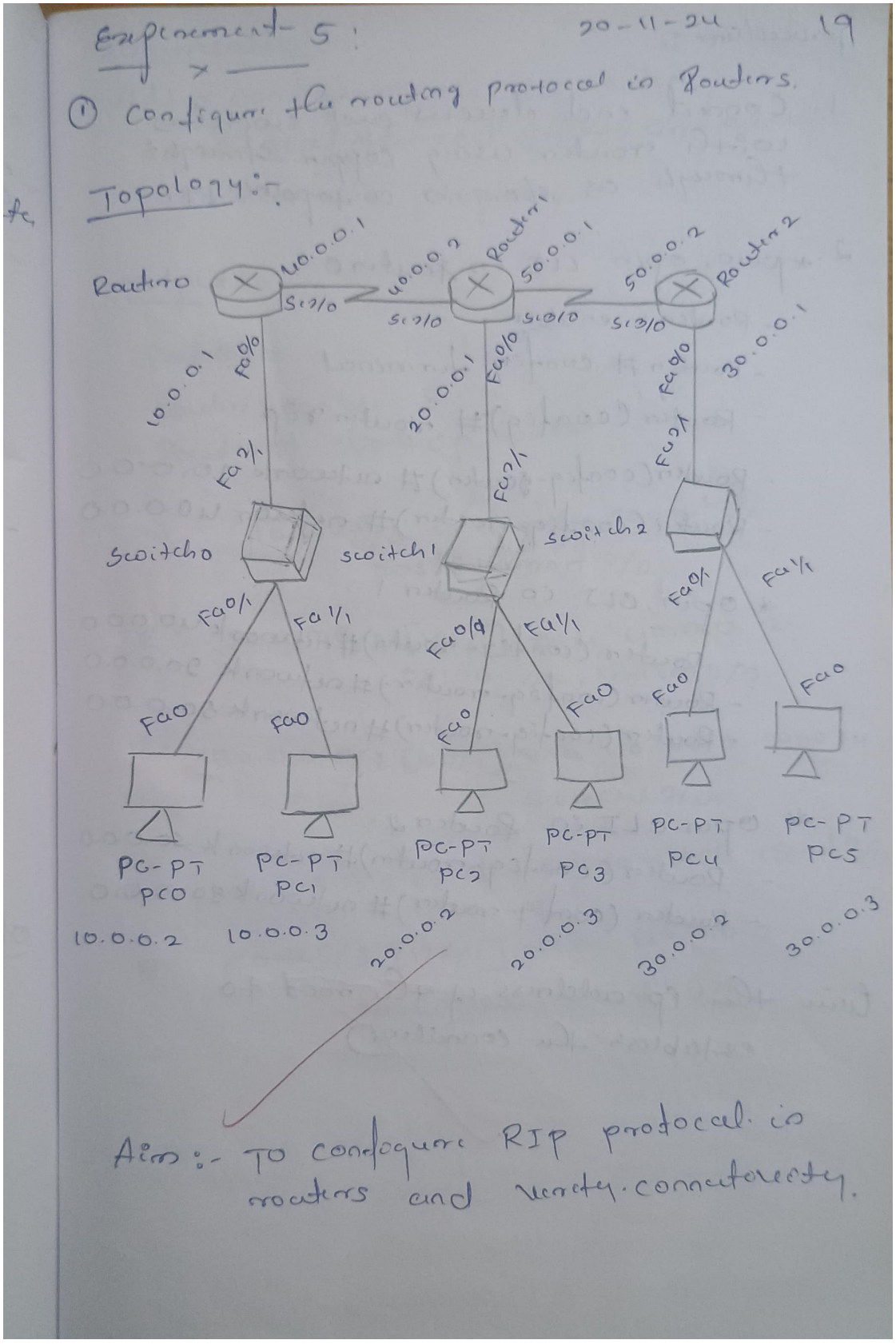
20|11|2024 Experiment 5-Configure RIP routing Protocol in Router

Observation Book:



procedure :-

1. Connect end devices and switches with router using copper straight through as shown in a topology.

2. * power, open CLI in Router 0
   - Router > enable
   - Router # config terminal
   - Router (config) # router rip
   - Router (config-router) # network 10.0.0.0
   - Router (config-router) # network 40.0.0.0

   * Open CLI in Router 1
   - Router (config-router) # network 40.0.0.0
   - Router (config-router) # network 30.0.0.0
   - Router (config-router) # network 50.0.0.0

   * Open CLI in Router 2
   - Router (config-router) # network 50.0.0.0
   - Router (config-router) # network 80.0.0.0

Give the ip address of the root to establish the connection

observation:-

After configuring the RIP routing protocol the end devices are able to communicate properly.

output:

Router>
Router>enable
Router# show ip route

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

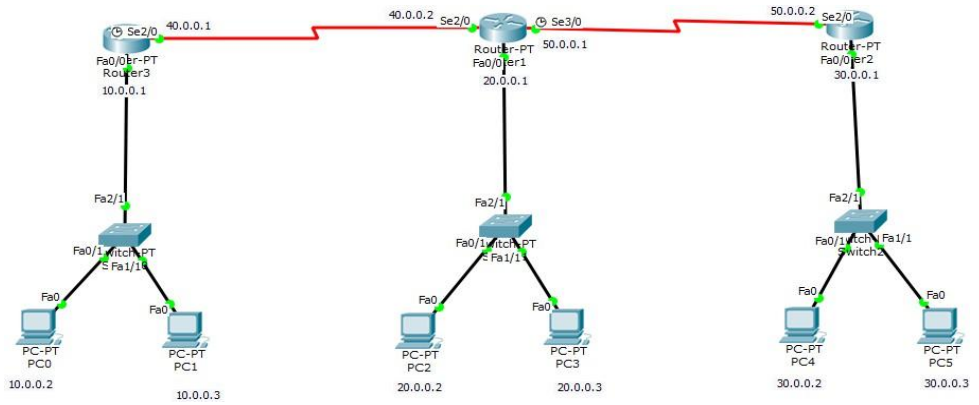
R : 20.0.0.0/8 [120/1] via 40.0.0.2, 00:00:24, Serial 2/0

R : 30.0.0.0/8 [120/1] via 40.0.0.2, 00:00:24, Serial 2/0

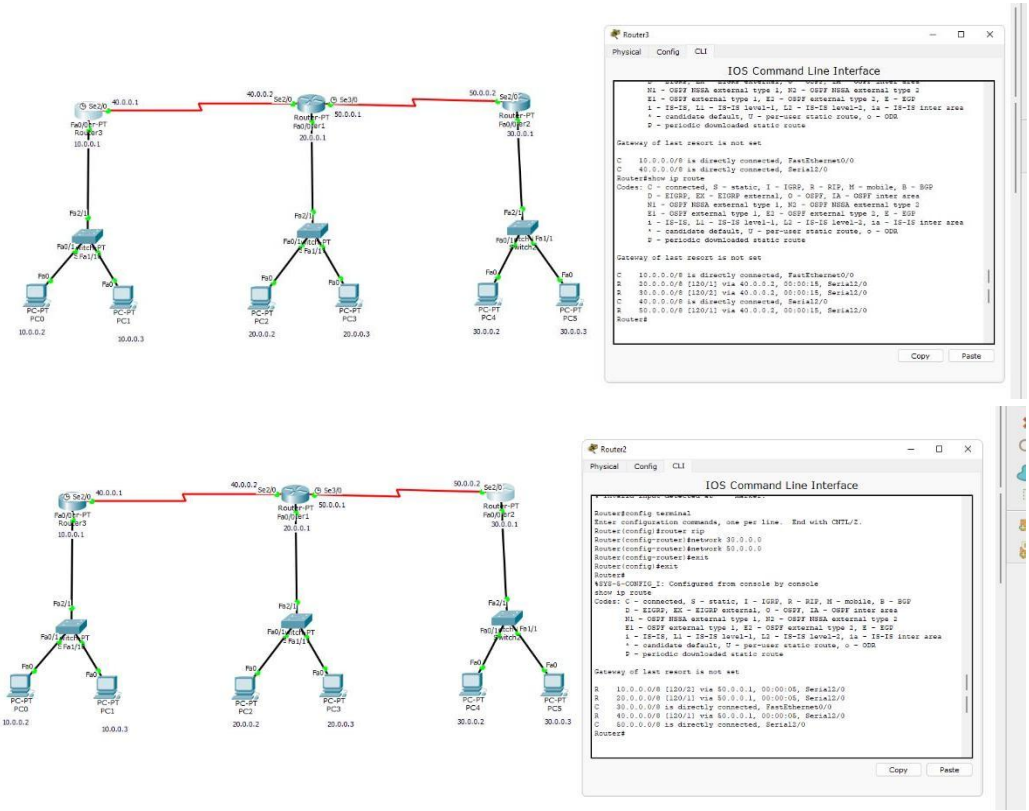
C : 40.0.0.0/8 is directly connected, Serial 2/0

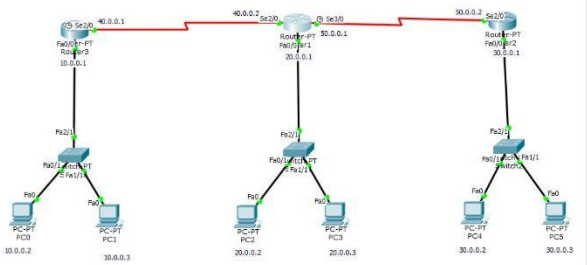
R : 50.0.0.0/8 [120/1] via 40.0.0.2, 00:00:24, Serial 2/0

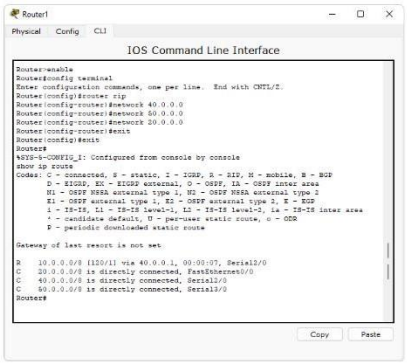
Topology:

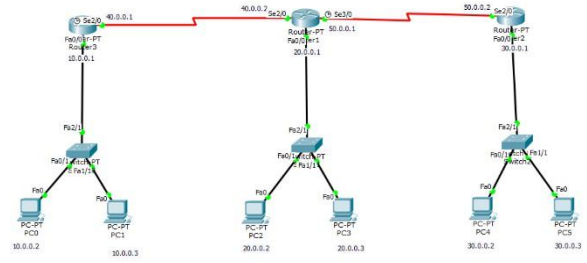


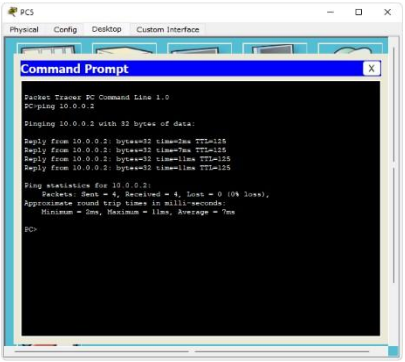
Output:




Se2/0
40.0.0.1
40.0.0.2
Se2/0
Se3/0
50.0.0.1
50.0.0.2
Se2/0
Router-PT
Router3
10.0.0.1
Router-PT
Router1
20.0.0.1
Router-PT
Router2
30.0.0.1
Fa2/1
Fa0/1
Fa1/1
Switch0
Switch1
Switch2
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


Router1
Physical
Config
CLI
IOS Command Line Interface
Router>enable
Router#config terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#router rip
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(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
* - candidate default, U - per-user static route, o - ODR
P - periodic downloaded static route
Gateway of last resort is not set
R 10.0.0.0/8 [120/1] via 40.0.0.1, 00:00:07, Serial2/0
C 20.0.0.0/8 is directly connected, FastEthernet0/0
C 40.0.0.0/8 is directly connected, Serial2/0
C 50.0.0.0/8 is directly connected, Serial3/0
Router#
Copy
Paste


Se2/0
40.0.0.1
40.0.0.2
Se2/0
Se3/0
50.0.0.1
50.0.0.2
Se2/0
Router-PT
Router3
10.0.0.1
Router-PT
Router1
20.0.0.1
Router-PT
Router2
30.0.0.1
Fa2/1
Fa0/1
Fa1/1
Switch0
Switch1
Switch2
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


PC5
Physical
Config
Desktop
Custom Interface
Command Prompt
X
Packet Tracer PC Command Line 1.0
PC>ping 10.0.0.2
Pinging 10.0.0.2 with 32 bytes of data:
Reply from 10.0.0.2: bytes=32 time=2ms TTL=125
Reply from 10.0.0.2: bytes=32 time=7ms TTL=125
Reply from 10.0.0.2: bytes=32 time=11ms TTL=125
Reply from 10.0.0.2: bytes=32 time=11ms TTL=125
Ping statistics for 10.0.0.2:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 2ms, Maximum = 11ms, Average = 7ms
PC>