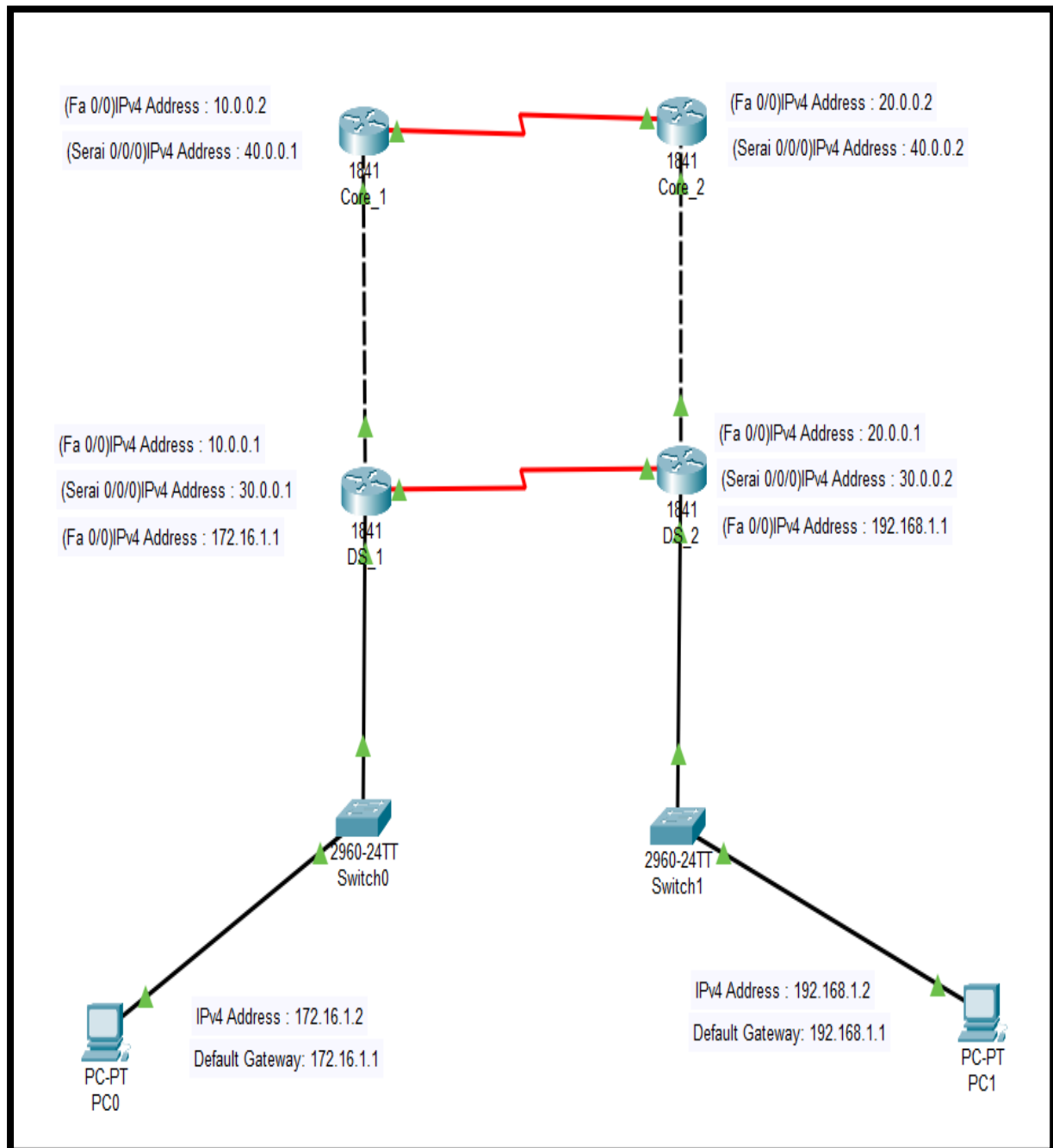


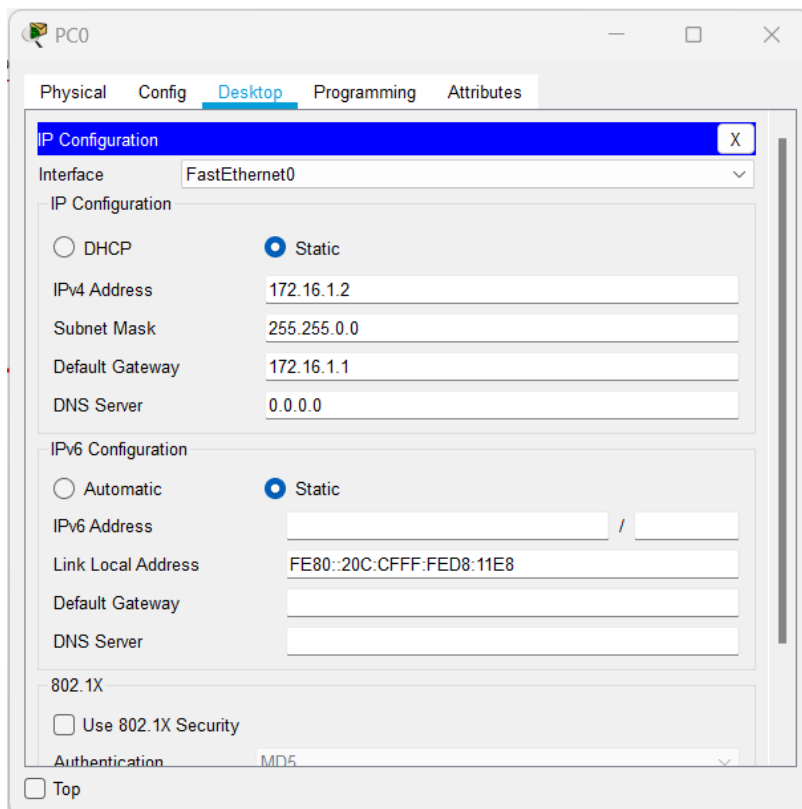
Practical NO: 2

Aim: Demonstrating Distribution Layer Functions.

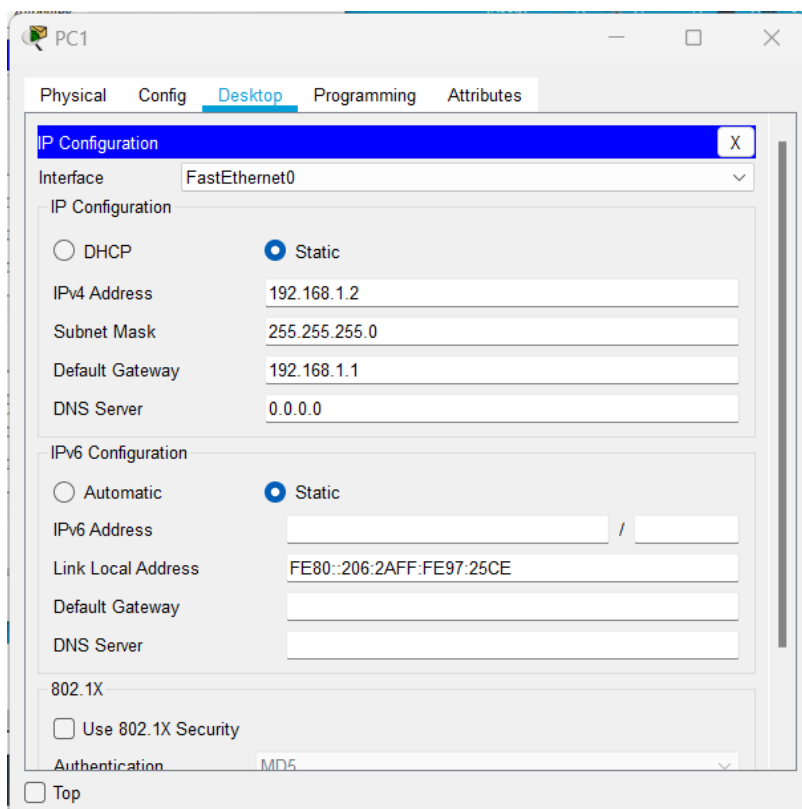
Step 1: Make Connection like This. Name the top two Routers Core_1 and Core_2 and the Bottom two Routers DS_1 and DS_2.



Step 2: Click on PC0 > Desktop > IP Configuration > set IPv4 Address and Default Gateway.



Step 3: Click on PC1 > Desktop > IP Configuration > set IPv4 Address and Default Gateway.



Step 4: Click on DS_1 > Config > FastEthernet 0/0 > set IPv4 Address and On the Port Status

The screenshot shows the configuration window for DS_1. The 'Config' tab is selected. On the left, the 'INTERFACE' section is expanded, and 'FastEthernet0/0' is selected. The main area displays the configuration for 'FastEthernet0/0'. The 'Port Status' is set to 'On'. 'Bandwidth' is set to '100 Mbps'. 'Duplex' is set to 'Full Duplex'. 'MAC Address' is '0001.96C5.AC01'. The 'IP Configuration' section shows 'IPv4 Address' as '172.16.1.1' and 'Subnet Mask' as '255.255.0.0'. The 'Tx Ring Limit' is set to '10'. Below the configuration, the 'Equivalent IOS Commands' are listed:

```
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up

Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#
```

A 'Top' button is located at the bottom left.

Step 5: Click on DS_2 > Config > FastEthernet 0/0 > set IPv4 Address and On the Port Status

The screenshot shows the configuration window for DS_2. The 'Config' tab is selected. On the left, the 'INTERFACE' section is expanded, and 'FastEthernet0/0' is selected. The main area displays the configuration for 'FastEthernet0/0'. The 'Port Status' is set to 'On'. 'Bandwidth' is set to '100 Mbps'. 'Duplex' is set to 'Full Duplex'. 'MAC Address' is '0060.4752.E901'. The 'IP Configuration' section shows 'IPv4 Address' as '192.168.1.1' and 'Subnet Mask' as '255.255.255.0'. The 'Tx Ring Limit' is set to '10'. Below the configuration, the 'Equivalent IOS Commands' are listed:

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
changed state to up

Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#
```

A 'Top' button is located at the bottom left.

Step 6: Click on DS_1 > Config > FastEthernet 0/1 > set IPv4 Address and On the Port Status

The screenshot shows the configuration window for DS_1. The 'Config' tab is active, and the 'FastEthernet0/1' interface is selected in the left sidebar. The main configuration area shows the following settings:

- Port Status: ☒ On
- Bandwidth: ☒ 100 Mbps ☐ 10 Mbps ☒ Auto
- Duplex: ☒ Half Duplex ☐ Full Duplex ☒ Auto
- MAC Address: 0001.96C5.AC02
- IP Configuration:
 - IPv4 Address: 10.0.0.1
 - Subnet Mask: 255.0.0.0
- Tx Ring Limit: 10

Equivalent IOS Commands:

```
Router(config)#interface FastEthernet0/1
Router(config-if)#ip address 10.0.0.1 255.0.0.0
Router(config-if)#ip address 10.0.0.1 255.0.0.0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up
```

☐ Top

Step 7: Click on Core_1 > Config > FastEthernet 0/0 > set IPv4 Address and On the Port Status

The screenshot shows the configuration window for Core_1. The 'Config' tab is active, and the 'FastEthernet0/0' interface is selected in the left sidebar. The main configuration area shows the following settings:

- Port Status: ☒ On
- Bandwidth: ☒ 100 Mbps ☐ 10 Mbps ☒ Auto
- Duplex: ☐ Half Duplex ☒ Full Duplex ☒ Auto
- MAC Address: 0090.2B35.AA01
- IP Configuration:
 - IPv4 Address: 10.0.0.2
 - Subnet Mask: 255.0.0.0
- Tx Ring Limit: 10

Equivalent IOS Commands:

```
Router(config-if)#no shutdown
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
```

☐ Top

Step 8: Click on DS_2 > Config > FastEthernet 0/1 > set IPv4 Address and On the Port Status

The screenshot shows the configuration window for DS_2. The 'Config' tab is active, and the 'FastEthernet0/1' interface is selected in the left sidebar. The main configuration area shows the following settings:

- Port Status: ☒ On
- Bandwidth: ☒ 100 Mbps ☐ 10 Mbps ☒ Auto
- Duplex: ☒ Half Duplex ☐ Full Duplex ☒ Auto
- MAC Address: 0060.4752.E902
- IP Configuration:
 - IPv4 Address: 20.0.0.1
 - Subnet Mask: 255.0.0.0
- Tx Ring Limit: 10

Equivalent IOS Commands:

```
Router(config)#interface FastEthernet0/1
Router(config-if)#ip address 20.0.0.1 255.0.0.0
Router(config-if)#ip address 20.0.0.1 255.0.0.0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up
```

☐ Top

Step 9: Click on Core_2 > Config > FastEthernet 0/0 > set IPv4 Address and On the Port Status

The screenshot shows the configuration window for Core_2. The 'Config' tab is active, and the 'FastEthernet0/0' interface is selected in the left sidebar. The main configuration area shows the following settings:

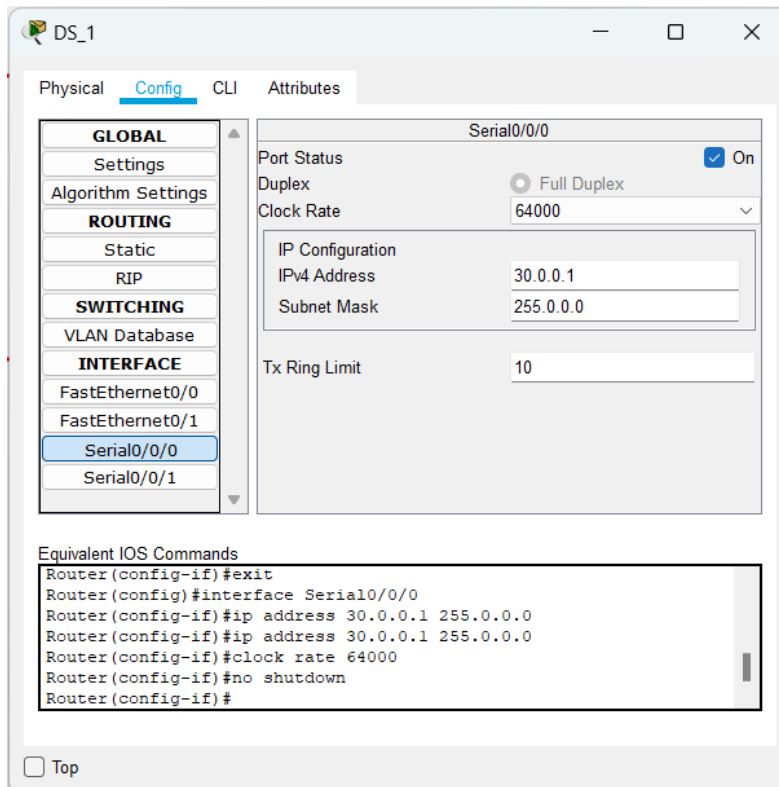
- Port Status: ☒ On
- Bandwidth: ☒ 100 Mbps ☐ 10 Mbps ☒ Auto
- Duplex: ☐ Half Duplex ☒ Full Duplex ☒ Auto
- MAC Address: 000C.CF93.EA01
- IP Configuration:
 - IPv4 Address: 20.0.0.2
 - Subnet Mask: 255.0.0.0
- Tx Ring Limit: 10

Equivalent IOS Commands:

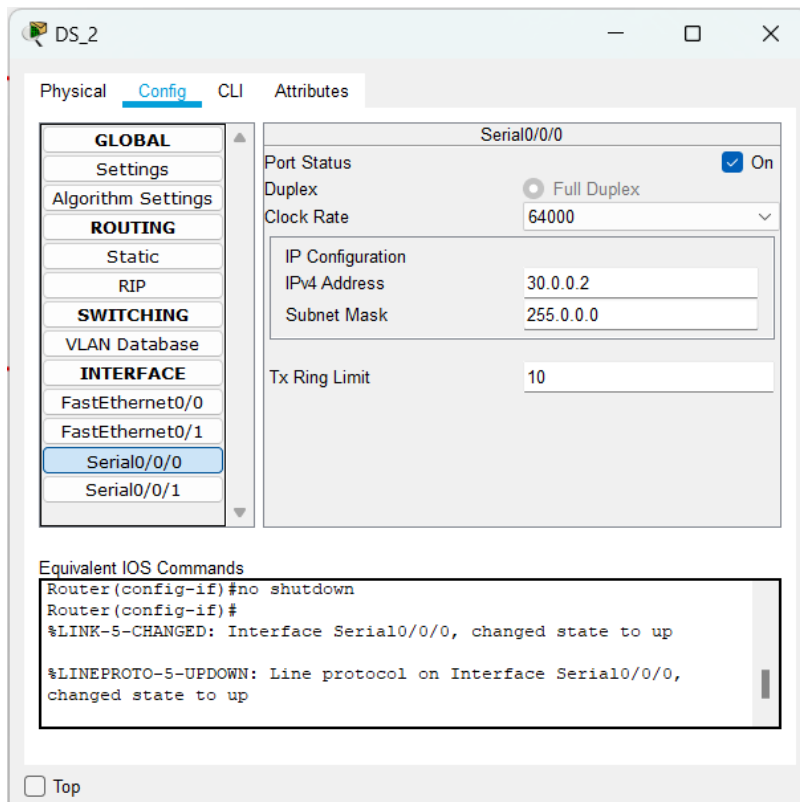
```
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
changed state to up
```

☐ Top

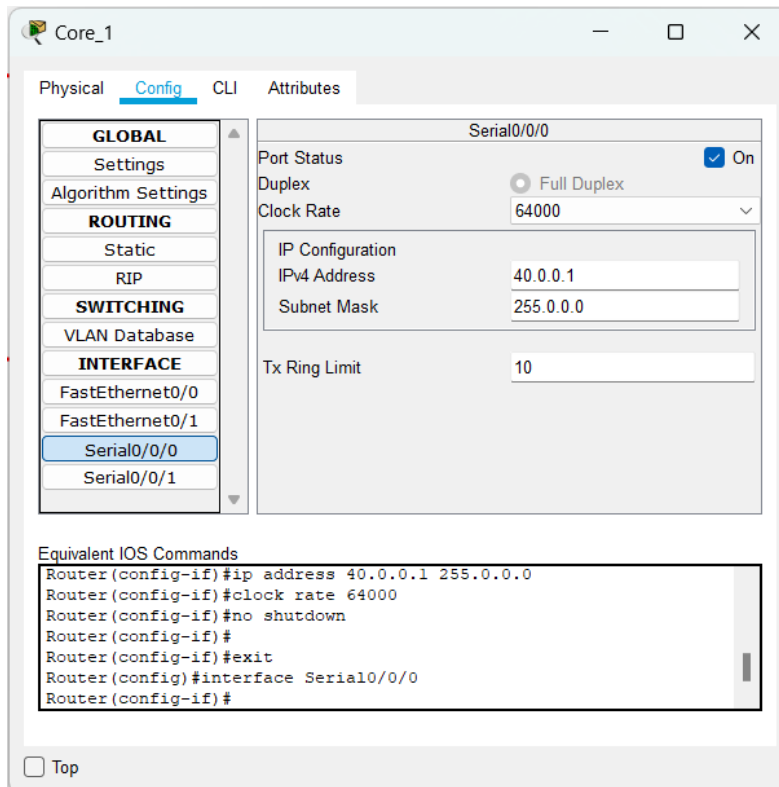
Step 10: Click on DS_1 > Config > Serial 0/0/0 > set IPv4 Address and On the Port Status.
Clock Rate = 64000.



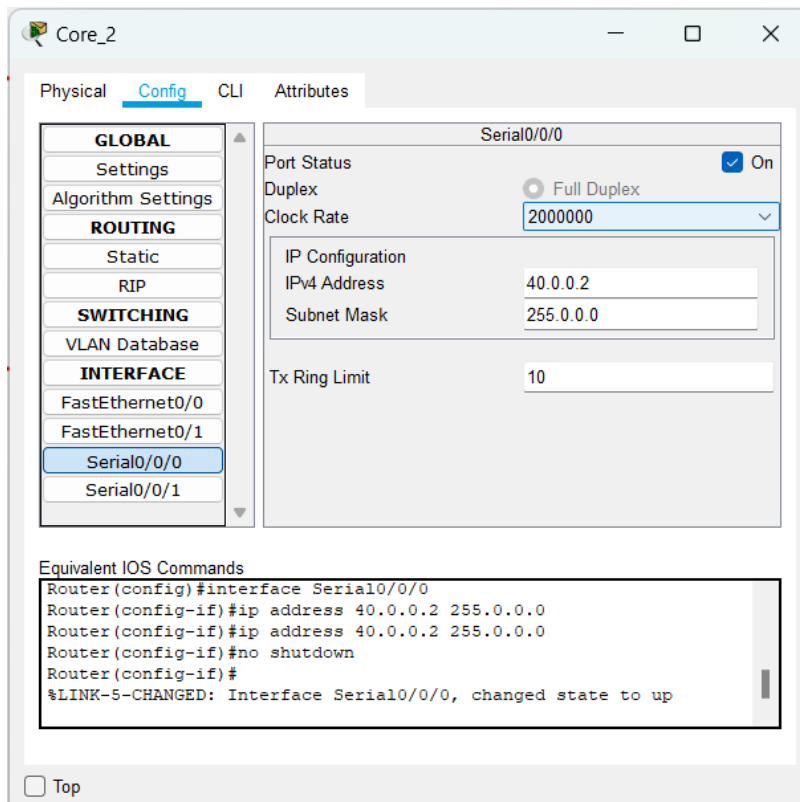
Step 11: Click on DS_2 > Config > Serial 0/0/0 > set IPv4 Address and On the Port Status.
Clock Rate = 64000.



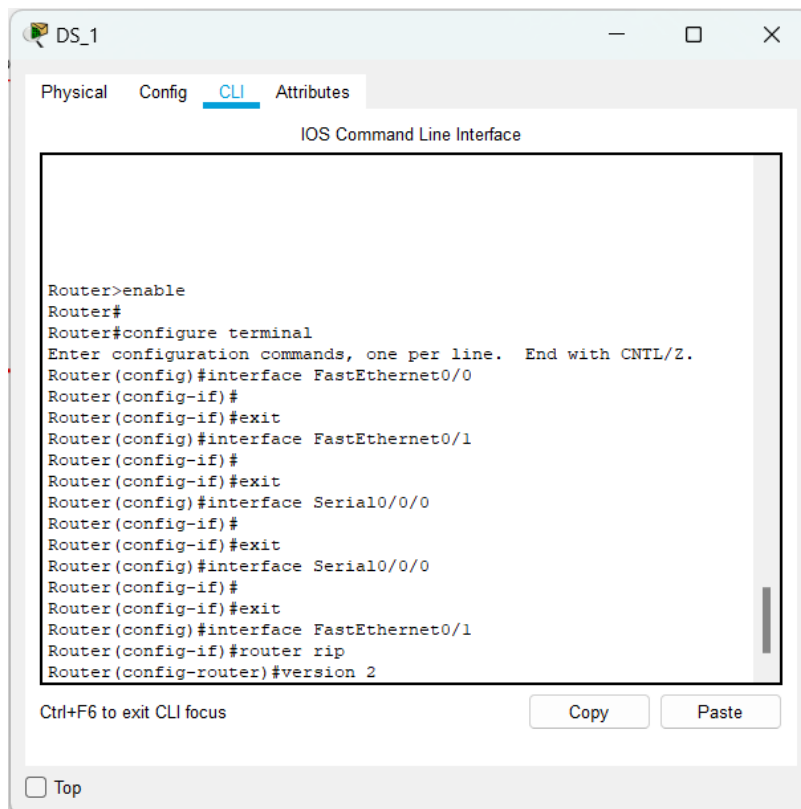
Step 12: Click on Core_1 > Config > Serial 0/0/0 > set IPv4 Address and On the Port Status.
Clock Rate = 64000.



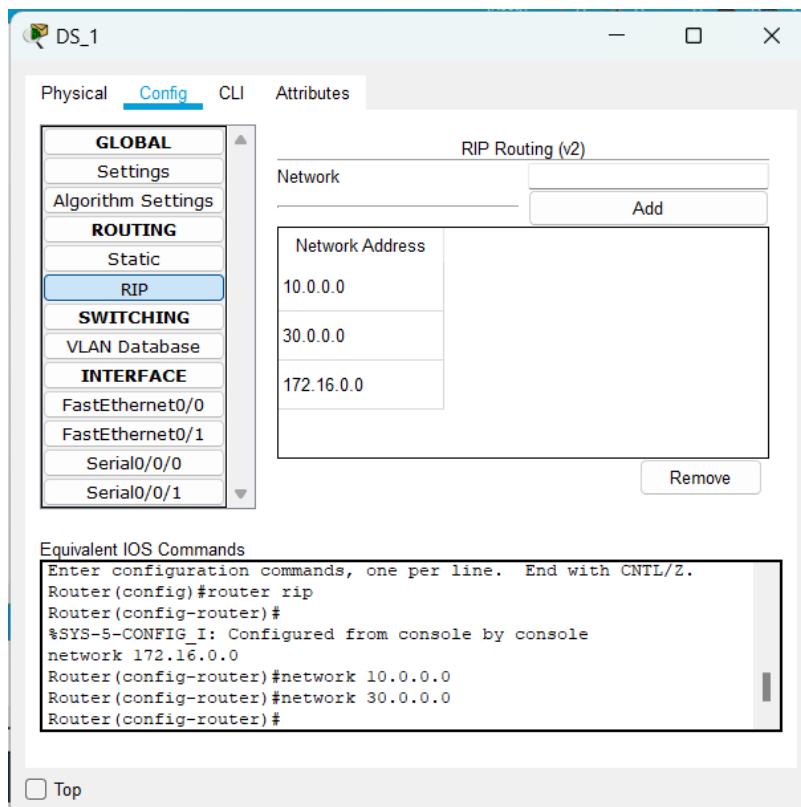
Step 13: Click on Core_2 > Config > Serial 0/0/0 > set IPv4 Address and On the Port Status.
Clock Rate = 64000.



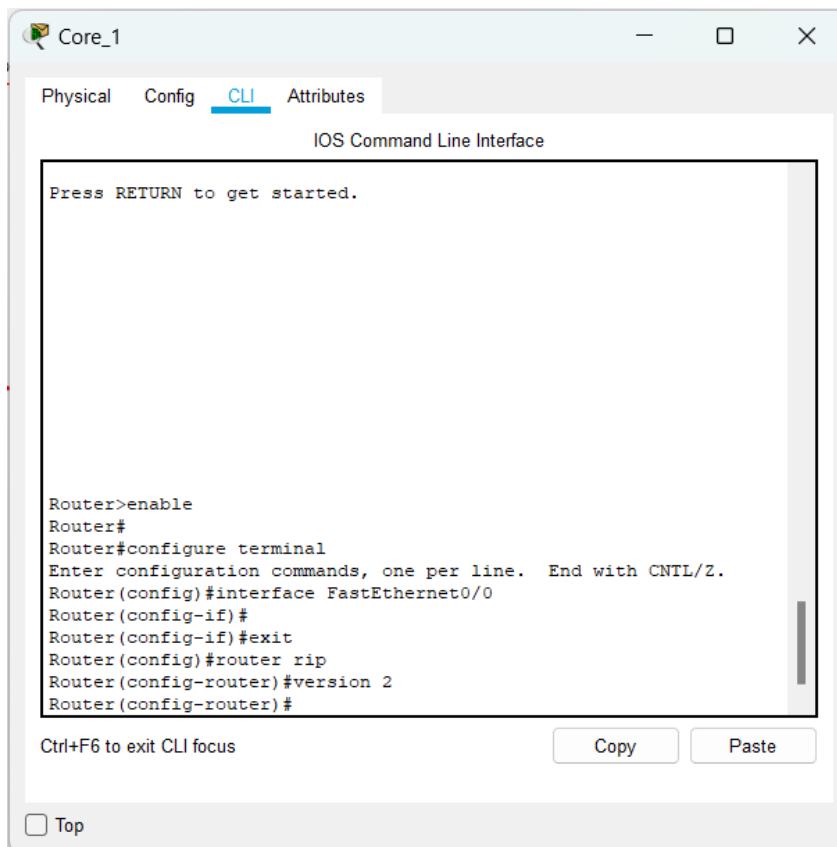
Step 14: Click on DS_1 > CLI > router rip and version 2



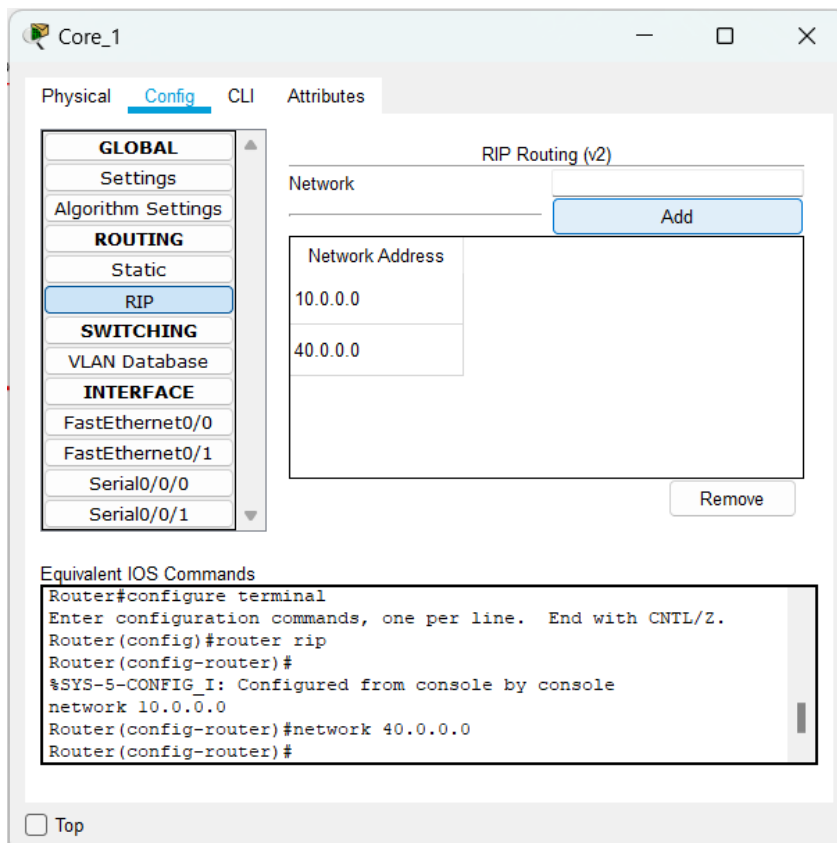
Step 15: Click on DS_1 > Config > RIP > Add Network Address.



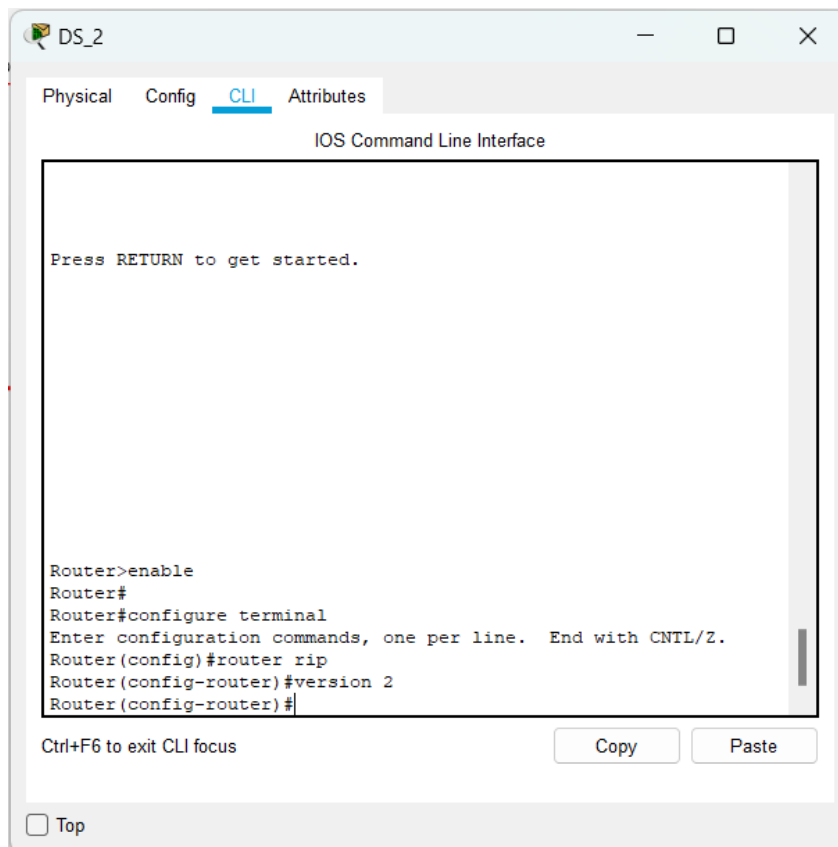
Step 16: Click on Core_1 > CLI > router rip and version 2



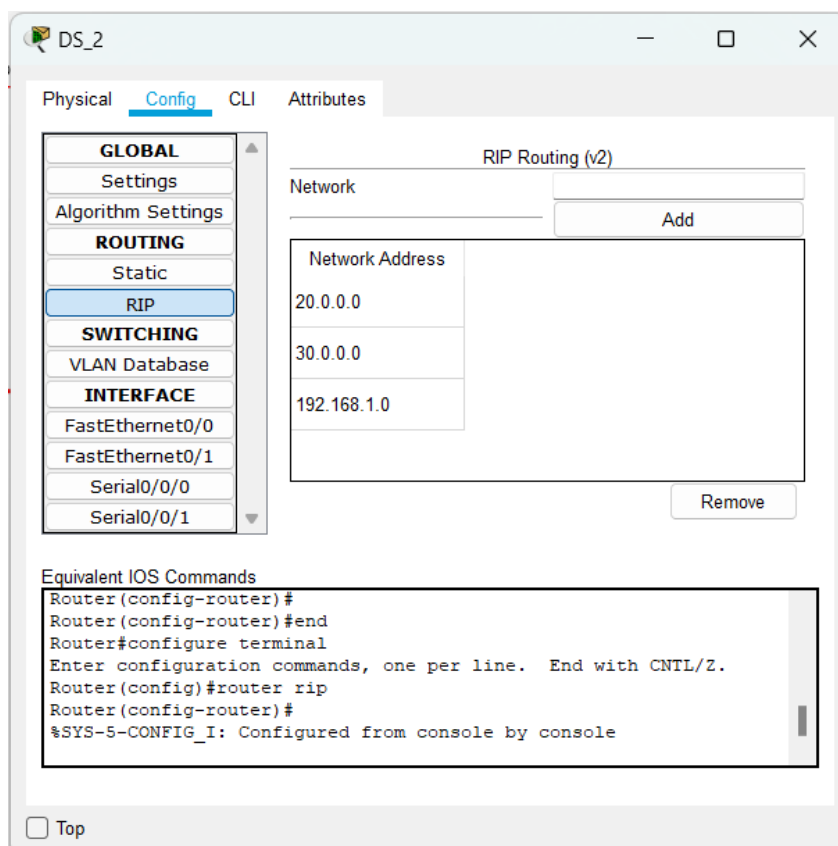
Step 17: Click on Core_1 > Config > RIP > Add Network Address.



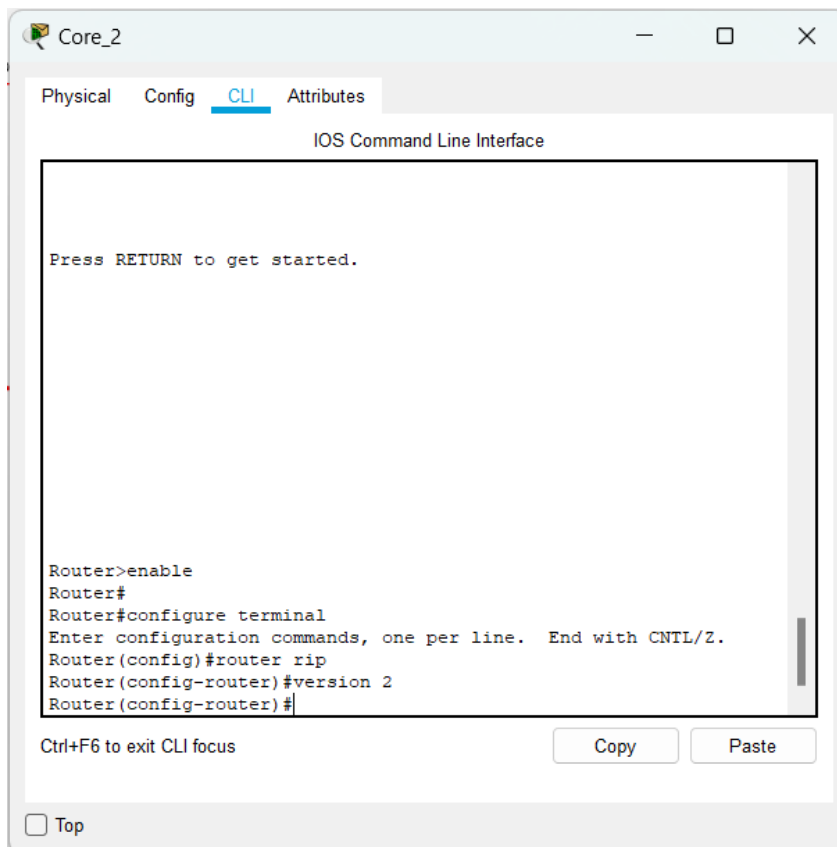
Step 18: Click on DS_2 > CLI > router rip and version 2



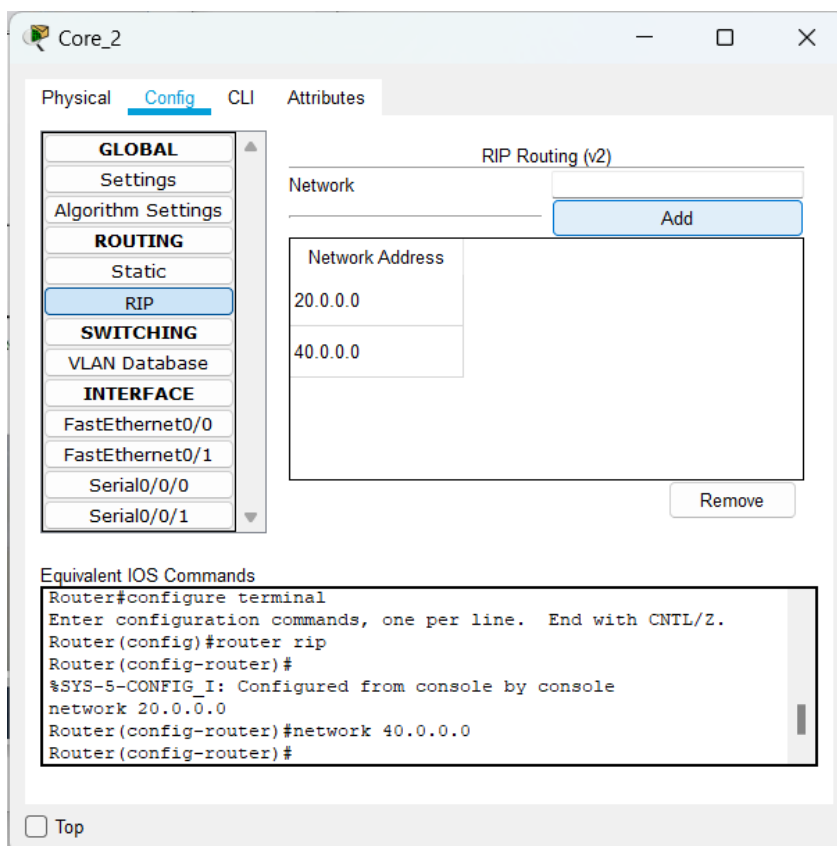
Step 19: Click on DS_2 > Config > RIP > Add Network Address.



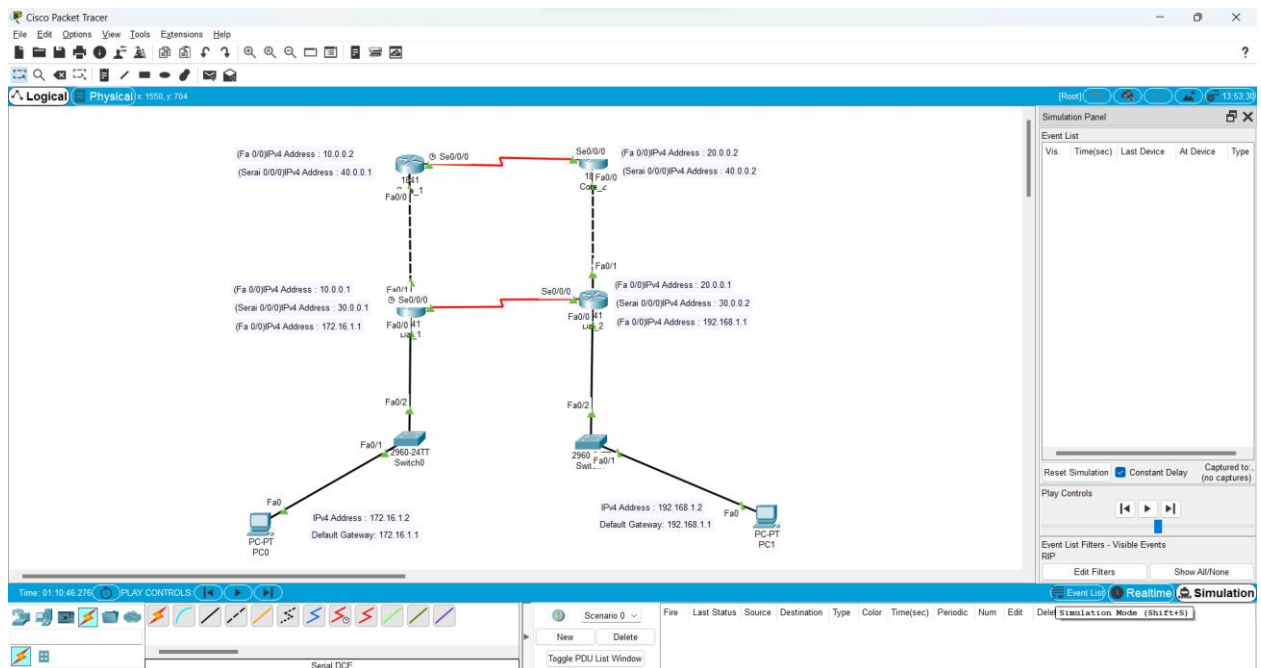
Step 20: Click on Core_2 > CLI > router rip and version 2



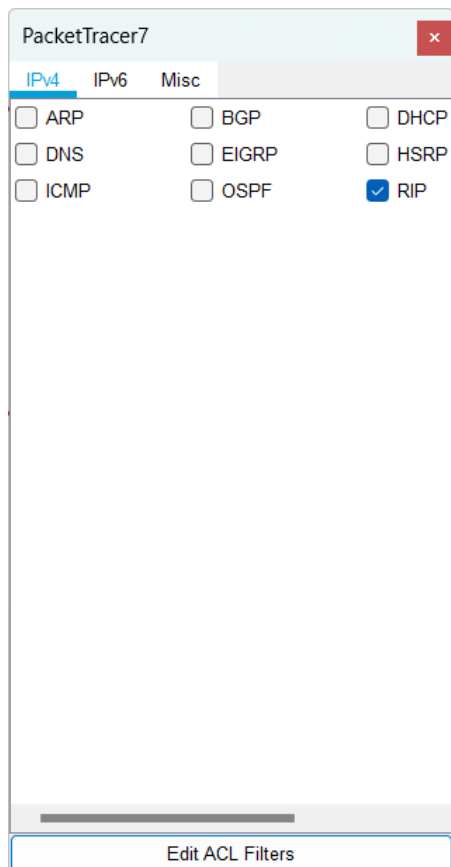
Step 21: Click on Core_2 > Config > RIP > Add Network Address.

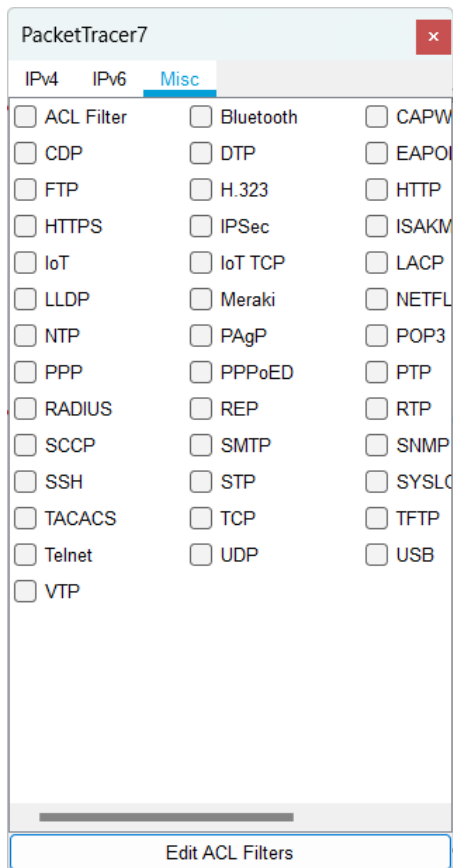


Step 22: Click on Simulation > Edit Filter



Step 23: Unclick every option except RIP in IPv4, IPv6 and Misc.





Output:

