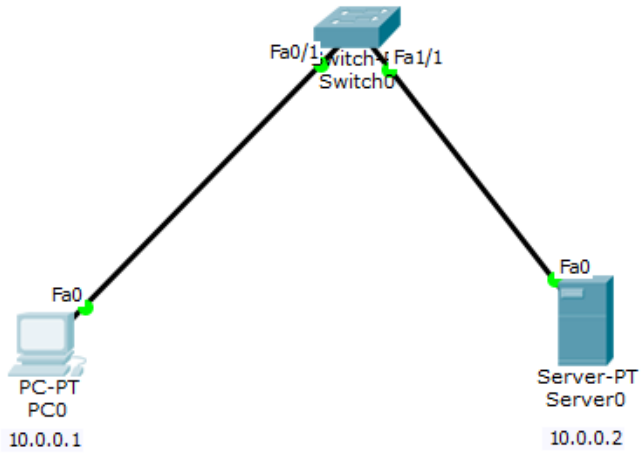
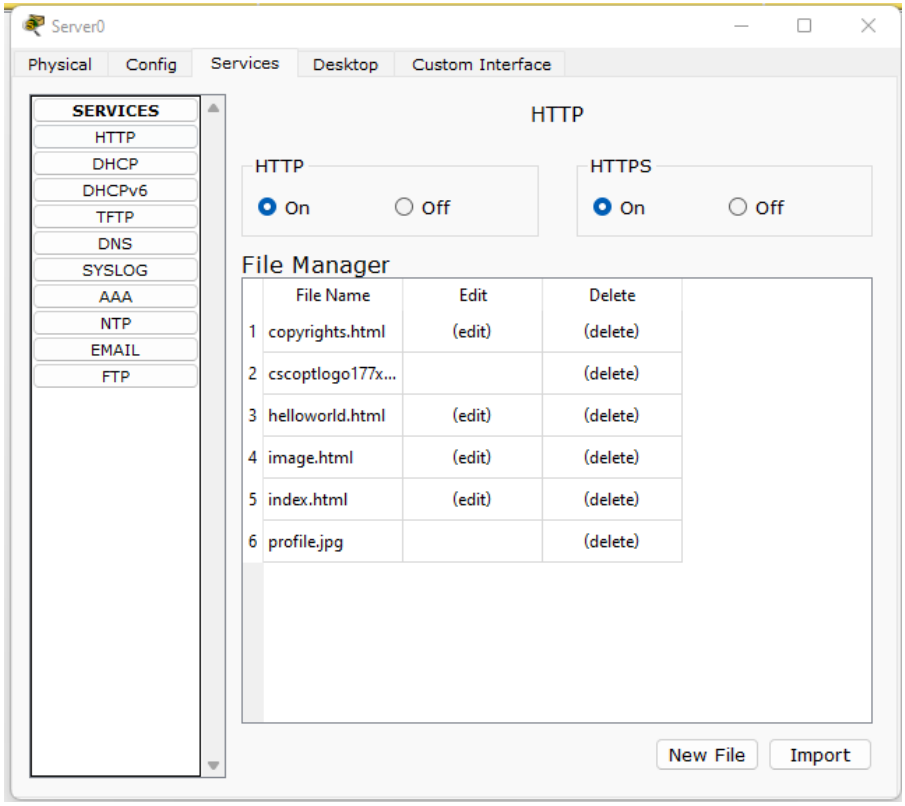
LAB5:
Aim : Configure Web Server, DNS within a LAN.

Topology:

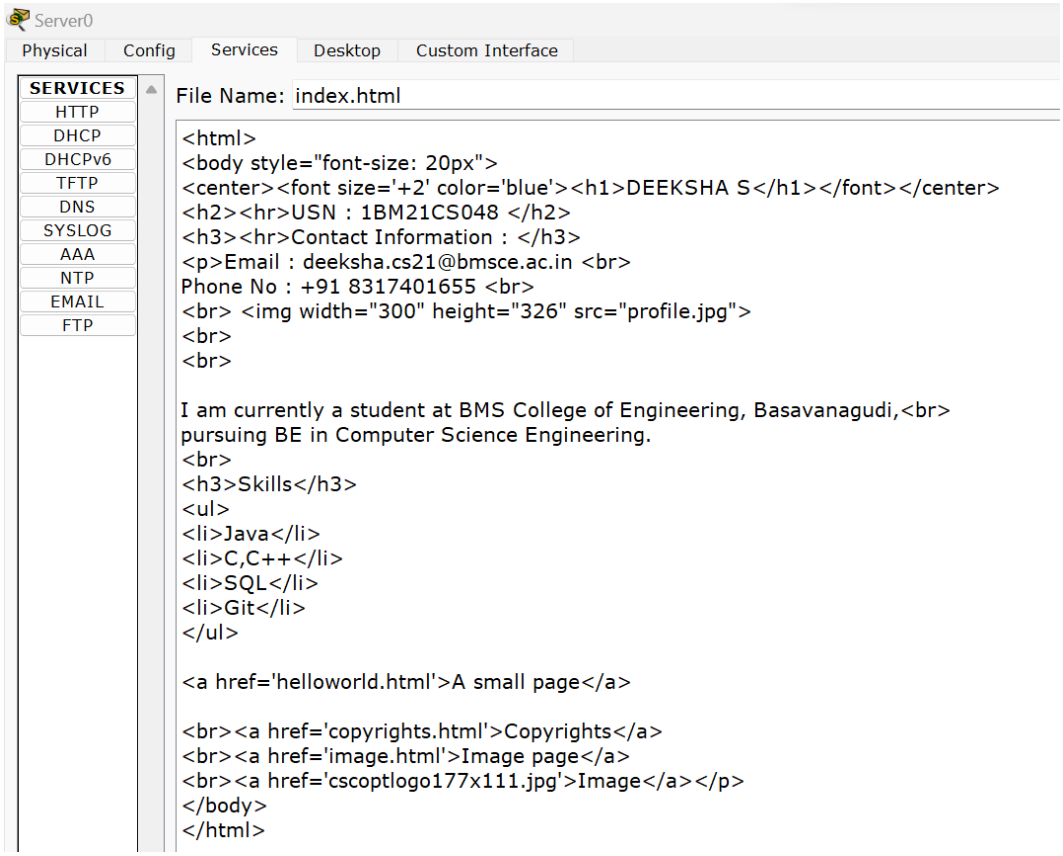


Server 0 :



Website:

Code:



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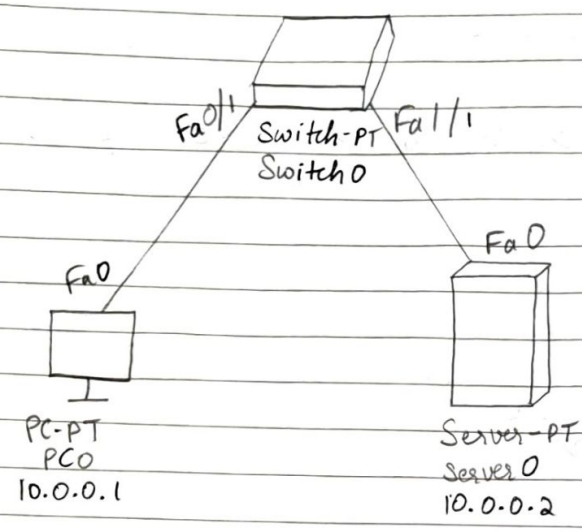
Aim:

Lab 5: Configure Web Server, DNS within a LAN

Topology:



Procedure :-

→ The Network is started by selecting end devices PC-PT and Server-PT.

→ Select Switch-PT and add all of them in the workspace.

→ Connect PC0 and Server0 to Switch-0 using copper Straight-Through cable.

→ Set IP address for PC0 and Server0
Config → Fastethernet → IP address

PC0 : 10.0.0.1
Server0 : 10.0.0.2

→ Open desktop in PC → Desktop → Web Browser
In URL, type 10.0.0.2 and click Go.
You can see Cisco Packet Tracer website.

→ In Server0, → Services → HTTP, then edit index.html.
Code the HTML & CSS and create your CV.

Output :-

→ In PC0 → Desktop → Webbrowser → URL
type 10.0.0.2.
The created CV will be visible.

→ In Server 0, → Services → DNS → On
Name : deeksha
Address : 10.0.0.2
Click on add.

Observation :-

→ In PC0 → Desktop → Webbrowser → URL
When we type the domain name "deeksha" the website created in Server0 opens.

