configure default route, static route to the Router

Topology :

Procedure :

i) Add 2 PCs and 3 generic routers and assign IP addresses.

ii) Connect PC0 to router 0 and PC1 to router 2 using copper cross wire.

iii) Connect router 0 to router 1 and router 1 to router 2 using serial DCE wire.

iv) Set up IP addresses, gateway, subnet mask of both the PCs.

v) In CLI of router 0 enter
Router # enable
Router # config terminal
Router (config) # interface FastEthernet 0/0
Router (config)# ip address 10.0.0.1 255.0.0.0
Router (config) # no shutdown
exit
Router # enable
Router # config terminal
Router (config) # interface serial 2/0
Router (config) # ip address 20.0.0.1 255.0.0.0
Router (config) # no shutdown
Router (config) # exit

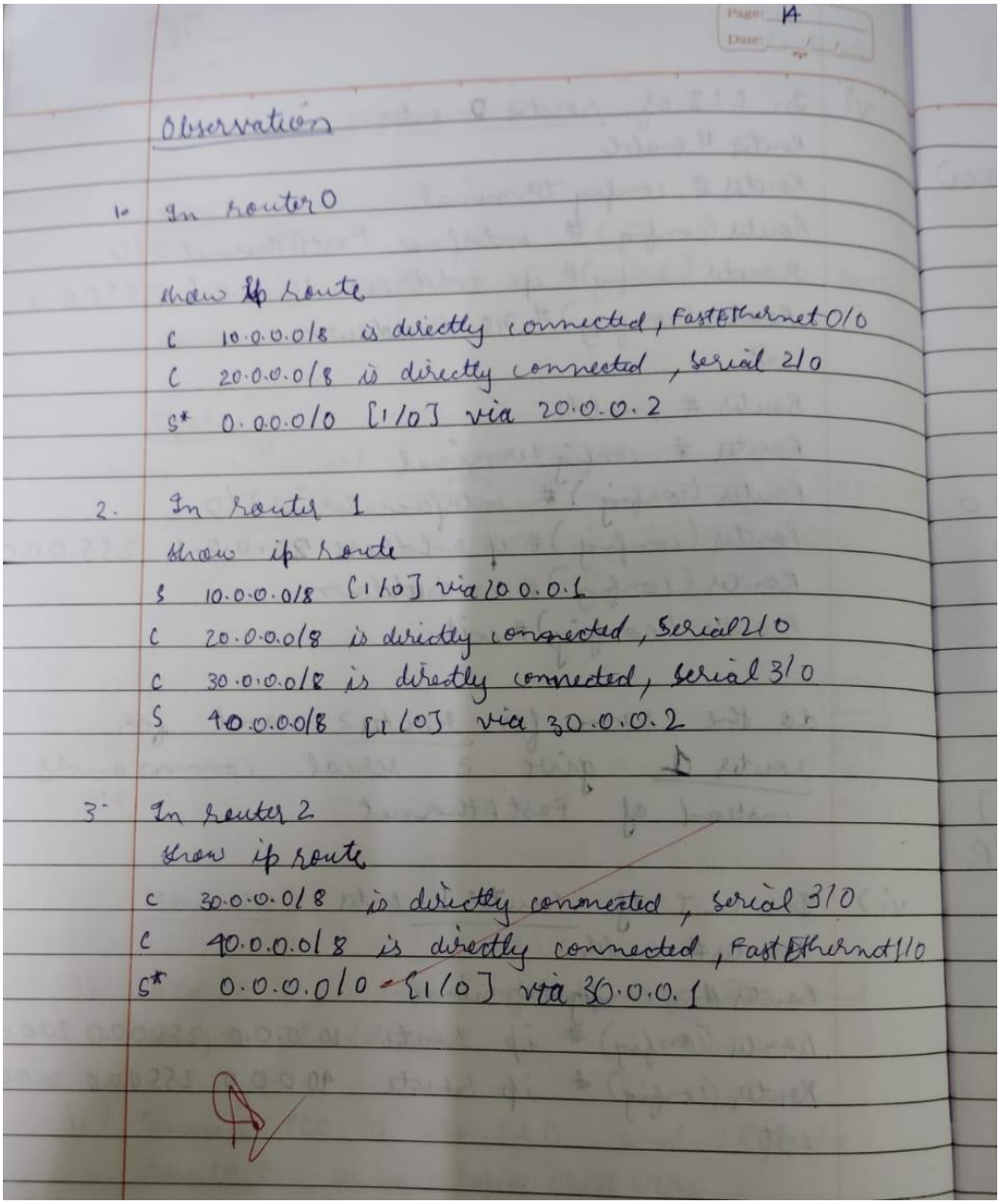
do the same for router 2 and for router 1 give a serial commands instead of FastEthernet.

vi) In CLI of router 1 enter
Router # enable
Router # config terminal
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
exit

vii) In CLI of router 0 enter (default routing)
Router (config)# ip route 0.0.0.0 0.0.0.0 20.0.0.2

viii) In CLI of router 2 enter (default routing)
Router (config)# ip route 0.0.0.0 0.0.0.0 30.0.0.1

ix) ping PC0 to PC1, the packets are send.



Observations

1. In Router 0

show ip route
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 20.0.0.2

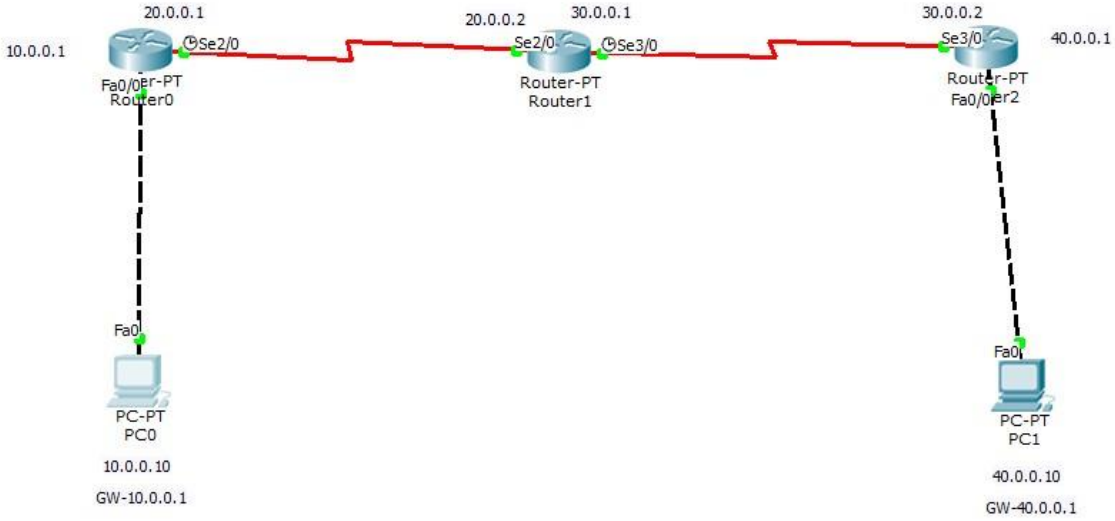
2. In Router 1

show ip route
S 10.0.0.0/8 [1/0] via 20.0.0.1
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 30.0.0.2

3. In Router 2

show ip route
C 30.0.0.0/8 is directly connected, Serial 3/0
C 40.0.0.0/8 is directly connected, FastEthernet 1/0
S* 0.0.0.0/0 [1/0] via 30.0.0.1

Screen Shots:



PC0

Physical | Config | Desktop | Custom Interface

Command Prompt

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Pinging 40.0.0.10 with 32 bytes of data:

Request timed out.
Reply from 40.0.0.10: bytes=32 time=7ms TTL=125
Reply from 40.0.0.10: bytes=32 time=6ms TTL=125
Reply from 40.0.0.10: bytes=32 time=5ms TTL=125

Ping statistics for 40.0.0.10:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 5ms, Maximum = 7ms, Average = 6ms

PC>ping 40.0.0.10

Pinging 40.0.0.10 with 32 bytes of data:

Reply from 40.0.0.10: bytes=32 time=8ms TTL=125
Reply from 40.0.0.10: bytes=32 time=7ms TTL=125
Reply from 40.0.0.10: bytes=32 time=9ms TTL=125
Reply from 40.0.0.10: bytes=32 time=6ms TTL=125

Ping statistics for 40.0.0.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 6ms, Maximum = 9ms, Average = 7ms

PC>
```