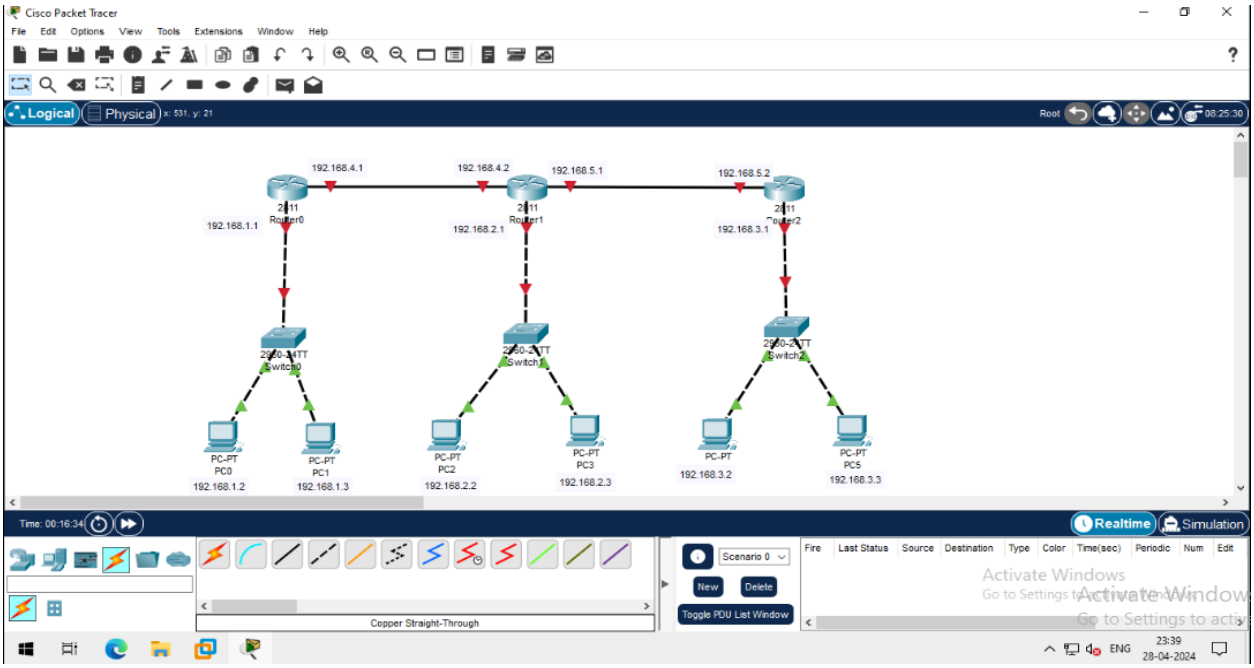
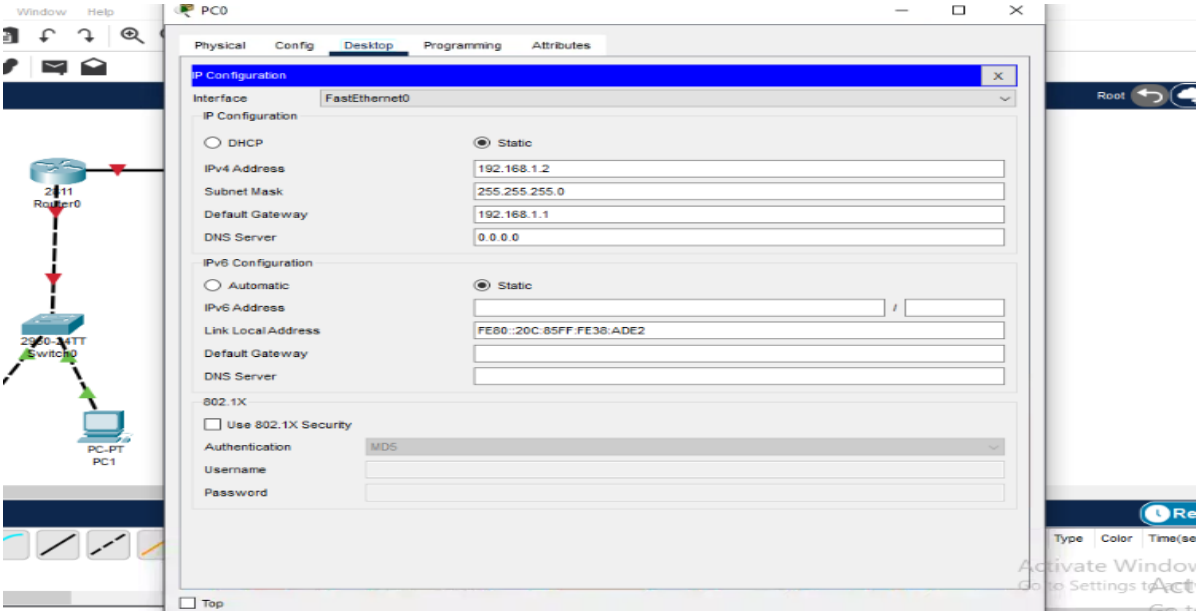
TASK

Implement static routing , OSPF ,RIP ,BGP using 3 routers

Here i am using packet tracer to do this task



After that giving ip address for every pc’s



Here giving ip address to ports on router 1 .

Router0

Physical Config CLI Attributes

IOS Command Line Interface

```
Router>en
Router#conf ter
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#int f
Router(config)#int fastEthernet 0/0
Router(config-if)#ip addr
Router(config-if)#ip address 192.168.1.1 255.255.255.0
Router(config-if)#no sh
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)#enit
                  ^
% Invalid input detected at '^' marker.

Router(config-if)#exit
Router(config)#int fa0/1
Router(config-if)#ip addr
Router(config-if)#ip address 192.168.4.1 255.255.255.0
Router(config-if)#no sh
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up

Router(config-if)#exit
Router(config)#
```

In router 2 ,

Router1

Physical Config CLI Attributes

IOS Command Line Interface

```
Router#conf ter
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#
Router(config)#no ip domain-loo
Router(config)#no ip domain-lookup
Router(config)#int eth
Router(config)#int ethernet 1/0
Router(config-if)#ip add
Router(config-if)#ip address 192.168.4.2 255.255.255.0
Router(config-if)#no sh
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface Ethernet1/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet1/0, changed state to up

Router(config-if)#exit
Router(config)#int
Router(config)#interface f
Router(config)#interface fastEthernet 0/0
Router(config-if)#ip add
Router(config-if)#ip address 192.168.2.1 255.255.255.0
Router(config-if)#no sh
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)#int
Router(config)#interface f
Router(config)#interface fastEthernet 1/0
%Invalid interface type and number
Router(config)#ip add
Router(config)#ip add192.168.5.1 255.255.255.0
```

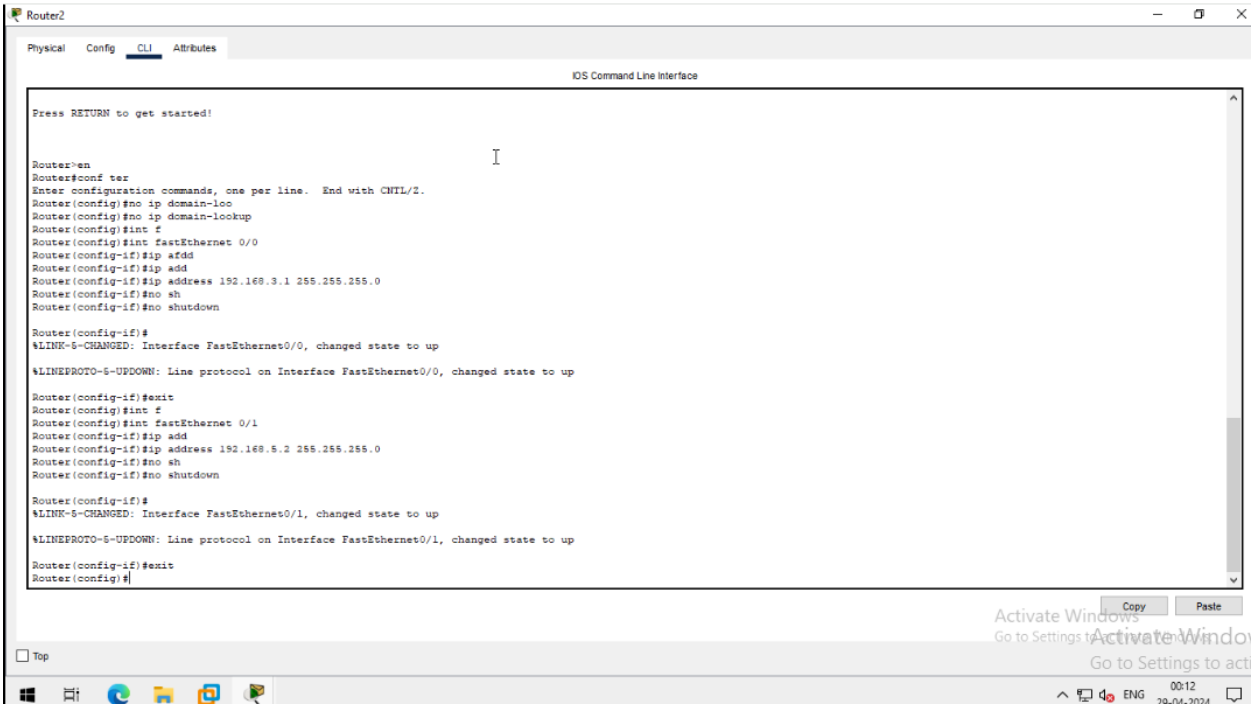
Copy

Top

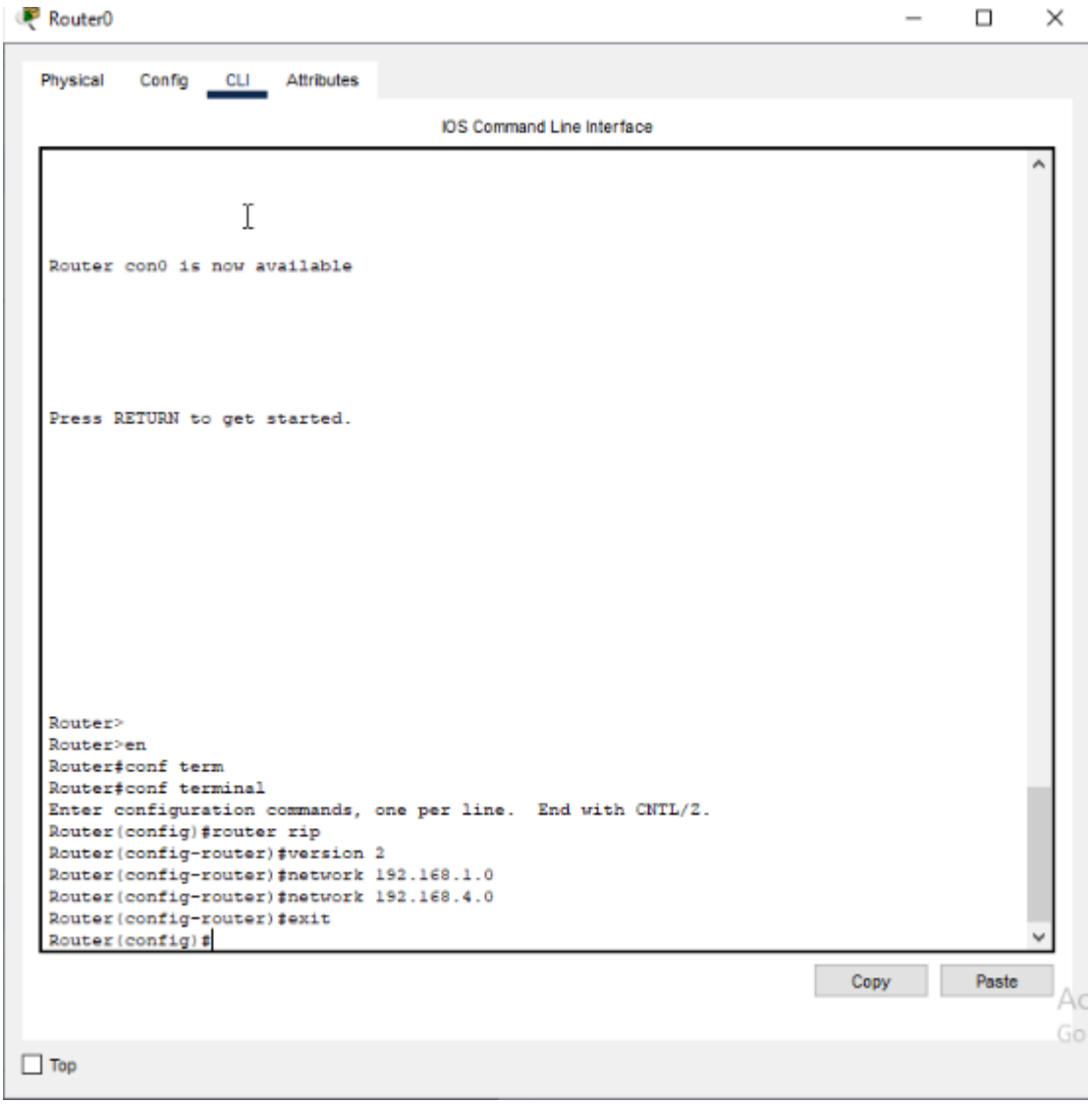
Activate Windows
Go to Settings to activate Windows.
Activate
Go to Settin

```
Router(config)#interface fastEthernet 0/1
Router(config-if)#ip add 192.168.5.1 255.255.255.0
Router(config-if)#no sh
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up

Router(config-if)#exit
Router(config)#
```

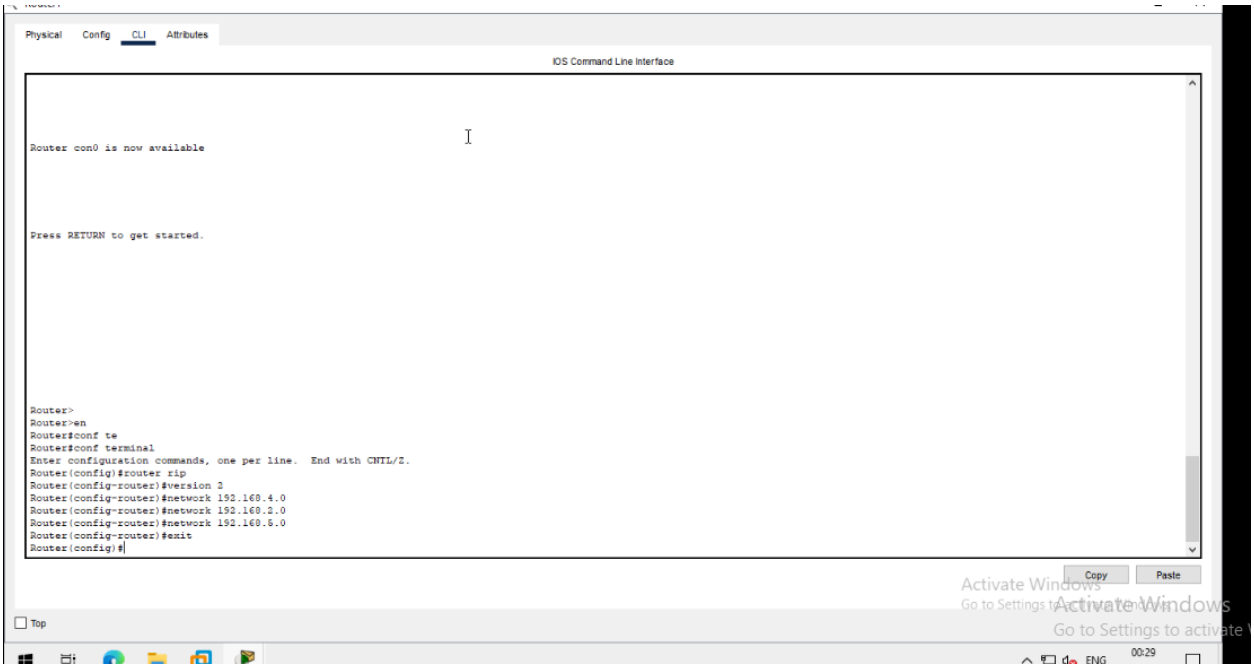
In router 3,



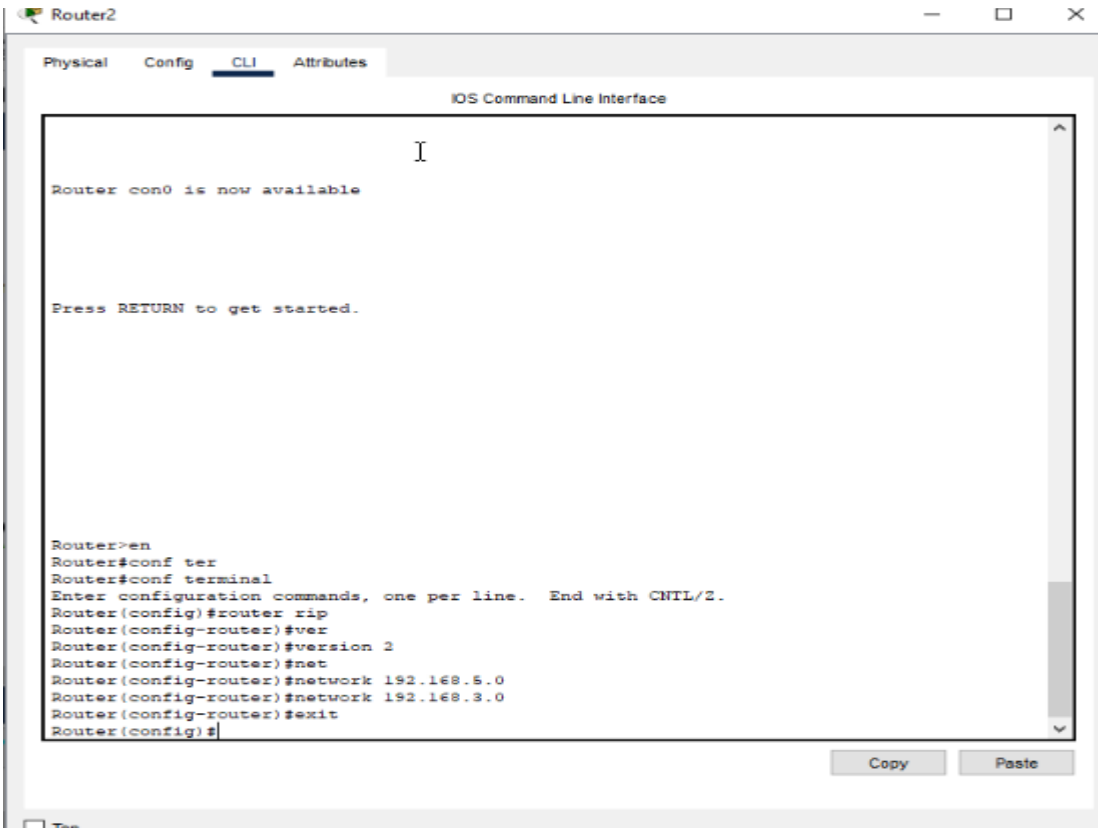
Doing RIP in router 1



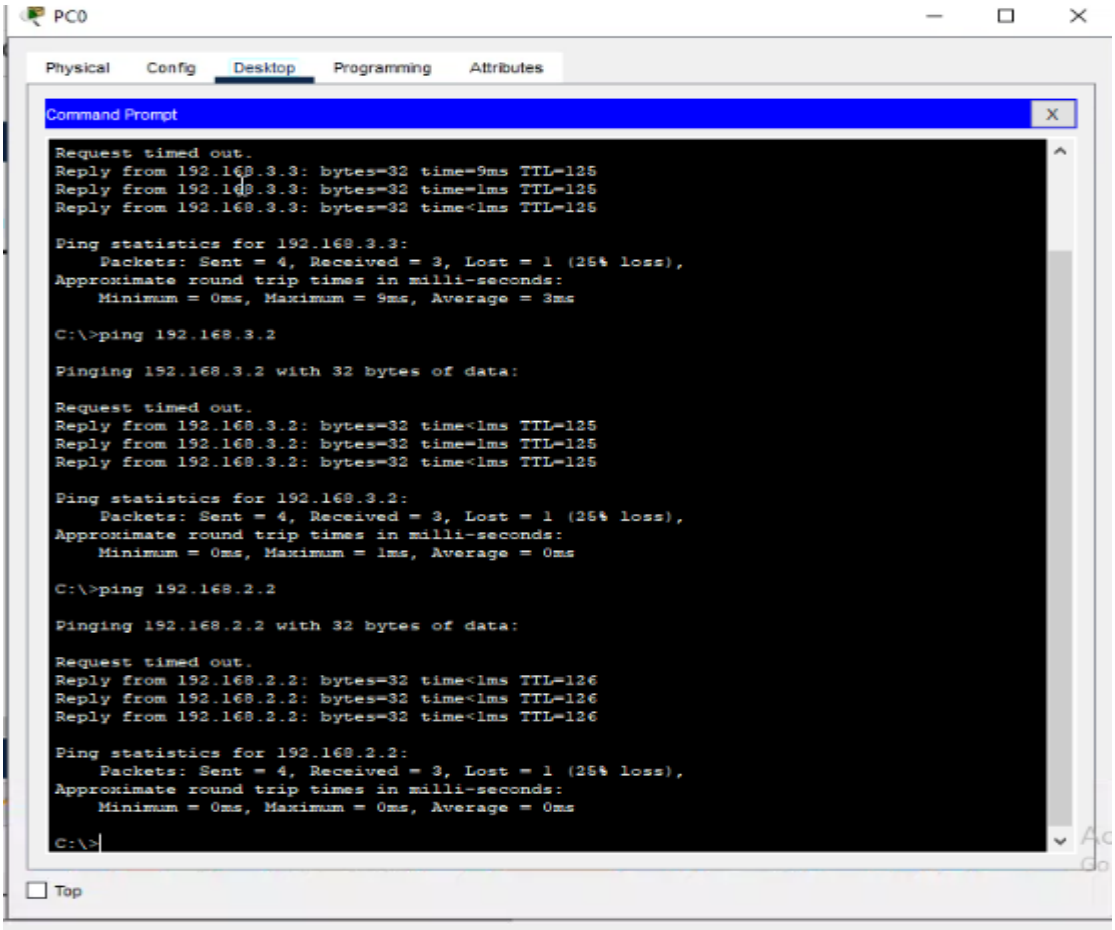
In router 2,



In router 3 ,

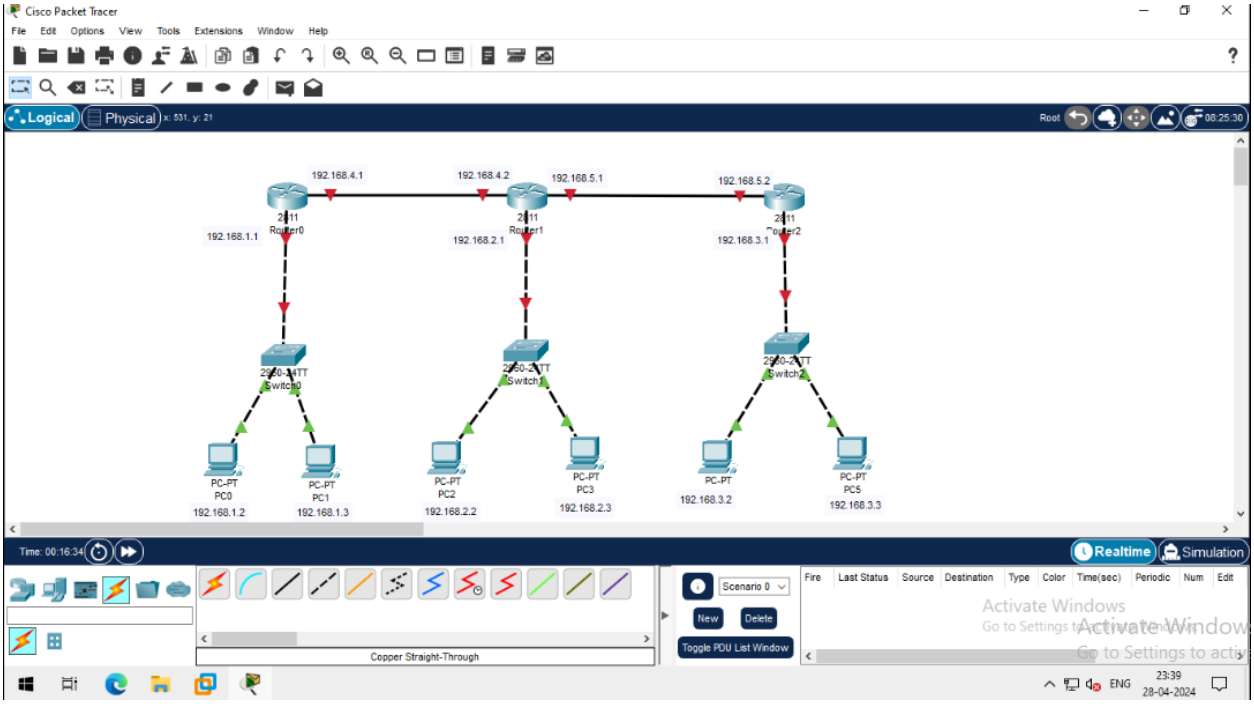


To check connection



Here we can see routing works!!!!

OSPF



After configured ip to all pc and ports of routers ,we can go to BGP routing

OSPF in Router 1

```
Router#conf ter
Router#conf terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#router ospf 100
Router(config-router)#netw
Router(config-router)#network 192.168.1.0 0.0.0.255 area 0
Router(config-router)#network 192.168.4.0 0.0.0.255 area 0
Router(config-router)#exit
Router(config)#
00:54:09: %OSPF-5-ADJCHG: Process 100, Nbr 192.168.5.1 on FastEthernet0/1 from LOADING to FULL, Loading
```

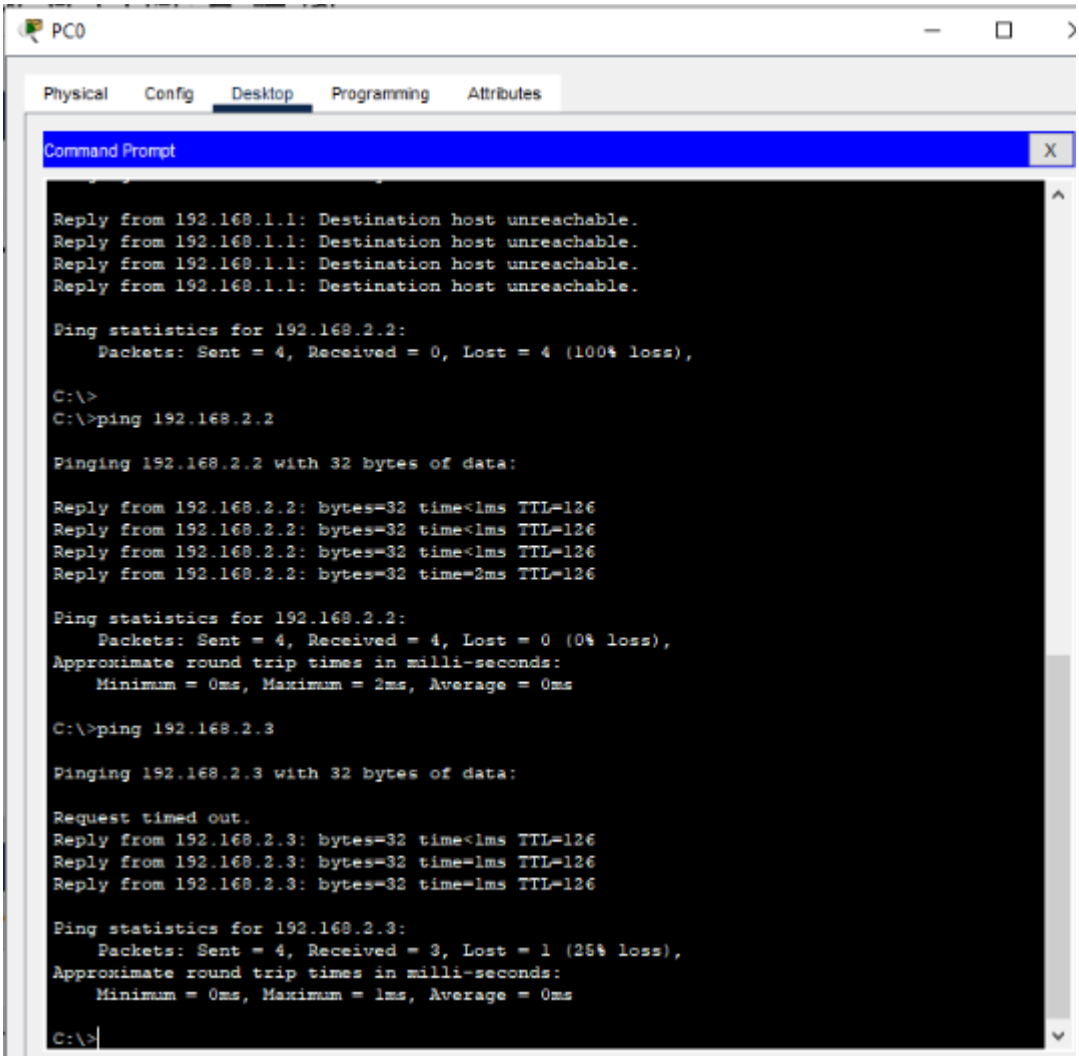
OSPF in Router 2

```
Router(config)#router ospf 100
Router(config-router)#net
Router(config-router)#network 192.168.4.0 0.0.0.255 arae 0
                                                  ^
% Invalid input detected at '^' marker.

Router(config-router)#network 192.168.4.0 0.0.0.255 area 0
Router(config-router)#network 192.168.2.0 0.0.0.255 area 0
Router(config-router)#
01:09:14: %OSPF-5-ADJCHG: Process 100, Nbr 192.168.4.1 on Ethernet1/0 from LOADING to FULL, Loading Done
network 192.168.5.0 0.0.0.255 area 0
Router(config-router)#exit
Router(config)#
01:10:03: %OSPF-5-ADJCHG: Process 100, Nbr 192.168.5.2 on FastEthernet0/1 from LOADING to FULL, Loading Done
```

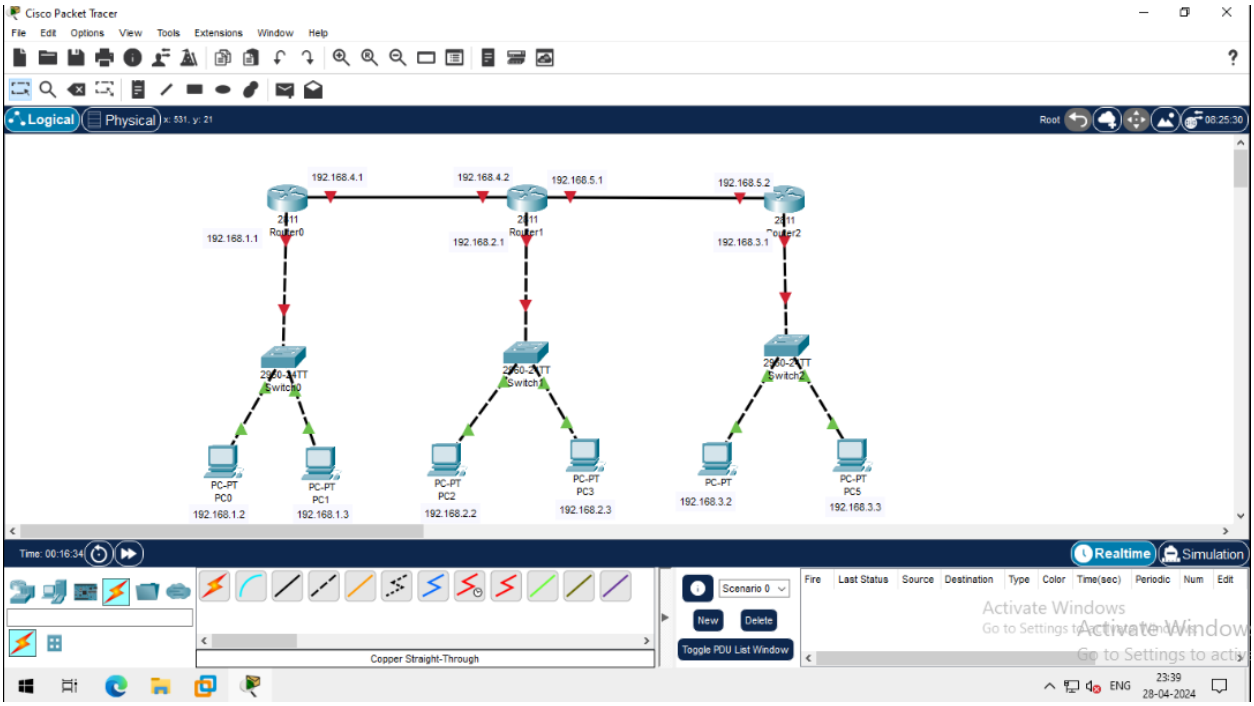
OSPF in Router 3

```
Router(config)#router ospf 100
Router(config-router)#net
Router(config-router)#network 192.168.5.0 0.0.0.255 area 0
Router(config-router)#network 192.168.3.0 0.0.0.255 area 0
Router(config-router)#
01:11:41: %OSPF-5-ADJCHG: Process 100, Nbr 192.168.5.1 on FastEthernet0/1 from LOADING to FULL, Loading Done
exit
Router(config)#
```

Connection check



BGP



After configured ip to all pc and ports of routers ,we can go to BGP routing

In router 1 ,

```
Router(config)#router bgp 54001
Router(config-router)#nei
Router(config-router)#neighbor 192.168.4.2 remo
Router(config-router)#neighbor 192.168.4.2 remote-as 54002
Router(config-router)#net
Router(config-router)#network 192.168.1.0 255.255.255.0
                                          ^
% Invalid input detected at '^' marker.

Router(config-router)#network 192.168.1.0 mas 255.255.255.0
Router(config-router)#network 192.168.1.0 mask 255.255.255.0
Router(config-router)#exit
Router(config)#router bgp 54001
Router(config-router)#network 192.168.4.0 mask 255.255.255.0
Router(config-router)#exit
Router(config)#%BGP-5-ADJCHANGE: neighbor 192.168.4.2 Up
```

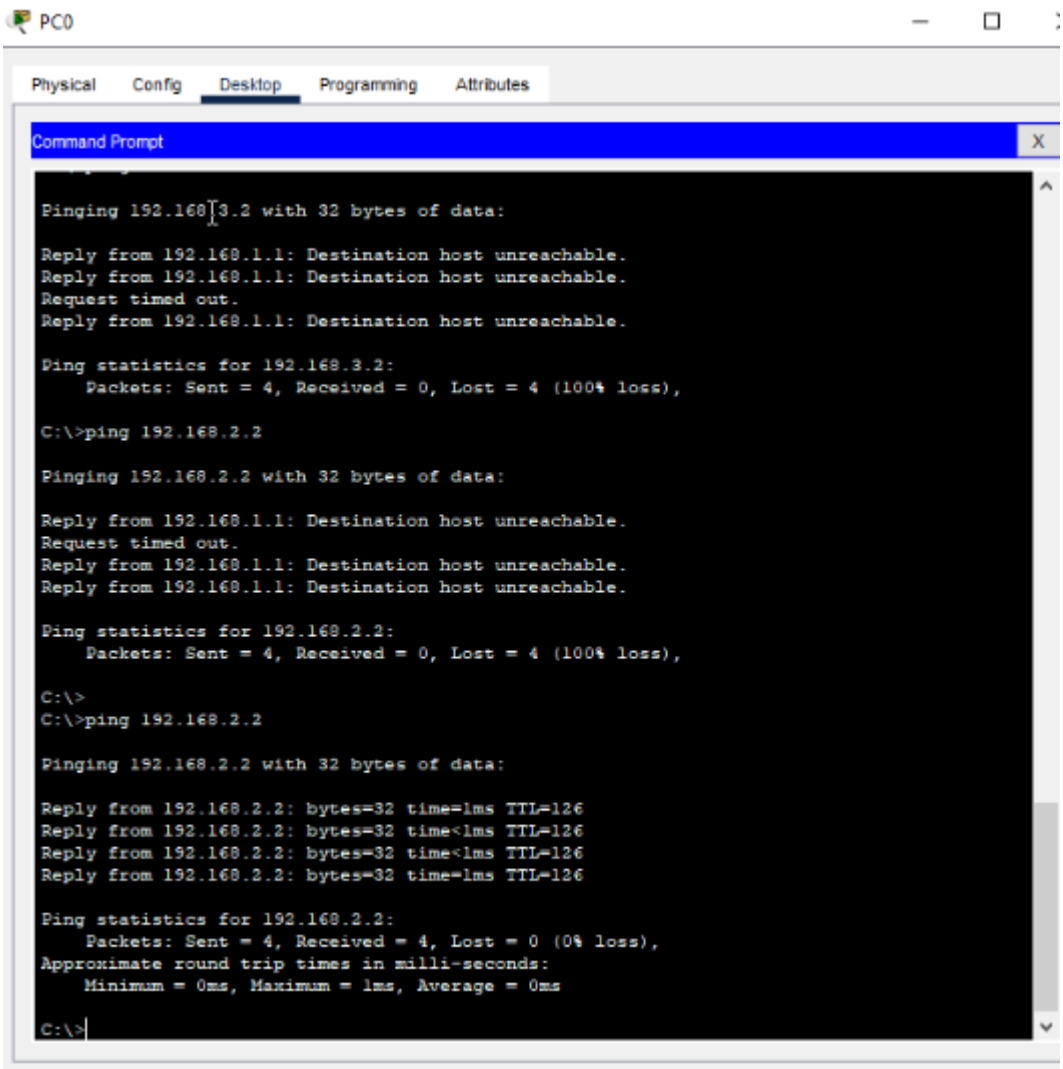
In router 2 ,

```
Router(config)#router bgp 54002
Router(config-router)#nei
Router(config-router)#neighbor remo
Router(config-router)#neighbor 192.168.5.2 remo
Router(config-router)#neighbor 192.168.5.2 remote-as 54003
Router(config-router)#net
Router(config-router)#network 192.168.2.0 mask 255.255.255.0
Router(config-router)#exit
Router(config)#router bgp 54002
Router(config-router)#network 192.168.4.0 mask 255.255.255.0
Router(config-router)#network 192.168.5.0 mask 255.255.255.0
Router(config-router)#exit
Router(config)#%BGP-5-ADJCHANGE: neighbor 192.168.5.2 Up

Router(config)#router bgp 54002
Router(config-router)#neighbor 192.168.4.1 remote-as 54001
Router(config-router)#%BGP-5-ADJCHANGE: neighbor 192.168.4.1 Up

Router(config-router)#exit
```

In router 3 ,

```
Router(config)#router bgp 54003
Router(config-router)#neig
Router(config-router)#neighbor 192.168.5.1 rem
Router(config-router)#neighbor 192.168.5.1 remote-as 54002
Router(config-router)#%BGP-5-ADJCHANGE: neighbor 192.168.5.1 Up

Router(config-router)#net
Router(config-router)#network 192.168.5.0 mask 255.255.255.0
Router(config-router)#network 192.168.3.0 mask 255.255.255.0
Router(config-router)#exit
Router(config)#
```

To check connection ,



Done !!!