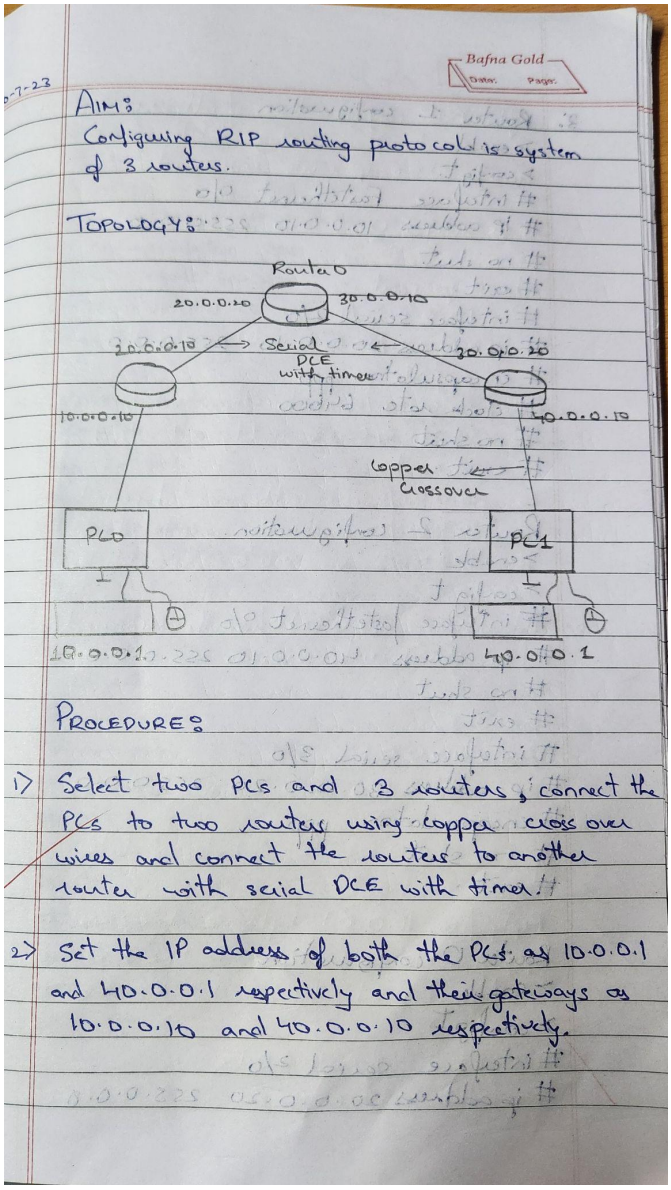
EXPERIMENT 5

AIM:

Configure RIP routing Protocol in Routers

OBSERVATION:



3. Router 1 configuration

```
>enable
>config t
#interface Fastethernet 0/0
# ip address 10.0.0.10 255.0.0.0
# no shut
# exit.
#interface serial 2/0
# ip address 20.0.0.10 255.0.0.0
# encapsulation ppp
# clock rate 64000
# no shut
# exit.
```

Router 2 configuration.

```
>enable
>config t
#interface fastethernet 0/0
# ip address 40.0.0.10 255.0.0.0
#no shut
# exit
#interface serial 3/0
#ip address 30.0.0.20 255.0.0.0
#encapsulation ppp
# no shut
#exit.
```

Router 0 configuration

```
>enable
>config t
#interface serial 2/0
# ip address 20.0.0.20 255.0.0.0
```

#encapsulation ppp
#no shut
#exit
#interface serial 3/0
#ip address 30.0.0.10 255.0.0.0
#encapsulation PPP
#clockrate 64000
#no shut
#exit

4. Now, network router configuration for Routing Information Protocol (RIP) is done as follows

Router 1
#router rip
#network 10.0.0.0
#network 20.0.0.0
#exit

Router 2
#router rip
#network 30.0.0.0
#network 40.0.0.0
#exit

Router 0
#router rip
#network 20.0.0.0
#network 30.0.0.0
#exit

5. After RIP configuration of all routers, we check the routing table of all by giving show ip route command.

For router 0

show ip rout
R 10.0.0.0/8 via 20.0.0.10, 00:00:13, serial
20.0.0.0/8 is variably subnetted, 2 subnets, 2 masks.
C 20.0.0.0/8 is directly connected, serial 2/0
C 30.0.0.0/8 is variably subnetted, 2 subnets, 2 masks.
C 30.0.0.0/8 is directly connected, serial 3/0
C 30.0.0.0/32 is directly connected, serial 3/0
R 40.0.0.0/8 via 30.0.0.20, 00:00:12, serial 3/0

6. Now, ping 10.0.0.1 from the command prompt of 40.0.0.1 and vis versa.

RESULT:
from 40.0.0.1
>ping 10.0.0.1

Pinging 10.0.0.1 with 32 bytes of data:
Request timed out
Reply from 10.0.0.1 : bytes = 32, time = 12ms TTL = 125
Reply from 10.0.0.1 : bytes = 32 time = 32ms TTL = 125
Reply from 10.0.0.1 : bytes = 32 time = 2ms TTL = 125

Ping statistics for 10.0.0.1:
Packets: Sent = 4, Received = 3, Lost = 01.

Bafna Gold
Date: Page:

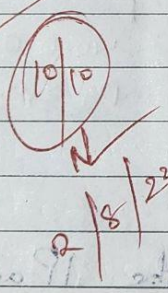
Approximate round trip time in milli-seconds.
Minimum = 2ms, Maximum = 8ms, Average = 2ms.

from 10.0.0.1
>ping 40.0.0.1

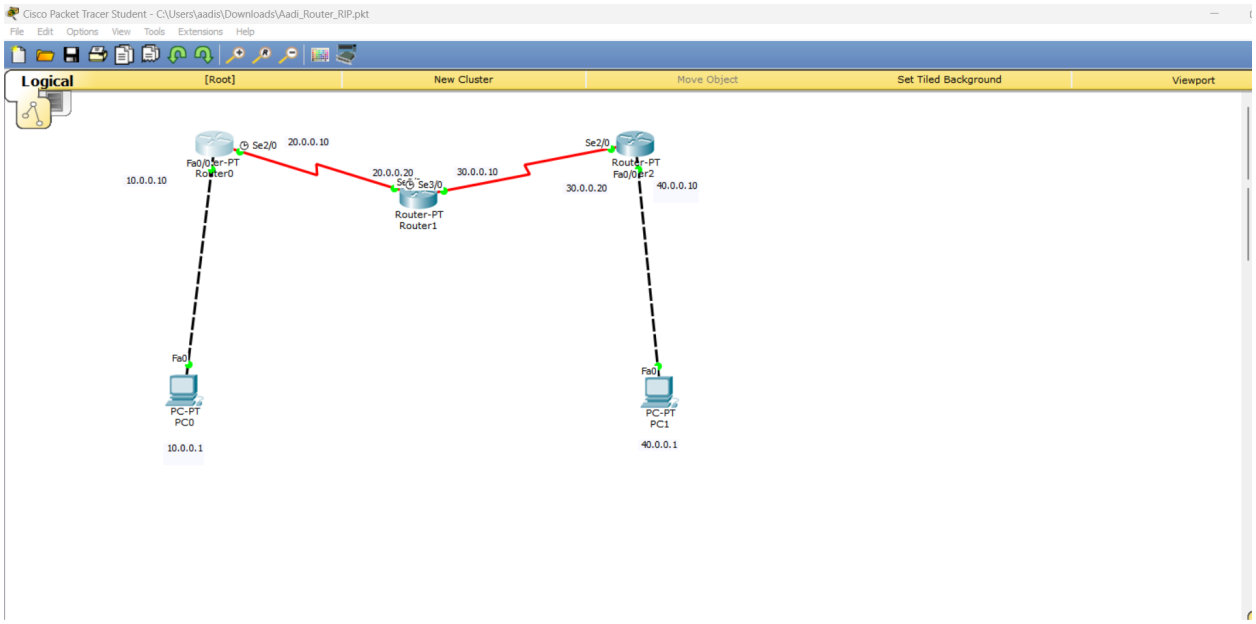
Pinging 40.0.0.1 with 32 bytes of data:

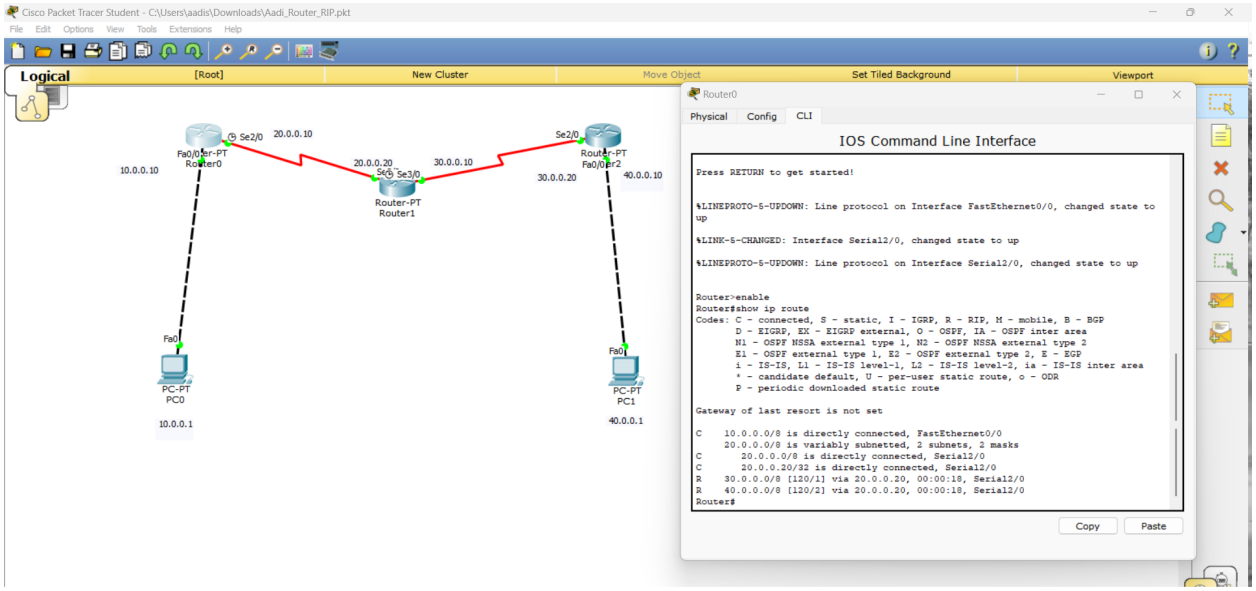
Reply from 40.0.0.1 : bytes = 32 time = 2ms TTL = 125
Reply from 40.0.0.1 : bytes = 32 time = 2ms TTL = 125
Reply from 40.0.0.1 : bytes = 32 time = 2ms TTL = 125
Reply from 40.0.0.1 : bytes = 32 time = 2ms TTL = 125

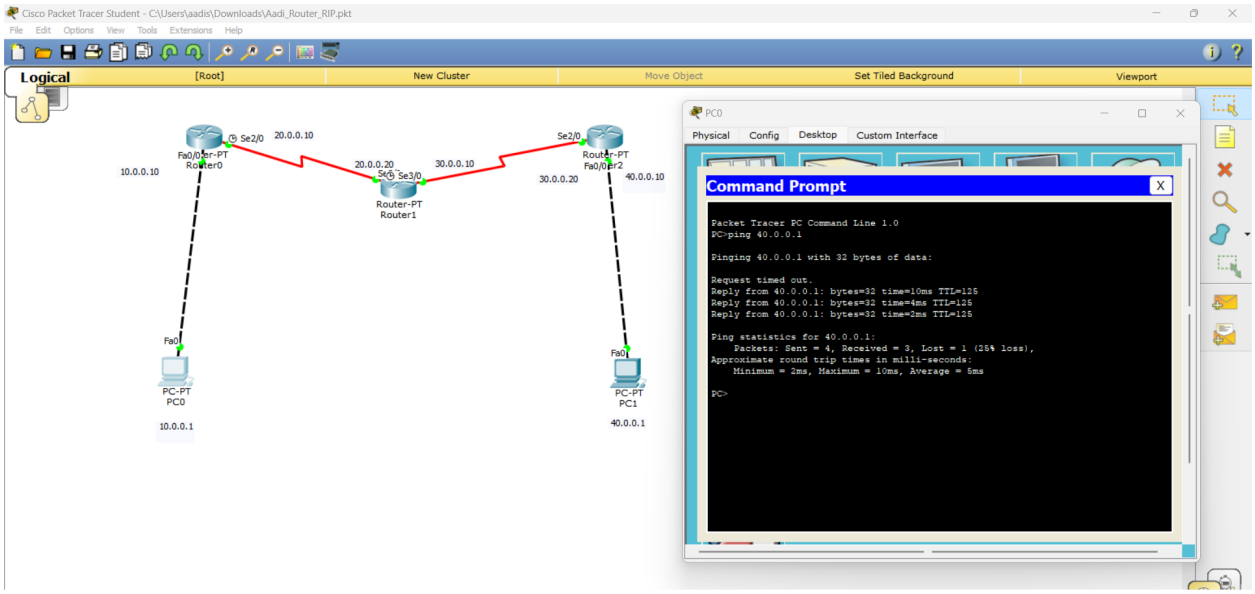
Ping statistics for 40.0.0.1 :
Packets : sent = 4, Received = 4, Lost = 0
Approximate round trip time in milli-seconds :
Minimum = 2ms, Maximum = 8ms, Average = 2ms.



Result:


Cisco Packet Tracer Student - C:\Users\aadis\Downloads\Aadi_Router_RIP.pkt
File Edit Options View Tools Extensions Help
Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
Router-PT Router0
Router-PT Router1
Router-PT Router2
Se2/0
Se3/0
20.0.0.10
20.0.0.20
30.0.0.10
30.0.0.20
40.0.0.10
10.0.0.10
Fa0
PC-PT PC0
PC-PT PC1
10.0.0.1
40.0.0.1


Cisco Packet Tracer Student - C:\Users\aadis\Downloads\Aadi_Router_RIP.pkt
Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
Router0
Physical
Config
CLI
IOS Command Line Interface
Press RETURN to get started!
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
%LINK-5-CHANGED: Interface Serial2/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up
Router>enable
Router#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
C 10.0.0.0/8 is directly connected, FastEthernet0/0
20.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C 20.0.0.0/8 is directly connected, Serial2/0
C 20.0.0.20/32 is directly connected, Serial2/0
R 30.0.0.0/8 [120/1] via 20.0.0.20, 00:00:18, Serial2/0
R 40.0.0.0/8 [120/2] via 20.0.0.20, 00:00:18, Serial2/0
Router#
Copy
Paste


Cisco Packet Tracer Student - C:\Users\aadis\Downloads\Aadi_Router_RIP.pkt
File Edit Options View Tools Extensions Help
Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
Router-PT Router0
Router-PT Router1
Router-PT Router2
Se2/0
Se3/0
Fa0/0
20.0.0.10
20.0.0.20
30.0.0.10
30.0.0.20
10.0.0.10
40.0.0.10
PC-PT PC0
PC-PT PC1
10.0.0.1
40.0.0.1
PC0
Physical
Config
Desktop
Custom Interface
Command Prompt
Packet Tracer PC Command Line 1.0
PC>ping 40.0.0.1
Pinging 40.0.0.1 with 32 bytes of data:
Request timed out.
Reply from 40.0.0.1: bytes=32 time=10ms TTL=125
Reply from 40.0.0.1: bytes=32 time=4ms 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 = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
Minimum = 2ms, Maximum = 10ms, Average = 5ms
PC>