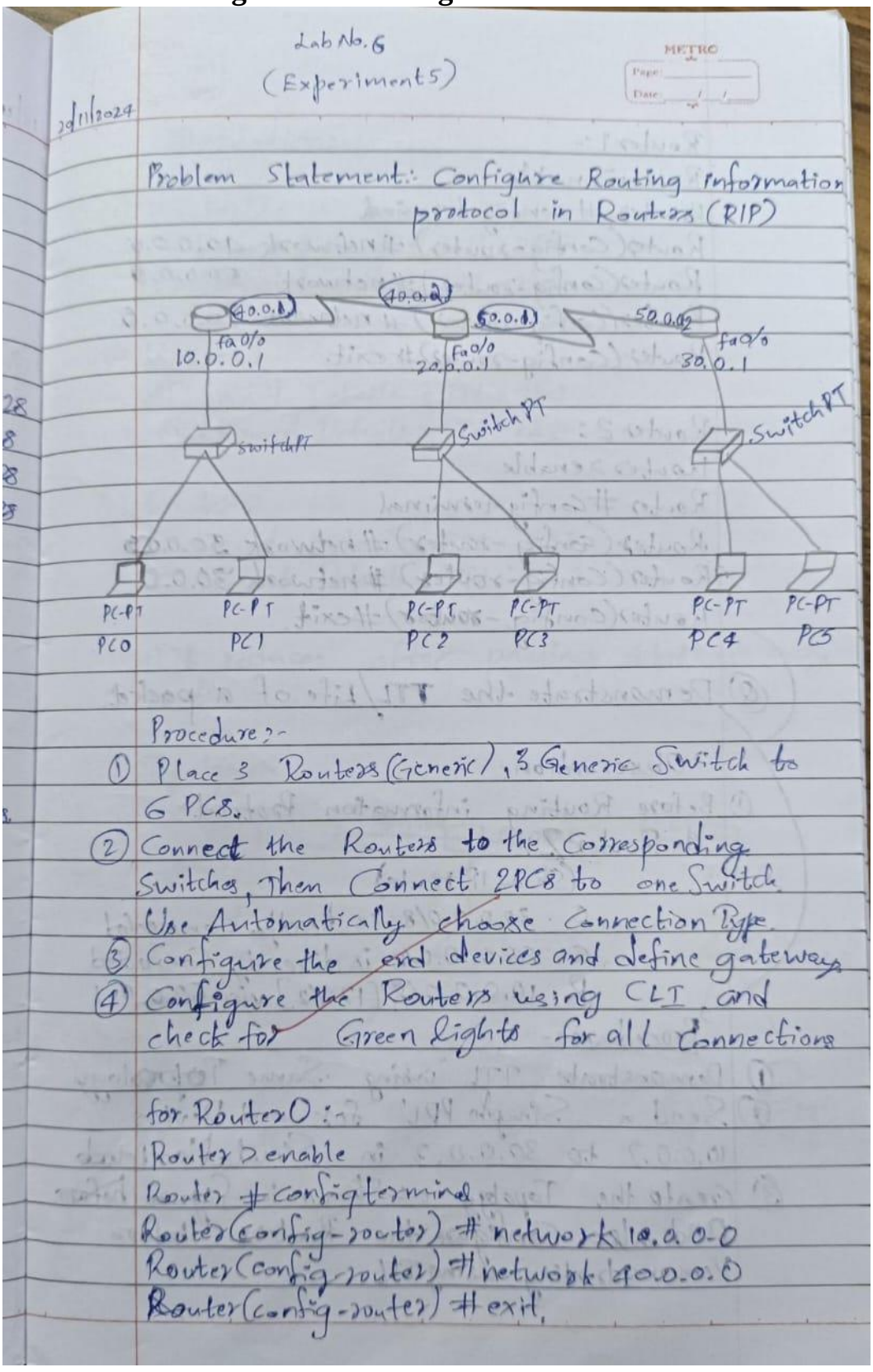
LABORATORY PROGRAM – 5

Configure RIP routing Protocol in Routers



Router 1:-
Router>enable
Router #config terminal
Router(Config-router) #network 40.0.0.0
Router(Config-router) #network 50.0.0.0
Router(Config-router) #network 20.0.0.0
Router(Config-router) #exit.

Router 2:
Router>enable
Router #Config terminal
Router(config-router) #network 50.0.0.0
Router(Config-router) #network 30.0.0.0
Router(Config-router) #exit.

(9) Demonstrate the TTL/Life of a packet.

→ Observation:

(1) Before Routing information Protocol:
In Router 2:-
(Show IP route)
C 30.0.0.0/8 is directly connected
C 50.0.0.0/8 is directly Connected
R 10.0.0.0/8 [120/2] via 50.0.0.1

Procedure:-

(1) Demonstrate TTL using Same Topology
(2) Send a Simple PDU for end Device 10.0.0.2 to 30.0.0.3 in Simulation Mode
(3) Create the Topology as Shown in figure ~~before~~ and also Configure the Routers before Demonstrating using TTL

Observation:-

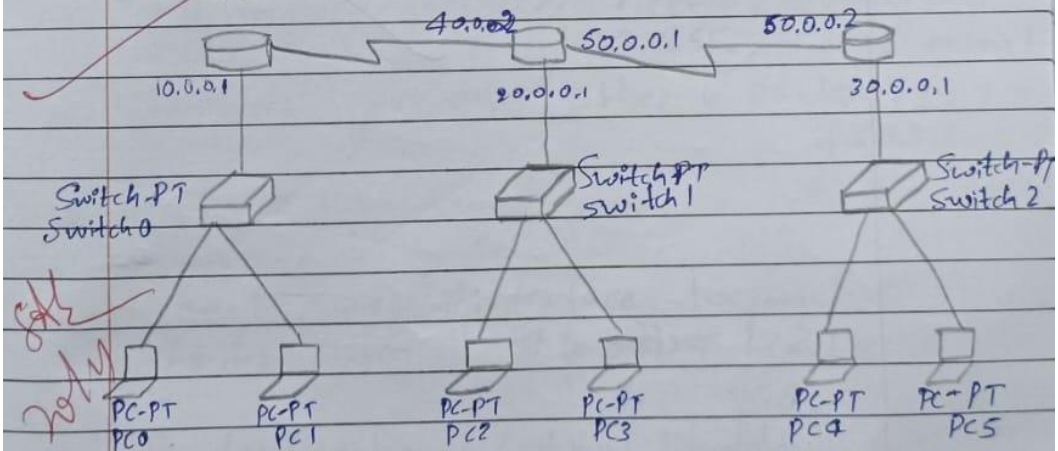
① Router0:
Inbound Details: TTL: 255
Outbound Details: TTL: 254

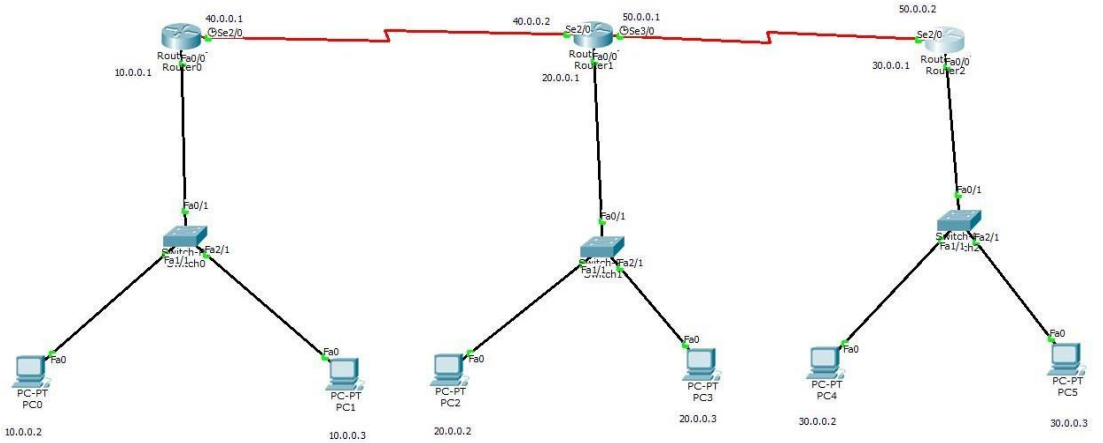
② Router1
Inbound Details: TTL: 254
OutBound Details: TTL: 253

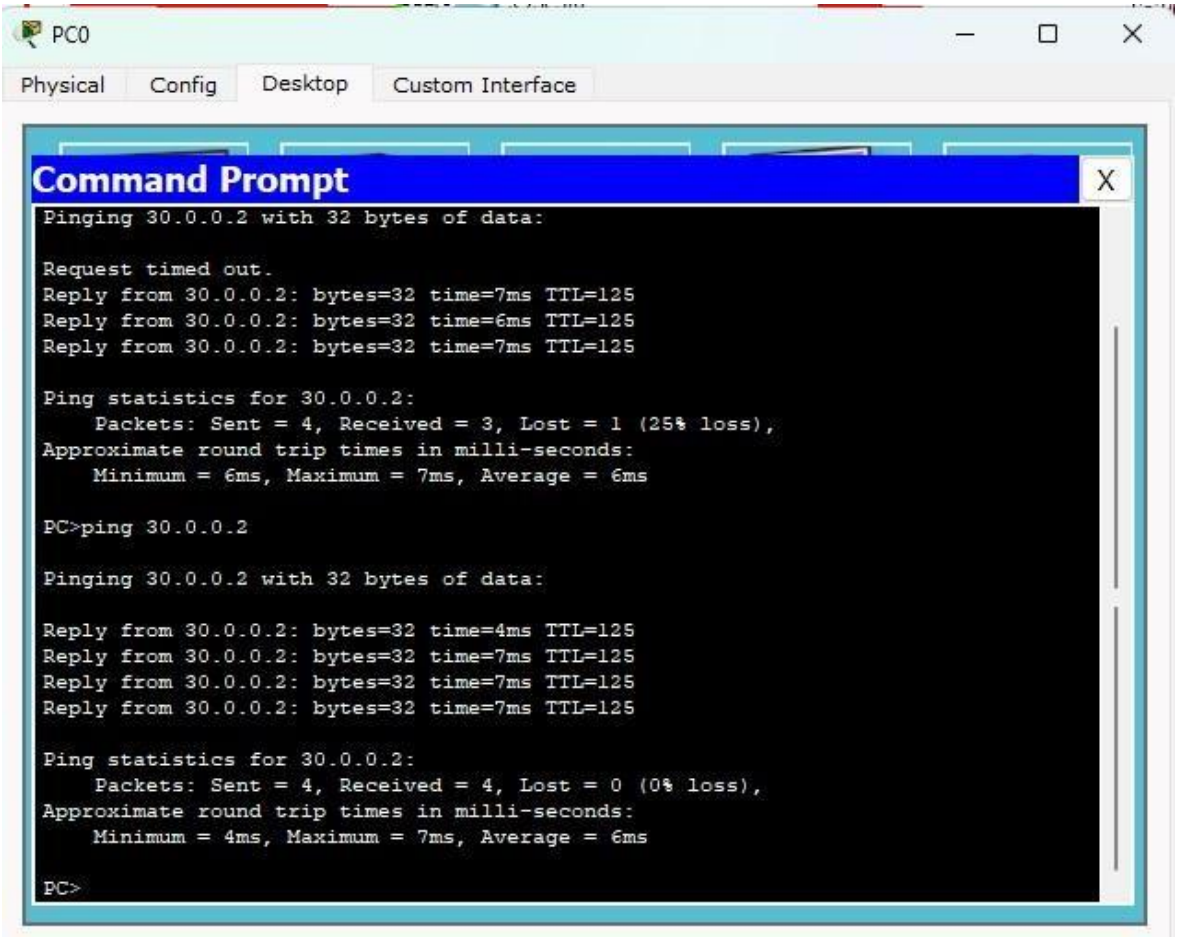
③ Router 2
Inbound Details: TTL: 253
OutBound Details: TTL: 252

TTL reduces after passing through every router

Topology:-




40.0.0.1
Se2/0
40.0.0.2
Se2/0
50.0.0.1
Se3/0
50.0.0.2
Se2/0
Router
Fa0/0
Router0
Router1
Router2
10.0.0.1
20.0.0.1
30.0.0.1
Fa0/1
Fa2/1
Switch
Fa1/1ch0
Switch1
Fa1/1-h2
Fa0
PC-PT
PC0
PC1
PC2
PC3
PC4
PC5
10.0.0.2
10.0.0.3
20.0.0.2
20.0.0.3
30.0.0.2
30.0.0.3


PC0
Physical
Config
Desktop
Custom Interface
Command Prompt
X
Pinging 30.0.0.2 with 32 bytes of data:
Request timed out.
Reply from 30.0.0.2: bytes=32 time=7ms TTL=125
Reply from 30.0.0.2: bytes=32 time=6ms TTL=125
Reply from 30.0.0.2: bytes=32 time=7ms TTL=125
Ping statistics for 30.0.0.2:
Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
Minimum = 6ms, Maximum = 7ms, Average = 6ms
PC>ping 30.0.0.2
Pinging 30.0.0.2 with 32 bytes of data:
Reply from 30.0.0.2: bytes=32 time=4ms TTL=125
Reply from 30.0.0.2: bytes=32 time=7ms TTL=125
Reply from 30.0.0.2: bytes=32 time=7ms TTL=125
Reply from 30.0.0.2: bytes=32 time=7ms TTL=125
Ping statistics for 30.0.0.2:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 4ms, Maximum = 7ms, Average = 6ms
PC>