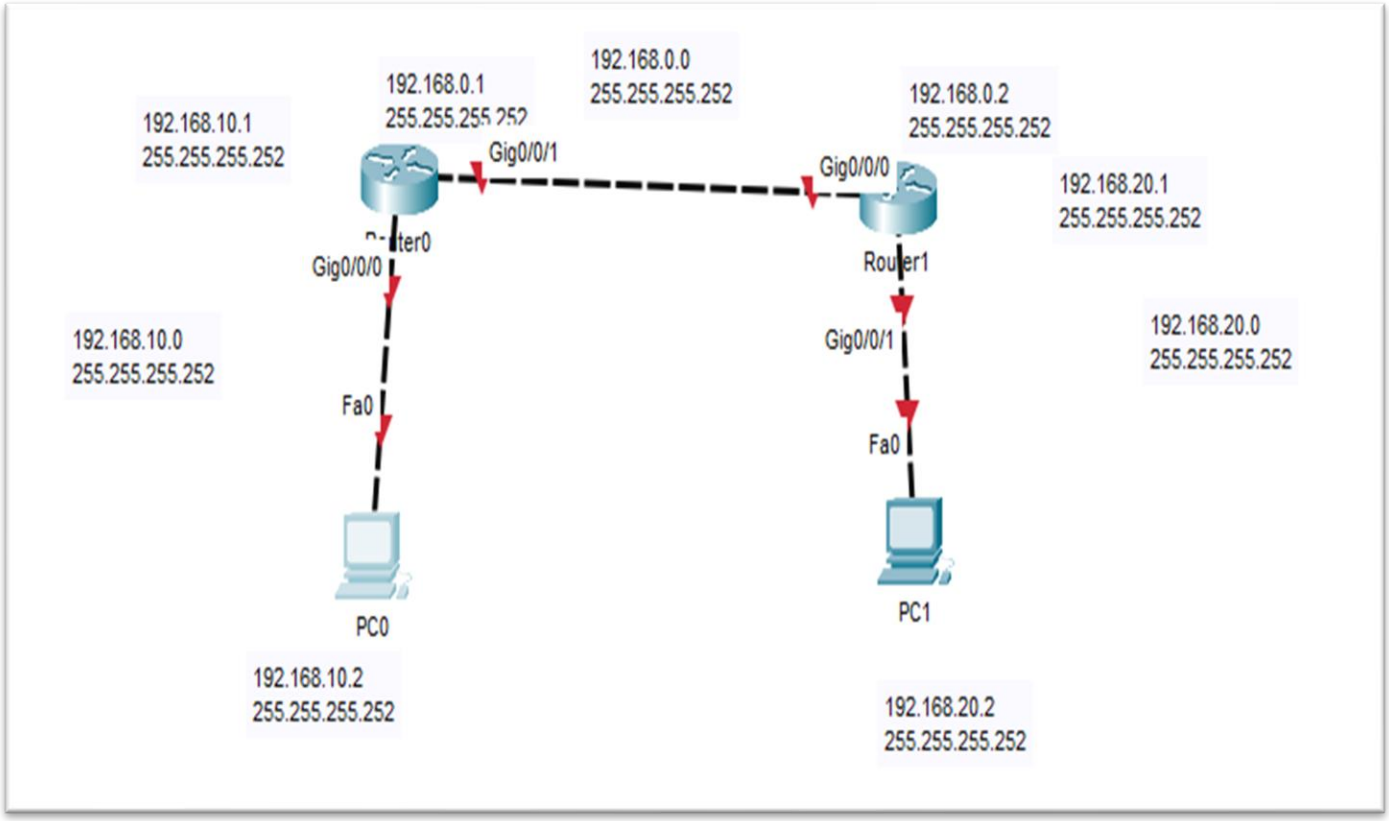
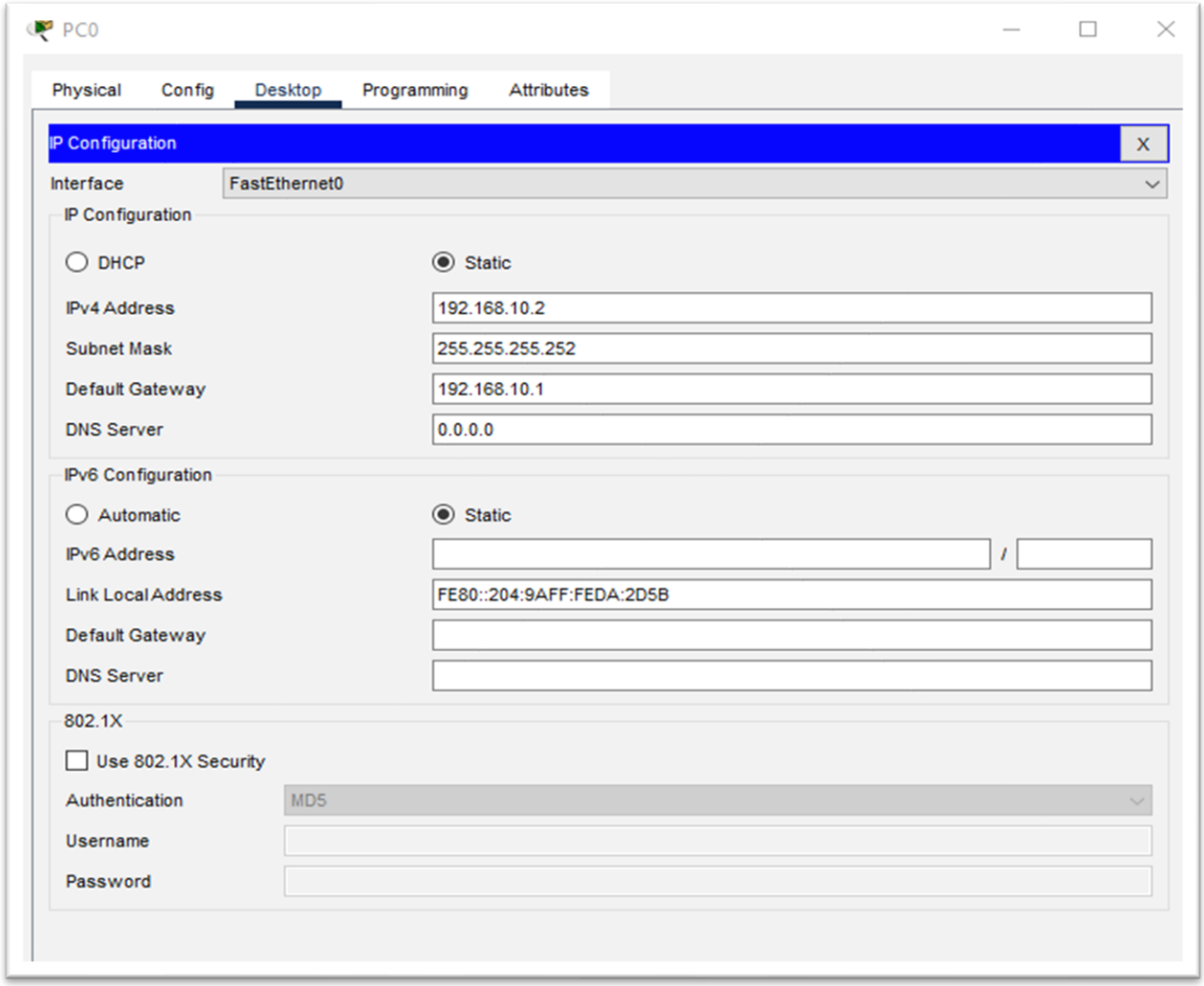
EIGRP Configuration Step by Step Guide

- ✓ Enhanced Interior Gateway Routing Protocol (EIGRP)
- ✓ An advanced distance-vector routing protocol
- ✓ Used for automating routing decisions and configuration
- ✓ Used on a router to share routes with other routers within the same autonomous system.

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



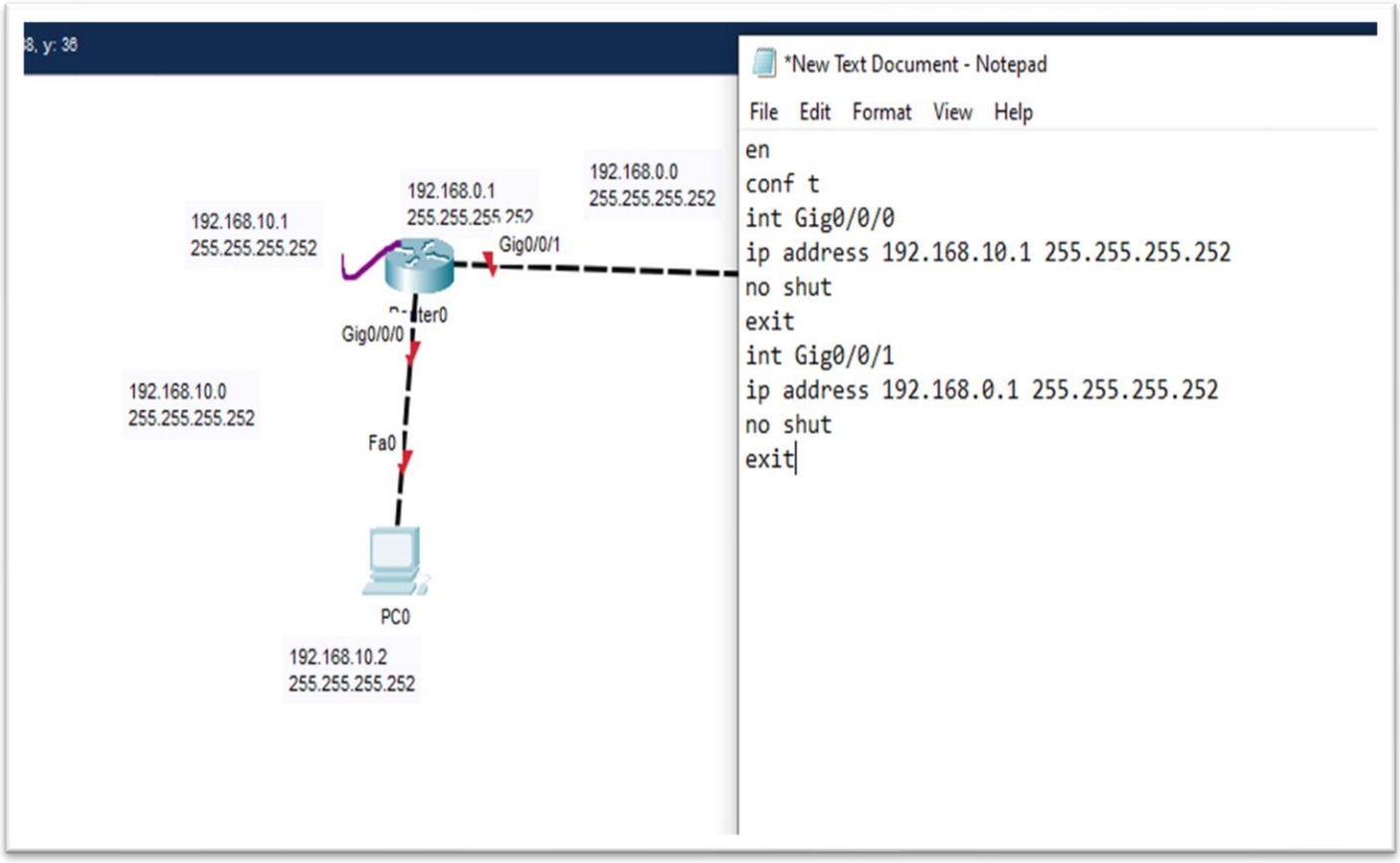
Step2: Configure each end devices (PC, laptop, mobile etc) by adding IP address, subnet mask and default gateway IP.

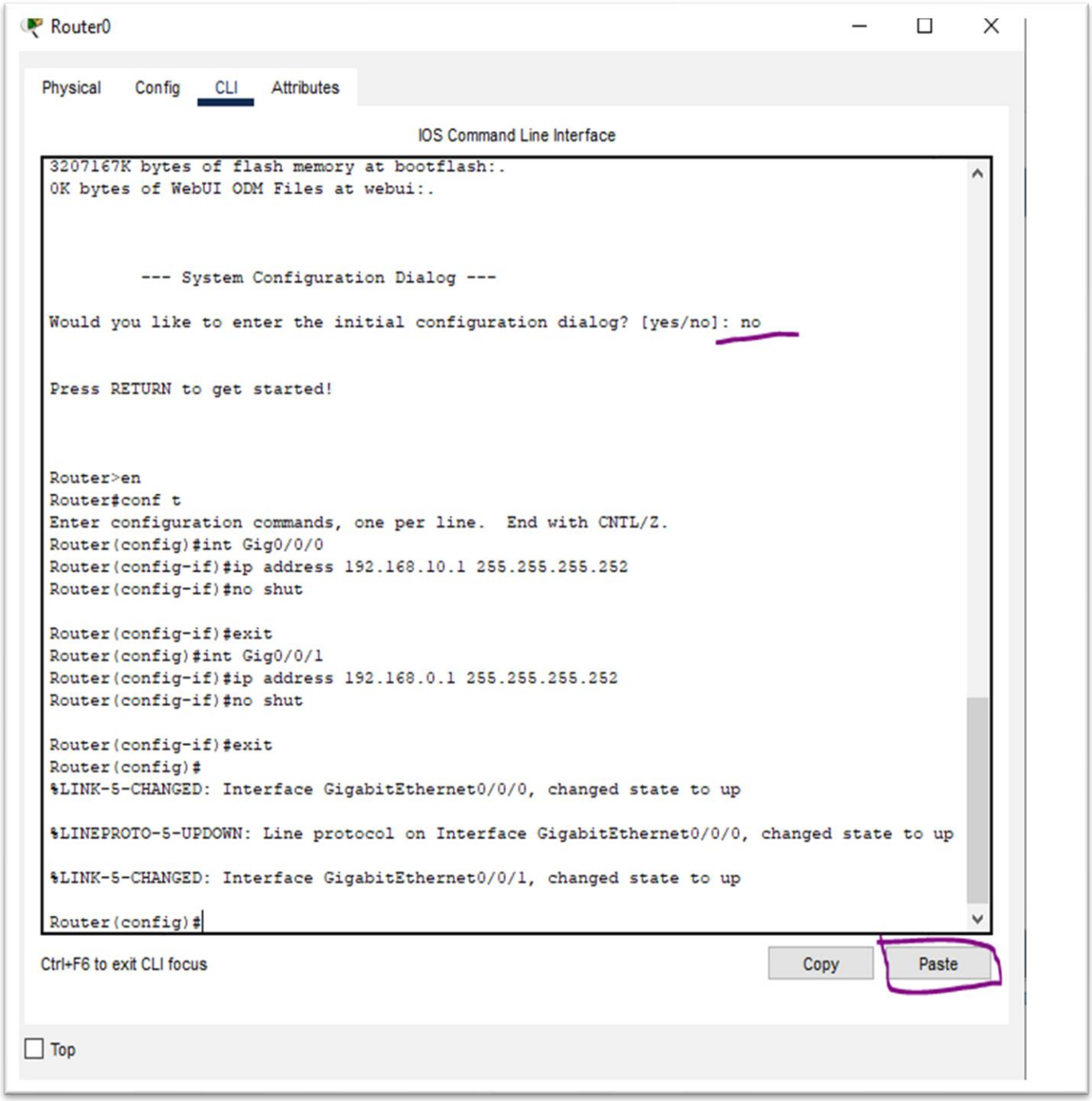


Step3: Configure each router by writing command in CLI.

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
```




Router0
Physical
Config
CLI
Attributes
IOS Command Line Interface
3207167K bytes of flash memory at bootflash:.
0K 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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Paste
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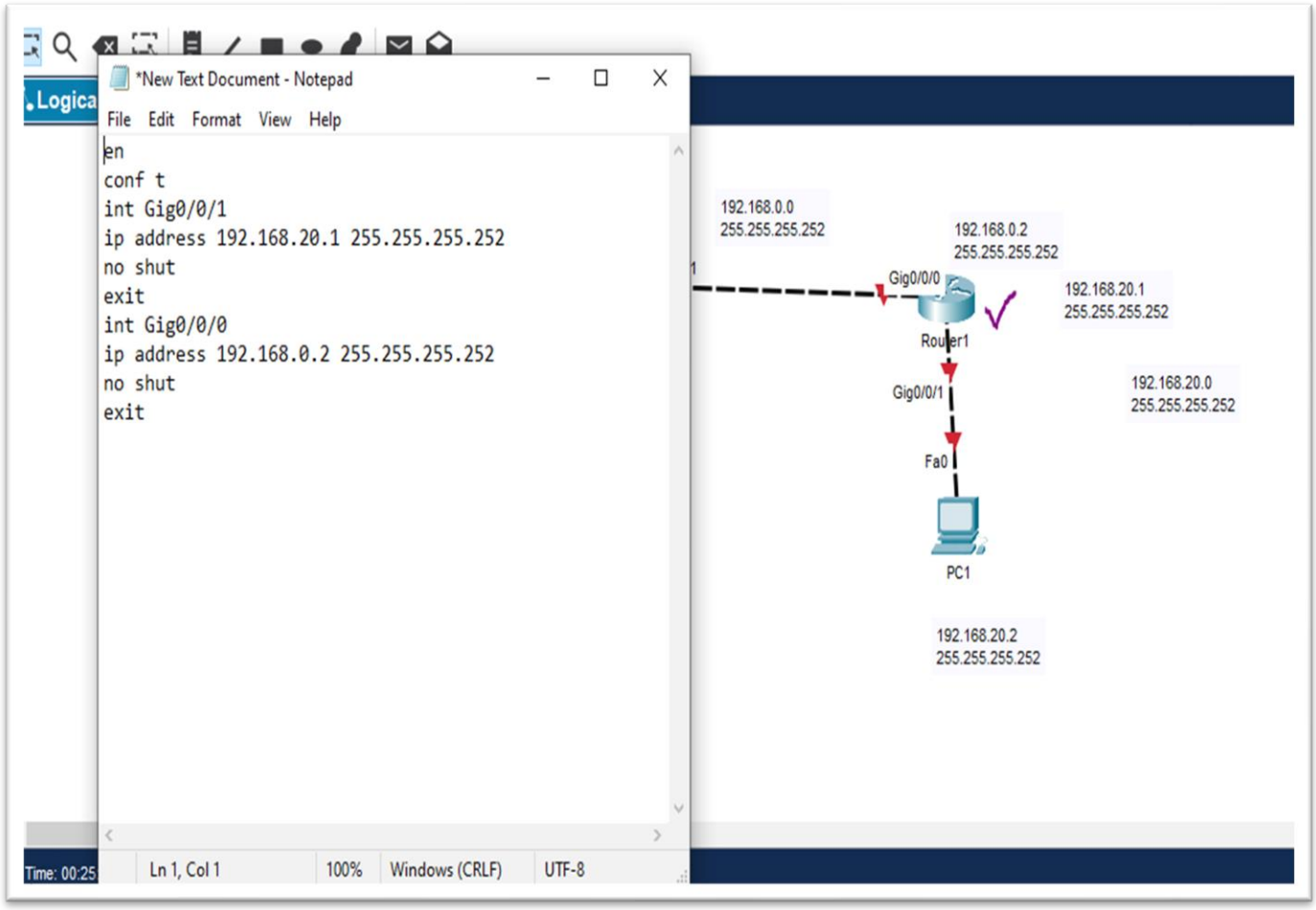
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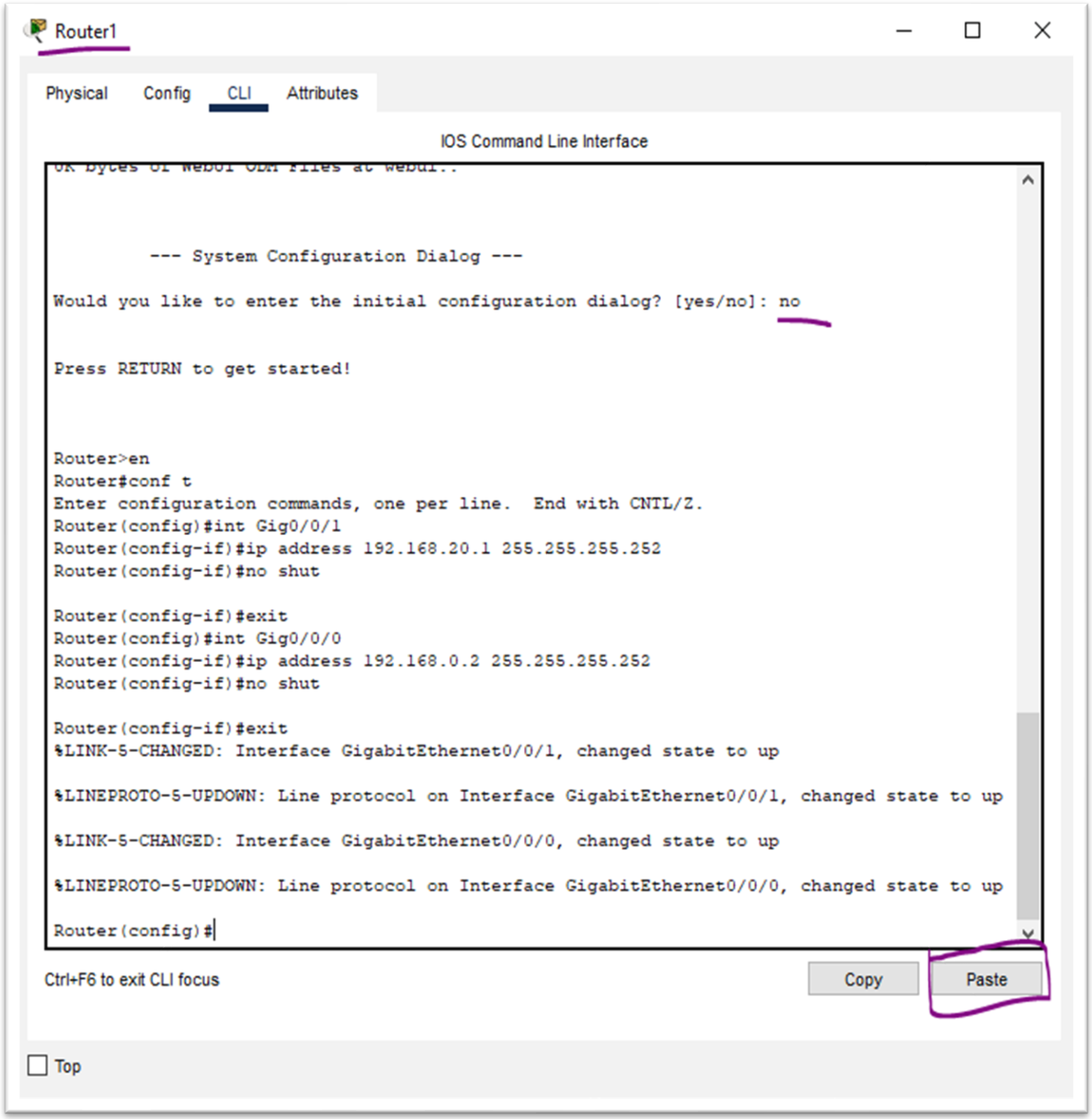
en
conf t
int Gig0/0/1
ip address 192.168.20.1 255.255.255.252
no shut
exit
int Gig0/0/0
ip address 192.168.0.2 255.255.255.252
no shut
exit
Ln 1, Col 1
100%
Windows (CRLF)
UTF-8
Time: 00:25
192.168.0.0
255.255.255.252
192.168.0.2
255.255.255.252
Gig0/0/0
192.168.20.1
255.255.255.252
Router1
Gig0/0/1
192.168.20.0
255.255.255.252
Fa0
PC1
192.168.20.2
255.255.255.252


Router1
Physical
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--- 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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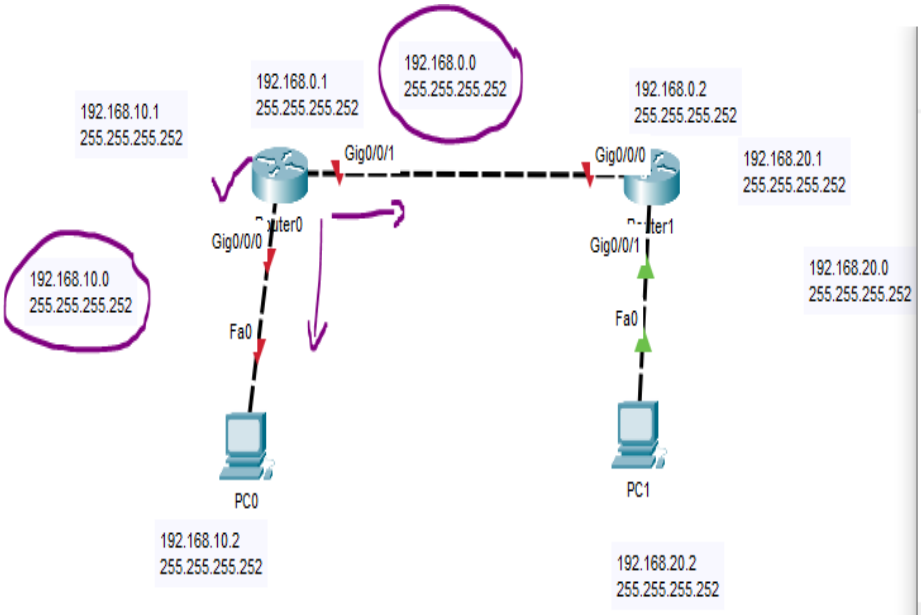
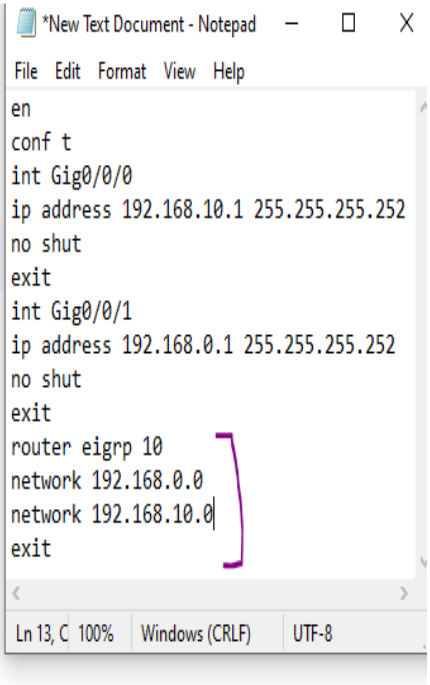
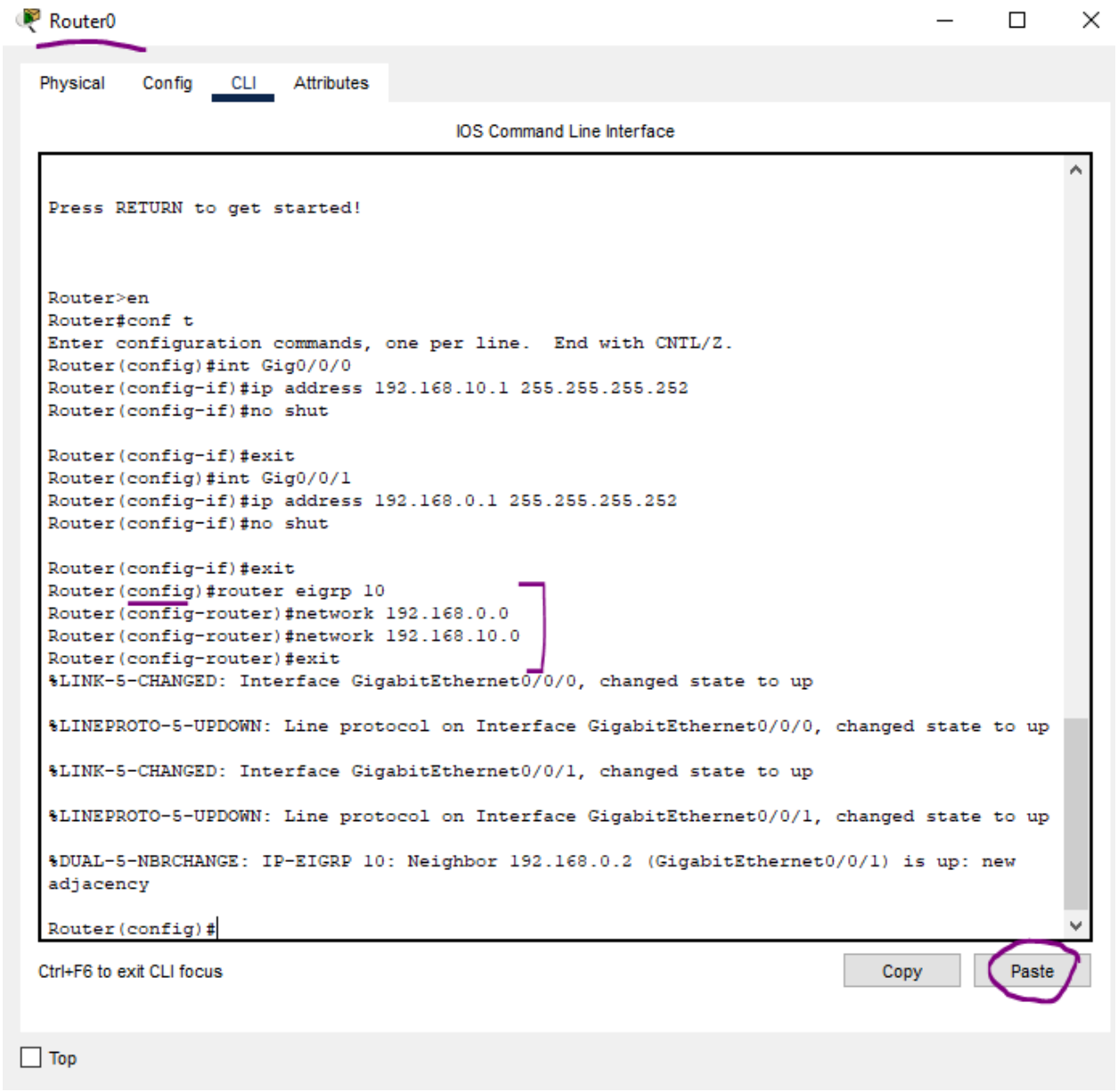
Step4: Configure RIP for each router by writing command in CLI.

The commands are as follows:

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






Router0
Physical
Config
CLI
Attributes
IOS Command Line Interface
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)#router eigrp 10
Router(config-router)#network 192.168.0.0
Router(config-router)#network 192.168.10.0
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
%DUAL-5-NBRCHANGE: IP-EIGRP 10: Neighbor 192.168.0.2 (GigabitEthernet0/0/1) is up: new adjacency
Router(config)#
Ctrl+F6 to exit CLI focus
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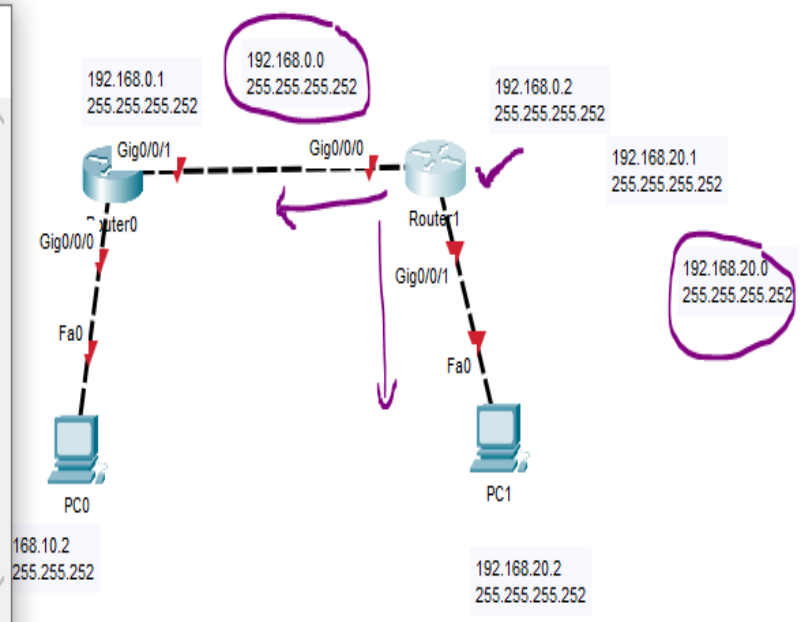
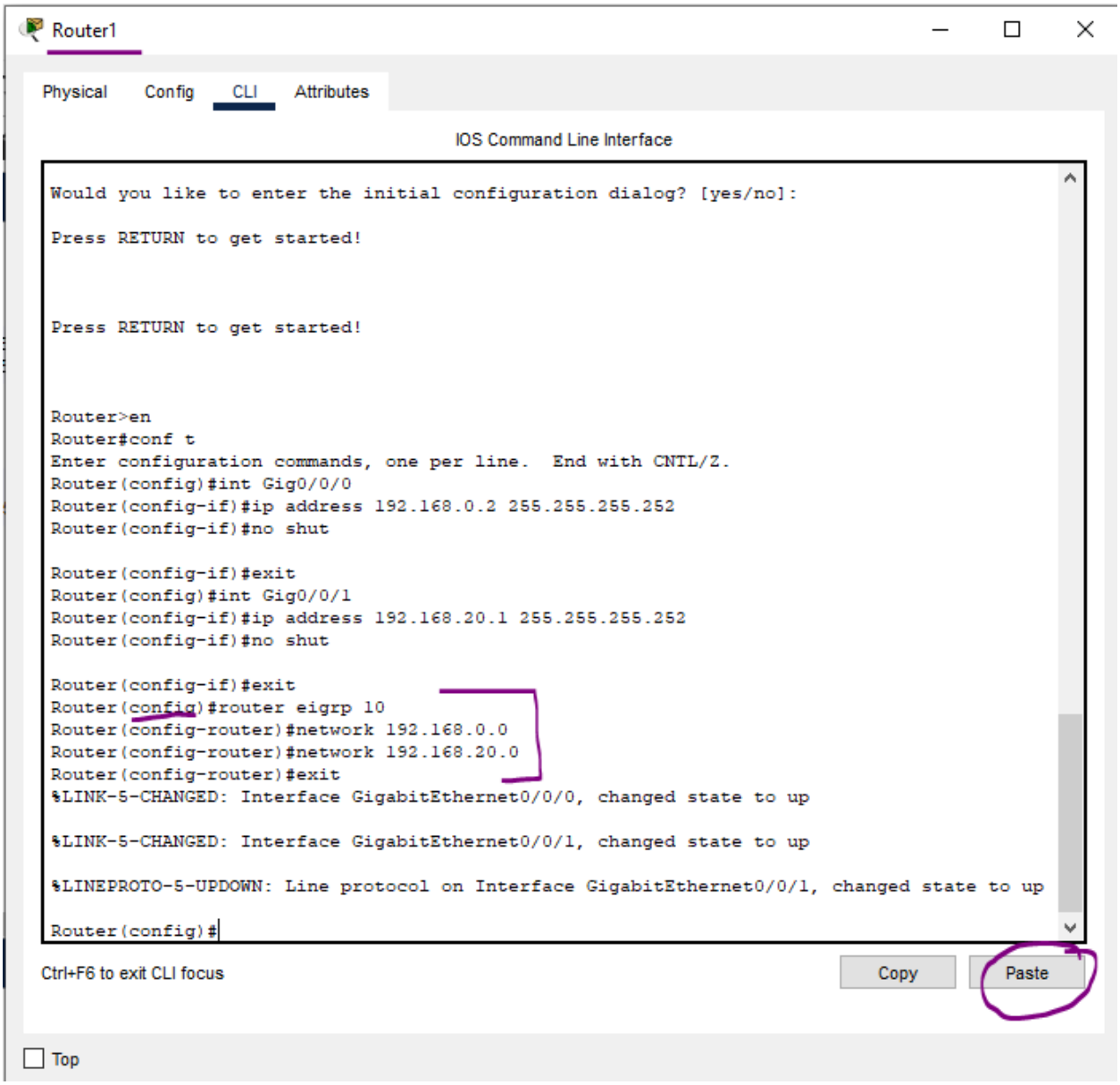
```
en
conf t
int Gig0/0/0
ip address 192.168.0.2 255.255.255.252
no shut
exit
int Gig0/0/1
ip address 192.168.20.1 255.255.255.252
no shut
exit
router eigrp 10
network 192.168.0.0
network 192.168.20.0
exit
```

Ln 11, C 100% Windows (CRLF) UTF-8




Router1
Physical
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CLI
Attributes
IOS Command Line Interface
Would you like to enter the initial configuration dialog? [yes/no]:
Press RETURN to get started!
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
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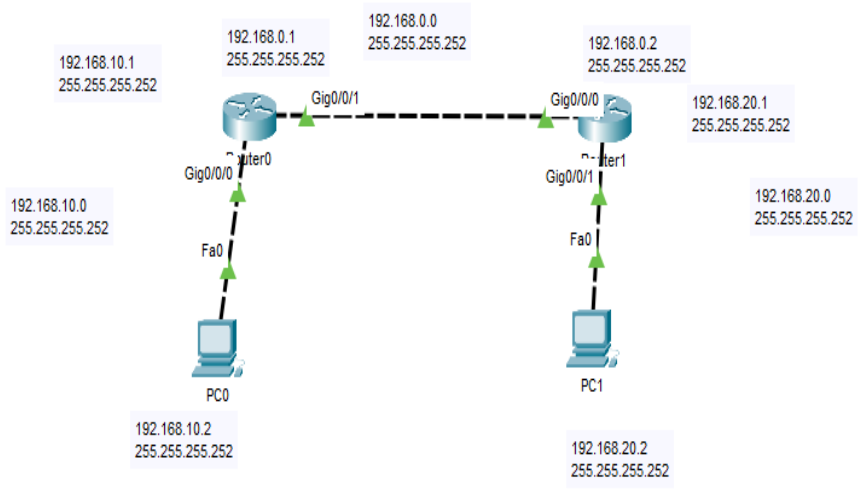
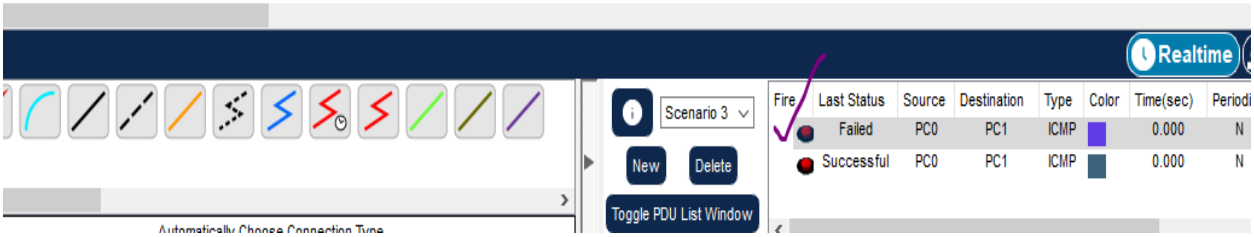
Router(config-if)#no shut
Router(config-if)#exit
Router(config)#int Gig0/0/1
Router(config-if)#ip address 192.168.20.1 255.255.255.252
Router(config-if)#no shut
Router(config-if)#exit
Router(config)#router eigrp 10
Router(config-router)#network 192.168.0.0
Router(config-router)#network 192.168.20.0
Router(config-router)#exit
%LINK-5-CHANGED: 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 eigrp 10	Enable EIGRP routing protocol in router. We can use any ASN (Autonomous System Number) from 1 to 65,535. In order to become EIGRP neighbors this number must be same on all participates.
Router(config-router)# network 192.168.10.0	Enable EIGRP on all interfaces which belong to network 192.168.10.0

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