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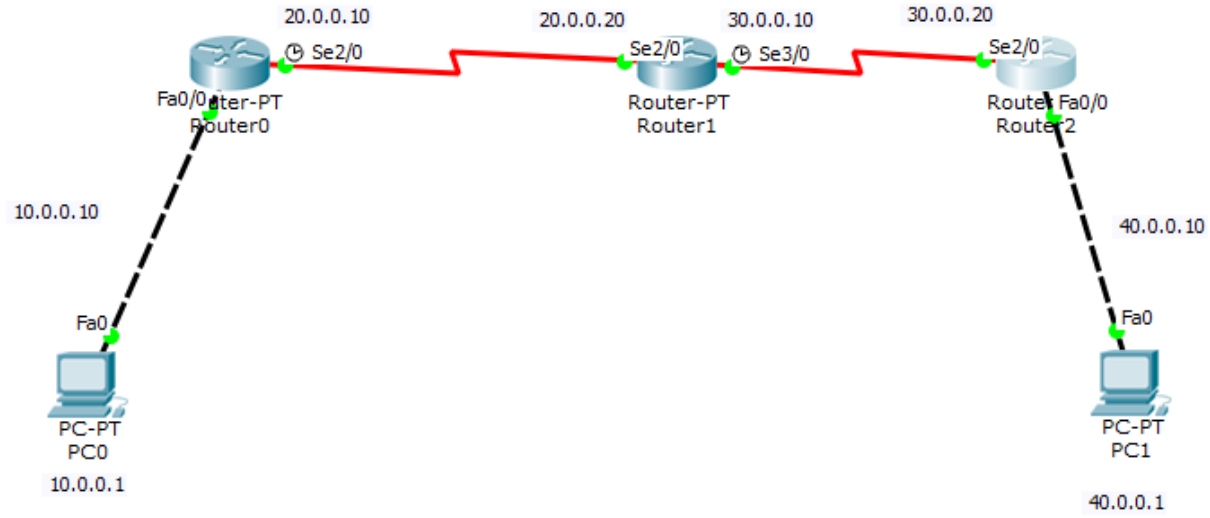
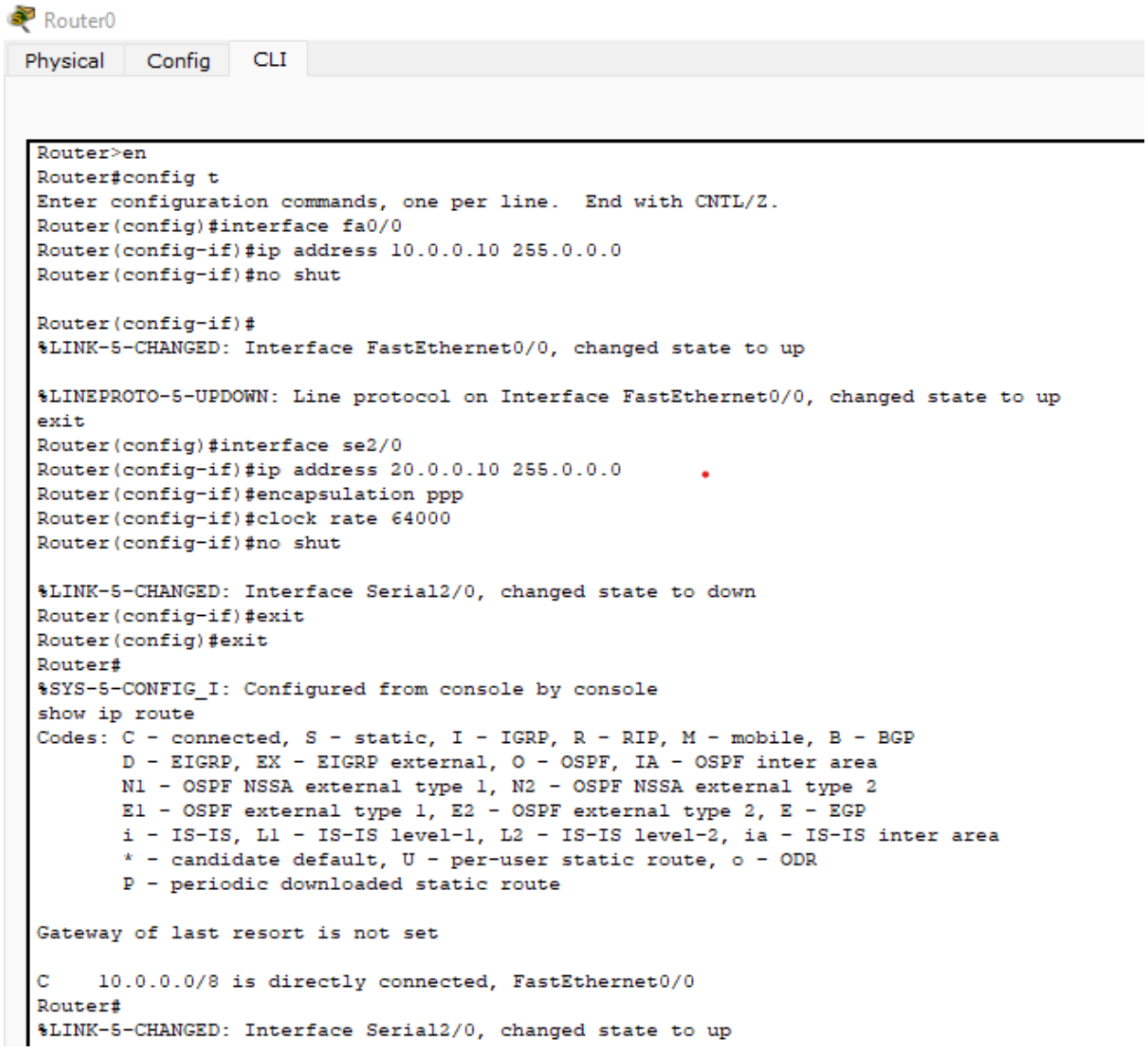
LAB6:
Aim: Configure RIP routing Protocol in Routers.

Topology:

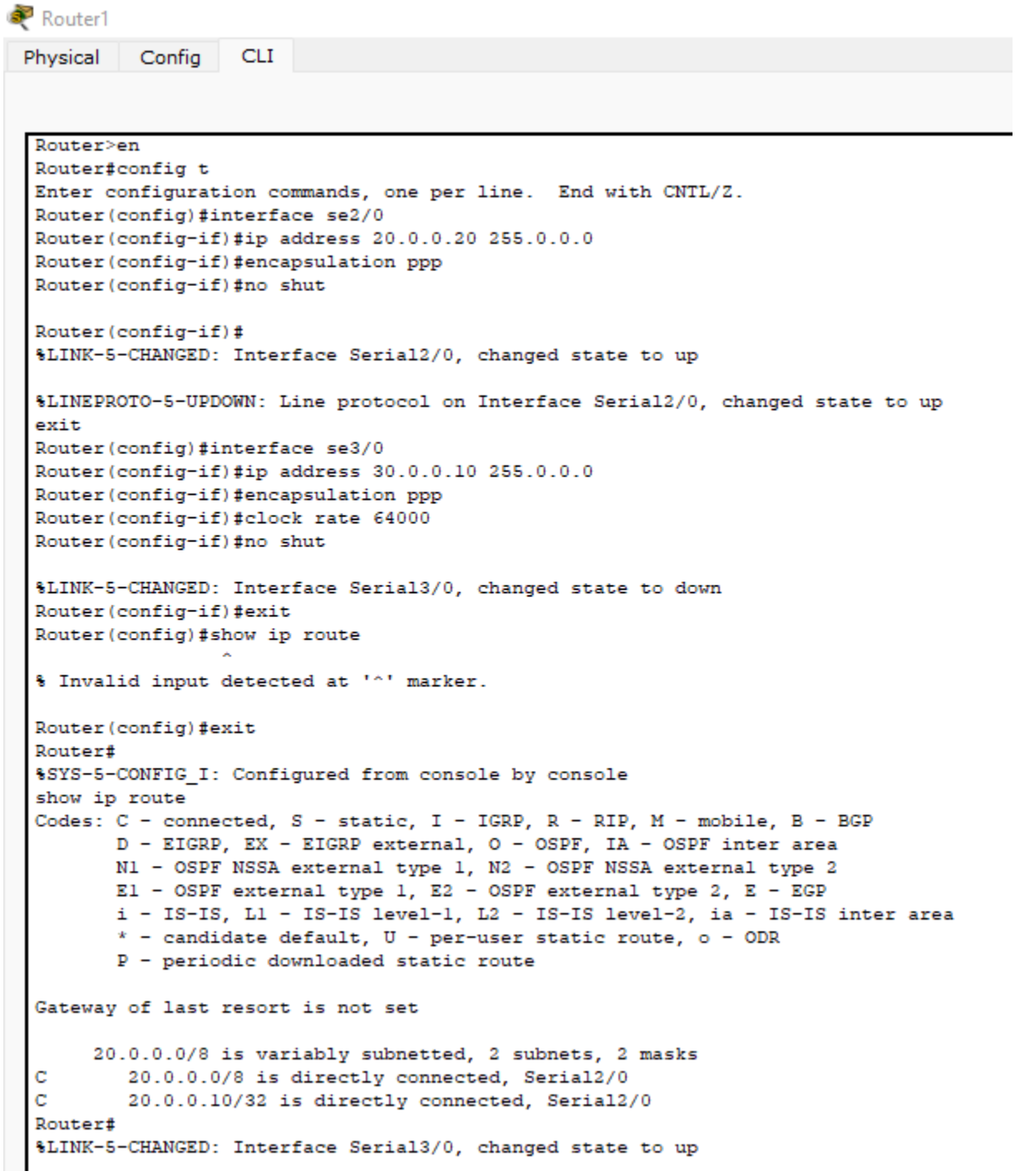


Configuration:

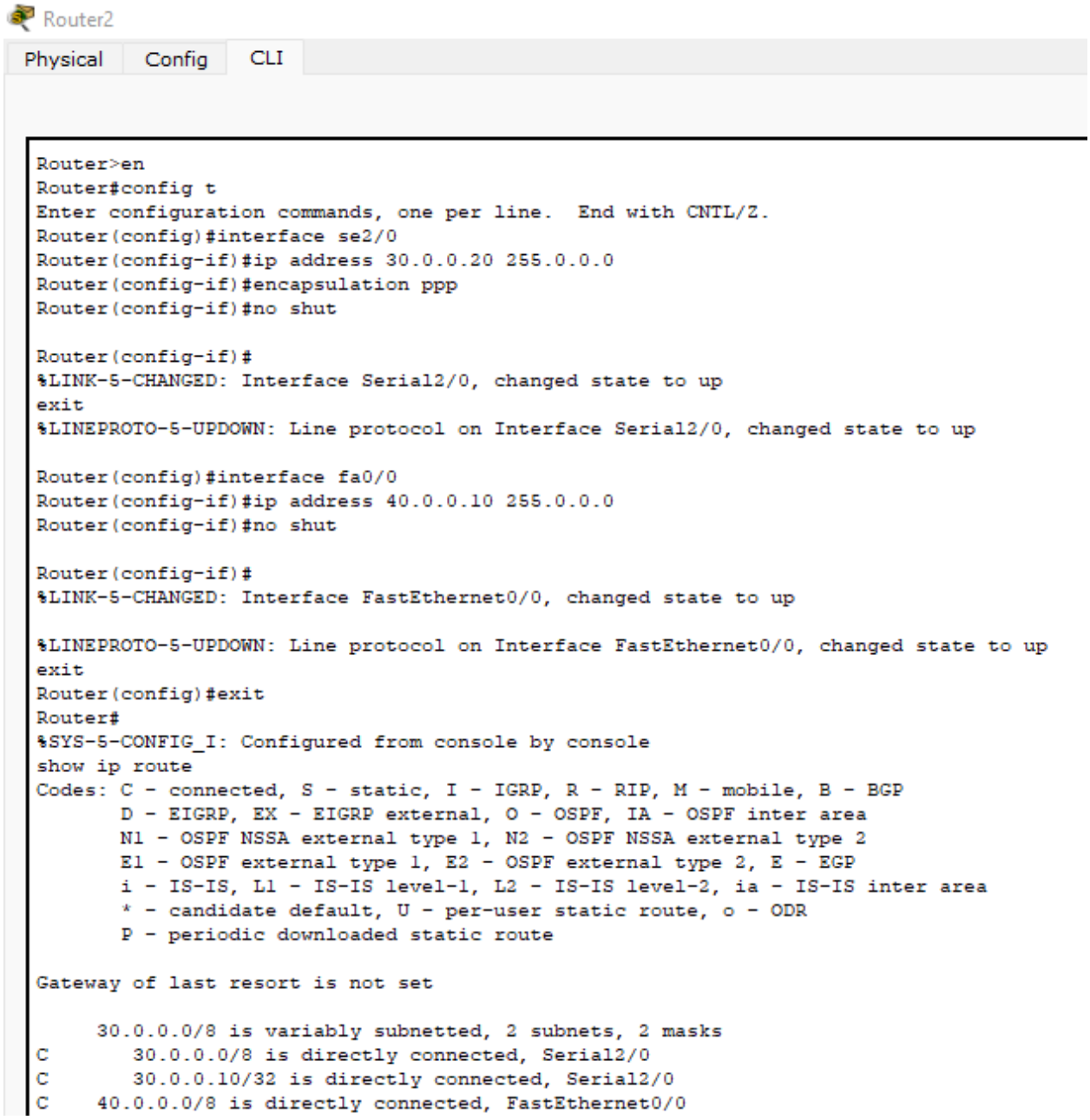
Router 0 :



Router 1 :


Router1
Physical
Config
CLI
Router>en
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface se2/0
Router(config-if)#ip address 20.0.0.20 255.0.0.0
Router(config-if)#encapsulation ppp
Router(config-if)#no shut
Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up
exit
Router(config)#interface se3/0
Router(config-if)#ip address 30.0.0.10 255.0.0.0
Router(config-if)#encapsulation ppp
Router(config-if)#clock rate 64000
Router(config-if)#no shut
%LINK-5-CHANGED: Interface Serial3/0, changed state to down
Router(config-if)#exit
Router(config)#show ip route
% Invalid input detected at '^' marker.
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
20.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C 20.0.0.0/8 is directly connected, Serial2/0
C 20.0.0.10/32 is directly connected, Serial2/0
Router#
%LINK-5-CHANGED: Interface Serial3/0, changed state to up

Router 2 :


Router2
Physical
Config
CLI
Router>en
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface se2/0
Router(config-if)#ip address 30.0.0.20 255.0.0.0
Router(config-if)#encapsulation ppp
Router(config-if)#no shut
Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up
exit
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up
Router(config)#interface fa0/0
Router(config-if)#ip address 40.0.0.10 255.0.0.0
Router(config-if)#no shut
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
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
30.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C 30.0.0.0/8 is directly connected, Serial2/0
C 30.0.0.10/32 is directly connected, Serial2/0
C 40.0.0.0/8 is directly connected, FastEthernet0/0

RIP routing:

Router 0:

```
Router#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up
config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#router rip
Router(config-router)#network 10.0.0.0
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

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#
```

Router 1:

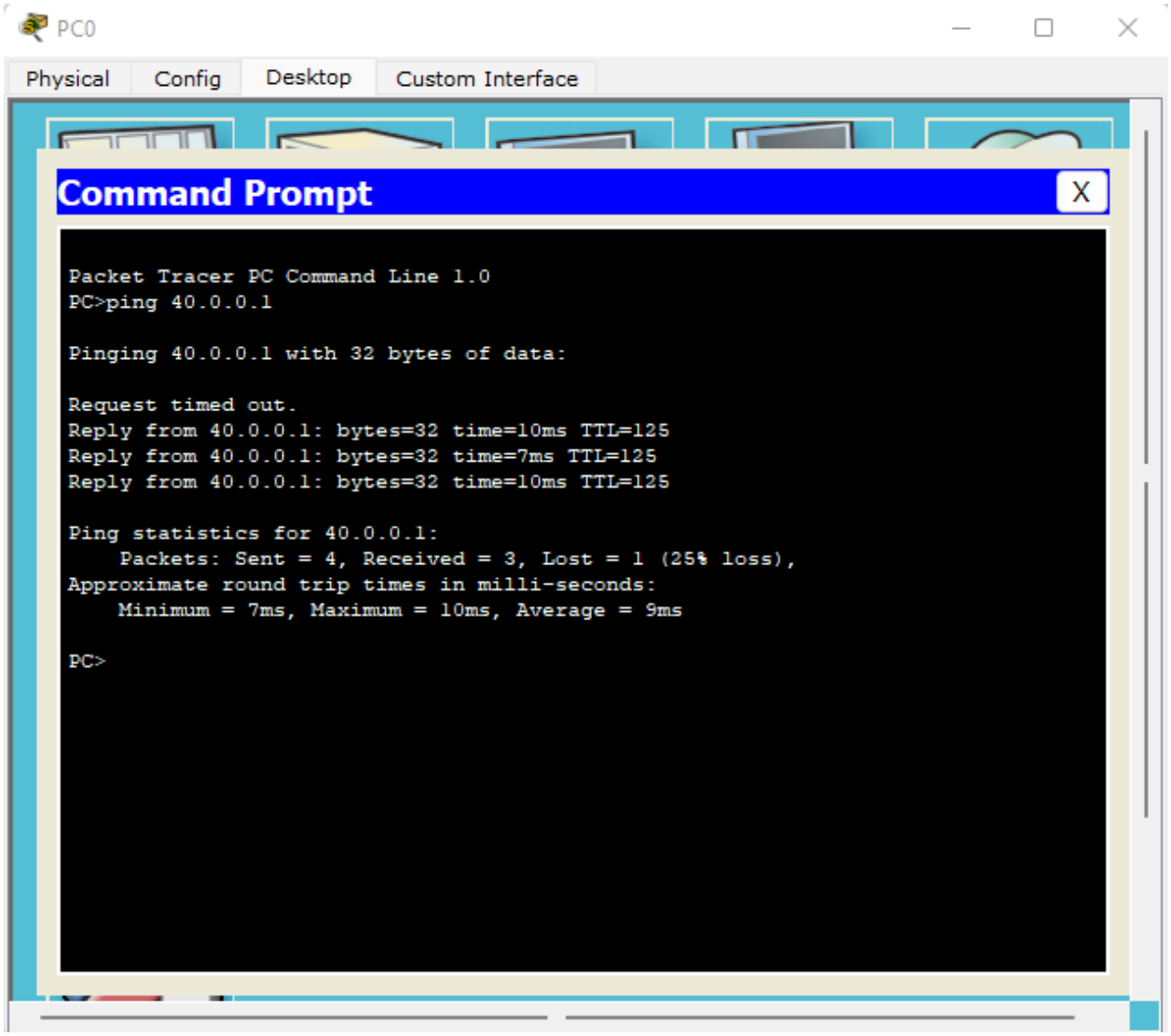
```
Router#
%LINK-5-CHANGED: Interface Serial3/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0, changed state to up
config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#router rip
Router(config-router)#network 20.0.0.0
Router(config-router)#network 30.0.0.0
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 20.0.0.10, 00:00:20, Serial2/0
     20.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C       20.0.0.0/8 is directly connected, Serial2/0
C       20.0.0.10/32 is directly connected, Serial2/0
     30.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C       30.0.0.0/8 is directly connected, Serial3/0
C       30.0.0.20/32 is directly connected, Serial3/0
R    40.0.0.0/8 [120/1] via 30.0.0.20, 00:00:19, Serial3/0
Router#
```

Router 2:

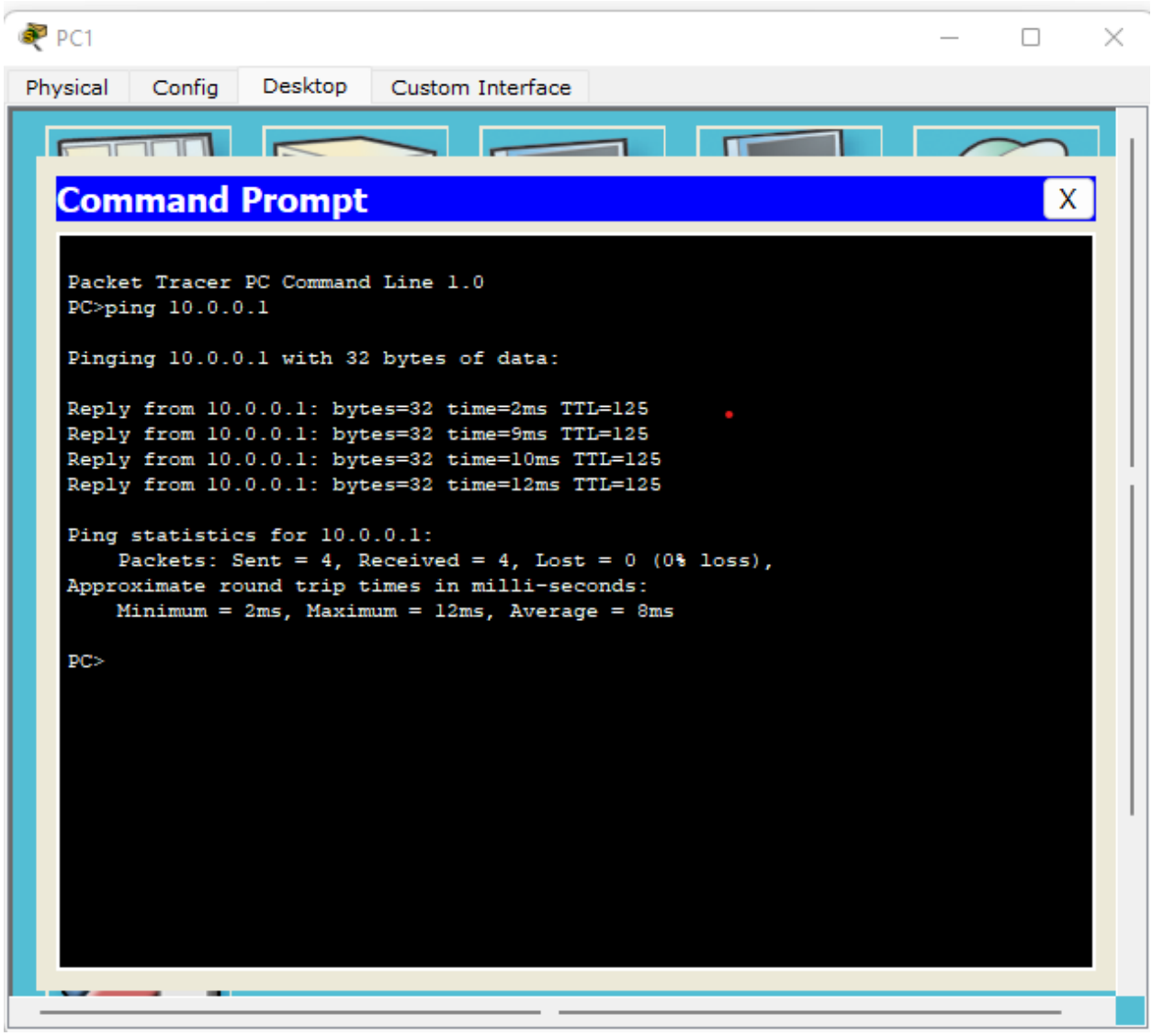
```
Router#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#network 30.0.0.0
                   ^
% Invalid input detected at '^' marker.

Router(config)#router rip
Router(config-router)#network 30.0.0.0
Router(config-router)#network 40.0.0.0
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 [120/2] via 30.0.0.10, 00:00:14, Serial2/0
R    20.0.0.0/8 [120/1] via 30.0.0.10, 00:00:14, Serial2/0
     30.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C       30.0.0.0/8 is directly connected, Serial2/0
C       30.0.0.10/32 is directly connected, Serial2/0
C    40.0.0.0/8 is directly connected, FastEthernet0/0
Router#
```

Command Prompt:

P0:



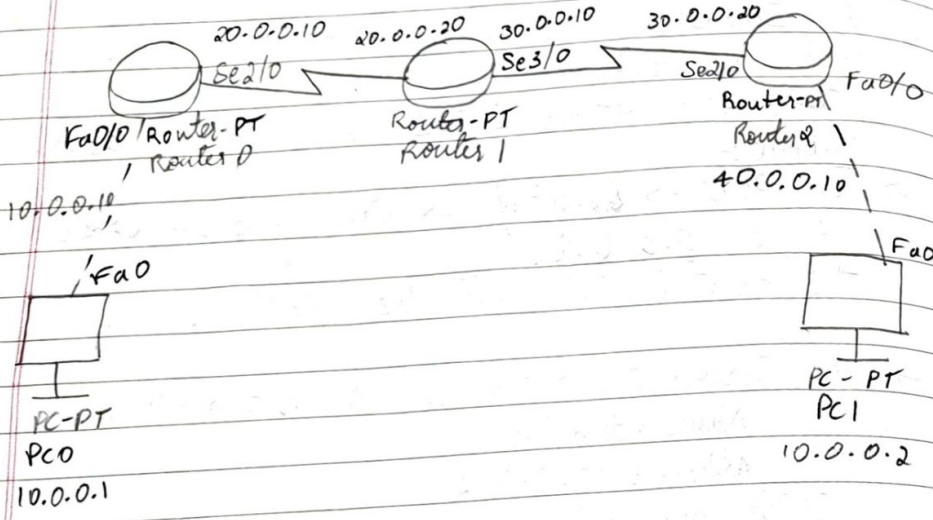
P1:


PC1
Physical
Config
Desktop
Custom Interface
Command Prompt
X
Packet Tracer PC Command Line 1.0
PC>ping 10.0.0.1
Pinging 10.0.0.1 with 32 bytes of data:
Reply from 10.0.0.1: bytes=32 time=2ms TTL=125
Reply from 10.0.0.1: bytes=32 time=9ms TTL=125
Reply from 10.0.0.1: bytes=32 time=10ms TTL=125
Reply from 10.0.0.1: bytes=32 time=12ms TTL=125
Ping statistics for 10.0.0.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 2ms, Maximum = 12ms, Average = 8ms
PC>

20/7/23.

Aim: Lab 6 : Configure RIP routing Protocol in Routers.

Topology :-



Procedure :

→ Repeat the topology in 4B experiment.

→ Set IP address of PC0 & PC1
PC0 : 10.0.0.1
PC1 : 10.0.0.2

→ Set Gateway for PC0 & PC1
PC0 : 10.0.0.10 PC1 : ~~60.0.0.20~~ 40.0.0.10

→ Set IP addresses of routers' interfaces using previous procedure.

Now:

Router 0:

Router(config)# interface serial 2/0
config-if# encapsulation ppp
clock rate 64000
no shut
exit

Router 1:

interface serial 2/0
encapsulation ppp
no shut
exit
interface se 3/0
encapsulation ppp
clock rate 64000
no shut
exit

Router 2:

interface se 2/0
encapsulation ppp
no shut
exit
interface fa 0/0
no shut
exit

Router 0:-

```
Router(config)# router rip
Router(config-router)# network 10.0.0.0
Router(config-router)# network 20.0.0.0
exit
exit
```

Router 1:

```
Router(config)# router rip
Router(config-router)# network 20.0.0.0
Router(config-router)# network 30.0.0.0
exit
exit
```

Router 2:

```
Router(config)# router rip
Router(config-router)# network 30.0.0.0
Router(config-router)# network 40.0.0.0
Router(config-router)# exit
exit
```

IP routing :-

We see that in each Router C indicates direct connection.

We see that RIP connection is established in each Router

Ping Output :-

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 = 7ms TTL = 125
Reply from 40.0.0.1 : bytes = 32 time = 10ms 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 = 7ms, Maximum = 10ms, Average = 9ms

Observation :-

→ Through RIP, routing is established in the network.

→ First packet is lost as we have seen before.

→ Then, remaining packets are transmitted successfully.

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