

04/06/24

Ip Address Classes:

Class A->1-127

Class B-> 128-191

Class C-> 192-223

Class D->224-239

Class E->240-255

Default Subnet Mask:

Class A->255.0.0.0

Class B->255.255.0.0

Class C->255.255.255.0

Decimal to binary:

255-> 11111111

238-> 11101110

34-> 00100010

123-> 01111011

50->00110010

200-> 11001000

10-> 00001010

138-> 10001010

1->00000001

13-> 00001101

250-> 11111010

107-> 01101011

224-> 11100000

114-> 01110010

192->11000000

Binary to Decimal:

10010010->146

01110111->119

11111111->255

11000101->197

11110110->246

00010011->19

10000001->129

00110001->49

01111000->120

11110000->240

00111011->59

00000111->7

00011011->27

10101010->170

Address classification:

10.250.1.1 -> A

150.10.15.0-> B

192.14.2.0-> C

148.17.9.1-> B

193.42.1.1-> C

126.8.156.0-> A

220.200.23.1-> C

230.230.45.58-> D

171.100.18.4-> B

119.18.45.0-> A

249.240.80.78-> E

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Default subnet Masks:

191.249.234.191 -> 255.255.255.0

223.23.223.109 -> 255.255.255.0

10.10.250.1 -> 255.0.0.0

126.123.23.1 -> 255.255.255.0

223.69.230.250 -> 255.255.255.0

192.12.35.105 -> 255.255.255.0

77.251.200.51 -> 255.255.255.0

189.210.50.1 -> 255.255.255.0

Network and Host address:

IP: 188.10.18.2, Subnet Mask: 255.255.0.0

Network Address: 188.10.0.0

Host Address: 188.10.18.2

IP: 10.10.48.80, Subnet Mask: 255.255.255.0

Network Address: 10.10.48.0

Host Address: 10.10.48.80

IP: 222.49.49.11, Subnet Mask: 255.255.255.0

Network Address: 222.49.49.0

Host Address: 222.49.49.11

IP: 128.23.230.19, Subnet Mask: 255.255.0.0

Network Address: 128.23.0.0

Host Address: 128.23.230.19

IP: 10.10.10.10, Subnet Mask: 255.0.0.0

Network Address: 10.0.0.0

Host Address: 10.10.10.10

IP: 200.113.123.11, Subnet Mask: 255.255.255.0

Network Address: 200.113.123.0

Host Address: 200.113.123.11

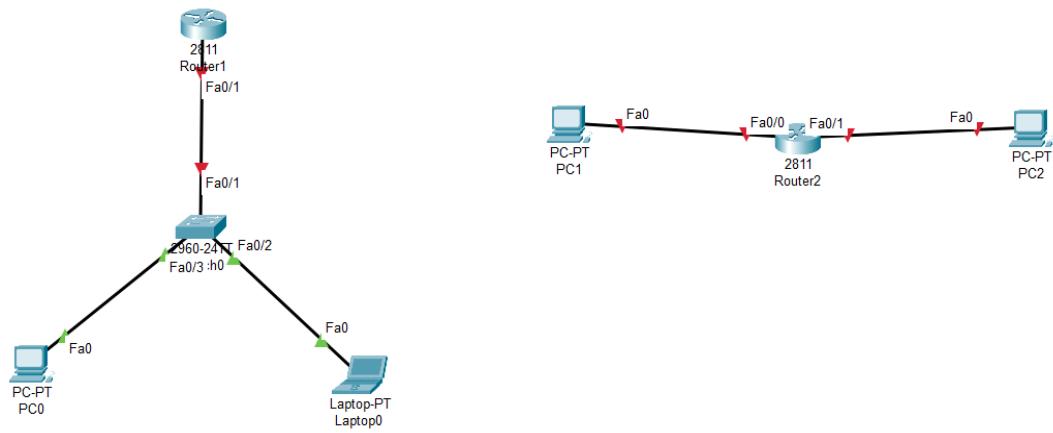
IP: 223.169.23.20, Subnet Mask: 255.255.0.0

Network Address: 223.169.0.0

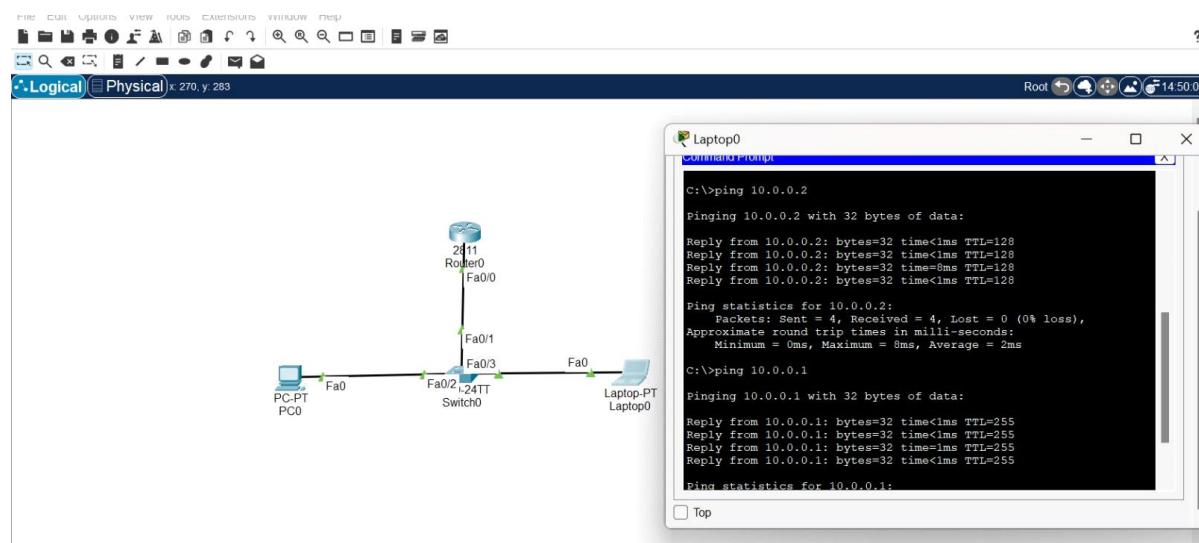
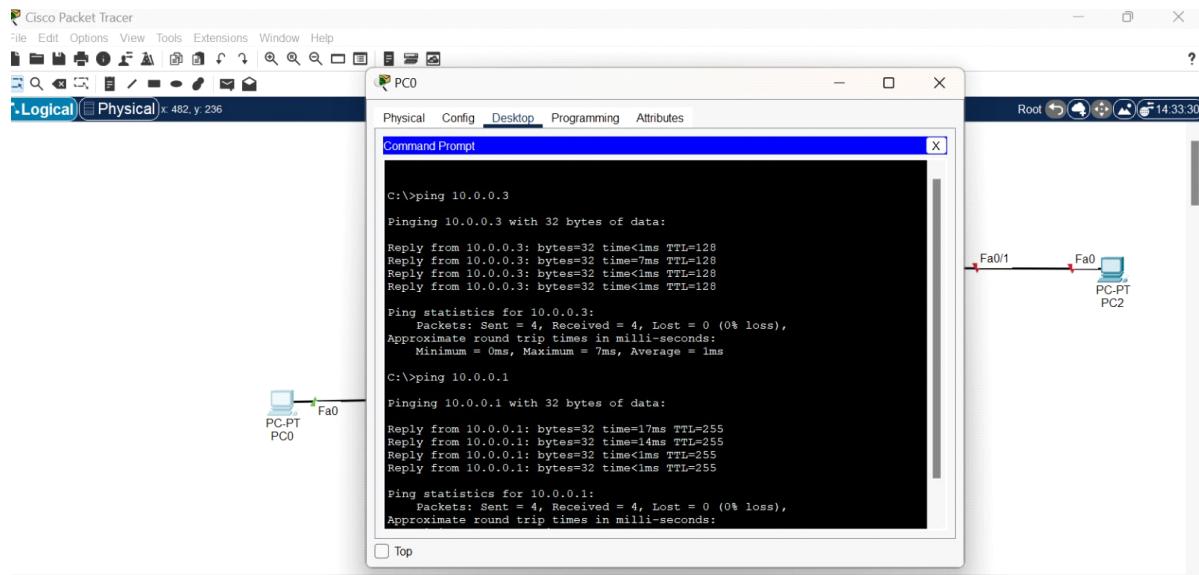
Host Address: 223.169.23.20

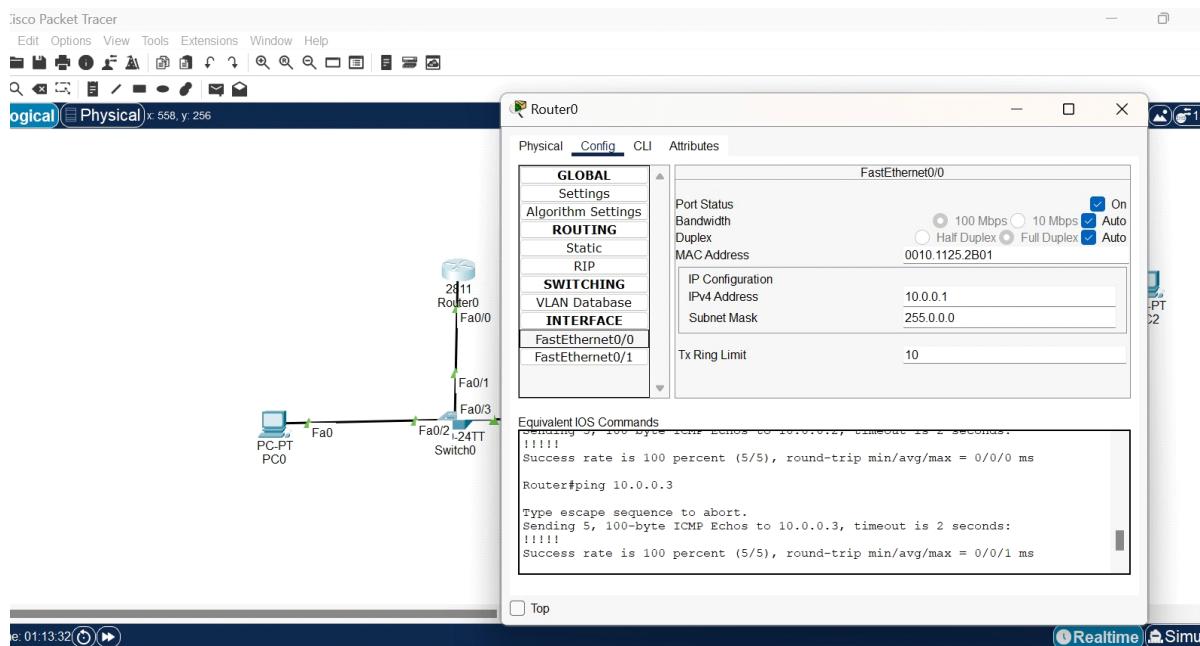
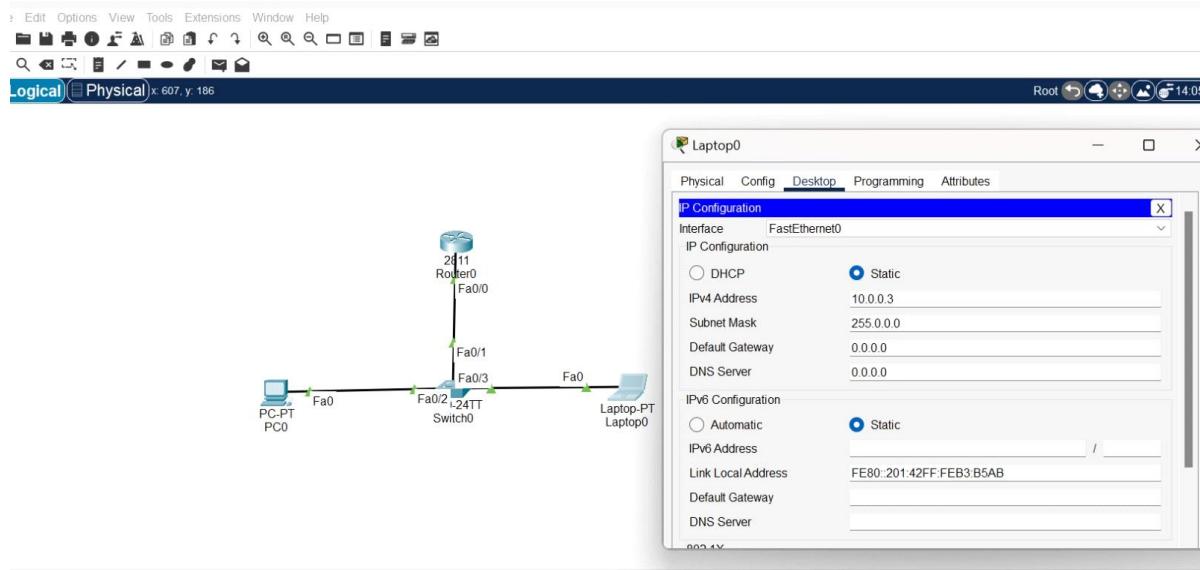
06/06/24

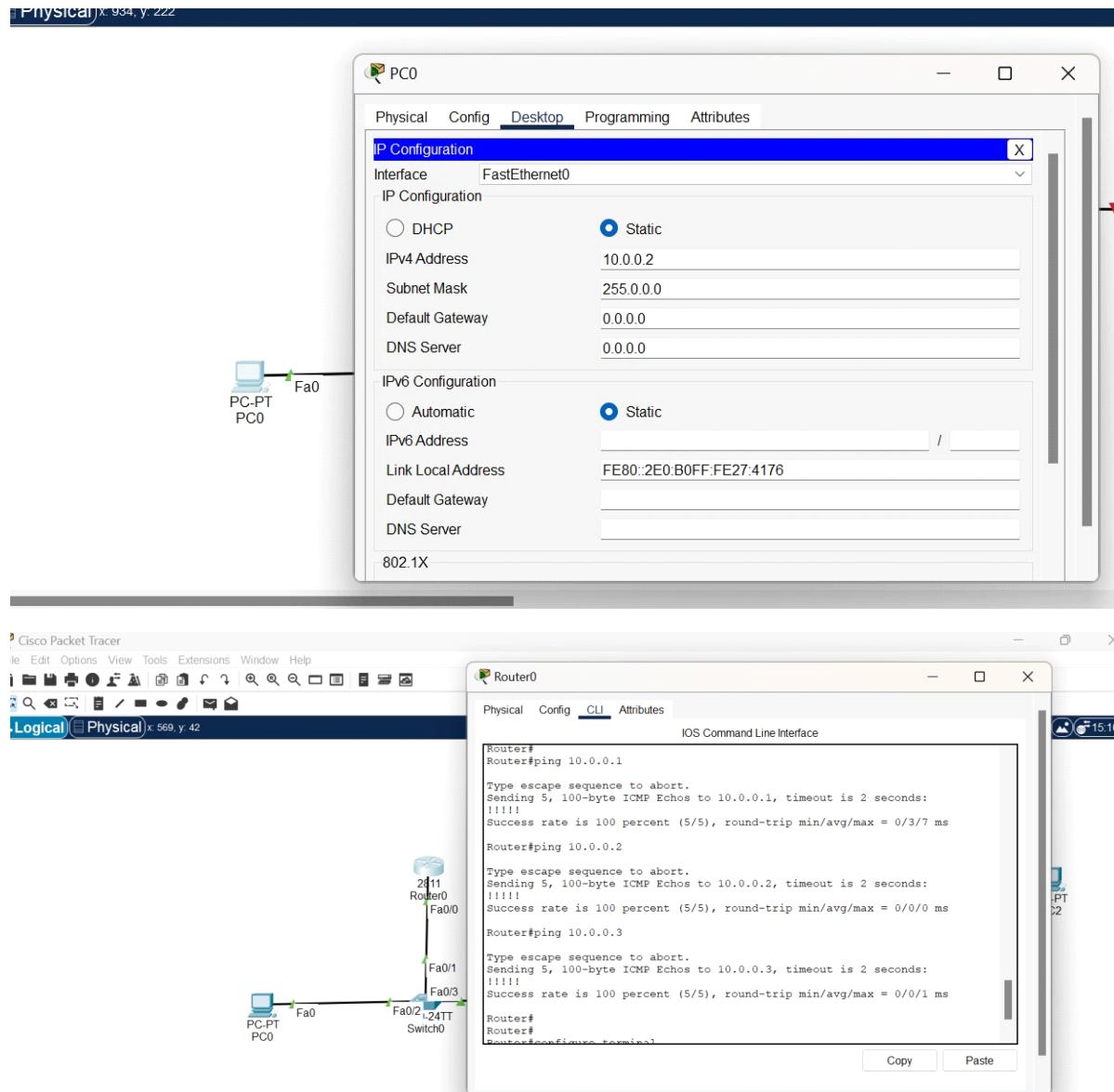
Lab1:Connecting the devices



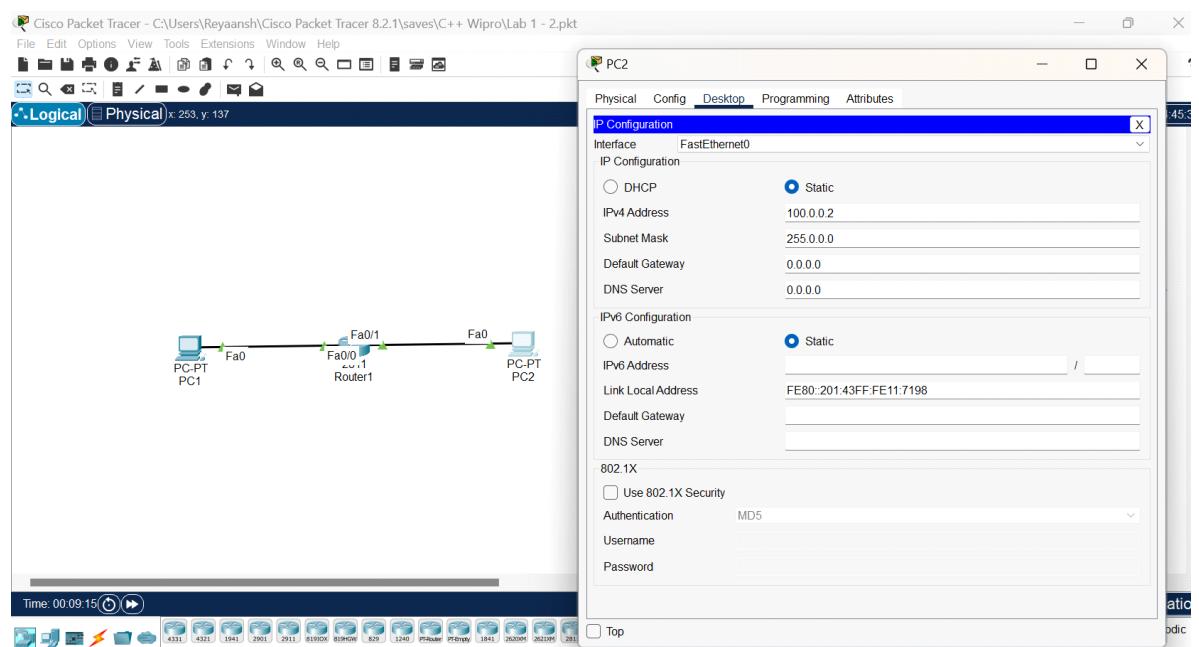
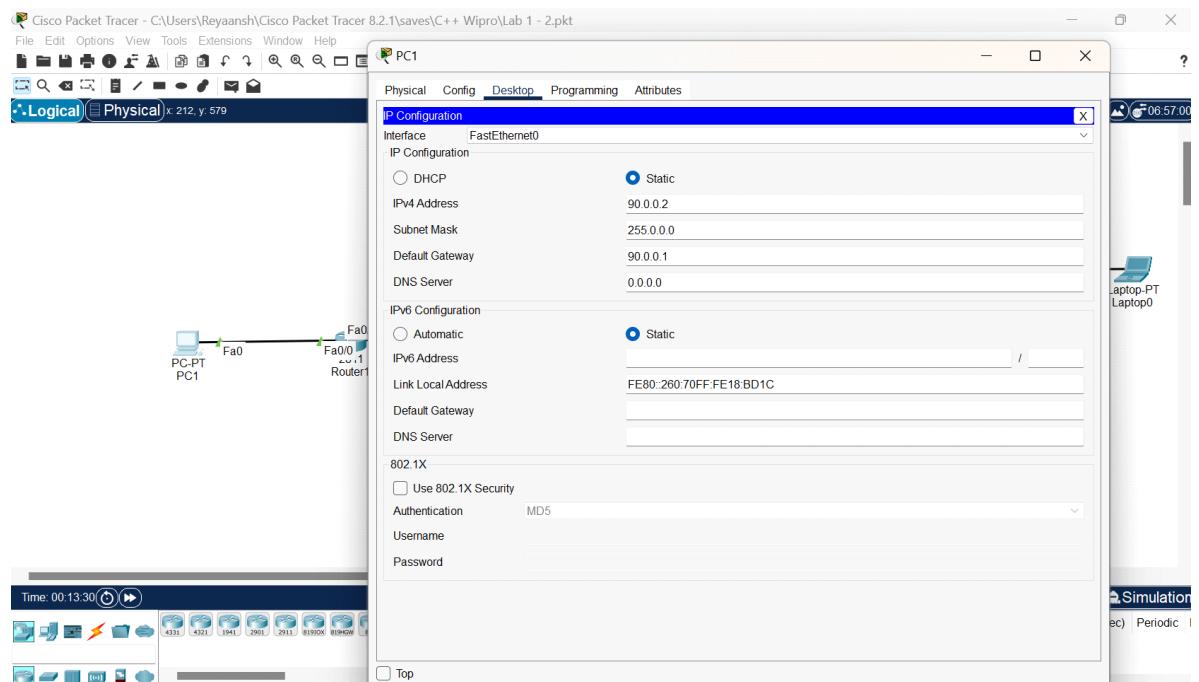
Lab2:Ip Address configuration and Ping check

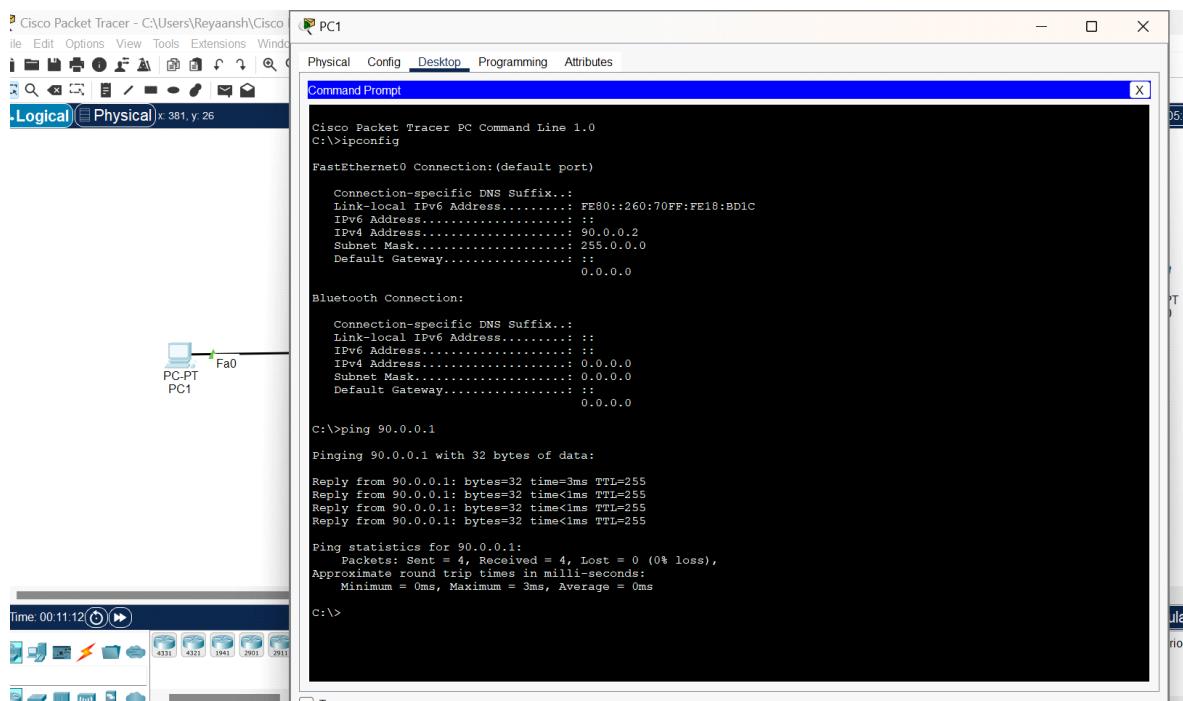
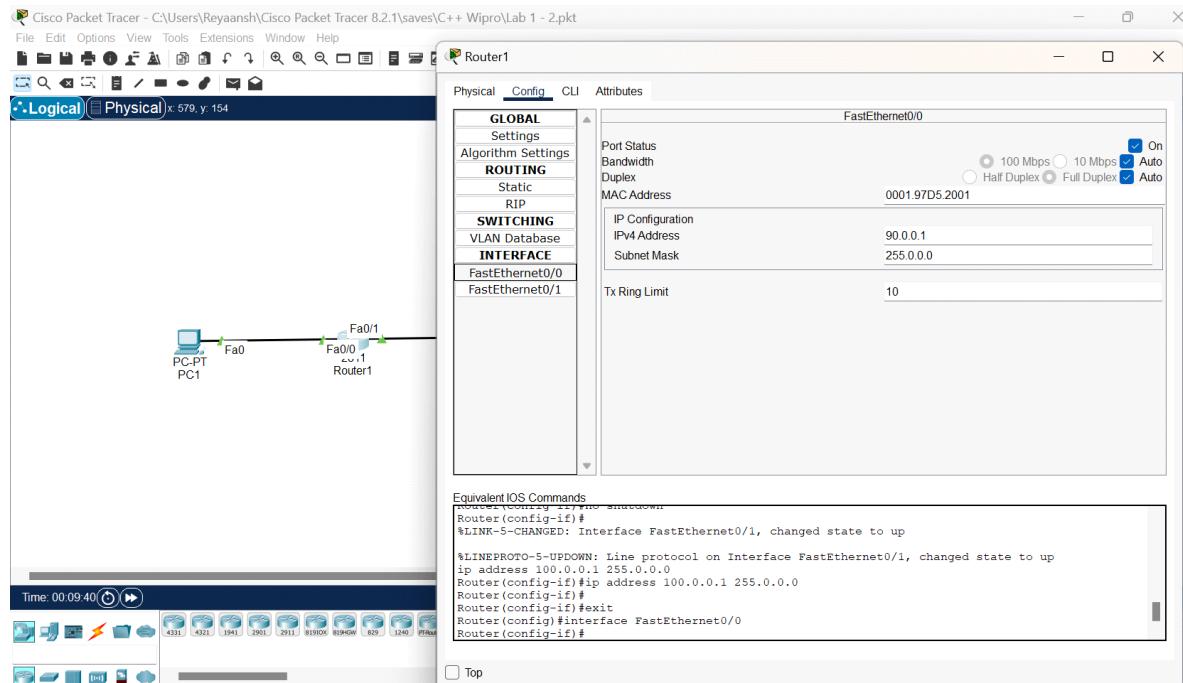


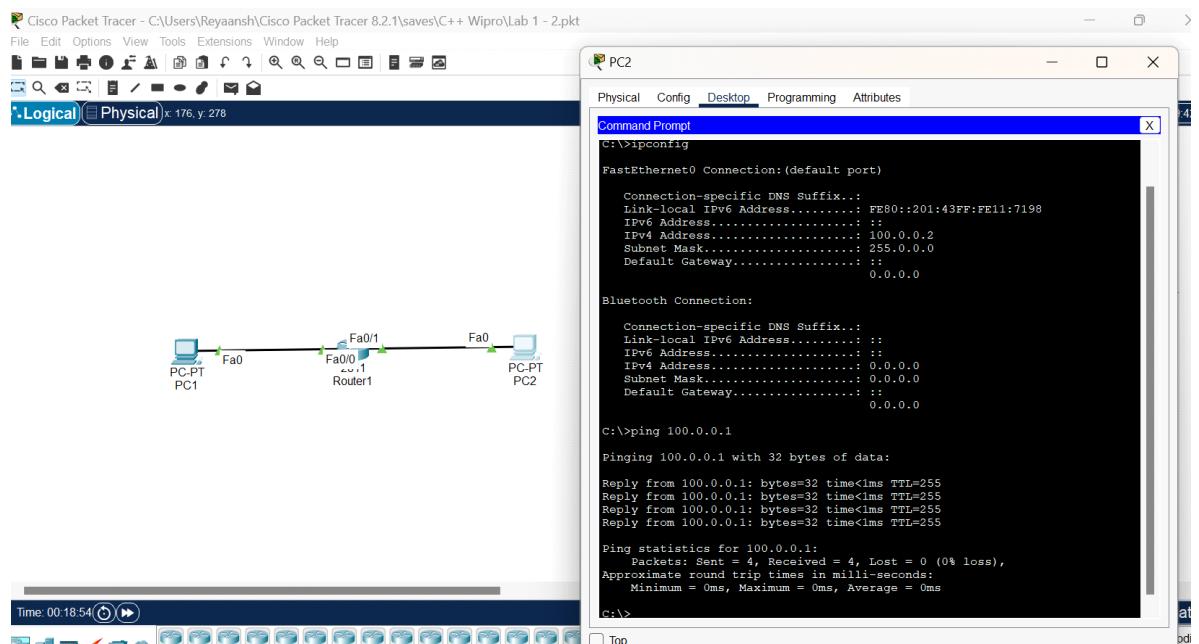
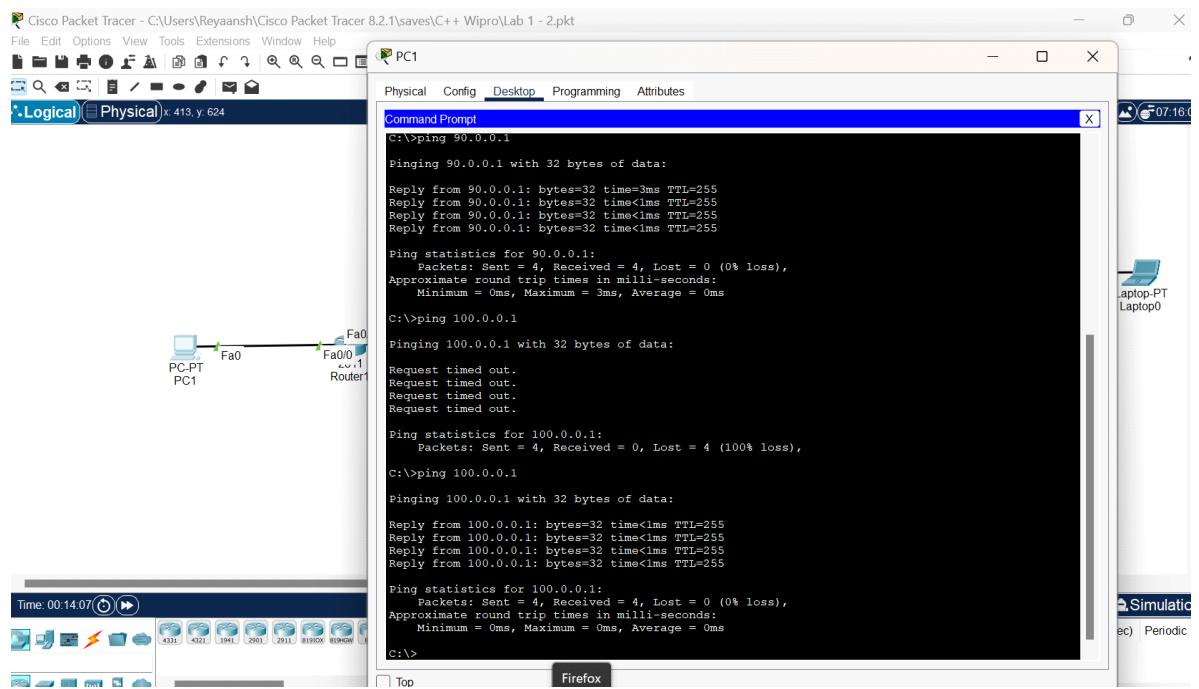


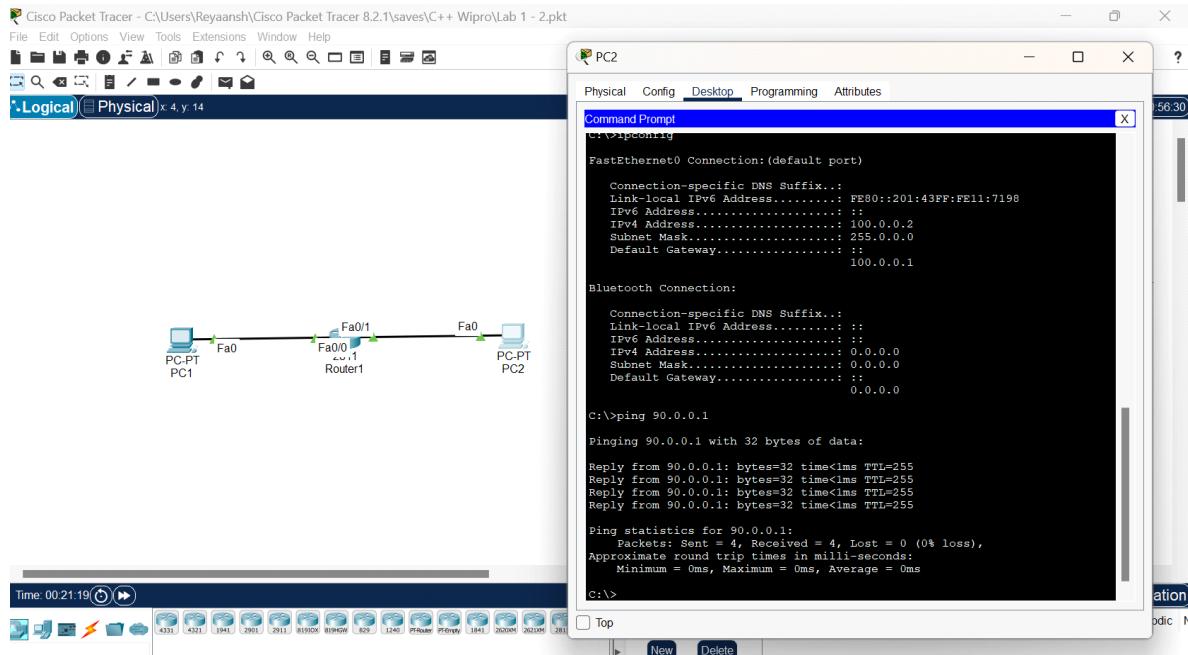


Lab3:Configuring Default Gateway



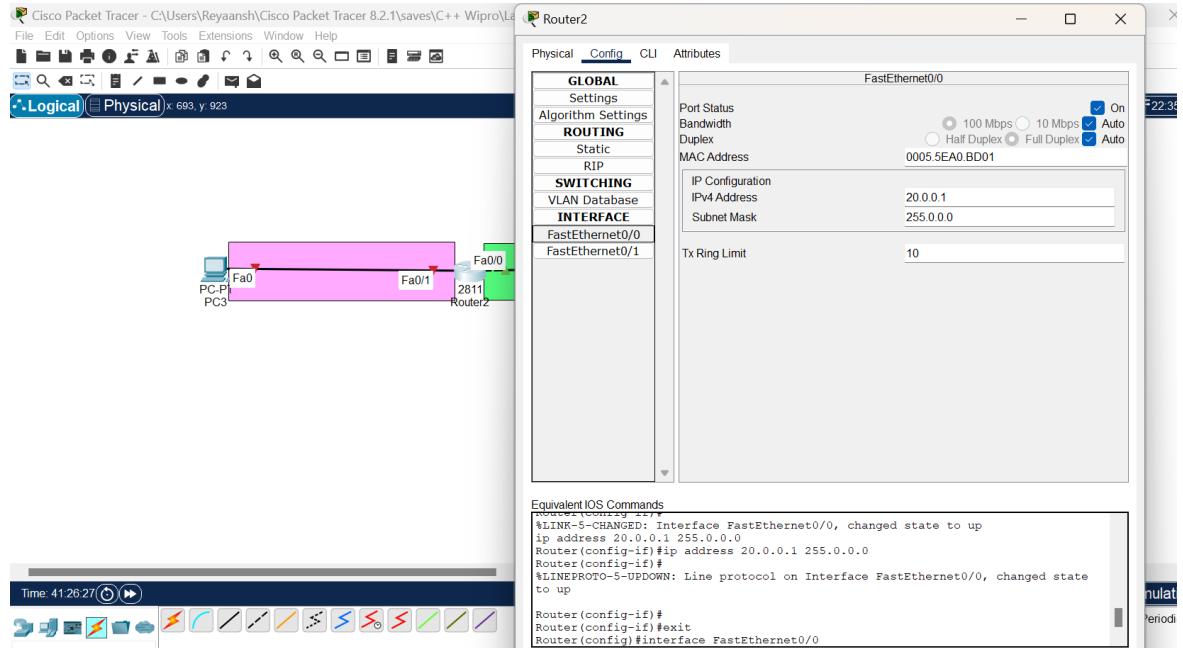


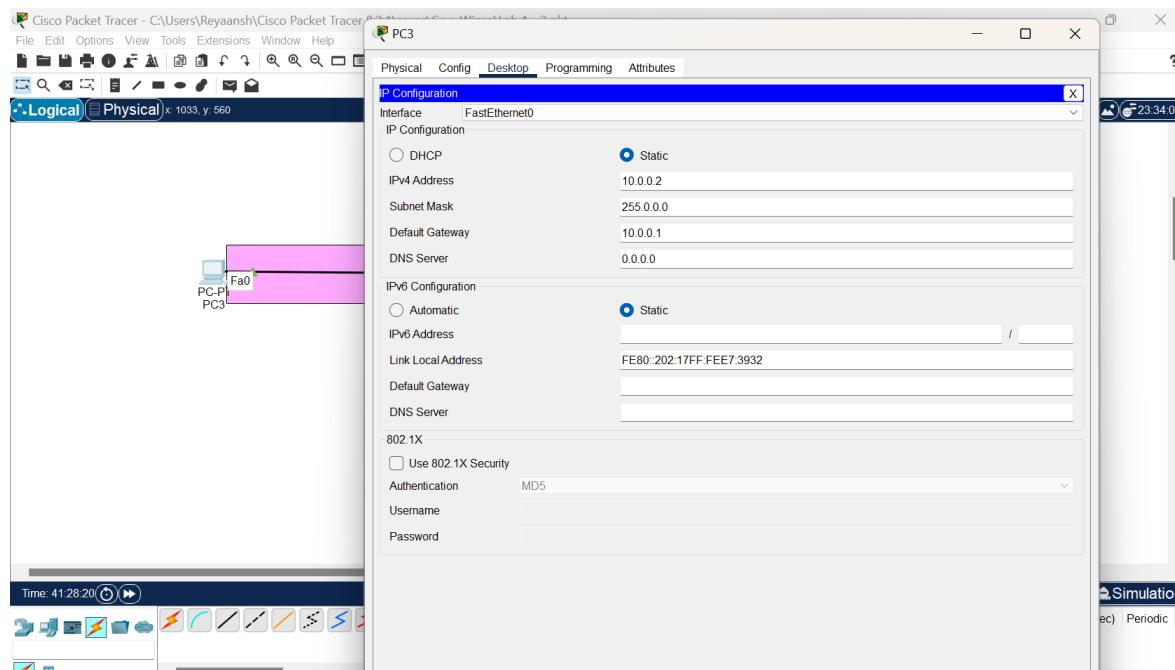
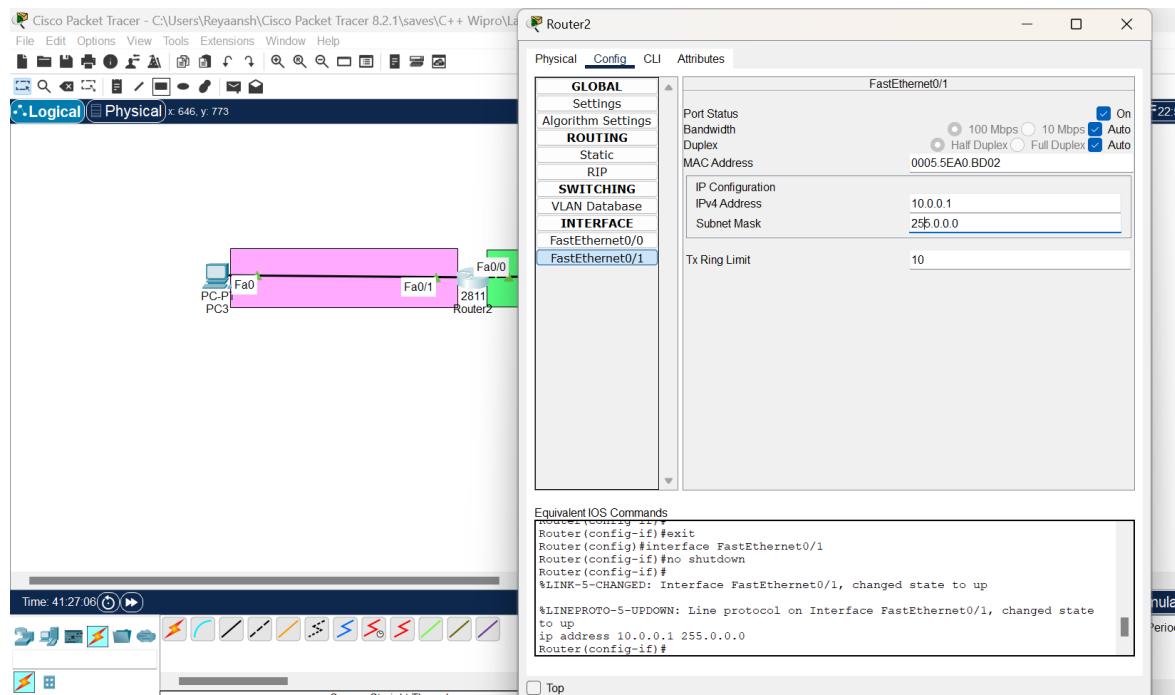


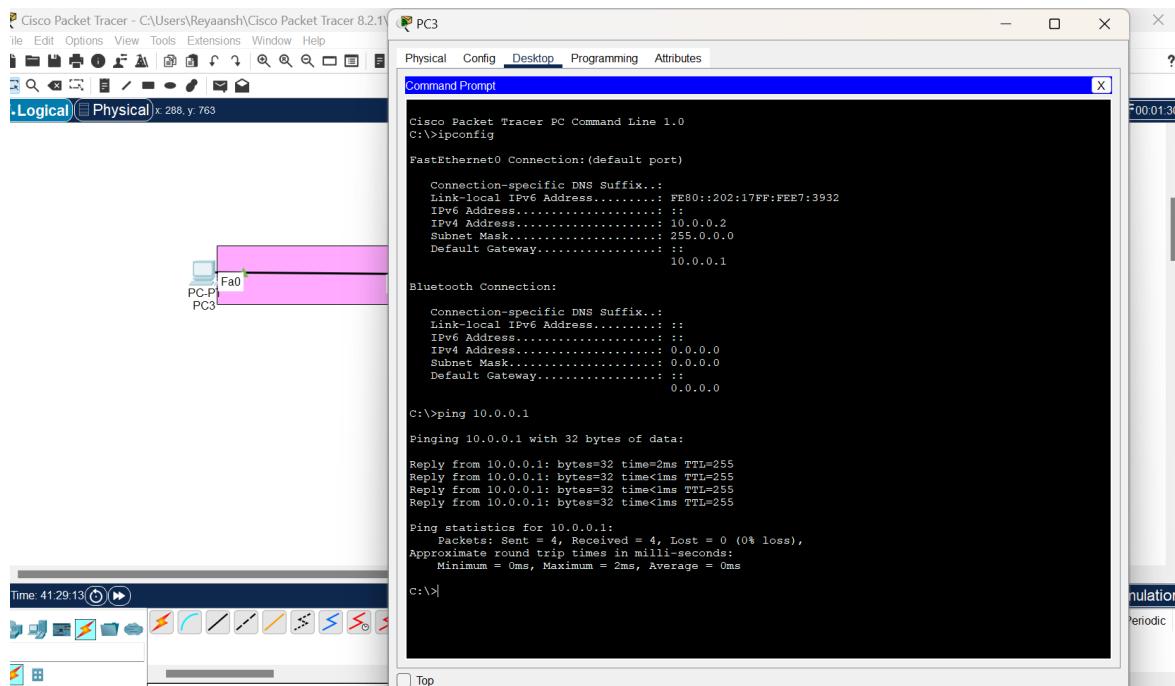
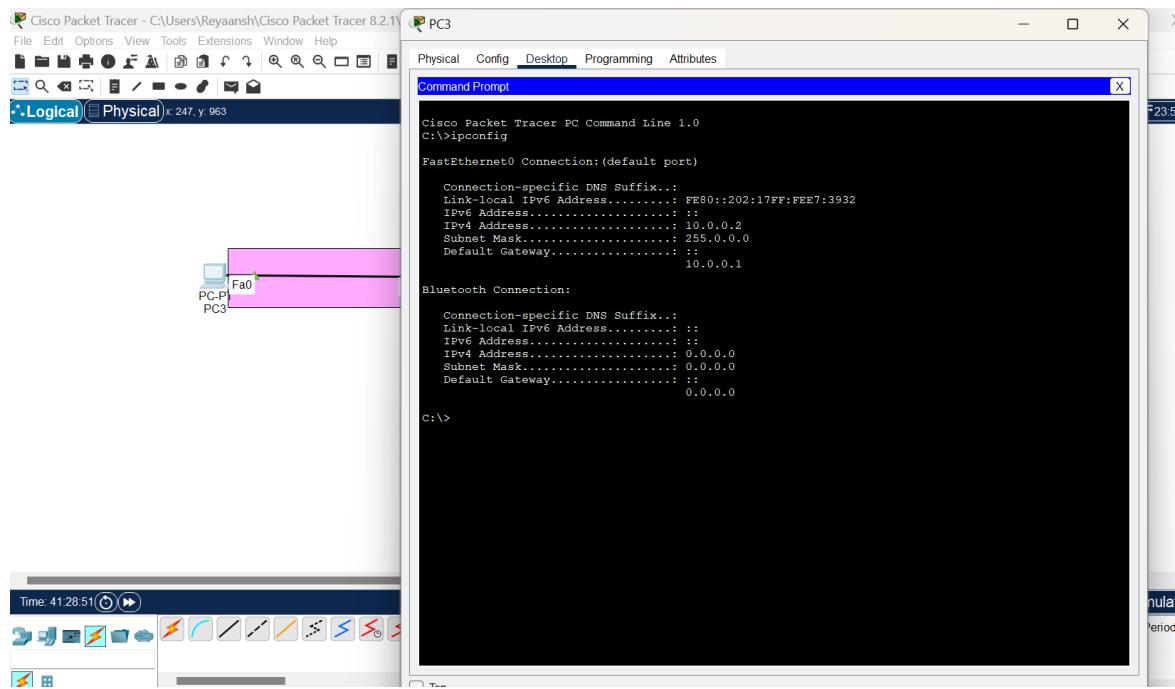


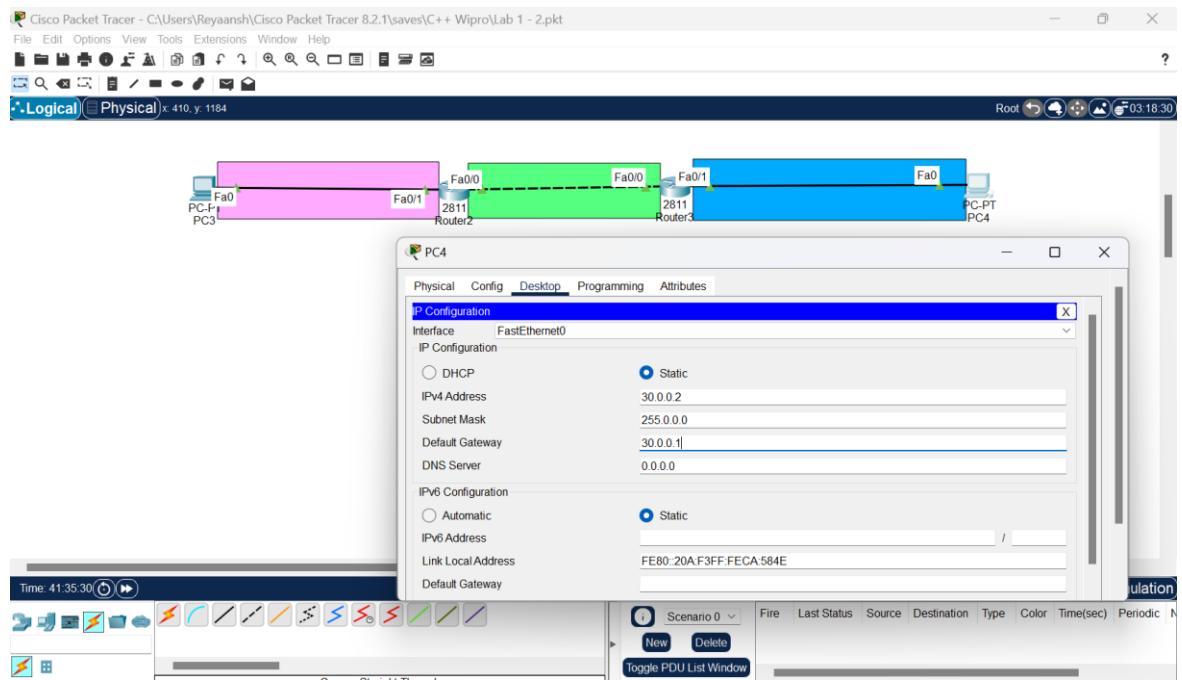
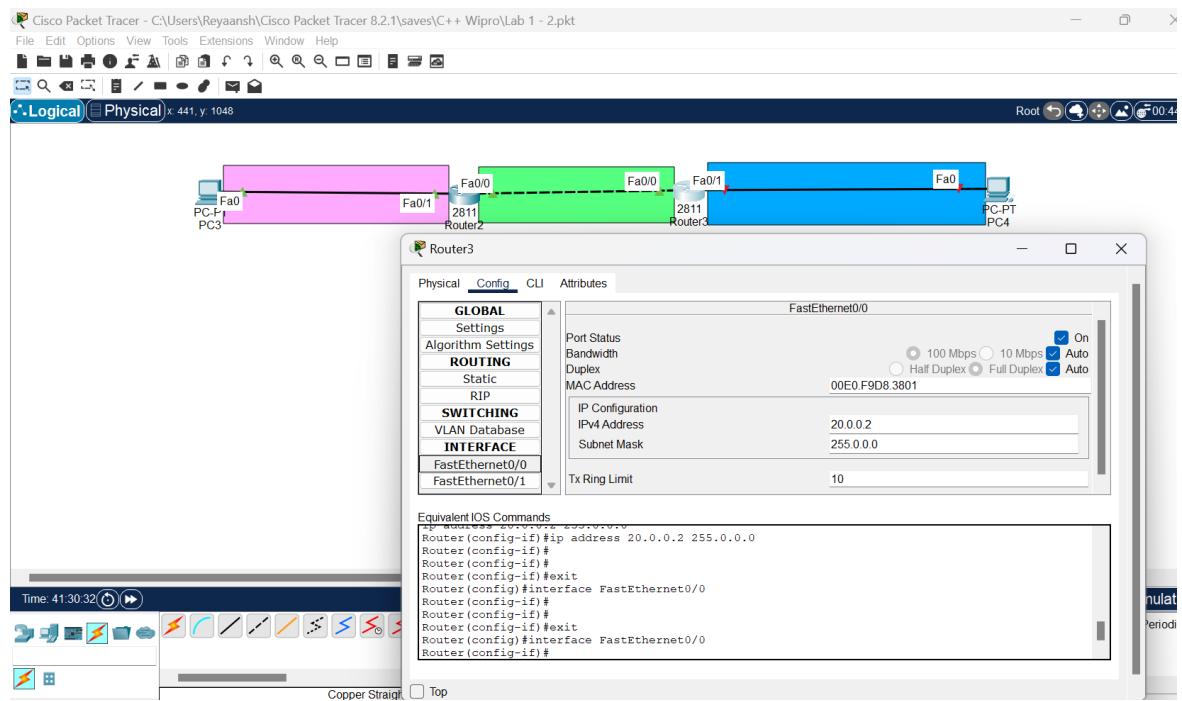
07/06/24

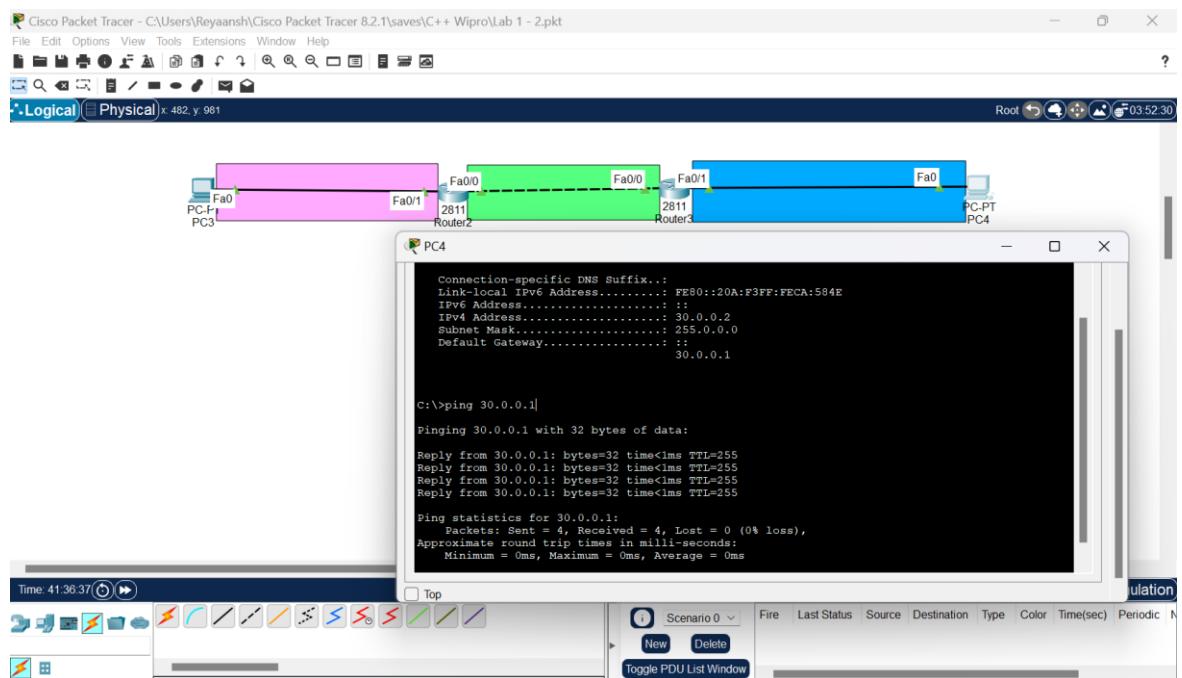
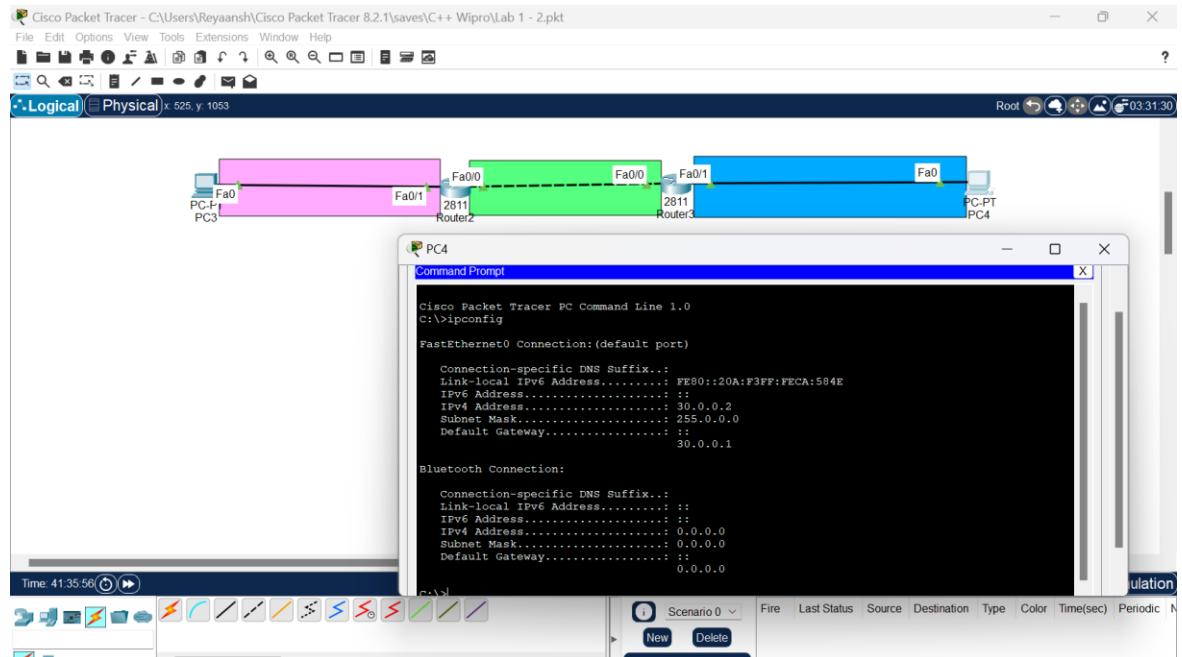
Lab4:Static Routing

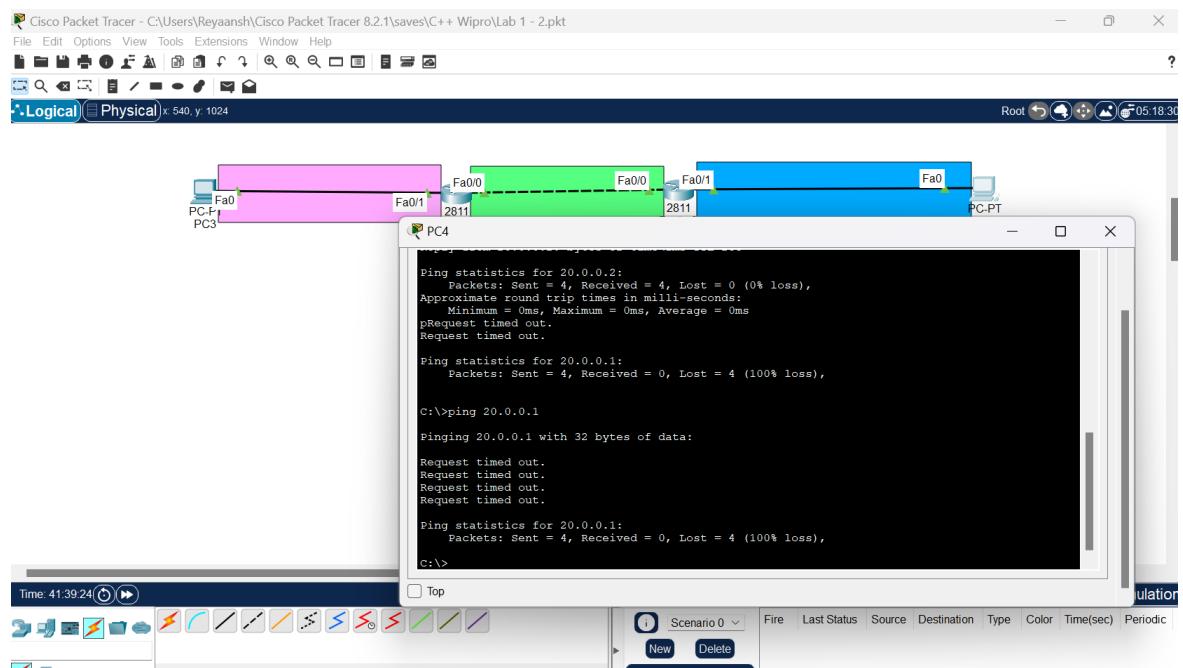
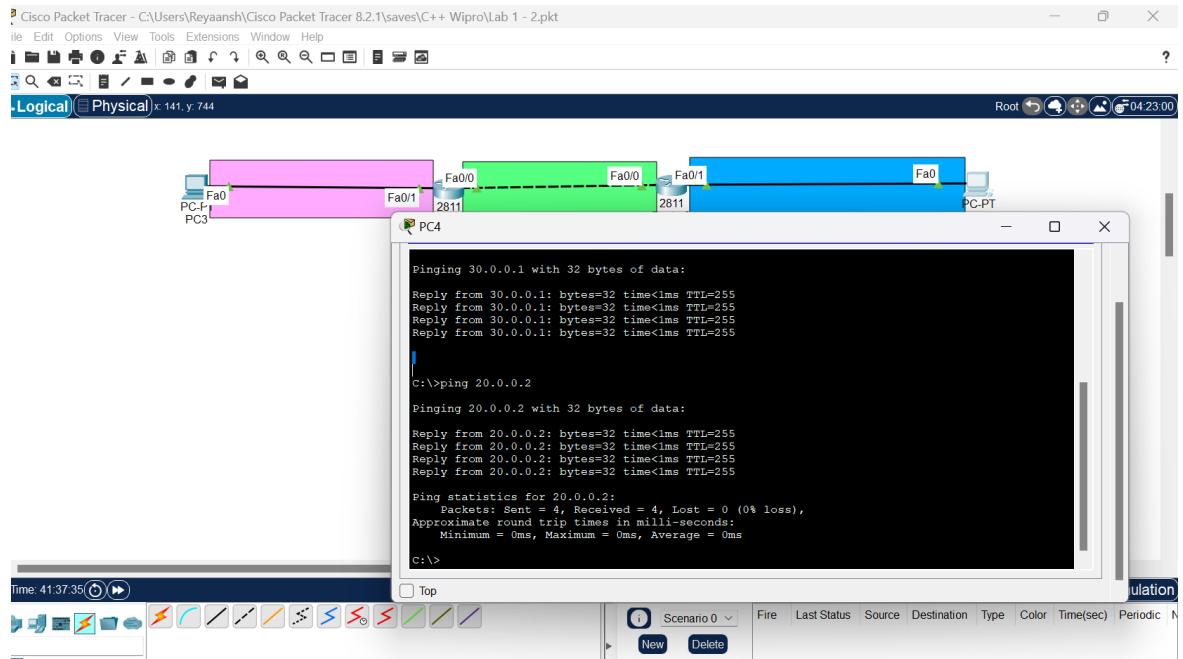


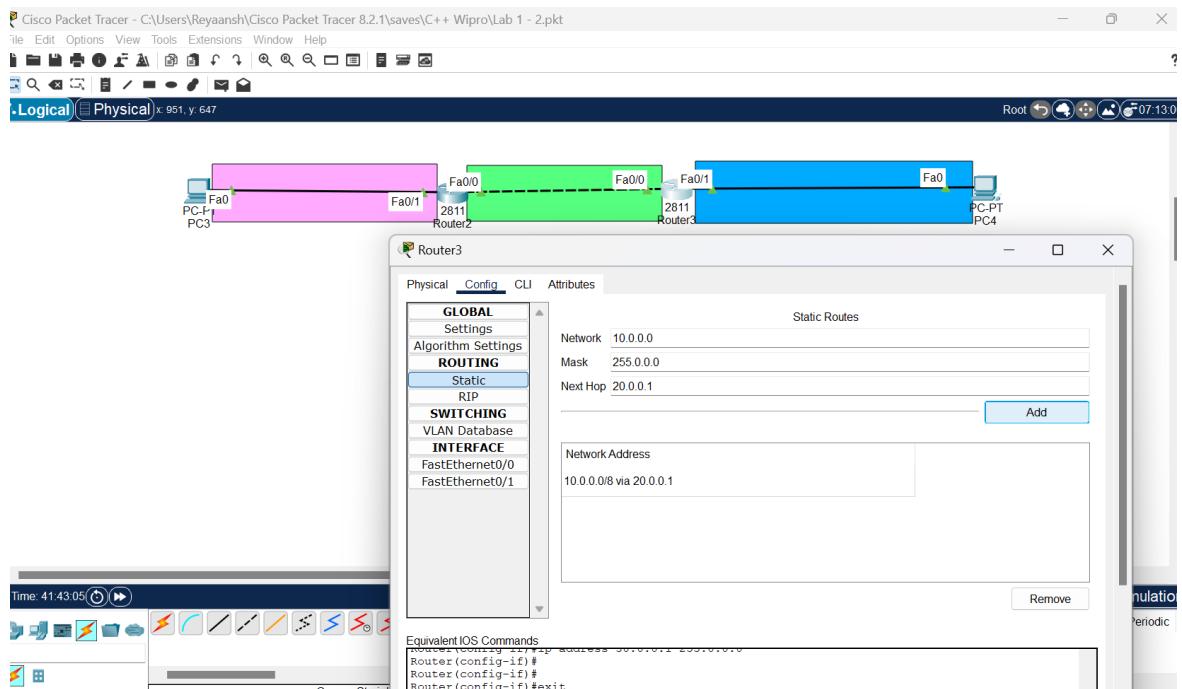
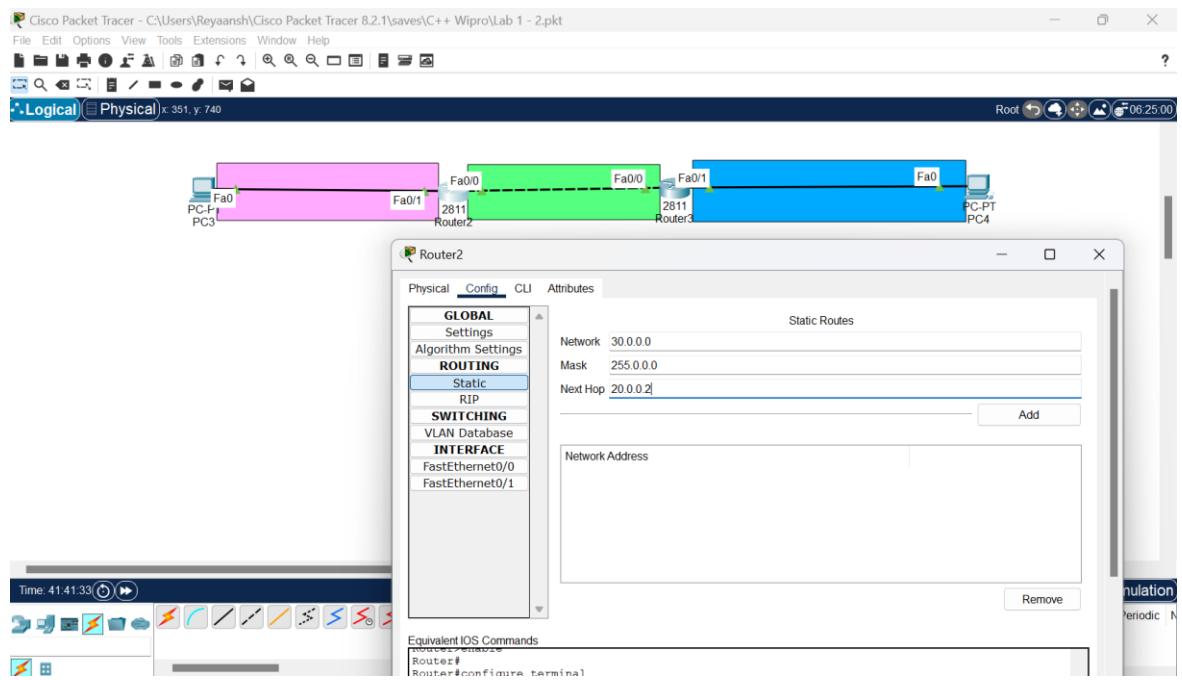


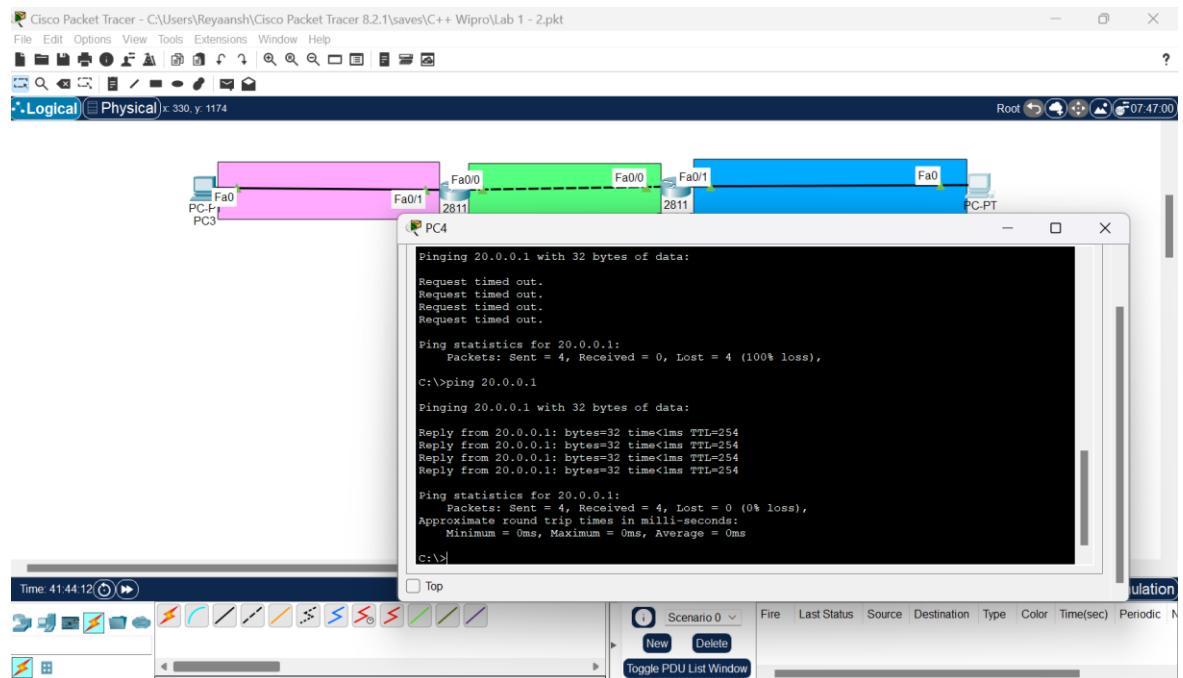
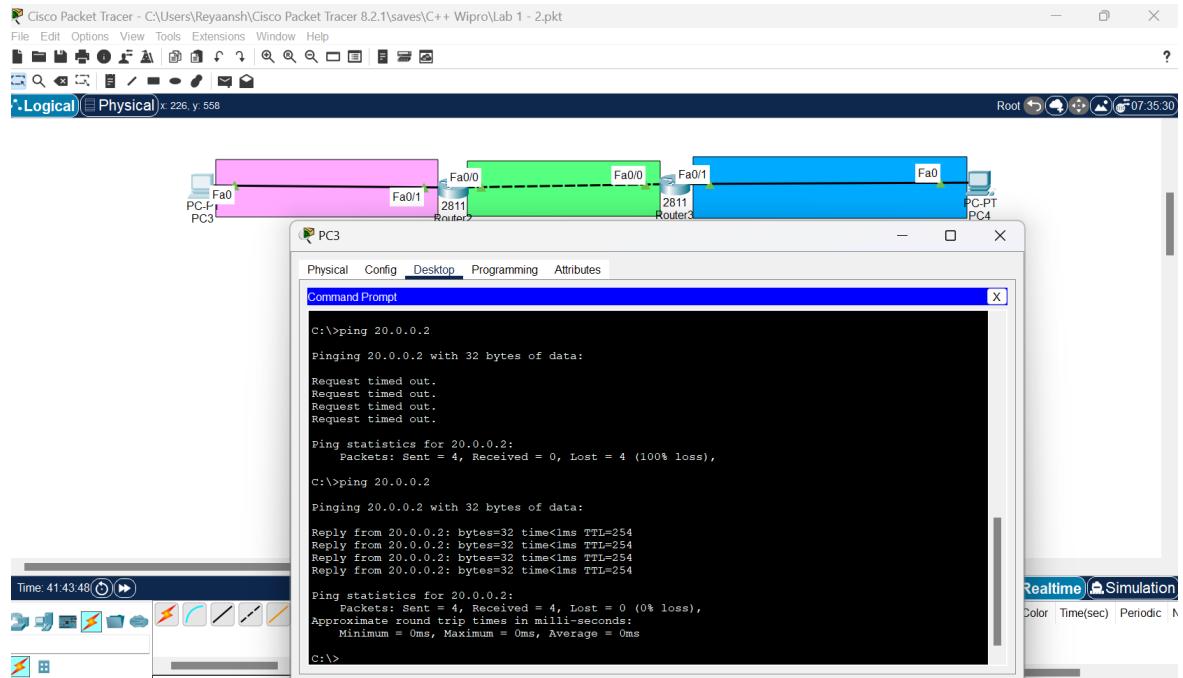


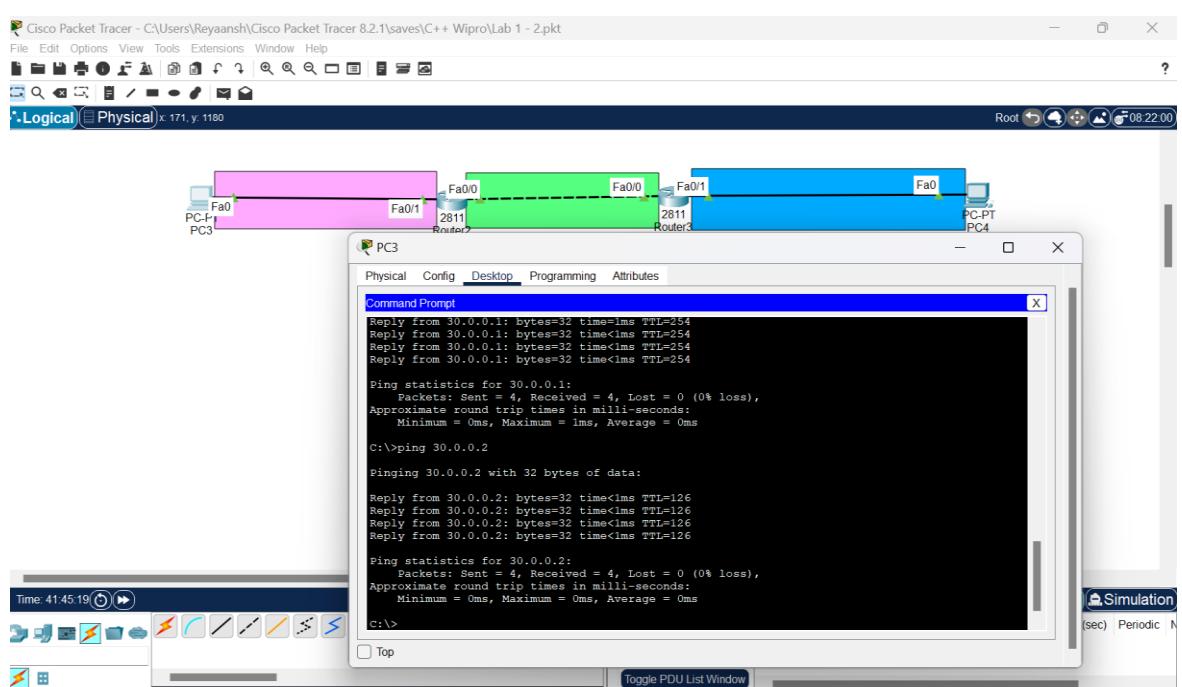
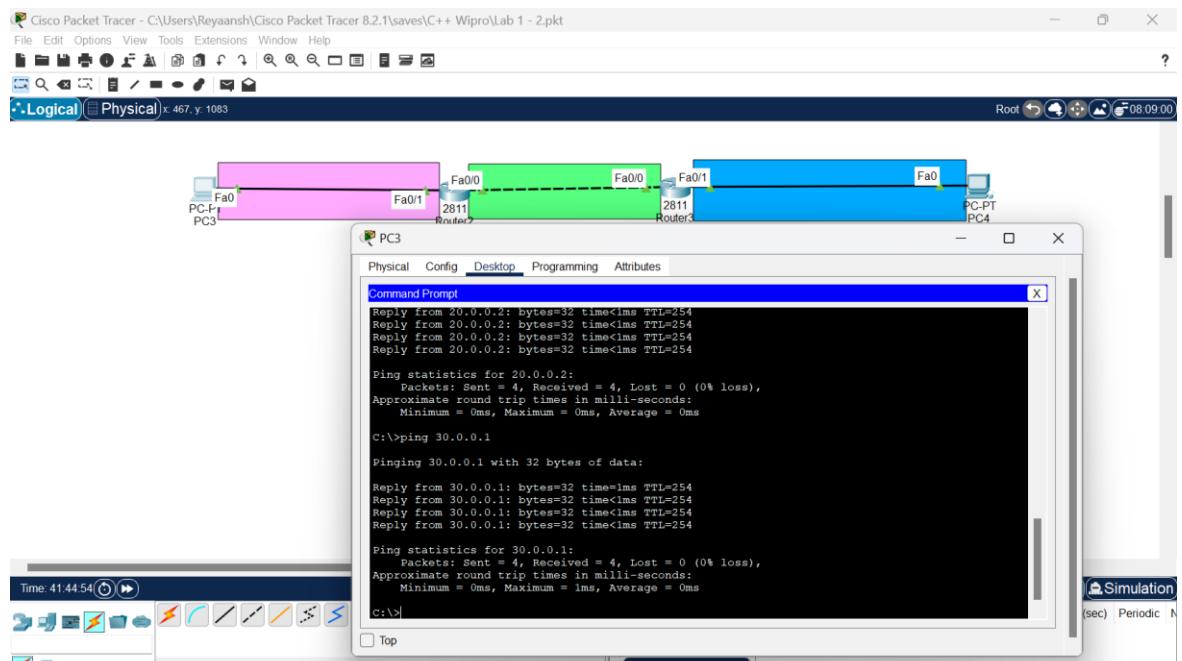


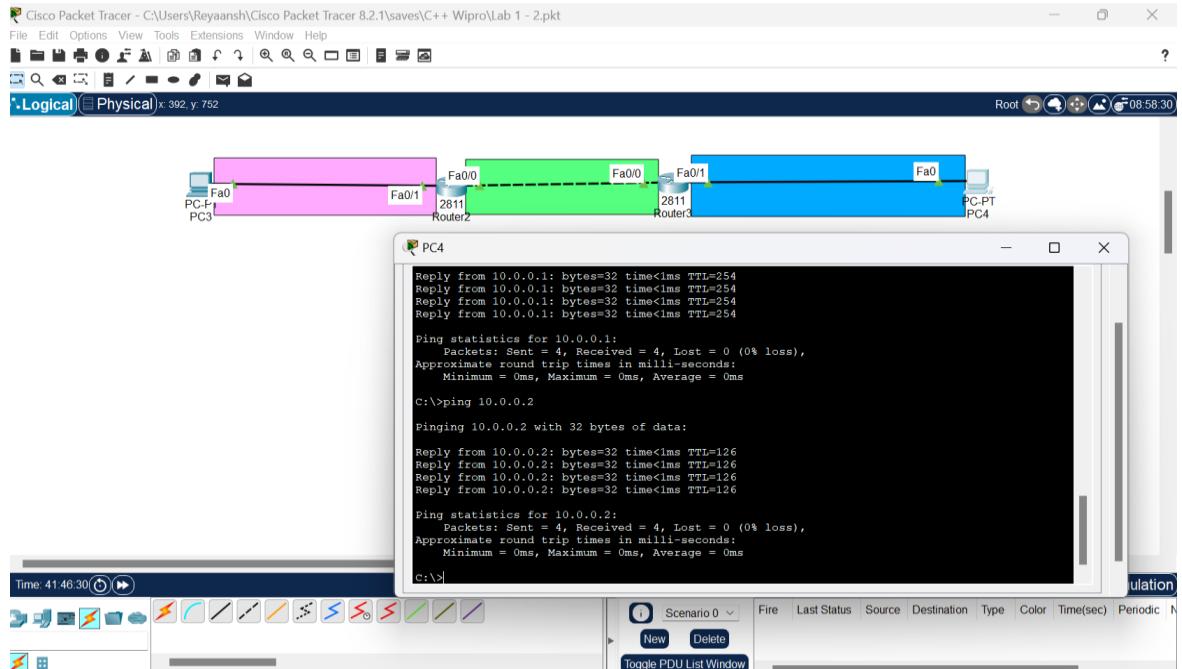
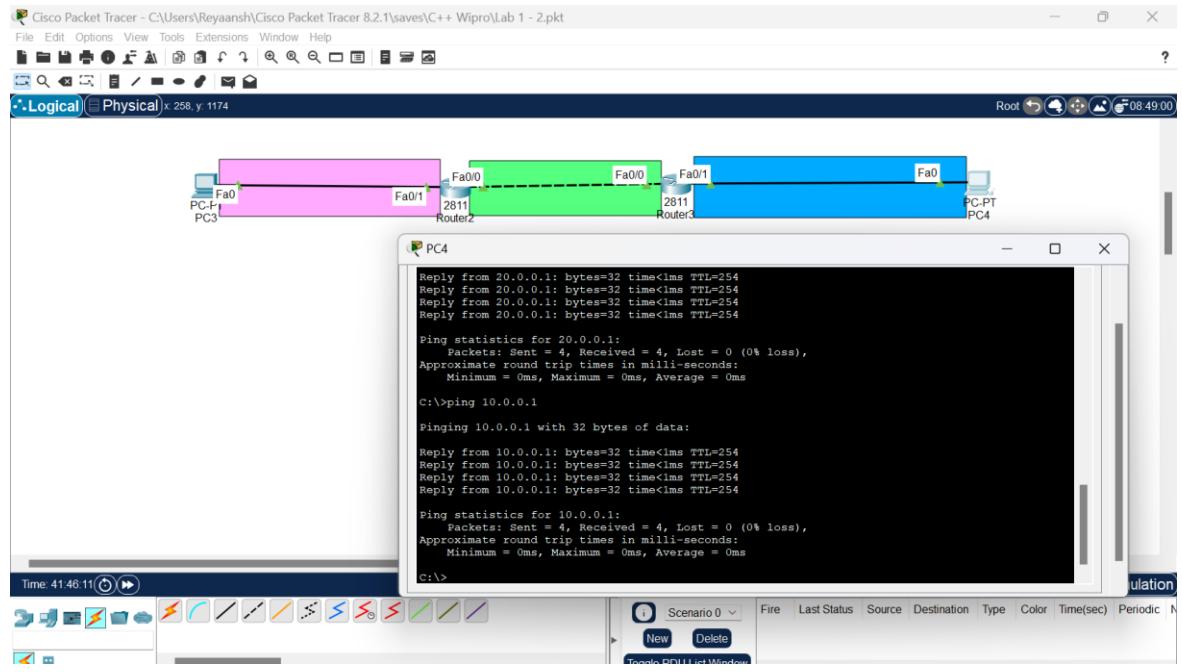




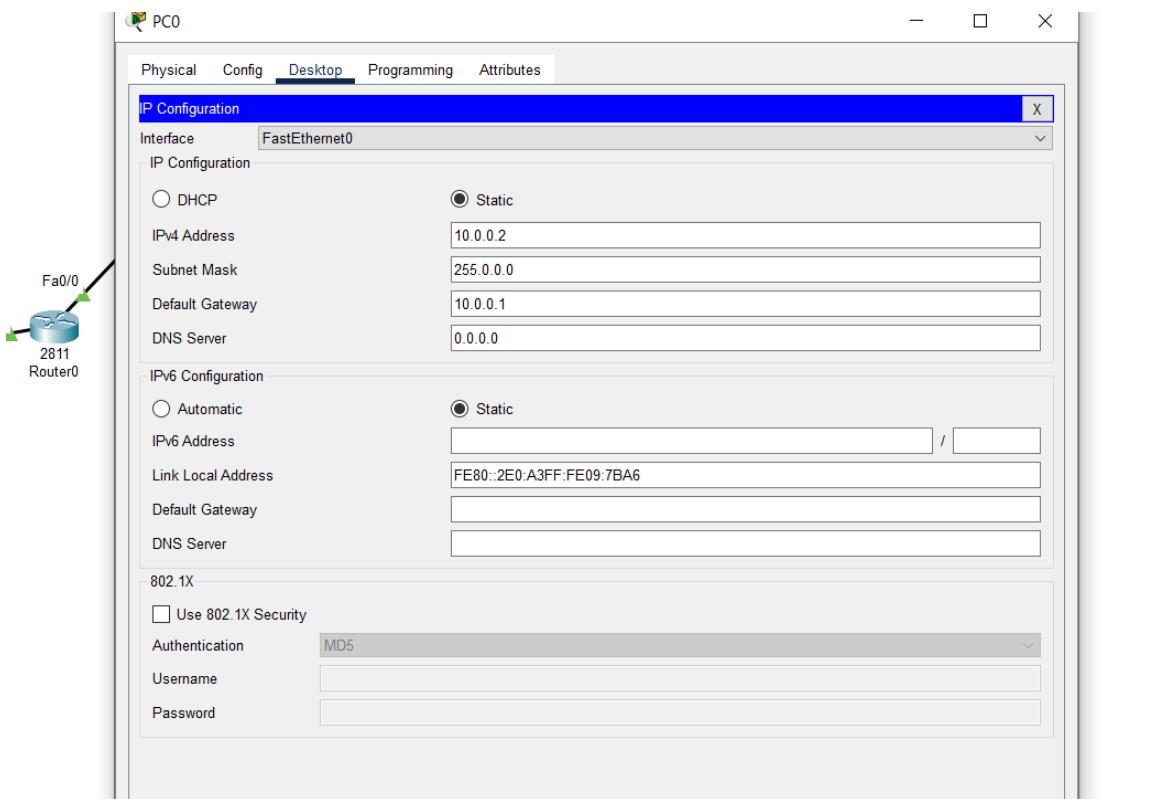
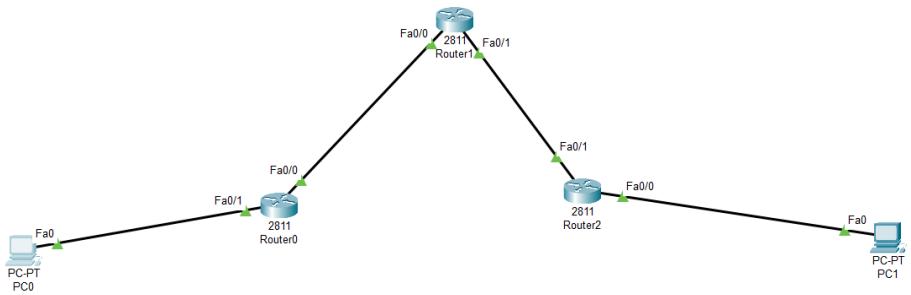


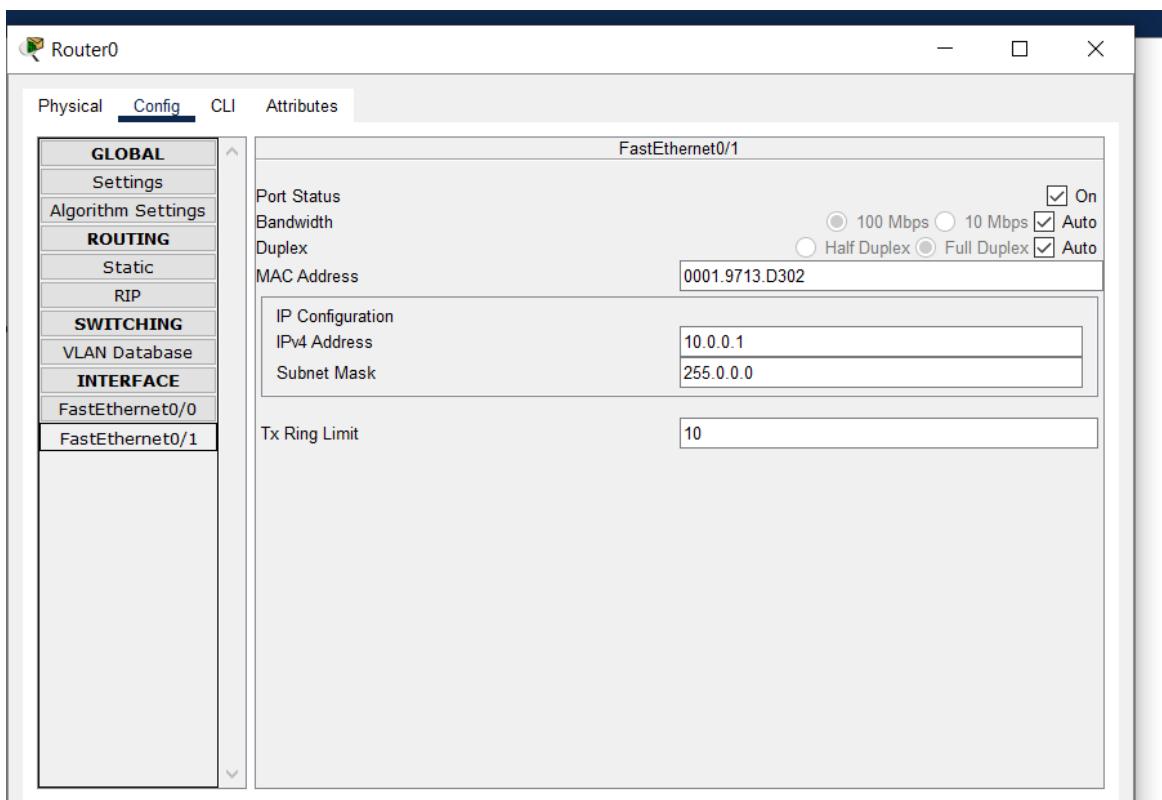
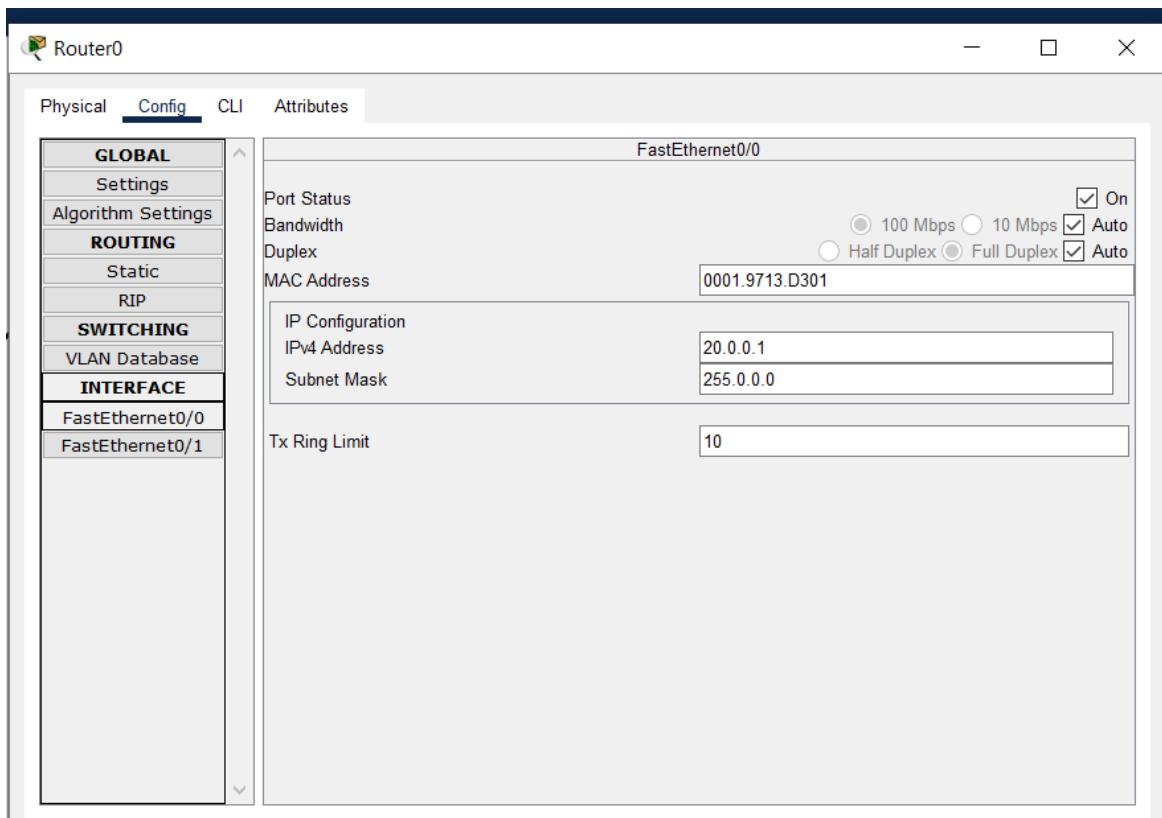






Lab5:Static Routing#2





Router0

Physical Config CLI Attributes

ROUTING

Static Routes

Network: []

Mask: []

Next Hop: []

Add

Network Address

30.0.0.0/8 via 20.0.0.2

40.0.0.0/8 via 20.0.0.2

Remove

GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
FastEthernet0/0
FastEthernet0/1

Router1

Physical Config CLI Attributes

ROUTING

FastEthernet0/0

Port Status: On
 100 Mbps 10 Mbps Auto
 Half Duplex Full Duplex

Bandwidth: Auto

Duplex: Auto

MAC Address: 000C.8504.8401

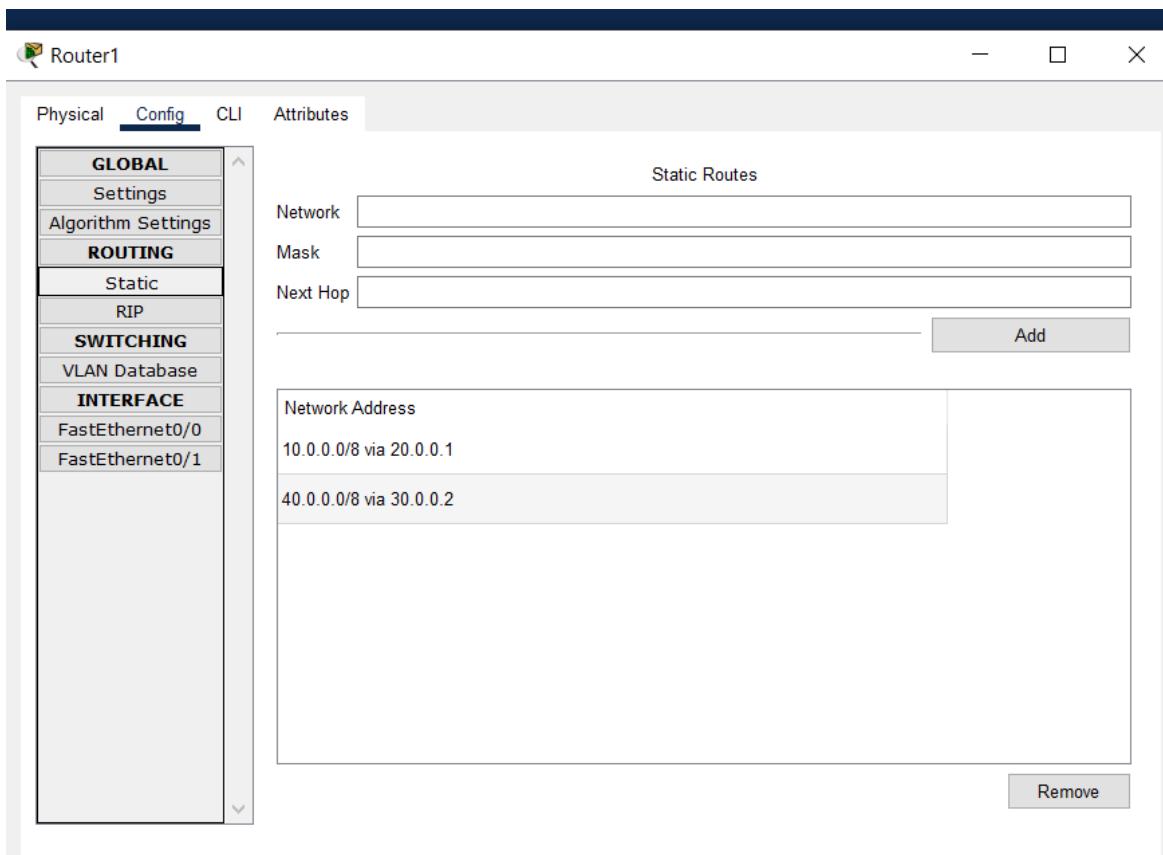
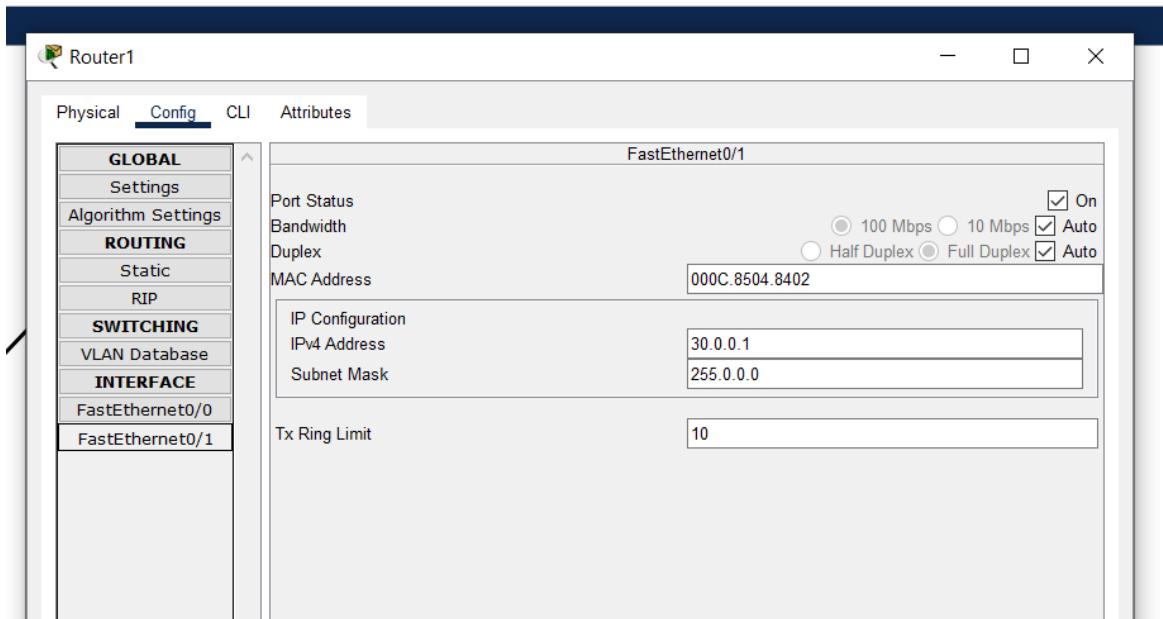
IP Configuration

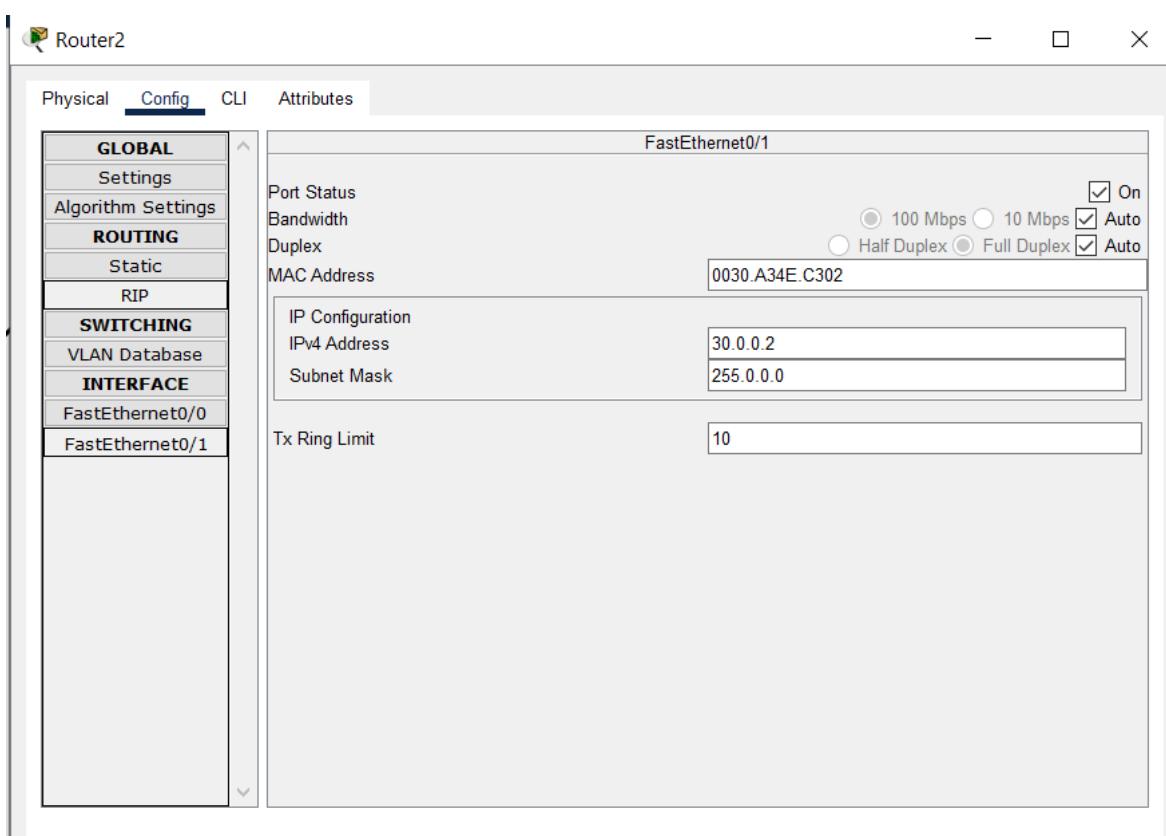
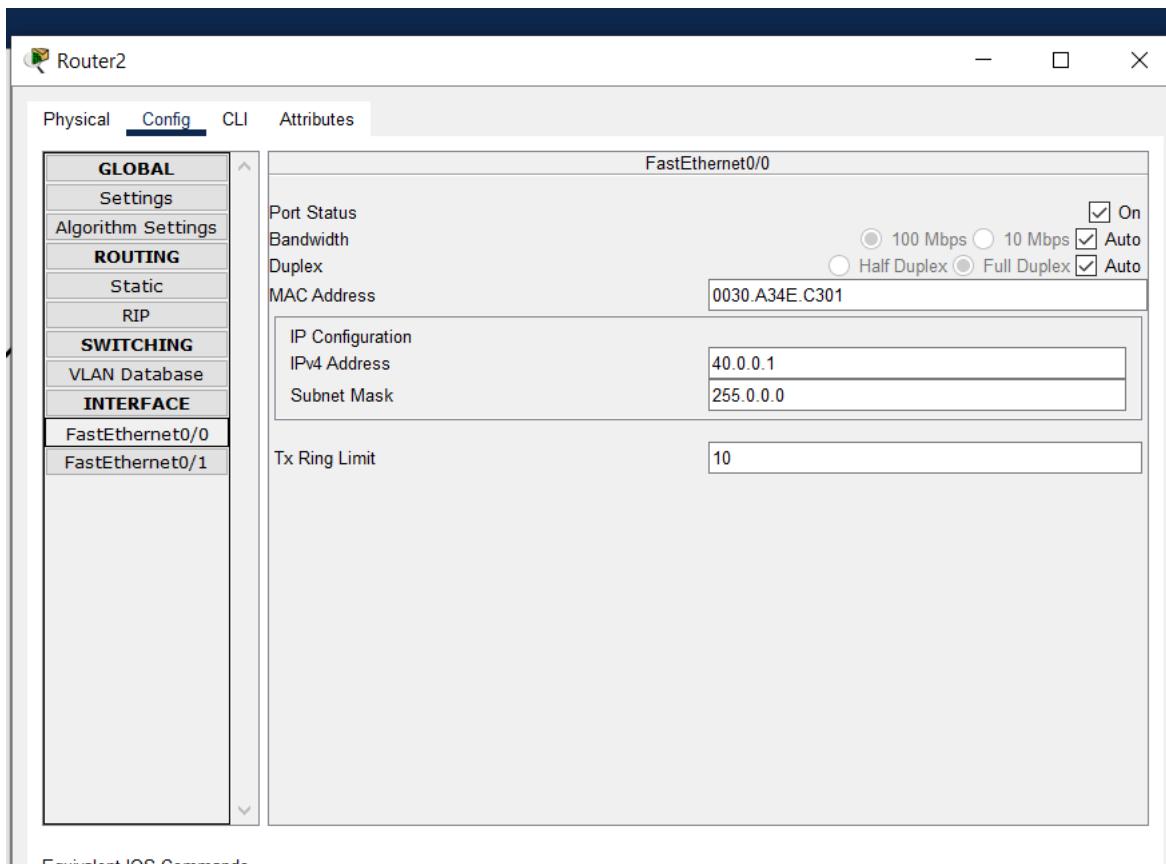
IPv4 Address: 20.0.0.2

Subnet Mask: 255.0.0.0

Tx Ring Limit: 10

GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
FastEthernet0/0
FastEthernet0/1





Router2

Physical Config CLI Attributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/0

FastEthernet0/1

Static Routes

Network: []

Mask: []

Next Hop: []

Add

Network Address

20.0.0.0/8 via 30.0.0.1

10.0.0.0/8 via 30.0.0.1

PC1

Physical Config Desktop Programming Attributes

IP Configuration

X

Interface: FastEthernet0

IP Configuration

DHCP Static

IPv4 Address: 40.0.0.2

Subnet Mask: 255.0.0.0

Default Gateway: 40.0.0.1

DNS Server: 0.0.0.0

IPv6 Configuration

Automatic Static

IPv6 Address: [] / []

Link Local Address: FE80::290:CFF:FE37:2734

Default Gateway: []

DNS Server: []

802.1X

Use 802.1X Security

Authentication: MD5

Username: []

Password: []

```
C:\>ping 10.0.0.2

Pinging 10.0.0.2 with 32 bytes of data:

Reply from 10.0.0.2: bytes=32 time<1ms TTL=125
Reply from 10.0.0.2: bytes=32 time=1ms TTL=125
Reply from 10.0.0.2: bytes=32 time<1ms TTL=125
Reply from 10.0.0.2: bytes=32 time<1ms 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 = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```

```
C:\>ping 40.0.0.2

Pinging 40.0.0.2 with 32 bytes of data:

Reply from 40.0.0.2: bytes=32 time<1ms TTL=125

Ping statistics for 40.0.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

Lab6:Dynamic Routing

Its for same above question

Router1

Router#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#router rip

Router(config-router)#ver

Router(config-router)#version 2

Router(config-router)#net

Router(config-router)#network 10.0.0.0 ?

<cr>

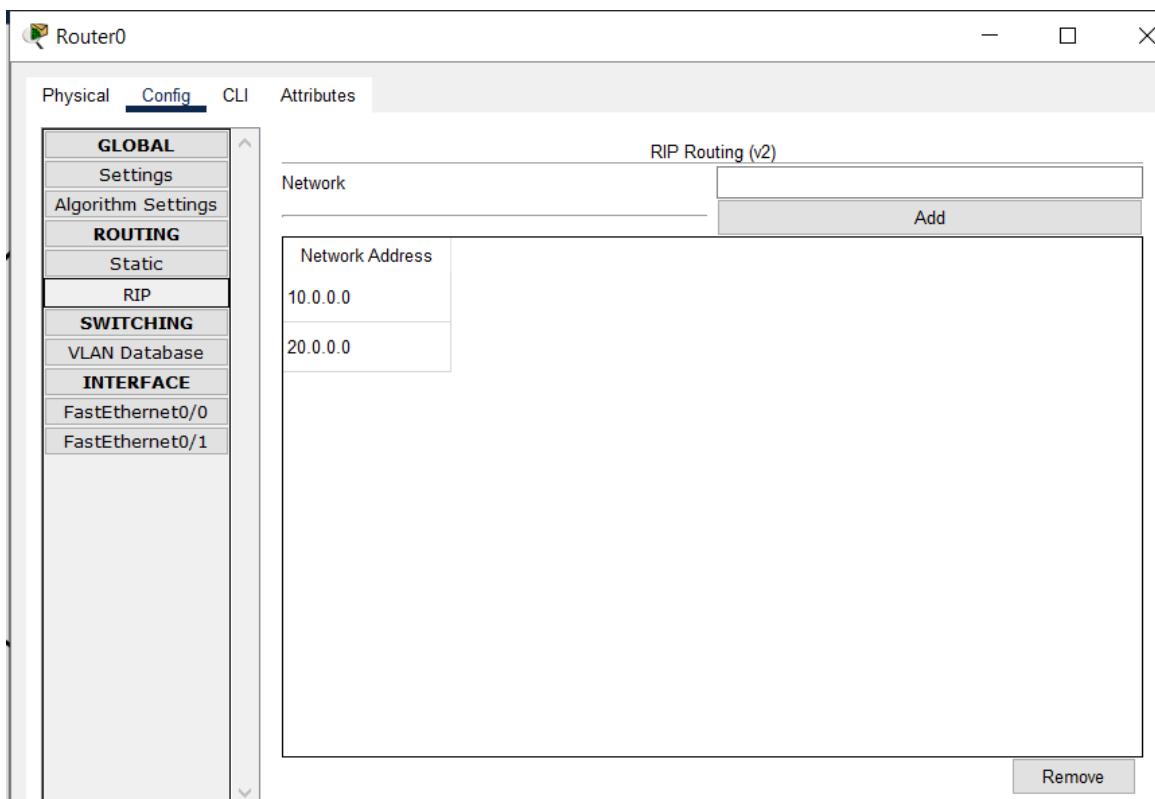
Router(config-router)#network 10.0.0.0

Router(config-router)#network 20.0.0.0

Router(config-router)#no au

Router(config-router)#no auto-summary

```
Router(config-router)#
```



Router2

```
Router#conf t
```

```
Enter configuration commands, one per line. End with CNTL/Z.
```

```
Router(config)#ro
```

```
Router(config)#router rip
```

```
Router(config-router)#ver
```

```
Router(config-router)#version 2
```

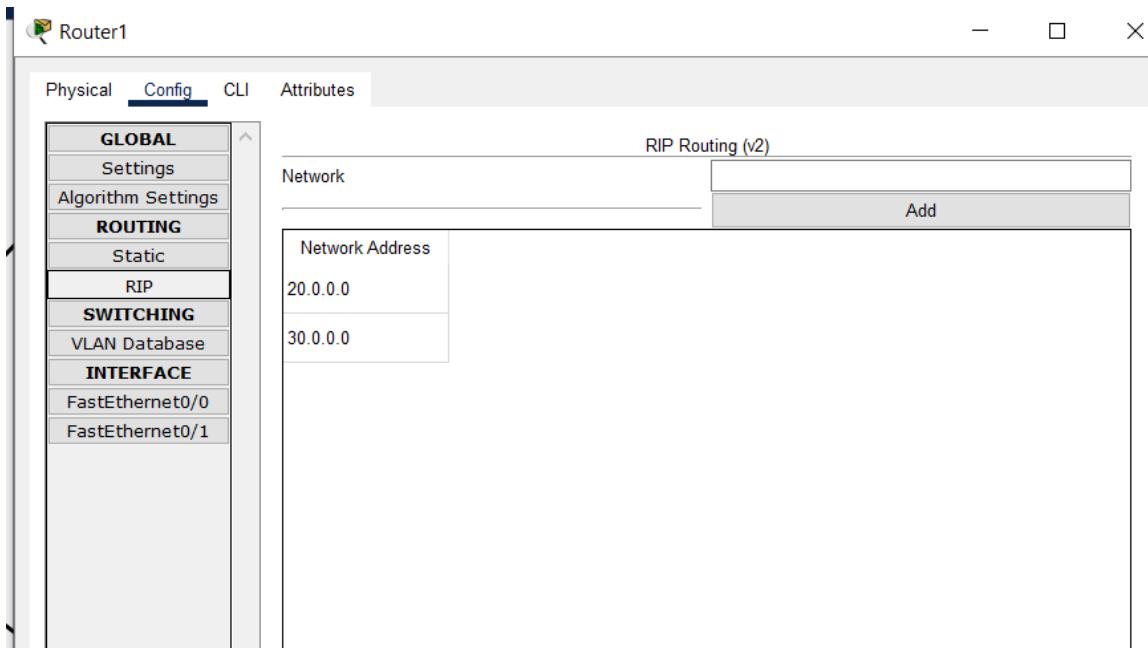
```
Router(config-router)#ne
```

```
Router(config-router)#network 20.0.0.0
```

```
Router(config-router)#network 30.0.0.0
```

```
Router(config-router)#no a
```

```
Router(config-router)#no auto-summary
```



Router3

```
Router#conf t
```

Enter configuration commands, one per line. End with CNTL/Z.

```
Router(config)#ro
```

```
Router(config)#router rip
```

```
Router(config-router)#ver
```

```
Router(config-router)#version 2
```

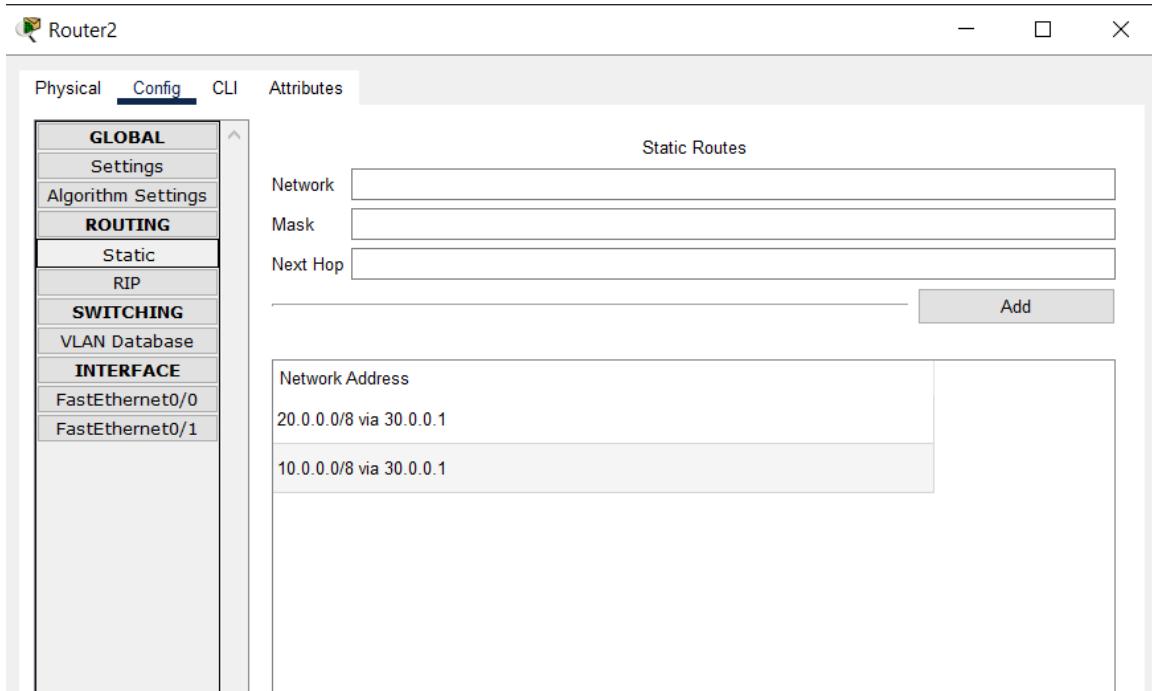
```
Router(config-router)#ne
```

```
Router(config-router)#network 30.0.0.0
```

```
Router(config-router)#network 40.0.0.0
```

```
Router(config-router)#no a
```

```
Router(config-router)#no auto-summary
```



```
C:\>ping 10.0.0.2

Pinging 10.0.0.2 with 32 bytes of data:

Reply from 10.0.0.2: bytes=32 time<lms TTL=125
Reply from 10.0.0.2: bytes=32 time=lms TTL=125
Reply from 10.0.0.2: bytes=32 time<lms TTL=125
Reply from 10.0.0.2: bytes=32 time<lms 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 = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```

```
C:\>ping 40.0.0.2

Pinging 40.0.0.2 with 32 bytes of data:

Reply from 40.0.0.2: bytes=32 time<lms TTL=125

Ping statistics for 40.0.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

