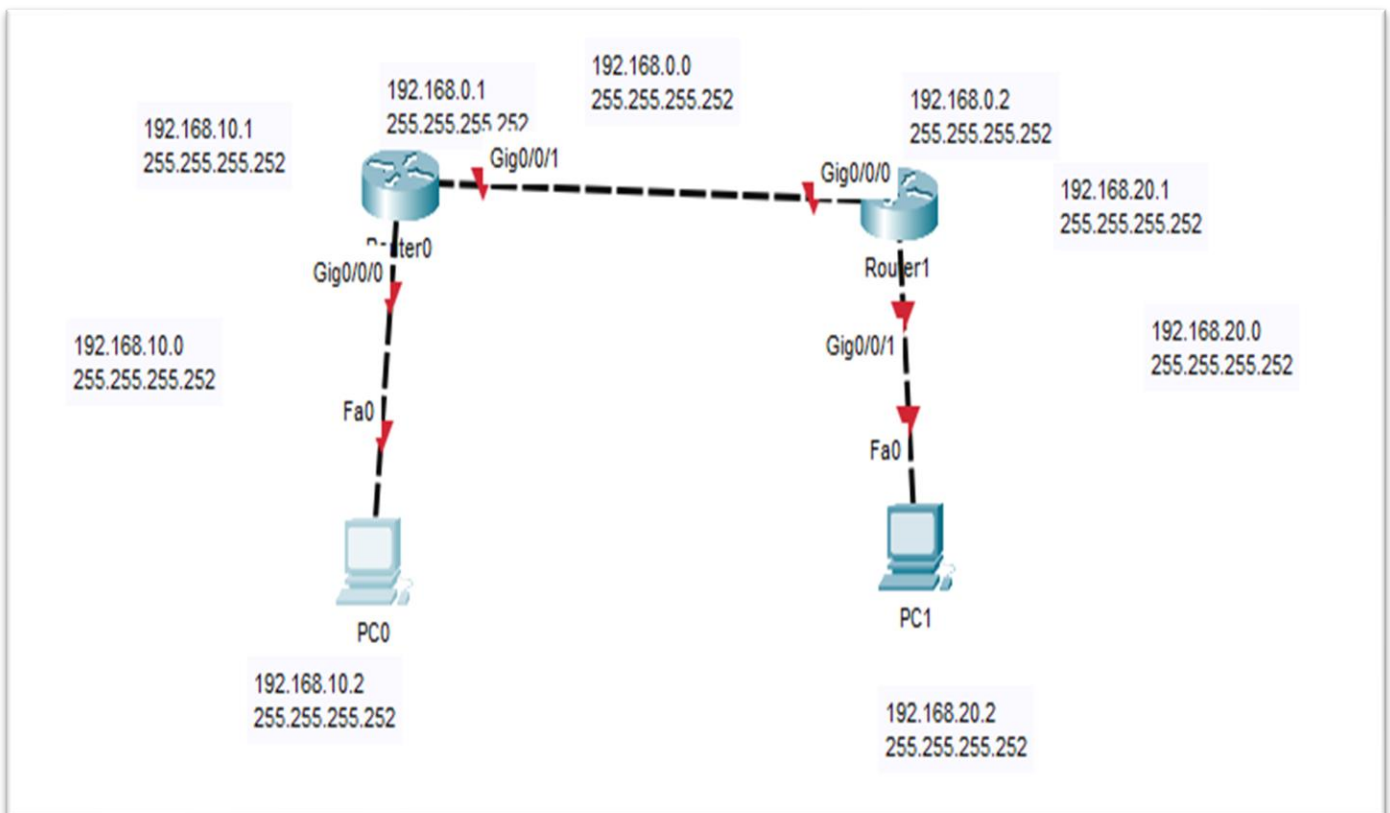


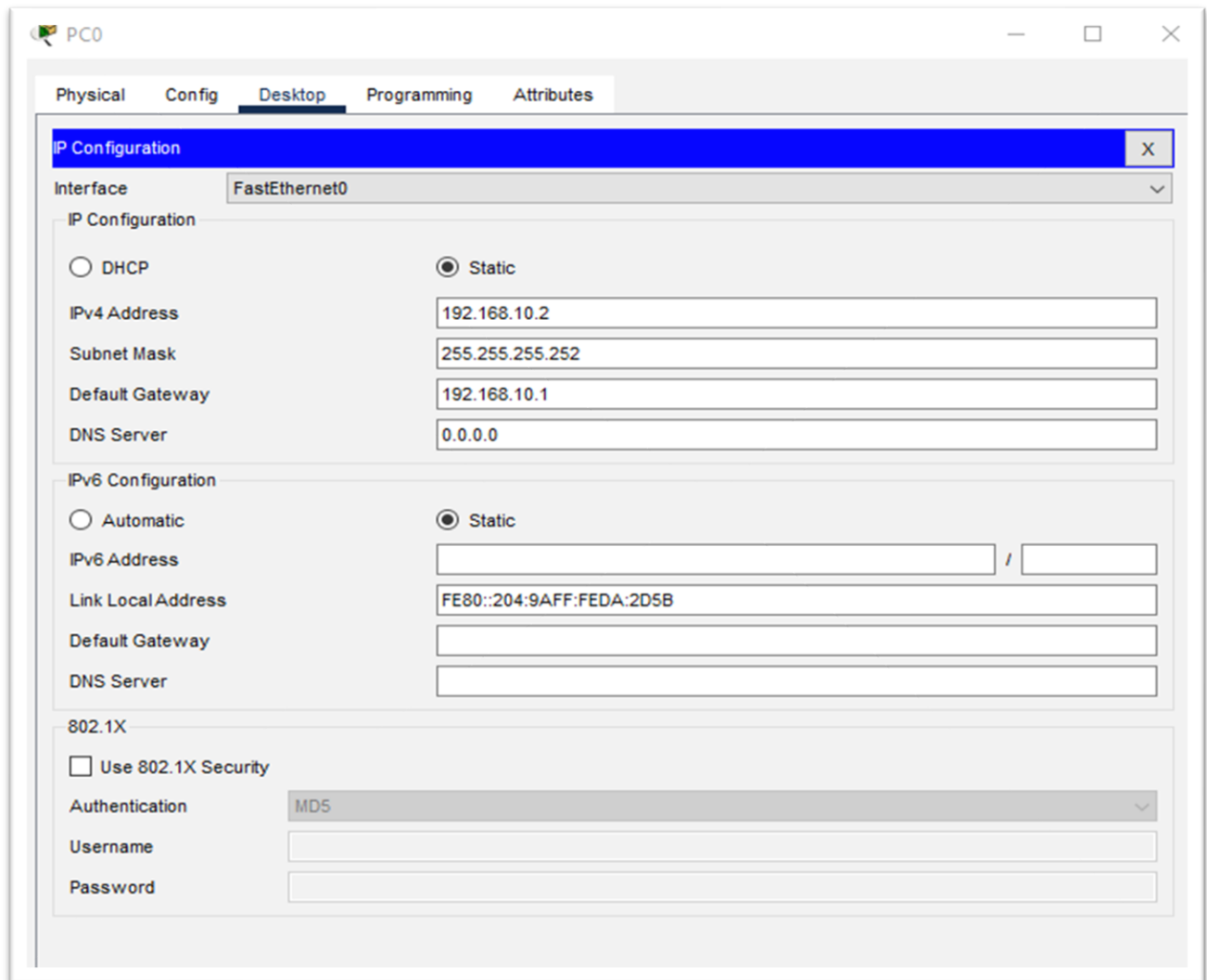
# RIP Configuration Step by Step Guide

- ✓ Routing information protocol
- ✓ An example of distance vector routing
- ✓ Based on hop count

**Step1:** Add place note in all devices for IP address and subnet mask.



## Step2: Configure each end devices (PC, laptop, mobile etc) by adding IP address, subnet mask and default gateway IP.



The screenshot shows the configuration window for PC0, specifically the Desktop tab. The IP Configuration section is active, showing settings for the FastEthernet0 interface. The IPv4 configuration is set to Static with an IP address of 192.168.10.2, a subnet mask of 255.255.255.252, a default gateway of 192.168.10.1, and a DNS server of 0.0.0.0. The IPv6 configuration is also set to Static, with a link local address of FE80::204:9AFF:FEDA:2D5B. The 802.1X security section is currently disabled.

PC0

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IPv4 Address 192.168.10.2

Subnet Mask 255.255.255.252

Default Gateway 192.168.10.1

DNS Server 0.0.0.0

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address /

Link Local Address FE80::204:9AFF:FEDA:2D5B

Default Gateway

DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

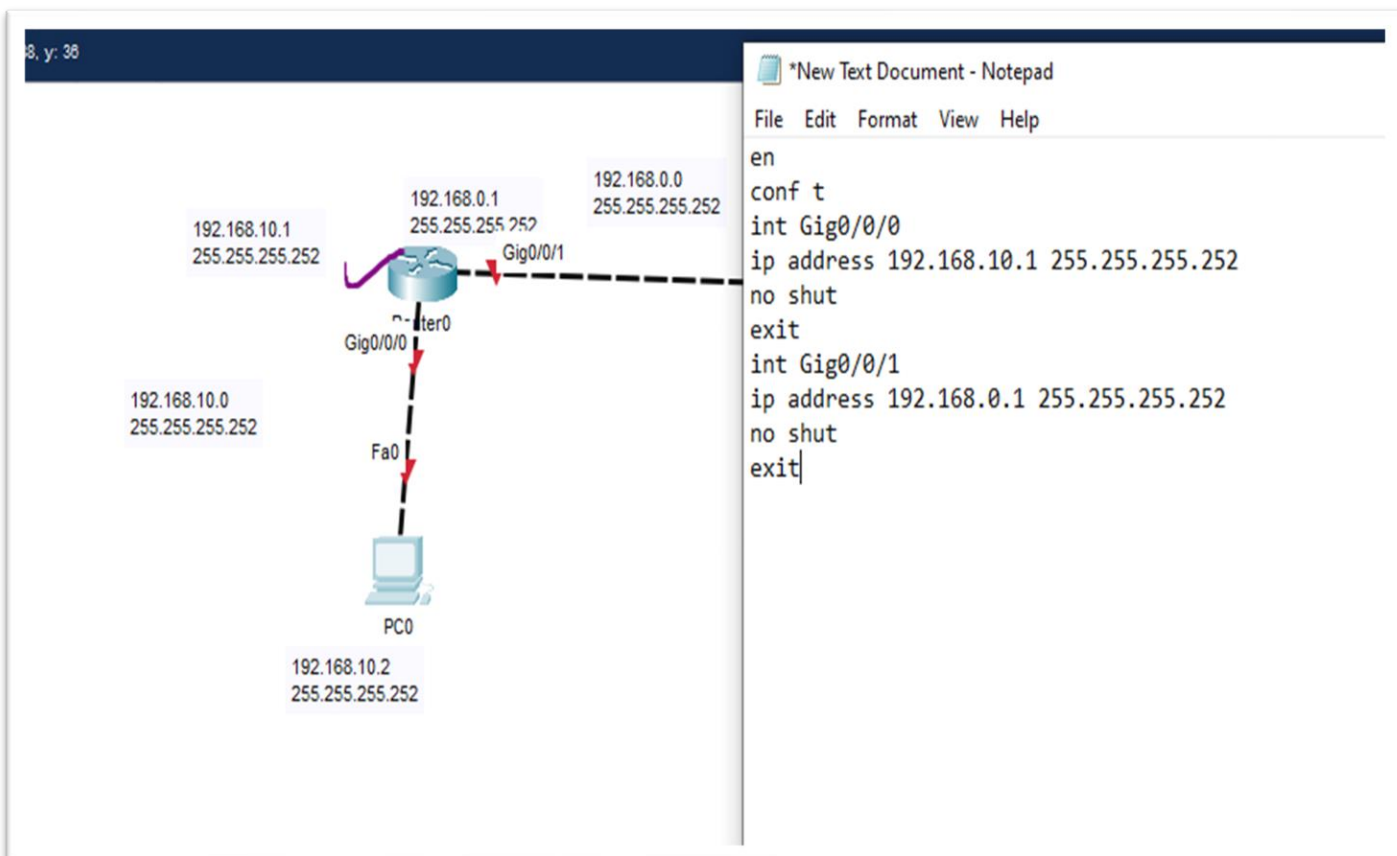
Username

Password

### Step3: Configure each router by writing command in CLI.

The commands are as follows. Write the same command if more than one port is used in the router.

```
Router>en
Router# conf t
Router(config)# int port_number
Router(config-if)# ip address gateway_ip subnet_mask
Router(config-if)#no shutdown
Router(config-if)#exit
```



## IOS Command Line Interface

3207167K bytes of flash memory at bootflash:.  
OK bytes of WebUI ODM Files at webui:.

--- System Configuration Dialog ---

Would you like to enter the initial configuration dialog? [yes/no]: no

Press RETURN to get started!

Router>en

Router#conf t

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

Router(config)#int Gig0/0/0

Router(config-if)#ip address 192.168.10.1 255.255.255.252

Router(config-if)#no shut

Router(config-if)#exit

Router(config)#int Gig0/0/1

Router(config-if)#ip address 192.168.0.1 255.255.255.252

Router(config-if)#no shut

Router(config-if)#exit

Router(config)#

%LINK-5-CHANGED: Interface GigabitEthernet0/0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/0, changed state to up

%LINK-5-CHANGED: Interface GigabitEthernet0/0/1, changed state to up

Router(config)#

Ctrl+F6 to exit CLI focus

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File Edit Format View Help

```
en
conf t
int Gig0/0/1
ip address 192.168.20.1 255.255.255.252
no shut
exit
int Gig0/0/0
ip address 192.168.0.2 255.255.255.252
no shut
exit
```

192.168.0.0  
255.255.255.252

192.168.0.2  
255.255.255.252

192.168.20.1  
255.255.255.252

192.168.20.0  
255.255.255.252

192.168.20.2  
255.255.255.252

Gig0/0/0

Router1

Gig0/0/1

Fa0

PC1

Time: 00:25 Ln 1, Col 1 100% Windows (CRLF) UTF-8

## IOS Command Line Interface

OK Bytes of WebUI ODM files at WebUI...

--- System Configuration Dialog ---

Would you like to enter the initial configuration dialog? [yes/no]: no

Press RETURN to get started!

Router>en

Router#conf t

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

Router(config)#int Gig0/0/1

Router(config-if)#ip address 192.168.20.1 255.255.255.252

Router(config-if)#no shut

Router(config-if)#exit

Router(config)#int Gig0/0/0

Router(config-if)#ip address 192.168.0.2 255.255.255.252

Router(config-if)#no shut

Router(config-if)#exit

%LINK-5-CHANGED: Interface GigabitEthernet0/0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/1, changed state to up

%LINK-5-CHANGED: Interface GigabitEthernet0/0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/0, changed state to up

Router(config)#

Ctrl+F6 to exit CLI focus

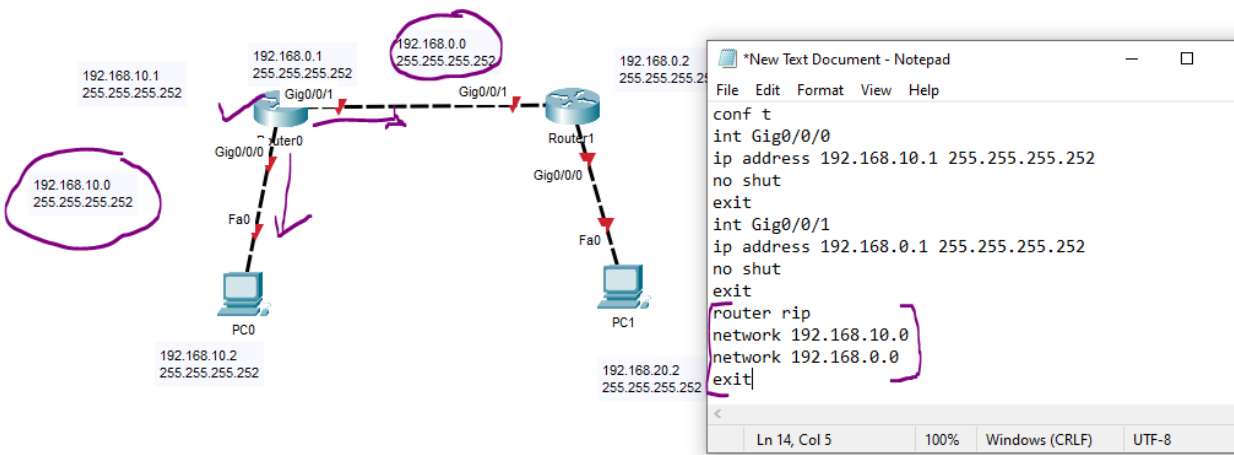
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## Step4: Configure RIP for each router by writing command in CLI.

The commands are as follows:

```
Router0 (config) #router rip  
Router0 (config-router) # network connected_network_IP  
Router0 (config-router) # network connected_network_IP  
Router (config-if) #exit
```



## IOS Command Line Interface

```
Router(config)#interface GigabitEthernet0/0/0
Router(config-if)#
Router(config-if)#
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/0/0
Router(config-if)#
Router(config-if)#
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/0/0
Router(config-if)#
Router(config-if)#en
% Ambiguous command: "en"
Router(config)#conf t
%Invalid hex value
Router(config)#int Gig0/0/0
Router(config-if)#ip address 192.168.10.1 255.255.255.252
Router(config-if)#no shut

Router(config-if)#exit
Router(config)#int Gig0/0/1
Router(config-if)#ip address 192.168.0.1 255.255.255.252
Router(config-if)#no shut

Router(config-if)#exit
Router(config)#router rip
Router(config-router)#network 192.168.10.0
Router(config-router)#network 192.168.0.0
Router(config-router)#exit
%LINK-5-CHANGED: Interface GigabitEthernet0/0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/0, changed state to up

%LINK-5-CHANGED: Interface GigabitEthernet0/0/1, changed state to up

Router(config)#
```

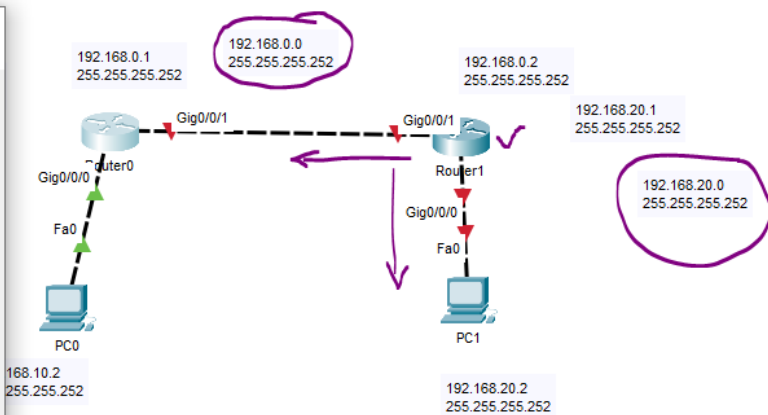
Ctrl+F6 to exit CLI focus

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```
*New Text Document - Notepad
File Edit Format View Help
en
conf t
int Gig0/0/0
ip address 192.168.20.1 255.255.255.252
no shut
exit
int Gig0/0/1
ip address 192.168.0.2 255.255.255.252
no shut
exit
router rip
network 192.168.20.0
network 192.168.0.0
exit
```



Router1

Physical Config CLI Attributes

IOS Command Line Interface

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#
Router(config)#
Router(config)#en
% Ambiguous command: "en"
Router(config)#conf t
%Invalid hex value
Router(config)#int Gig0/0/0
Router(config-if)#ip address 192.168.20.1 255.255.255.252
Router(config-if)#no shut

Router(config-if)#exit
Router(config)#int Gig0/0/1
Router(config-if)#ip address 192.168.0.2 255.255.255.252
Router(config-if)#no shut

Router(config-if)#exit
Router(config)#router rip
Router(config-router)#network 192.168.20.0
Router(config-router)#network 192.168.0.0
Router(config-router)#exit
%LINK-5-CHANGED: Interface GigabitEthernet0/0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/0, changed state to up

%LINK-5-CHANGED: Interface GigabitEthernet0/0/1, changed state to up

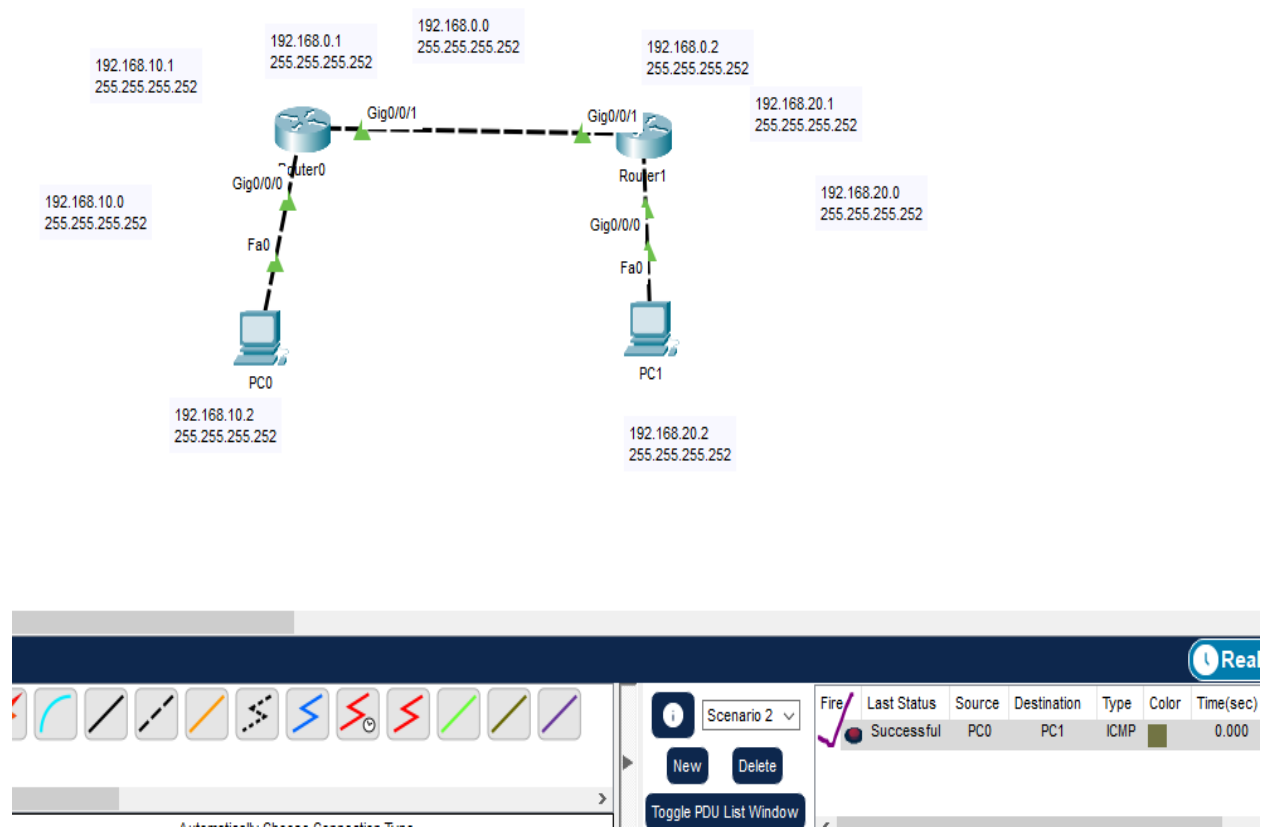
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/1, changed state to up
Router(config)#
```

Ctrl+F6 to exit CLI focus

Copy Paste

Top

## Step5: Pass the packet from one subnet to another subnet and check the status.



## Command description:

Command	Description
Router>en	Enable global configuration mode
Router# conf t	Enter in global configuration mode
Router(config)#int Gig0/0/0	Enter interface mode from global configuration mode
Router(config-if)#ip address 192.168.10.1 255.255.255.252	Assign IP to the interface ( eg. Gig0/0/0)
Router(config-if)#no shutdown	Bring the interface up
Router(config-if)#exit	Return in global configuration mode
Router(config)#router rip	Enable RIP routing protocol
Router(config-router)# network 192.168.10.0	Used to specify the networks which are directly connected with the router.

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