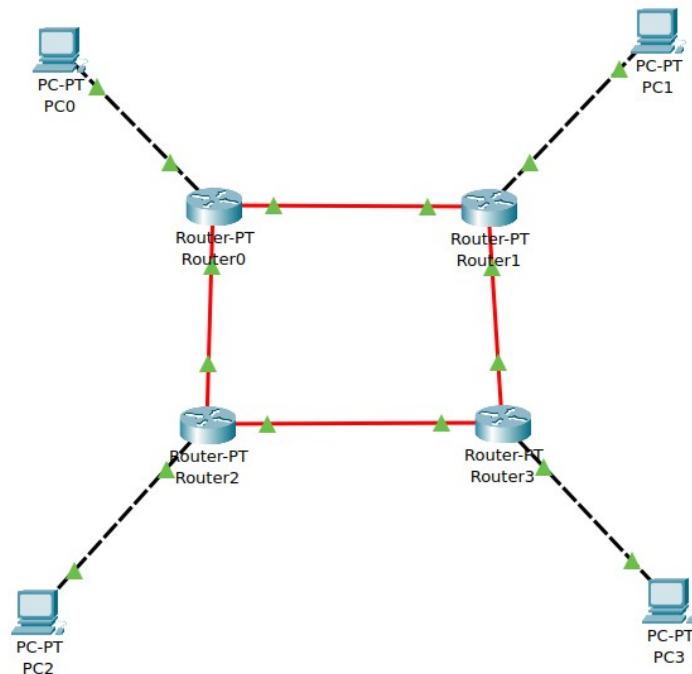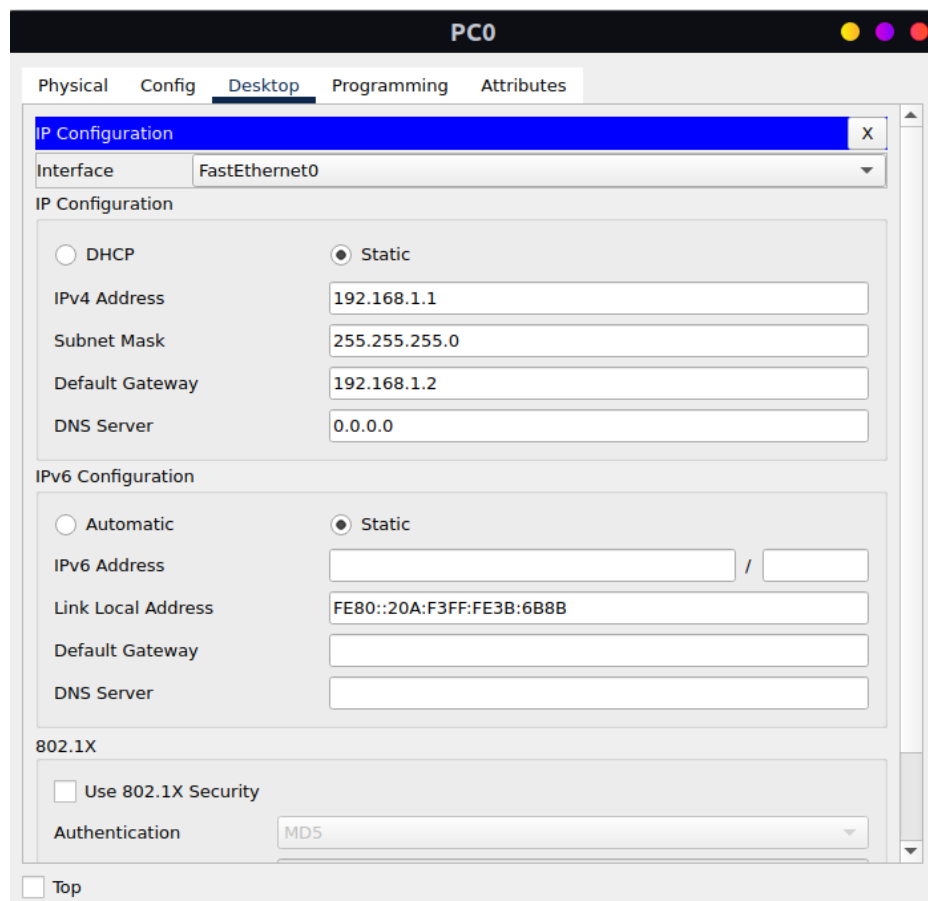# Experiment 11 : Simulate EIGRP protocol in a topology.
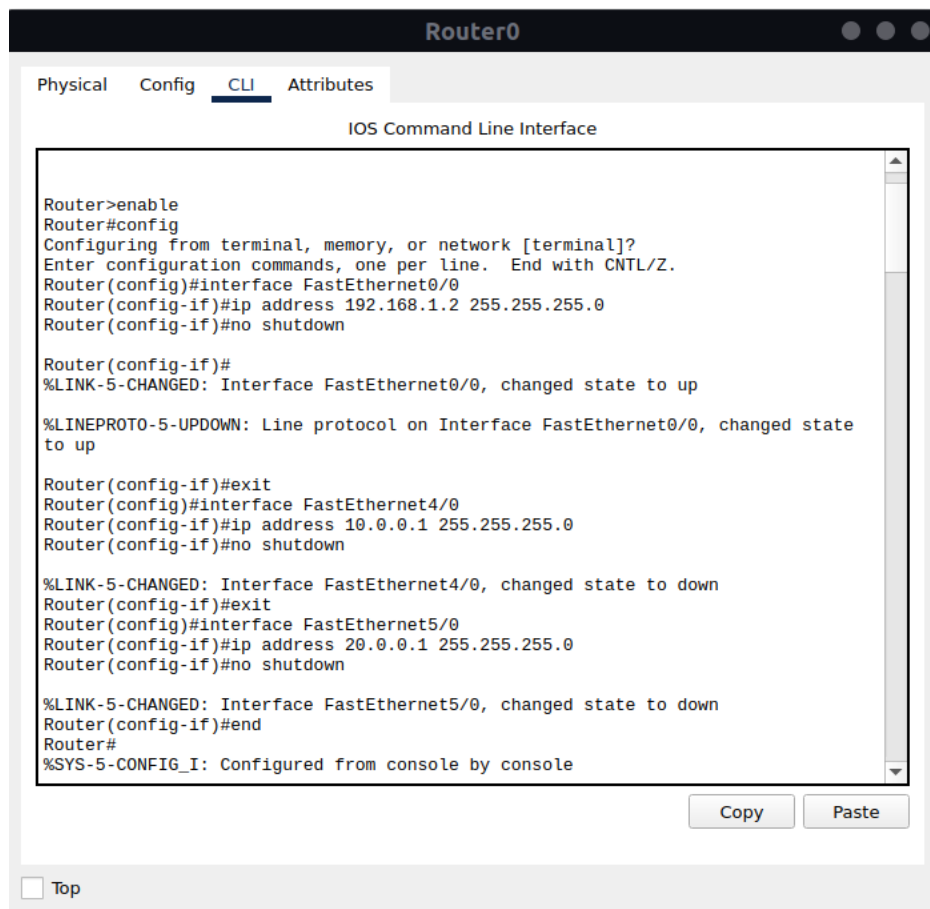
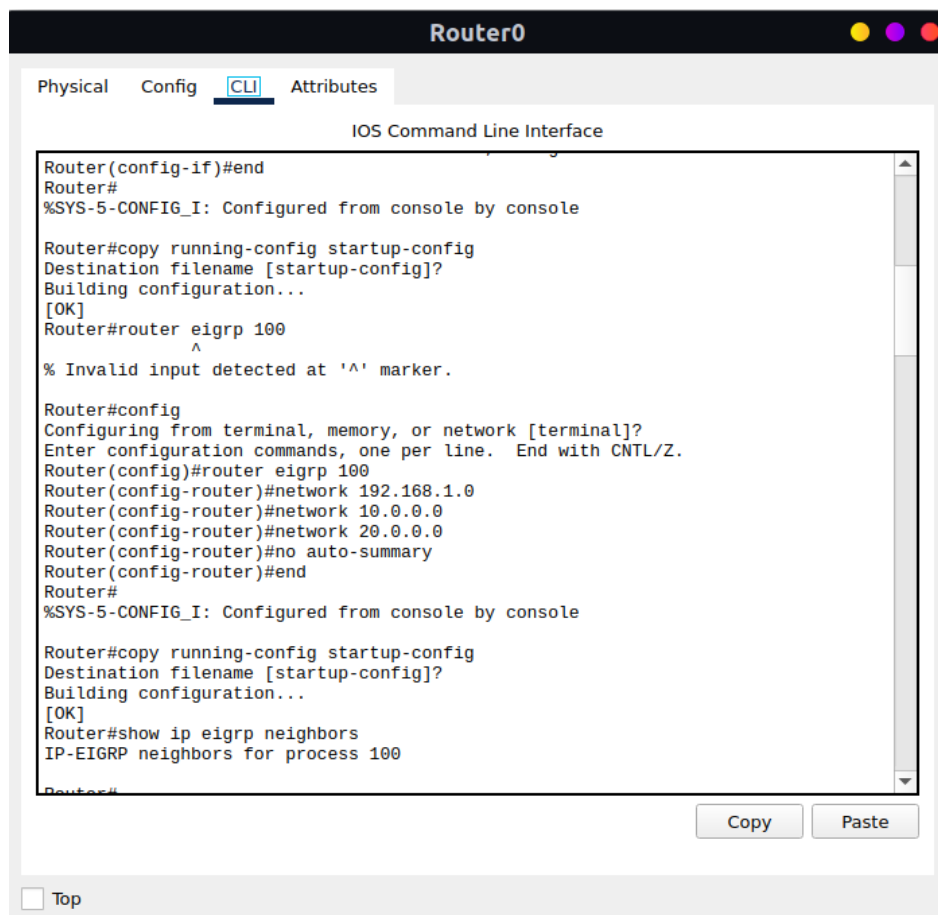## Step 1:

Step 2:
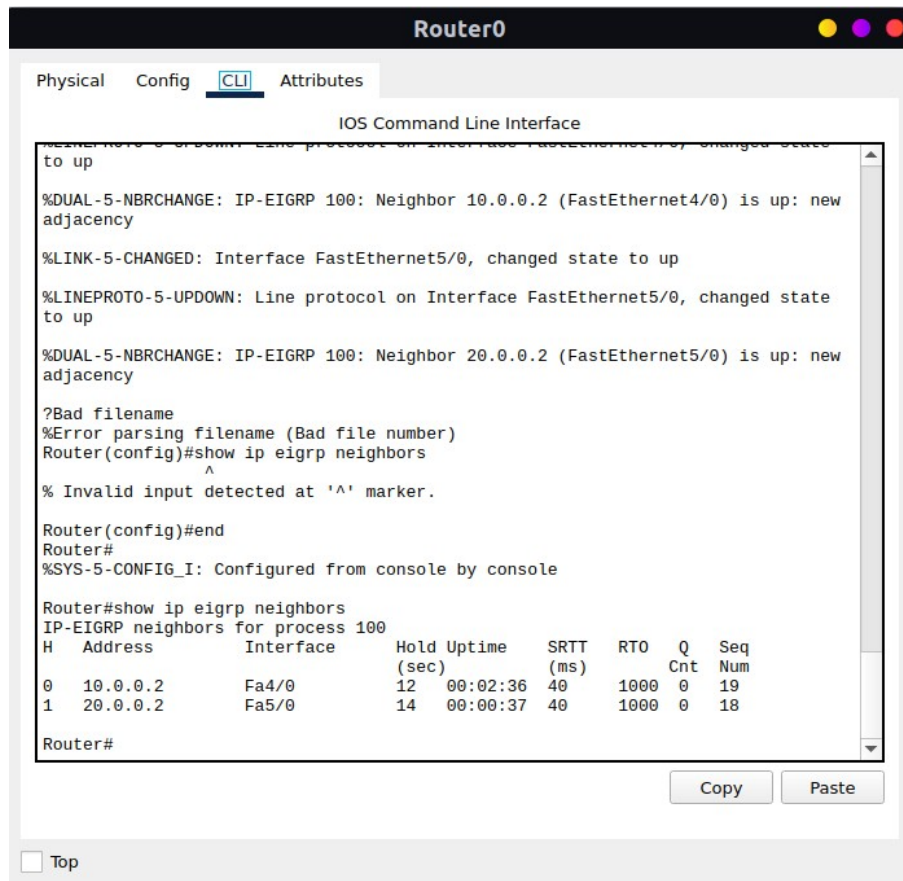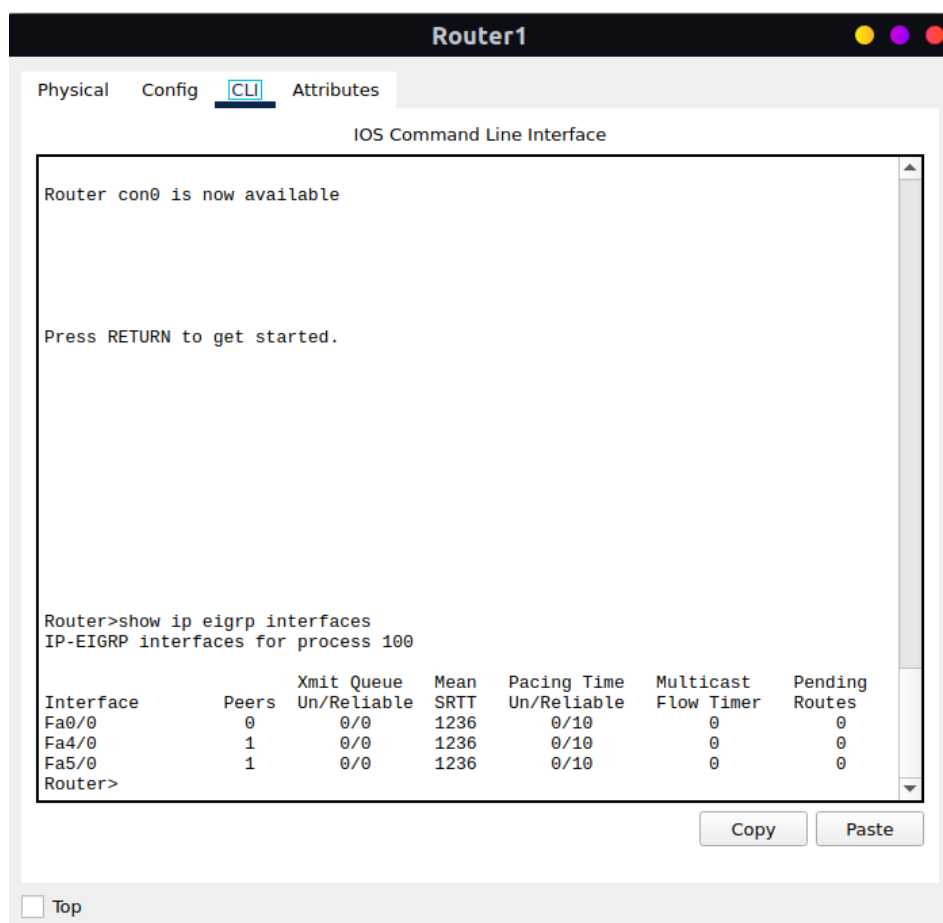
Step 3:

```
Router>enable
Router#config
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 192.168.1.2 255.255.255.0
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

Router(config-if)#exit
Router(config)#interface FastEthernet4/0
Router(config-if)#ip address 10.0.0.1 255.255.255.0
Router(config-if)#no shutdown

%LINK-5-CHANGED: Interface FastEthernet4/0, changed state to down
Router(config-if)#exit
Router(config)#interface FastEthernet5/0
Router(config-if)#ip address 20.0.0.1 255.255.255.0
Router(config-if)#no shutdown

%LINK-5-CHANGED: Interface FastEthernet5/0, changed state to down
Router(config-if)#end
Router#
%SYS-5-CONFIG_I: Configured from console by console
```

Step 4:

```
Router(config-if)#end
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
Router#router eigrp 100
          ^
% Invalid input detected at '^' marker.

Router#config
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#router eigrp 100
Router(config-router)#network 192.168.1.0
Router(config-router)#network 10.0.0.0
Router(config-router)#network 20.0.0.0
Router(config-router)#no auto-summary
Router(config-router)#end
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
Router#show ip eigrp neighbors
IP-EIGRP neighbors for process 100
Router#
```

Step 5:


```
to up

%DUAL-5-NBRCHANGE: IP-EIGRP 100: Neighbor 10.0.0.2 (FastEthernet4/0) is up: new
adjacency

%LINK-5-CHANGED: Interface FastEthernet5/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet5/0, changed state
to up

%DUAL-5-NBRCHANGE: IP-EIGRP 100: Neighbor 20.0.0.2 (FastEthernet5/0) is up: new
adjacency

?Bad filename
%Error parsing filename (Bad file number)
Router(config)#show ip eigrp neighbors
                 ^
% Invalid input detected at '^' marker.

Router(config)#end
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#show ip eigrp neighbors
IP-EIGRP neighbors for process 100
H   Address         Interface      Hold Uptime    SRTT   RTO   Q    Seq
                                   (sec)          (ms)         Cnt  Num
0   10.0.0.2        Fa4/0          12   00:02:36  40     1000  0    19
1   20.0.0.2        Fa5/0          14   00:00:37  40     1000  0    18

Router#
```

Step 6:


```
Router con0 is now available




Press RETURN to get started.










Router>show ip eigrp interfaces
IP-EIGRP interfaces for process 100

                     Xmit Queue   Mean   Pacing Time   Multicast    Pending
Interface     Peers  Un/Reliable  SRTT   Un/Reliable   Flow Timer   Routes
Fa0/0         0      0/0          1236   0/10          0            0
Fa4/0         1      0/0          1236   0/10          0            0
Fa5/0         1      0/0          1236   0/10          0            0
Router>
```

Step 7:


```
adjacency

?Bad filename
%Error parsing filename (Bad file number)
Router(config-if)#end
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#show ip eigrp topology
IP-EIGRP Topology Table for AS 100/ID(192.168.3.2)

Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
       r - Reply status

P 10.0.0.0/24, 1 successors, FD is 30720
        via 20.0.0.1 (30720/28160), FastEthernet5/0
P 20.0.0.0/24, 1 successors, FD is 28160
        via Connected, FastEthernet5/0
P 30.0.0.0/24, 1 successors, FD is 30720
        via 40.0.0.2 (30720/28160), FastEthernet4/0
P 40.0.0.0/24, 1 successors, FD is 28160
        via Connected, FastEthernet4/0
P 192.168.1.0/24, 1 successors, FD is 30720
        via 20.0.0.1 (30720/28160), FastEthernet5/0
P 192.168.2.0/24, 2 successors, FD is 33280
        via 40.0.0.2 (33280/30720), FastEthernet4/0
        via 20.0.0.1 (33280/30720), FastEthernet5/0
P 192.168.3.0/24, 1 successors, FD is 28160
        via Connected, FastEthernet0/0
P 192.168.4.0/24, 1 successors, FD is 30720
        via 40.0.0.2 (30720/28160), FastEthernet4/0
Router#
```

Step 8: