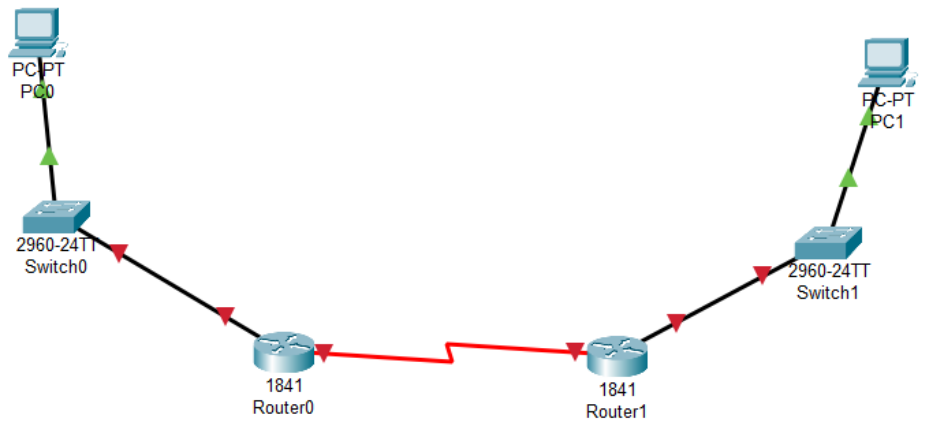
Practical No : 1 Date:22-9-22

Aim : Configuring WEP on a Wireless Router

Prequest : Cisco Packet tracer

Step1:

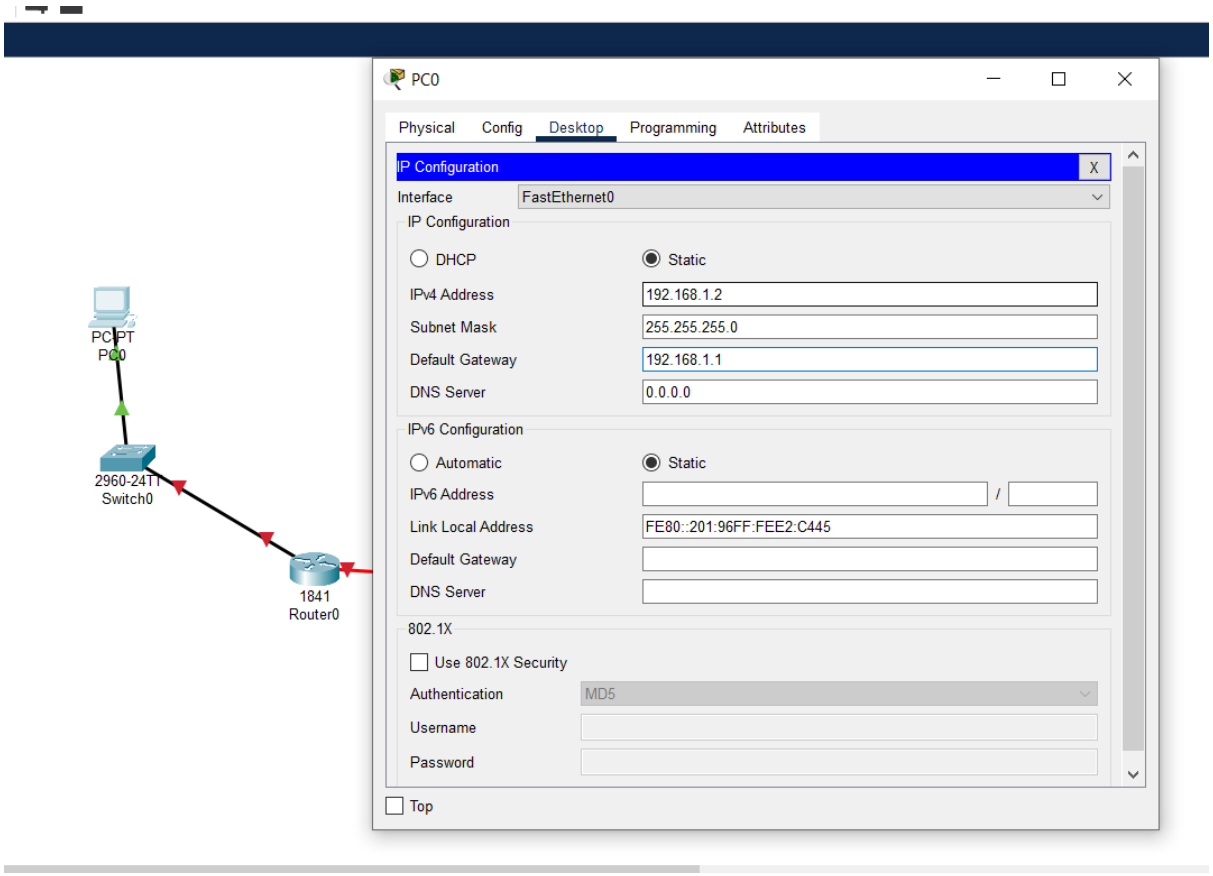


Connect router 0 and router 1 with Serial DCE in

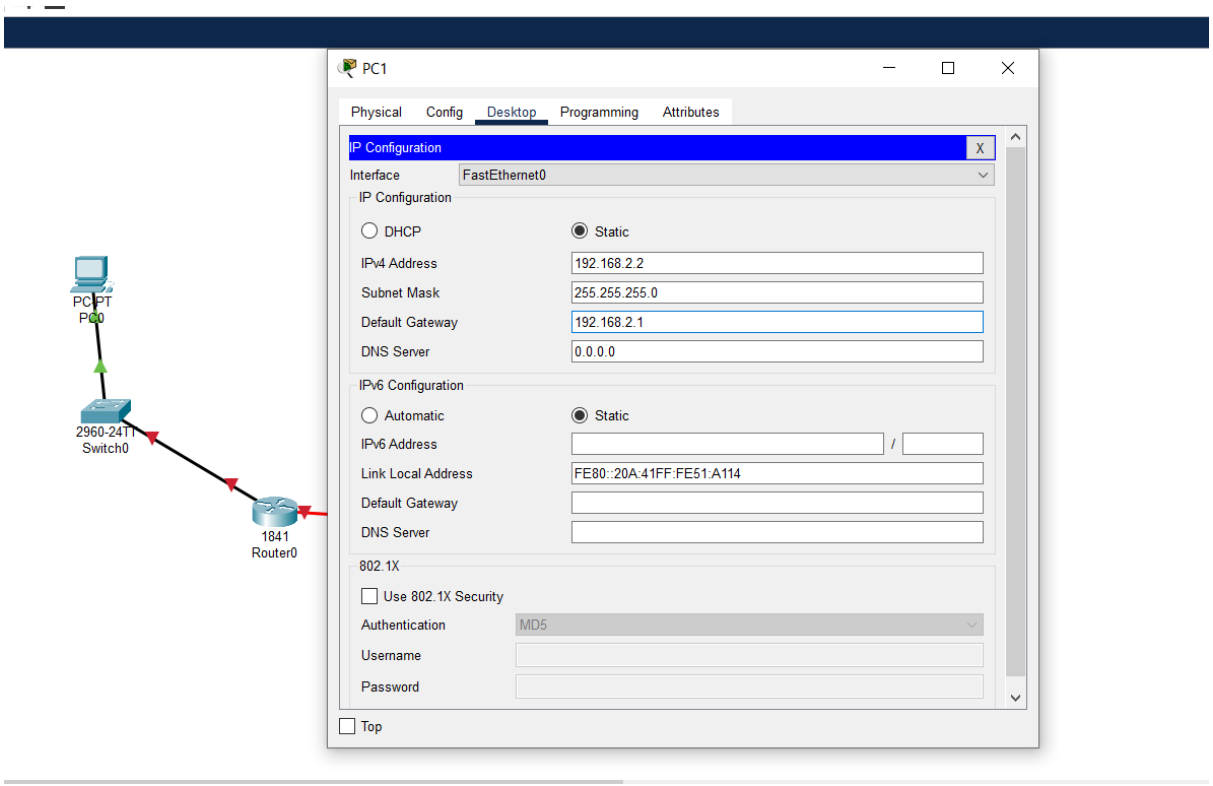
And remaining connect Ethernet with coper wire

Step 2 : give the IP4 address and Default Gateway

PC0

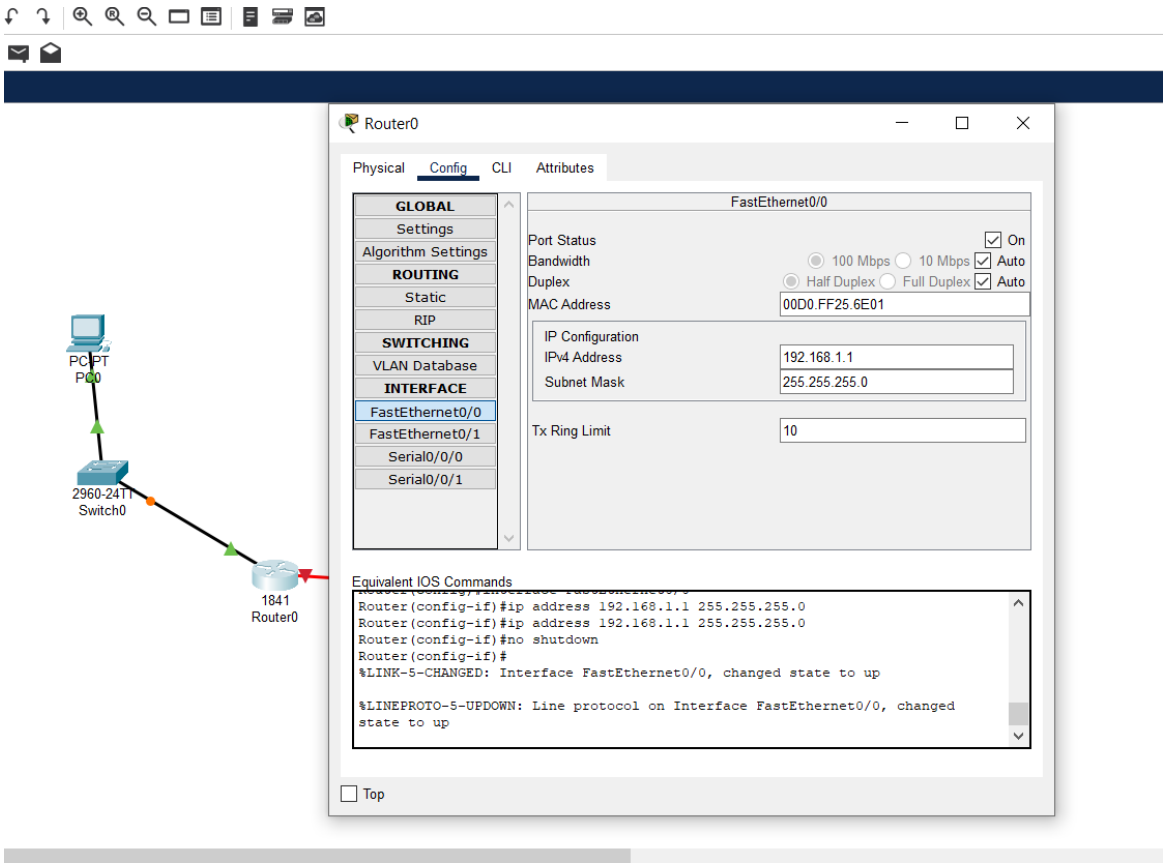

PC0
Physical
Config
Desktop
Programming
Attributes
IP Configuration
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
192.168.1.2
Subnet Mask
255.255.255.0
Default Gateway
192.168.1.1
DNS Server
0.0.0.0
IPv6 Configuration
Automatic
Static
IPv6 Address
Link Local Address
FE80::201:96FF:FEE2:C445
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication
MD5
Username
Password
Top
PC-PT
PC0
2960-24TT
Switch0
1841
Router0

PC1

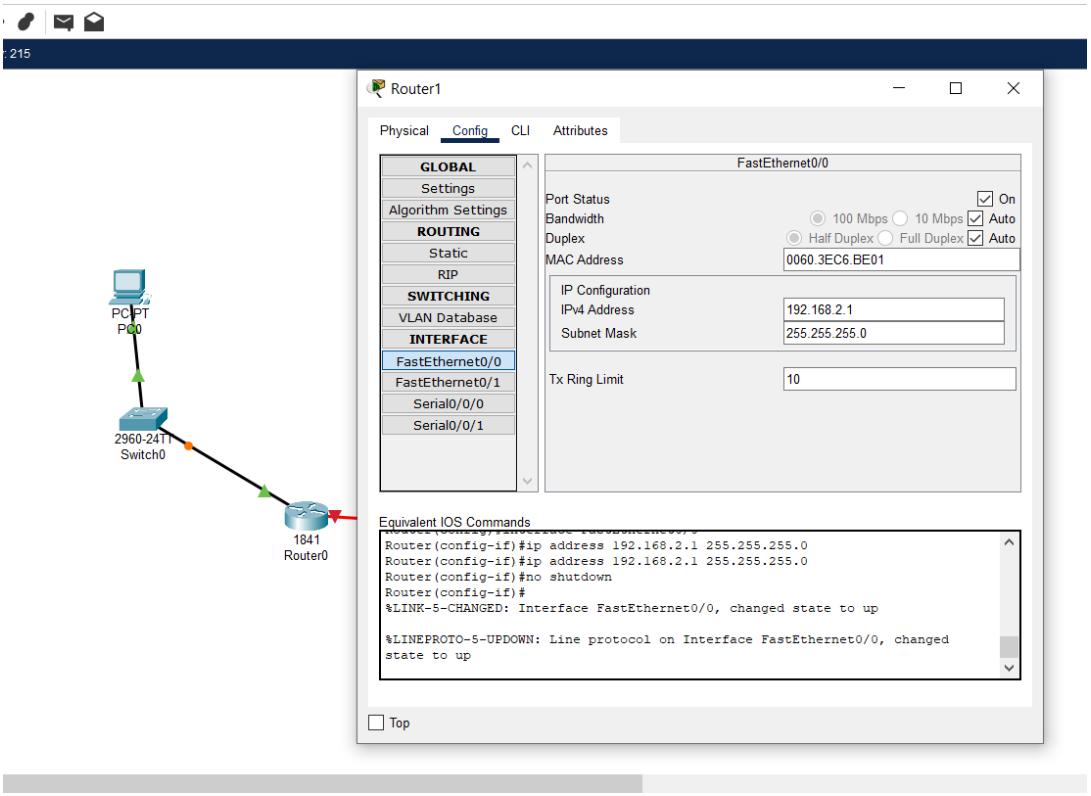

PC1
Physical
Config
Desktop
Programming
Attributes
IP Configuration
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
192.168.2.2
Subnet Mask
255.255.255.0
Default Gateway
192.168.2.1
DNS Server
0.0.0.0
IPv6 Configuration
Automatic
Static
IPv6 Address
Link Local Address
FE80::20A:41FF:FE51:A114
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication
MD5
Username
Password
Top
PC-PT
PC0
2960-24TT
Switch0
1841
Router0

Step 3 : give ip for router 0 and 1 and

Router 0

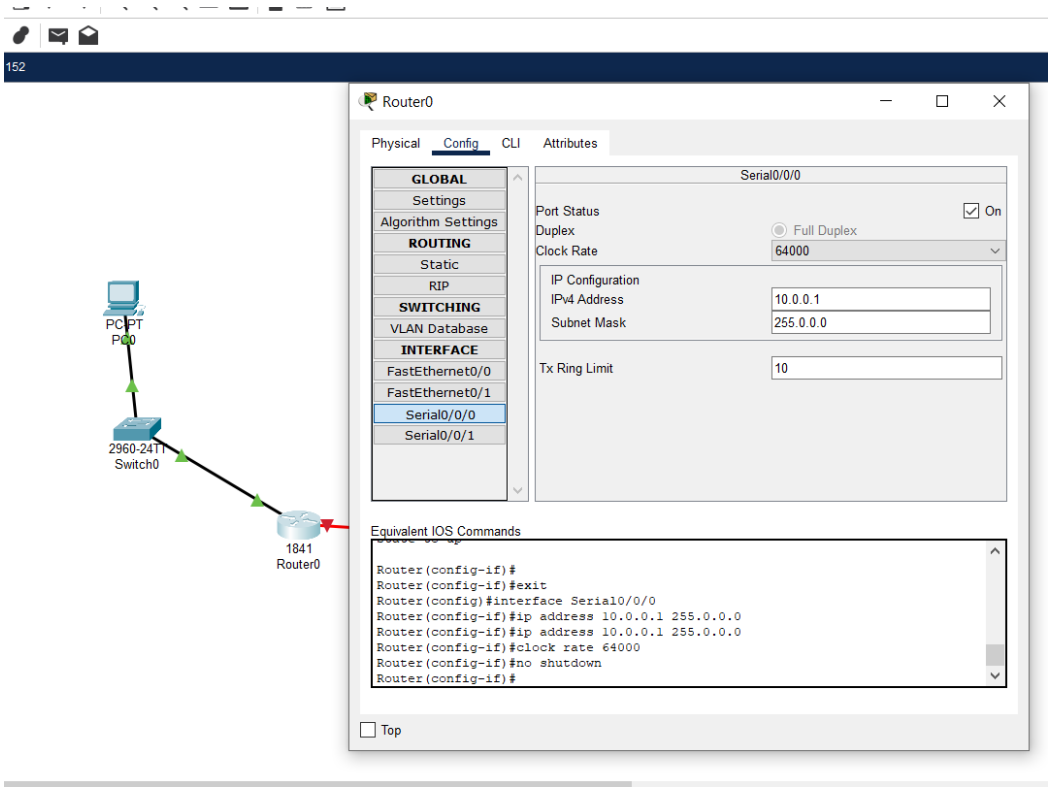


Router 2

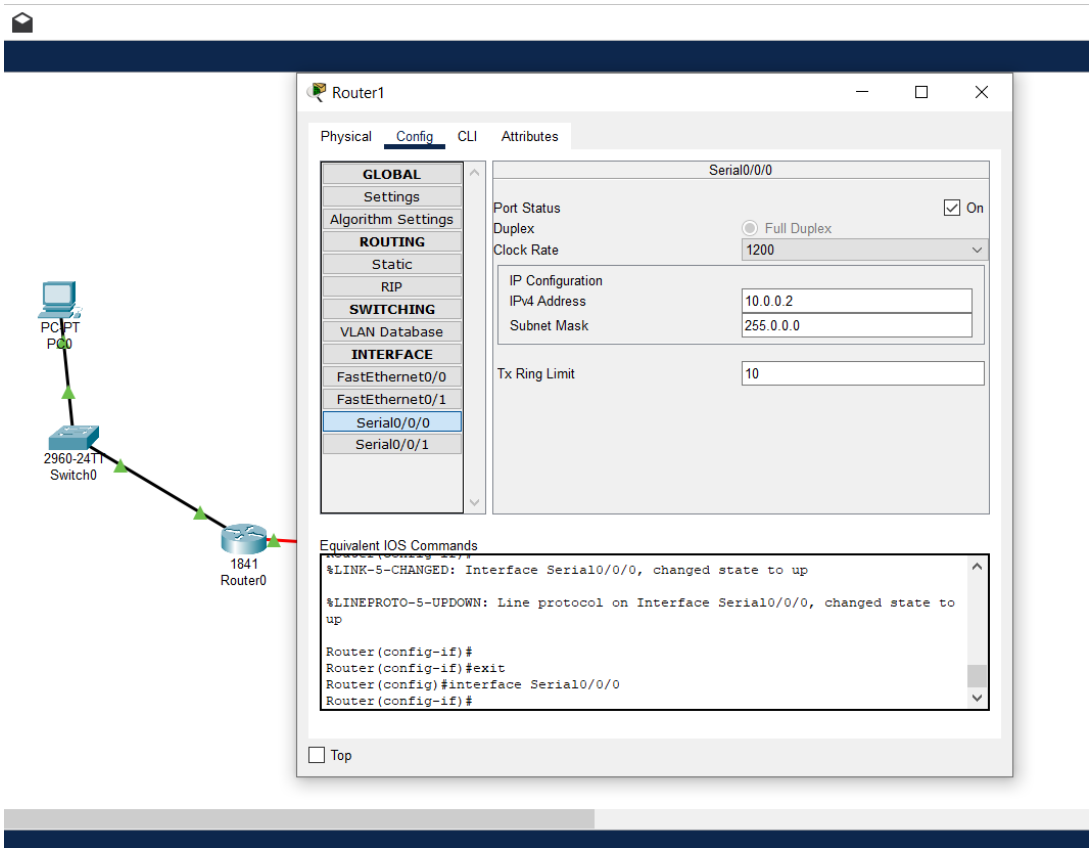


Step 4 : Give Serial Ip for router 0 and 1

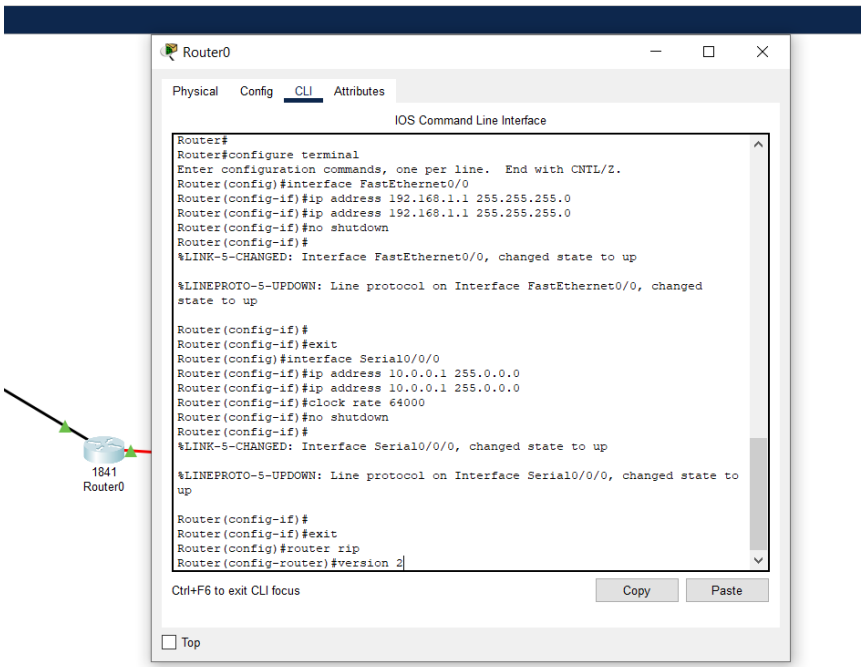
Router 0



Router 1

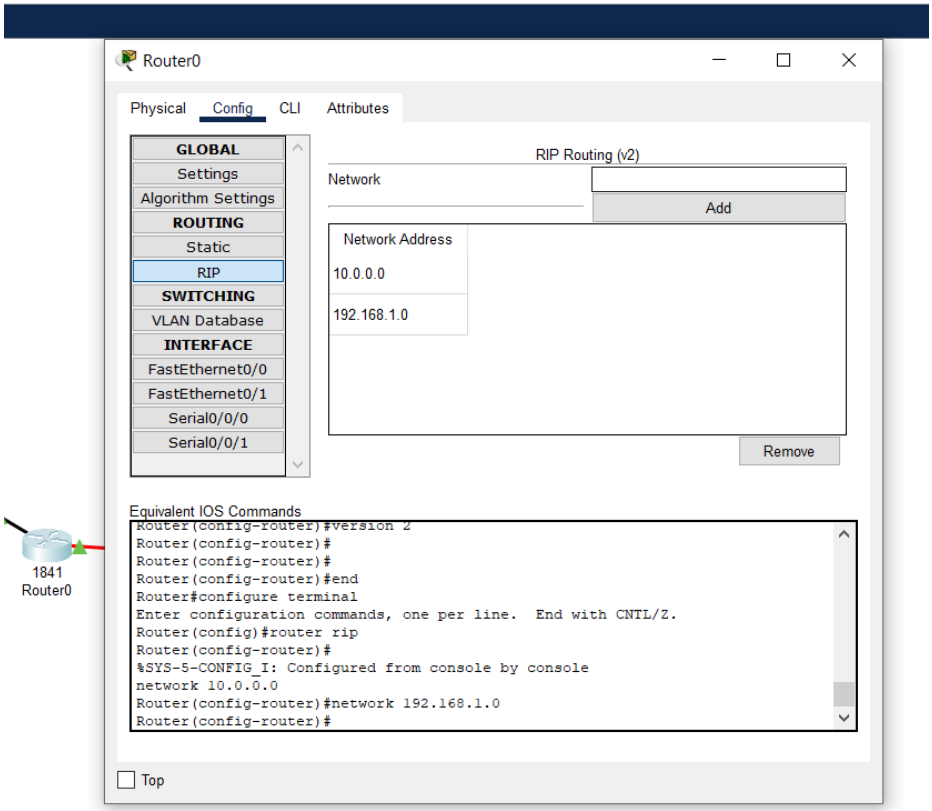


Step 5: in both router click on RIP and go to CLI and type version 2

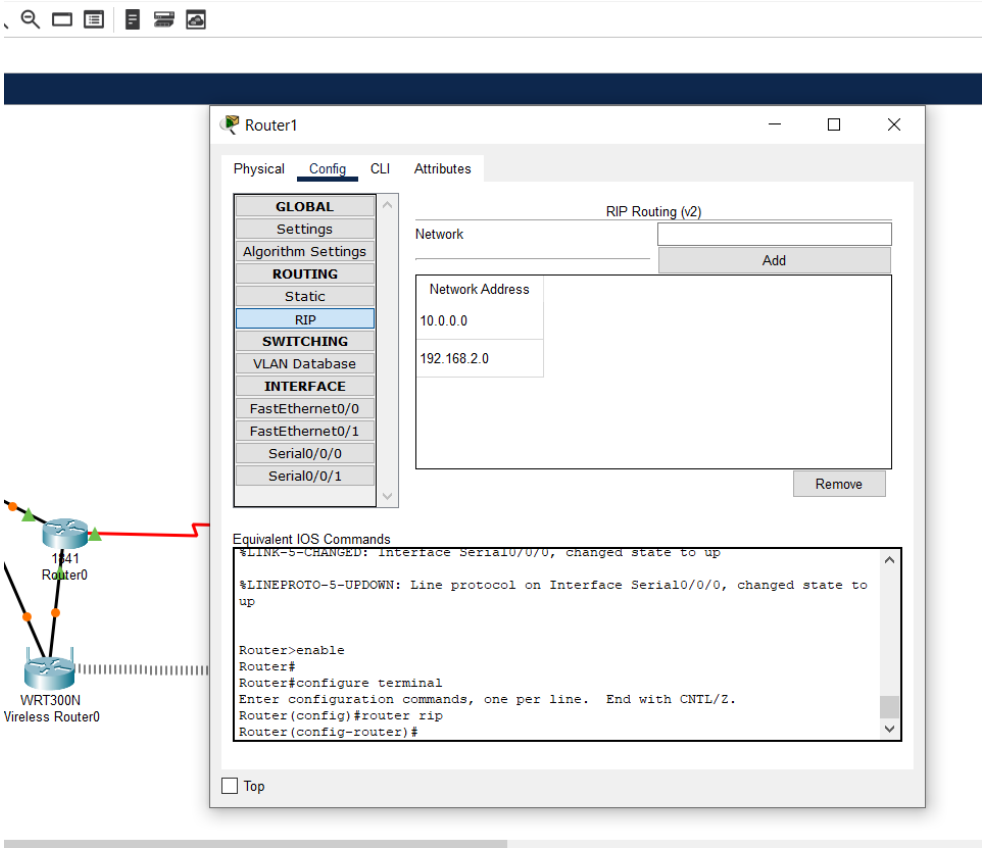


Step 6 : Go to RIP and add the network IP which router is connected

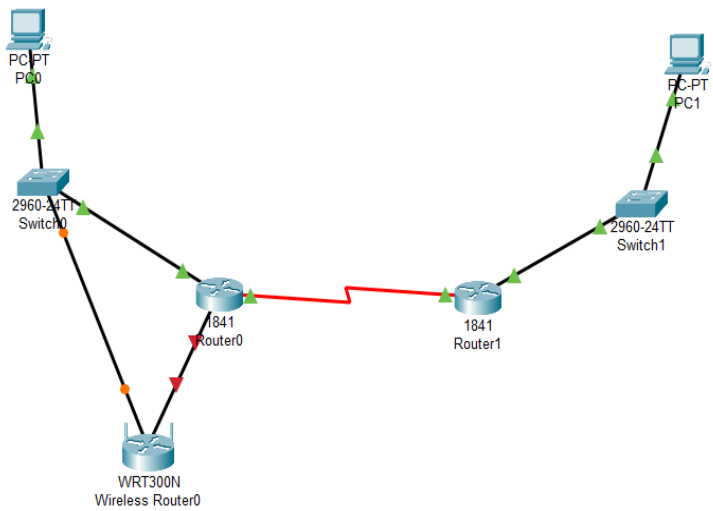
Router 0



Router 1

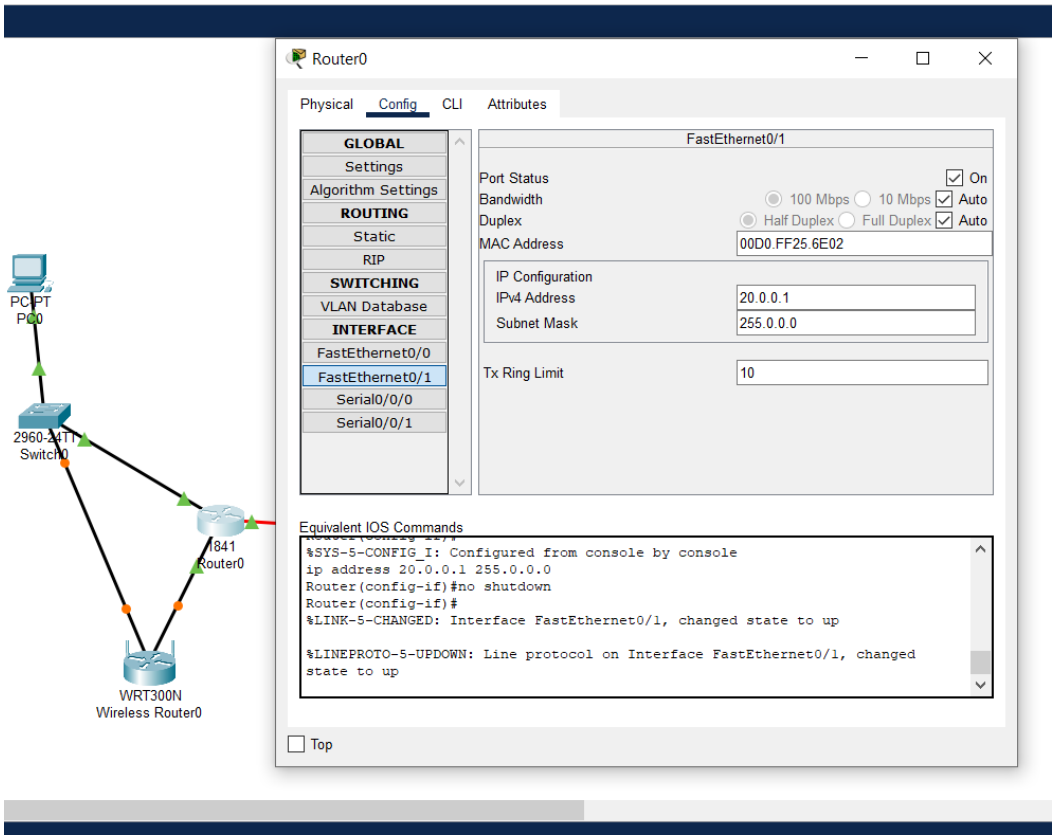


Step 7: add wireless router

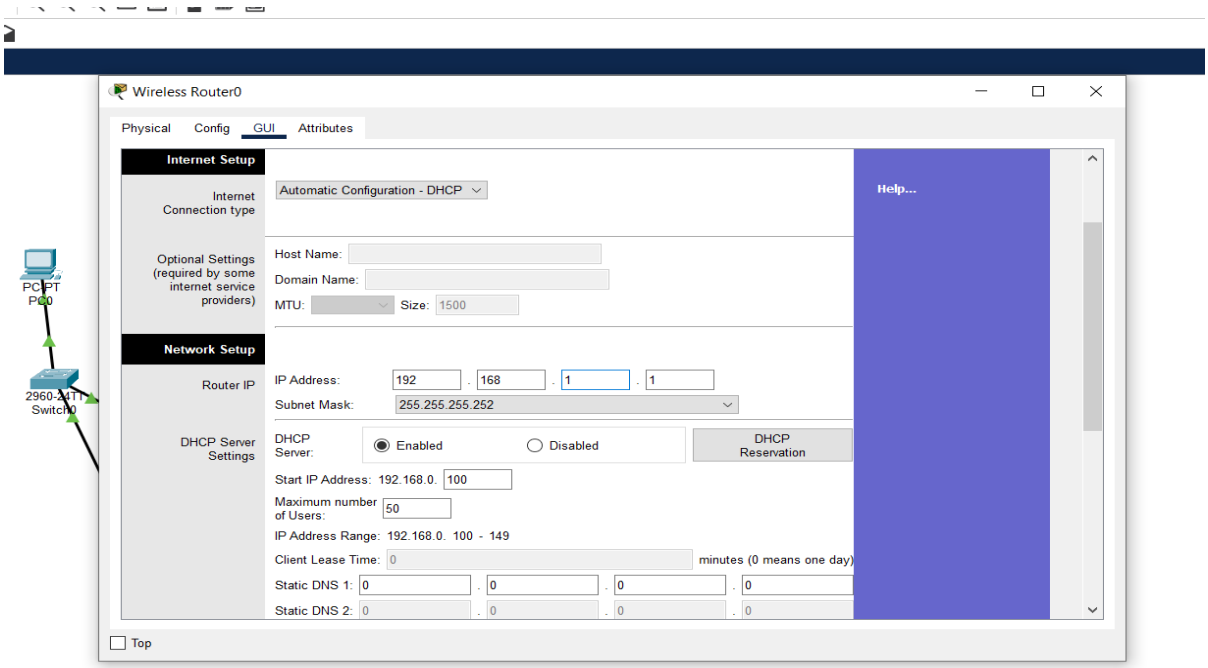


And connect with ethernet cable with switch and router 0

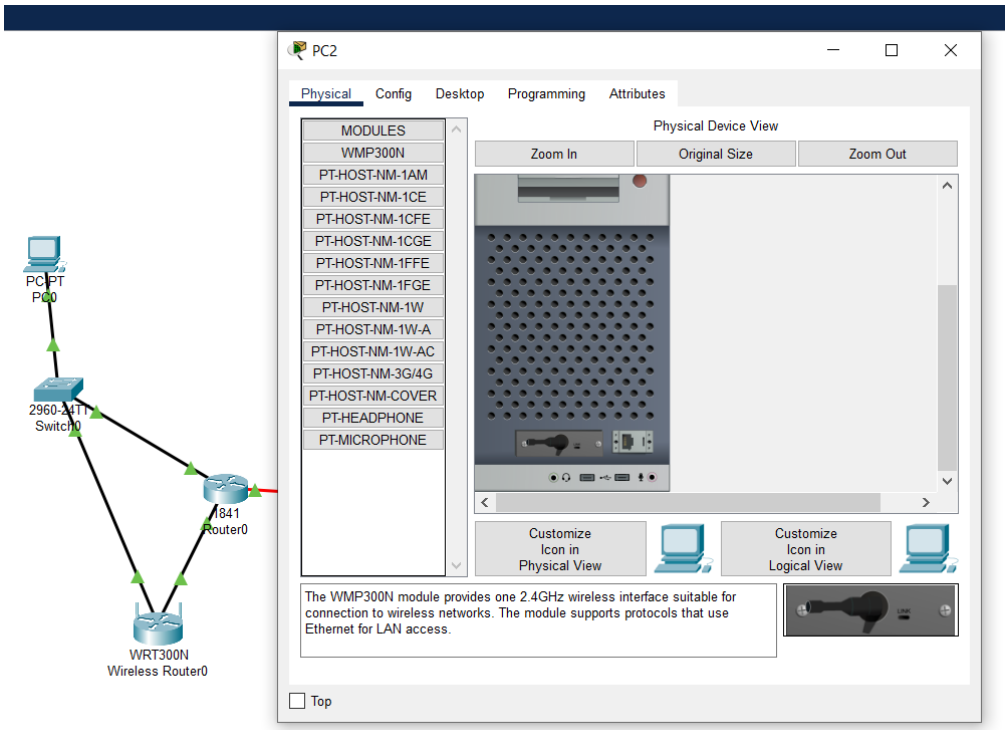
Give IP of wireless router in router 0

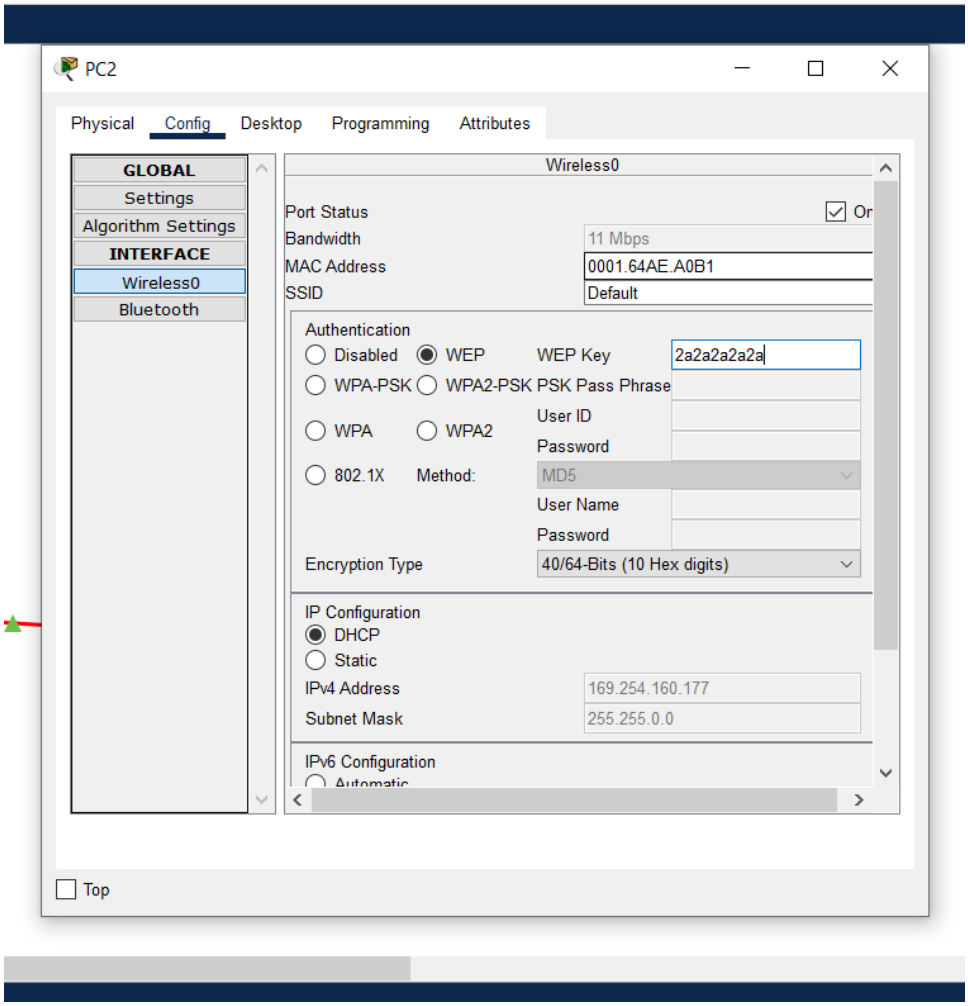


Change IP of wireless router

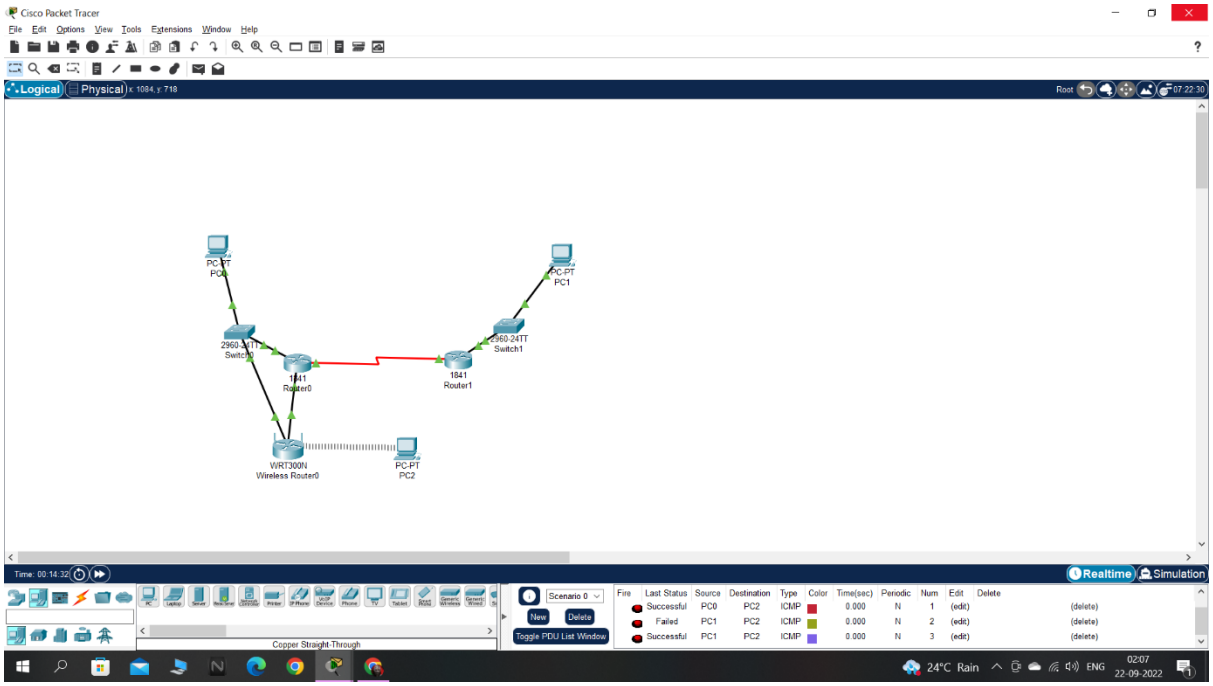


Add new pc and turn off and wire with wireless switch



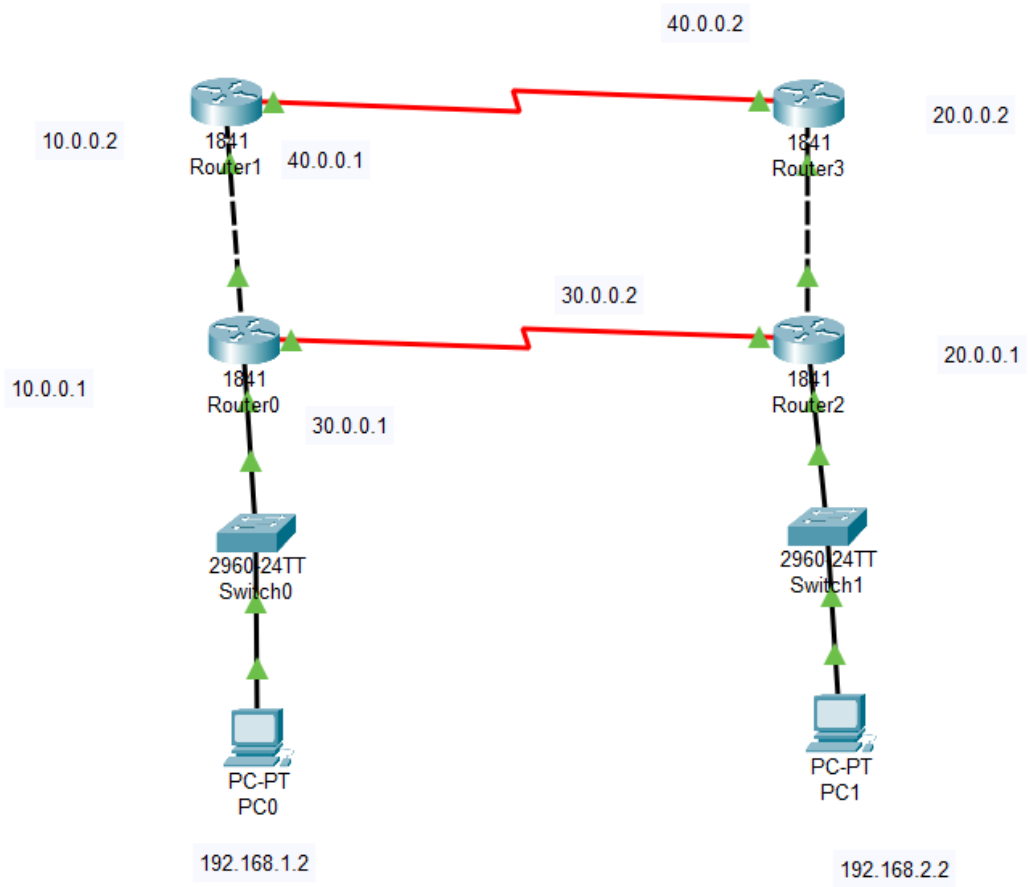


Final Topology

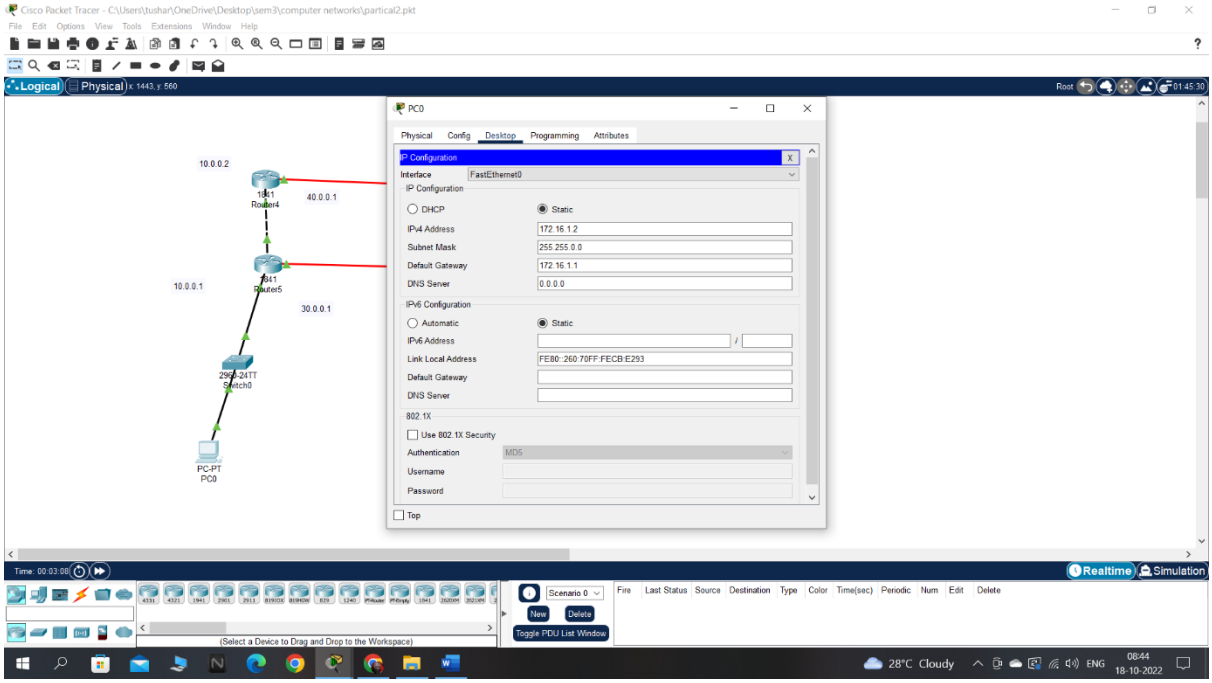


Pratical 2

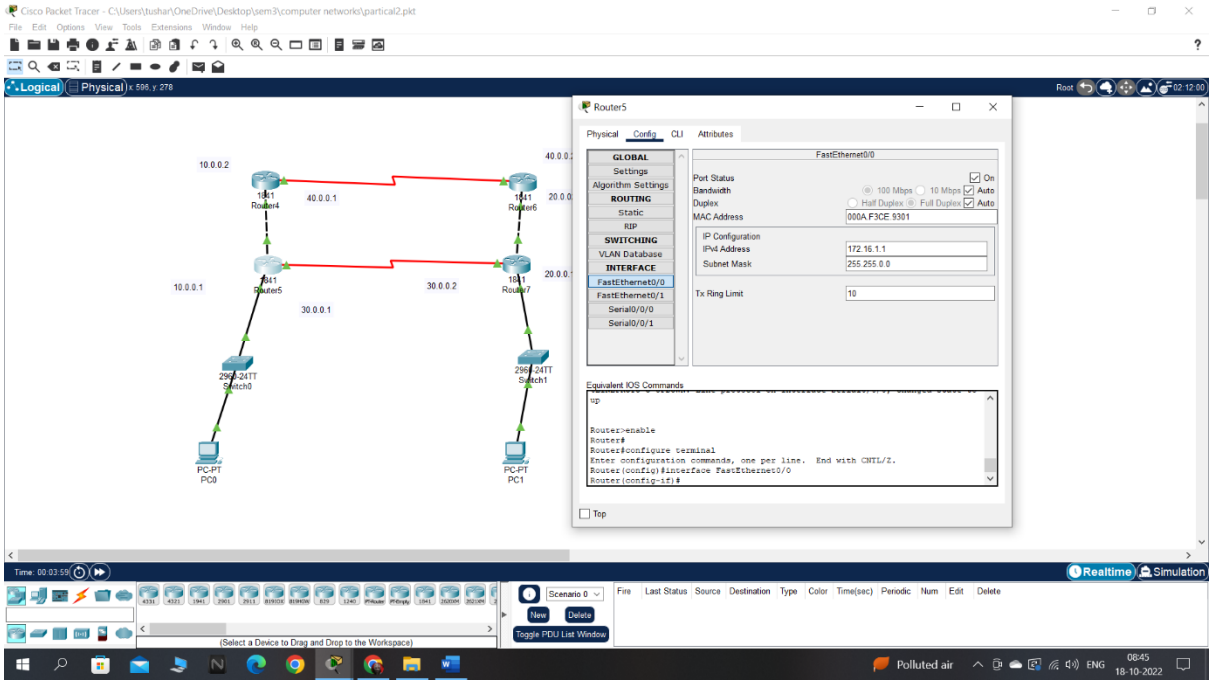
Aim: Demonstrating Distribution Layer Functions

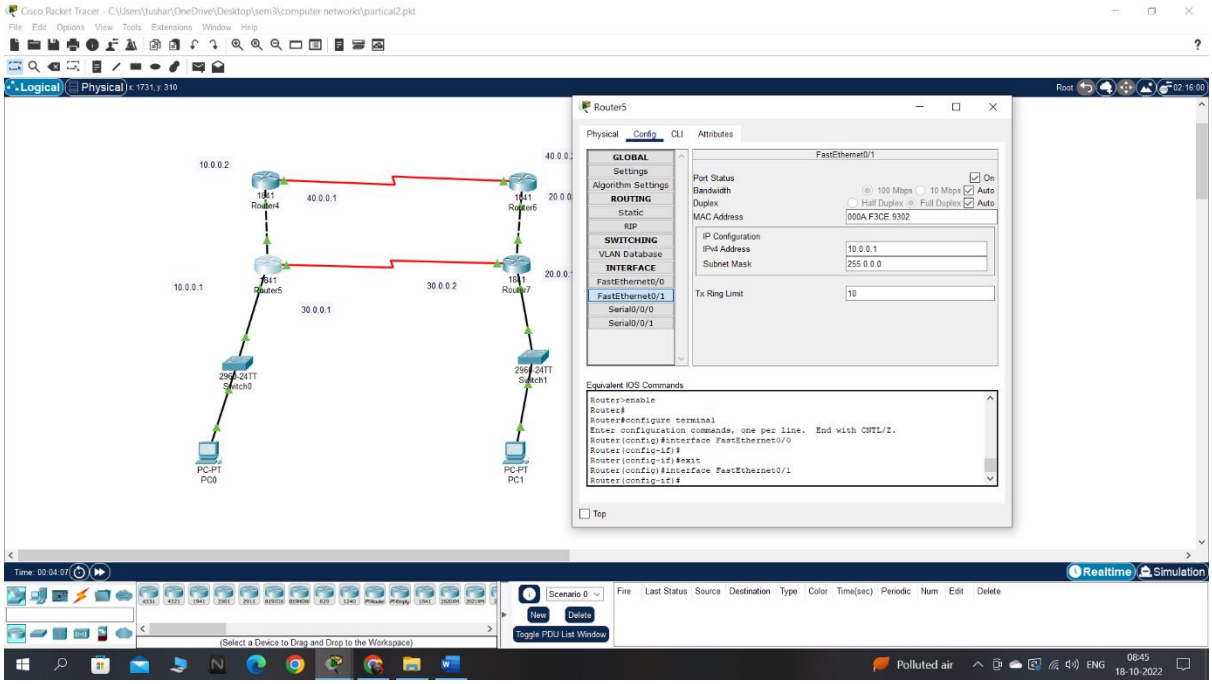


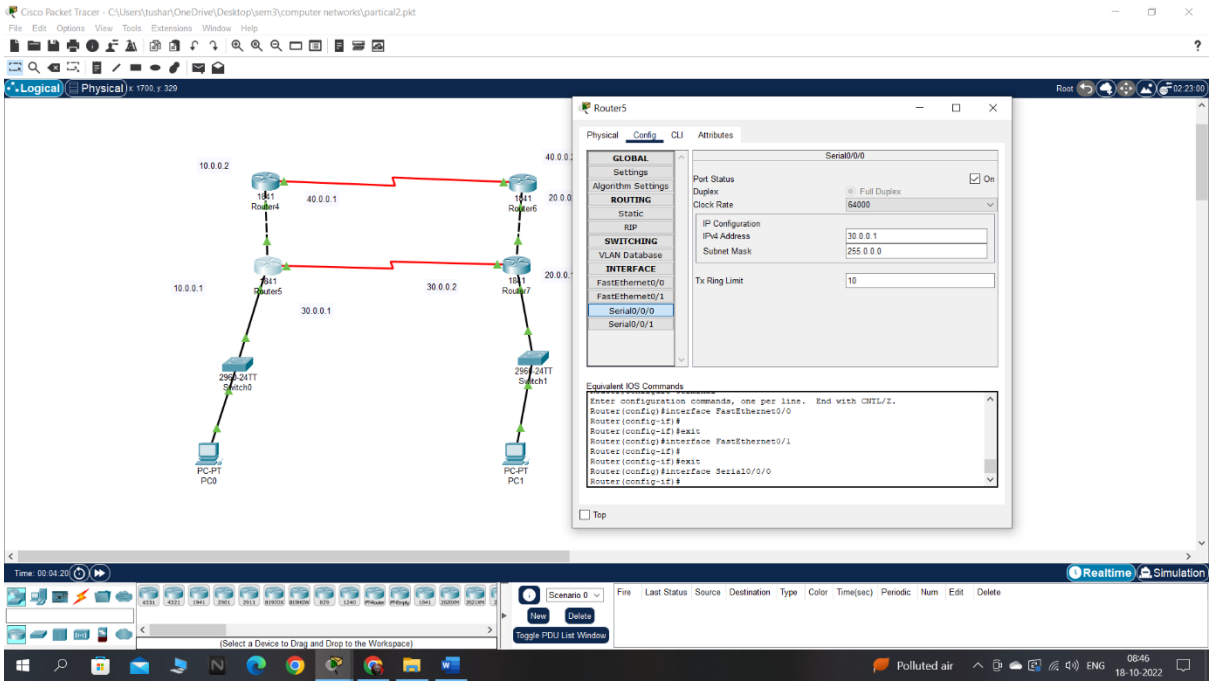
1. Give the PC0 Ip address and default gateway



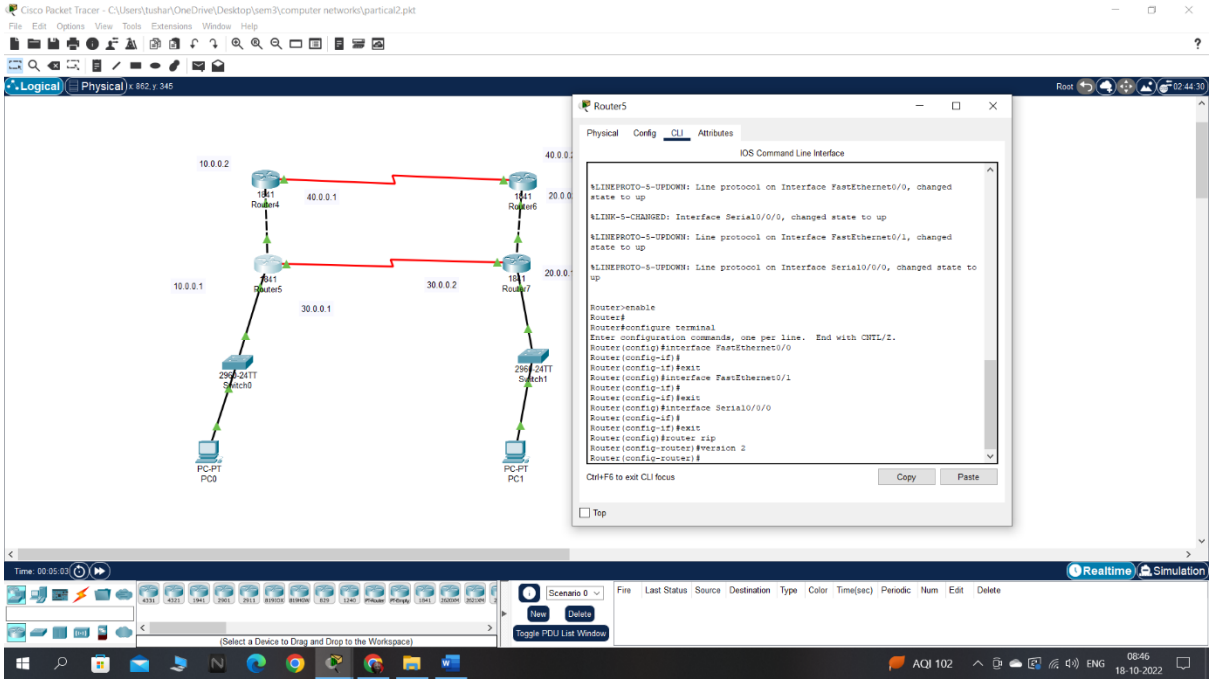
2. Give the IP for FastEthernet0/0, FastEthernet0/1, and Serial0/0 in the Router 5

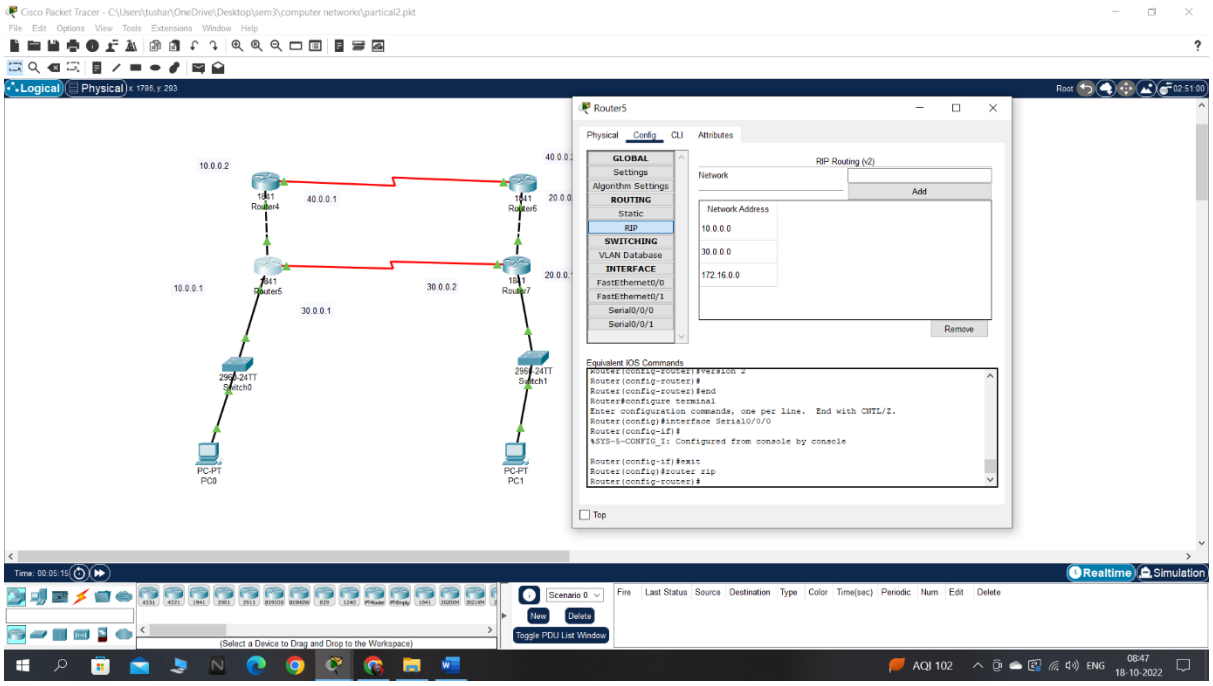



Cisco Packet Tracer - C:\Users\tushar\OneDrive\Desktop\sem3\computer networks\partical2.pkt
Logical
Physical
Router5
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
FastEthernet0/0
FastEthernet0/1
Serial0/0/0
Serial0/0/1
FastEthernet0/1
Port Status
Bandwidth
Duplex
MAC Address
000A.F3CE.9302
IP Configuration
IPv4 Address
10.0.0.1
Subnet Mask
255.0.0.0
Tx Ring Limit
10
Equivalent IOS Commands
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#
Top
10.0.0.2
40.0.0.1
10.0.0.1
30.0.0.1
30.0.0.2
PC-PT
PC0
PC-PT
PC1
Realtime
Simulation
Scenario 0
New
Delete
Toggle PDU List Window
(Select a Device to Drag and Drop to the Workspace)

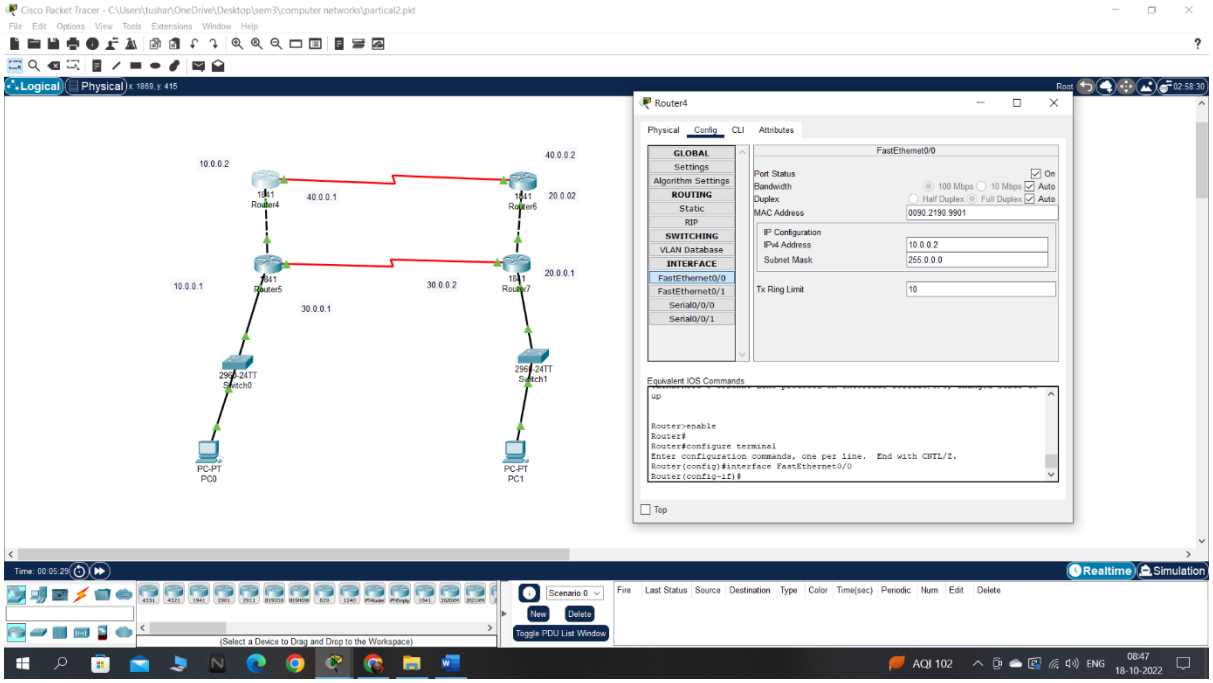

Cisco Packet Tracer - C:\Users\tushar\OneDrive\Desktop\sem3\computer networks\partical2.pkt
Logical
Physical
Router5
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
FastEthernet0/0
FastEthernet0/1
Serial0/0/0
Serial0/0/1
Serial0/0/0
Port Status
Duplex
Full Duplex
Clock Rate
64000
IP Configuration
IPv4 Address
30.0.0.1
Subnet Mask
255.0.0.0
Tx Ring Limit
10
Equivalent IOS Commands
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/0/0
Router(config-if)#
Top
10.0.0.2
40.0.0.1
10.0.0.1
30.0.0.1
30.0.0.2
PC-PT
PC0
PC-PT
PC1
Realtime
Simulation
Scenario 0
New
Delete
Toggle PDU List Window
(Select a Device to Drag and Drop to the Workspace)

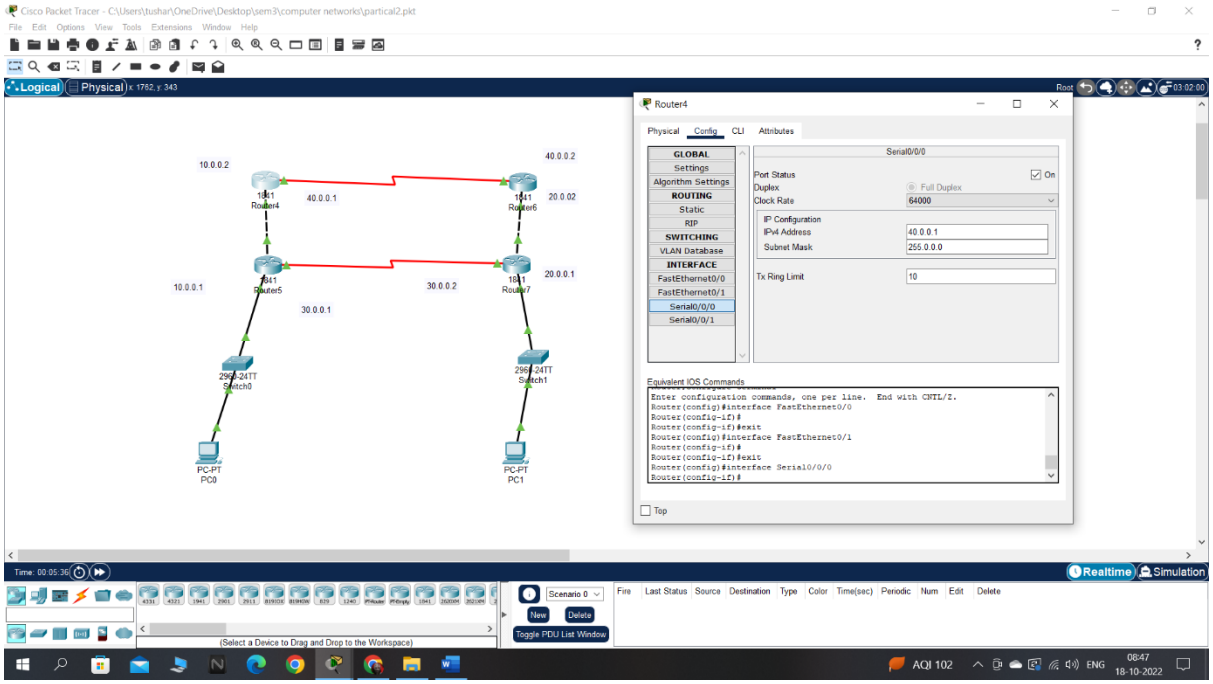
3.Set Routing information Protocol(RIP)



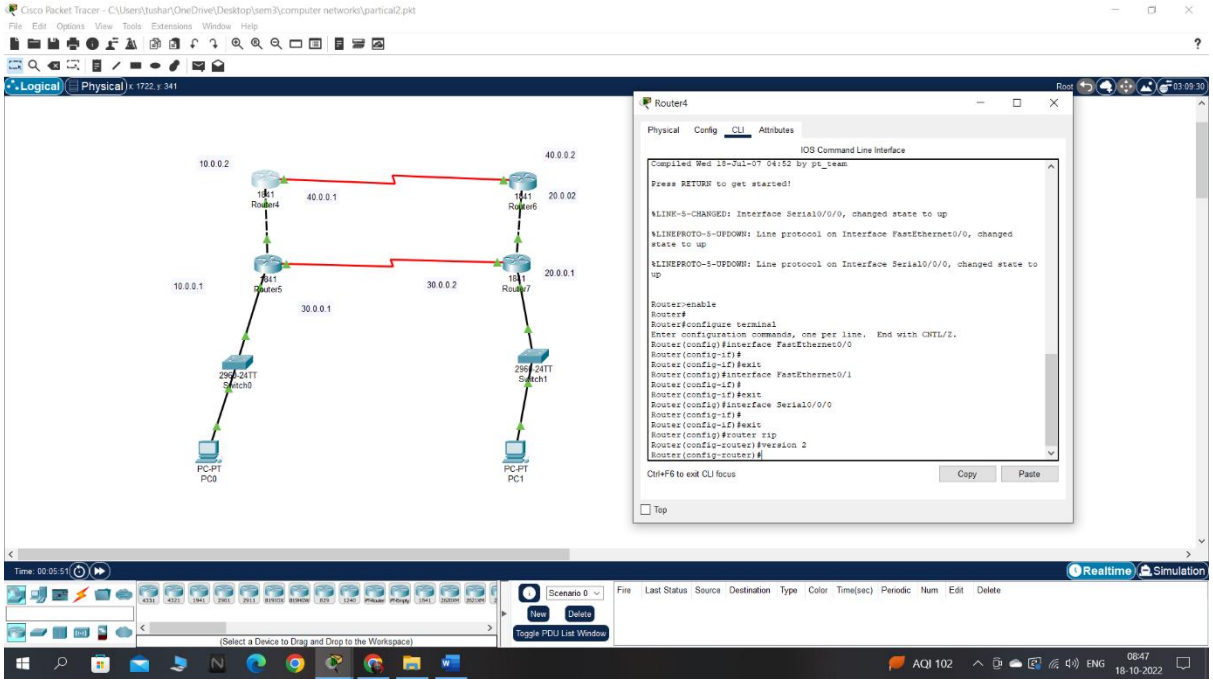


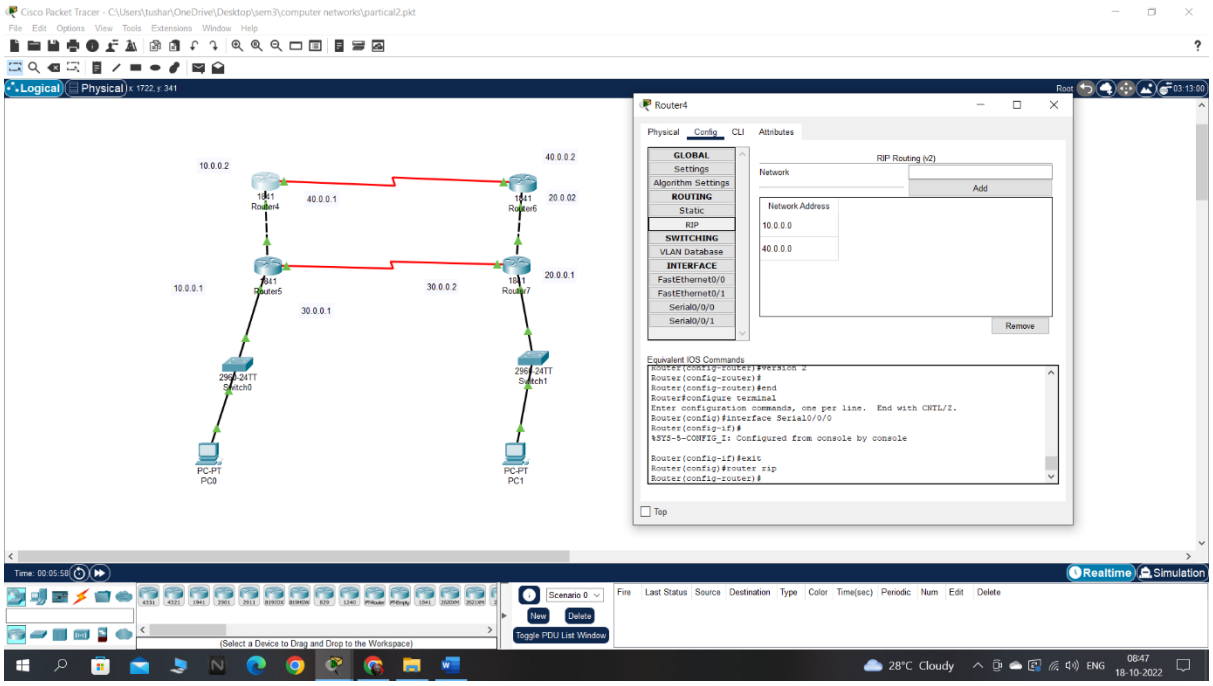
4.Give the IP for FastEthernet0/0 and Serial0/0 in the Router 4



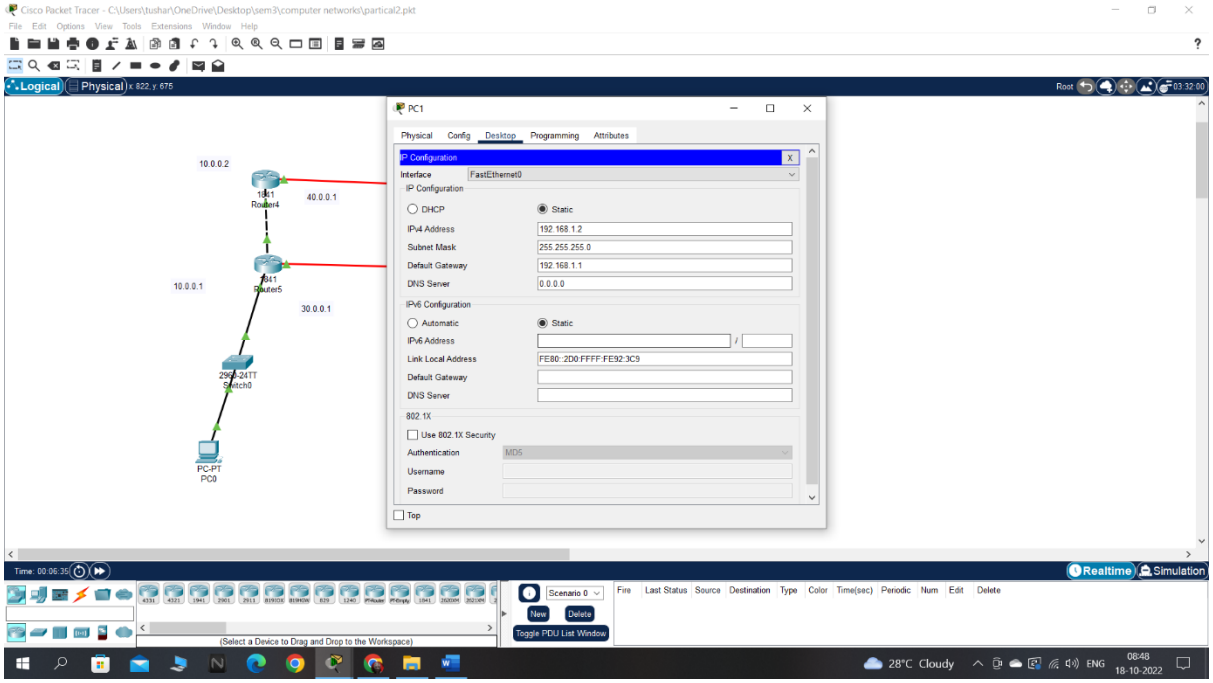


5.Set Routing information Protocol(RIP)

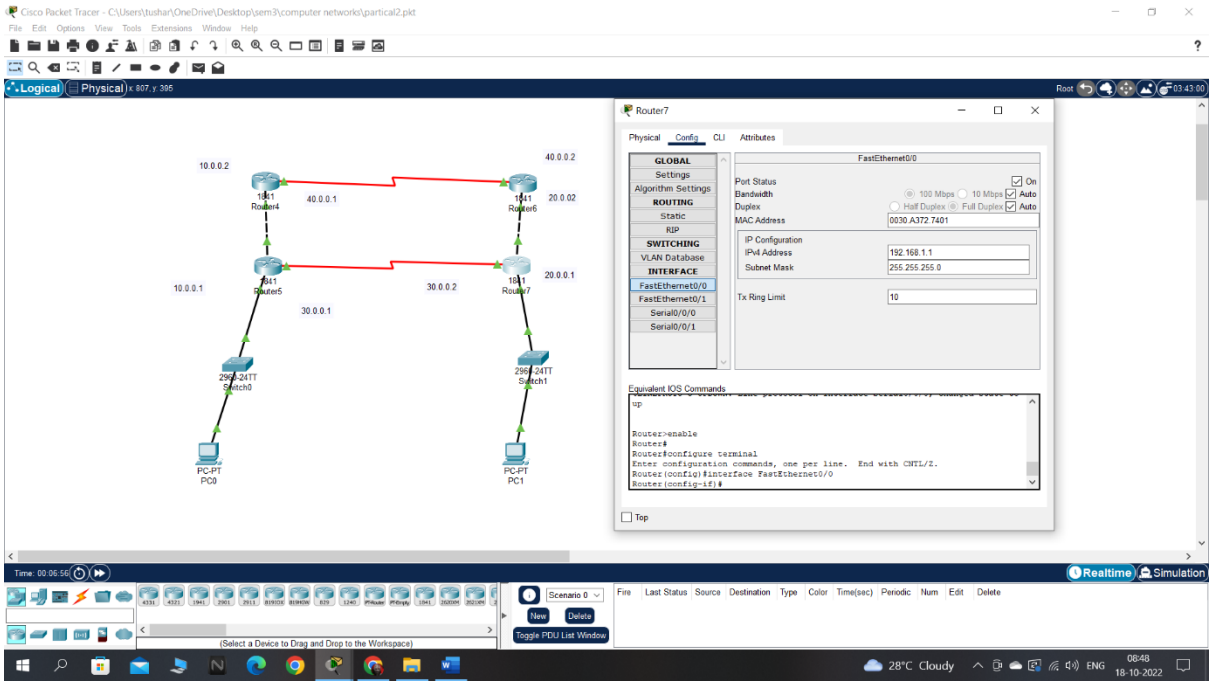


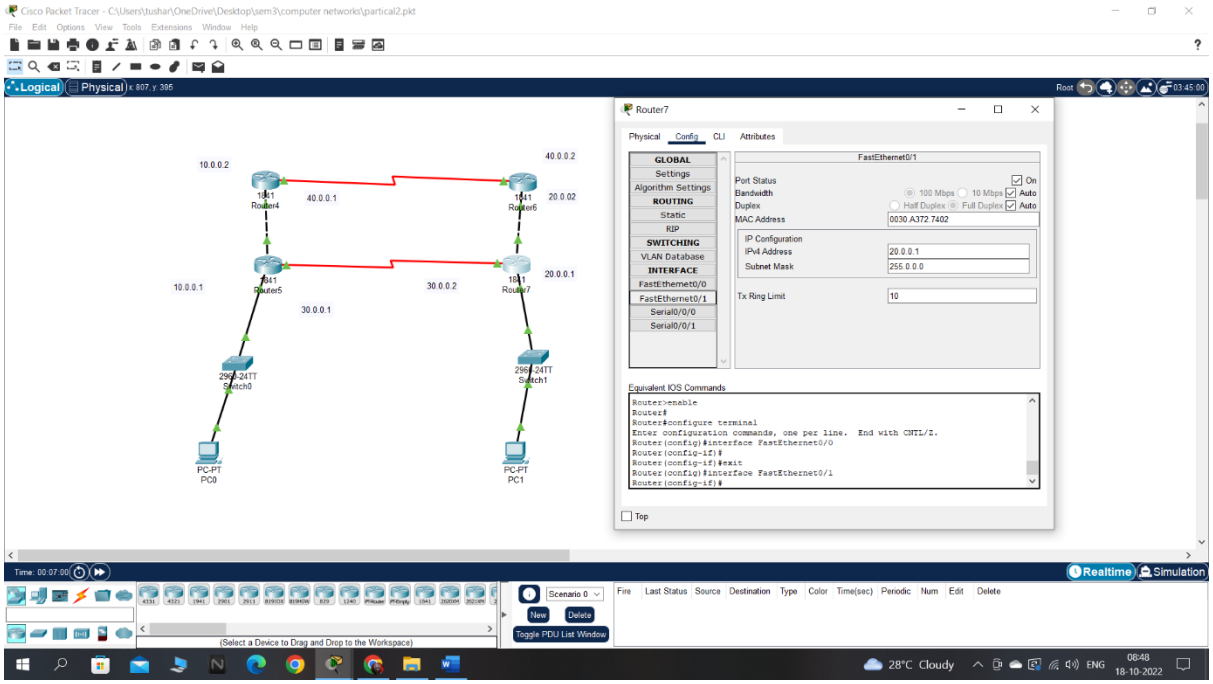


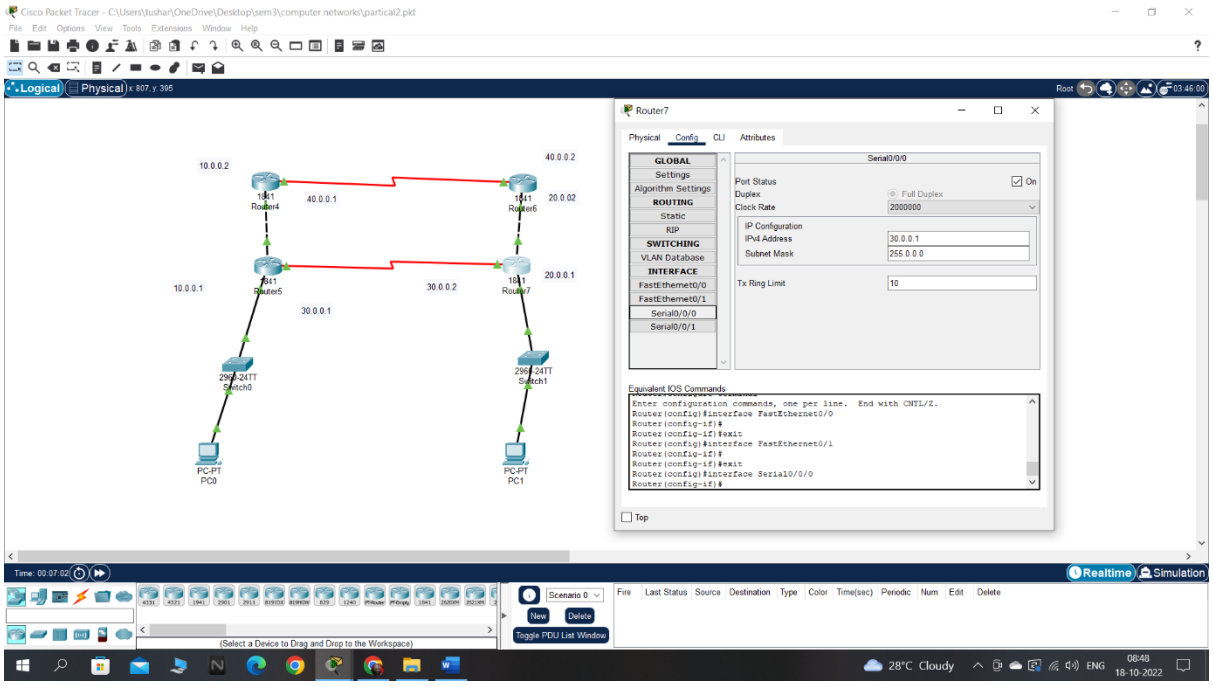
6. Give the PC0 Ip address and default gateway



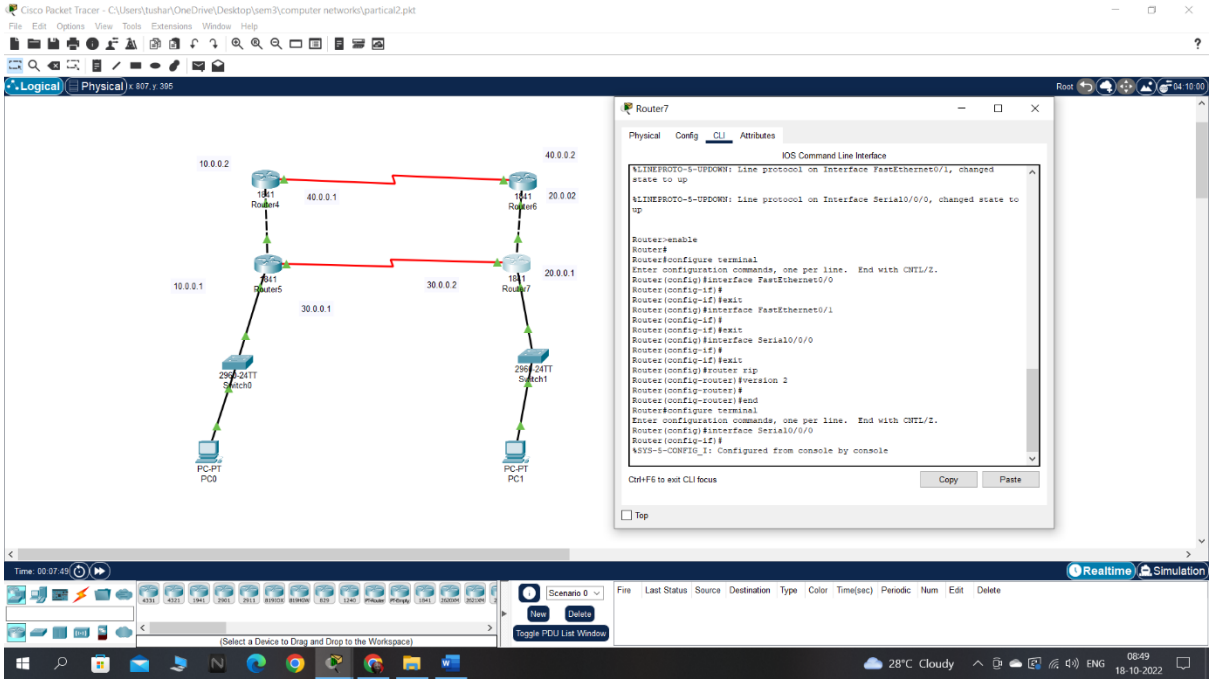
7.Give the IP for FastEthernet0/0, FastEthernet0/1, and Serial0/0 in the Router 7

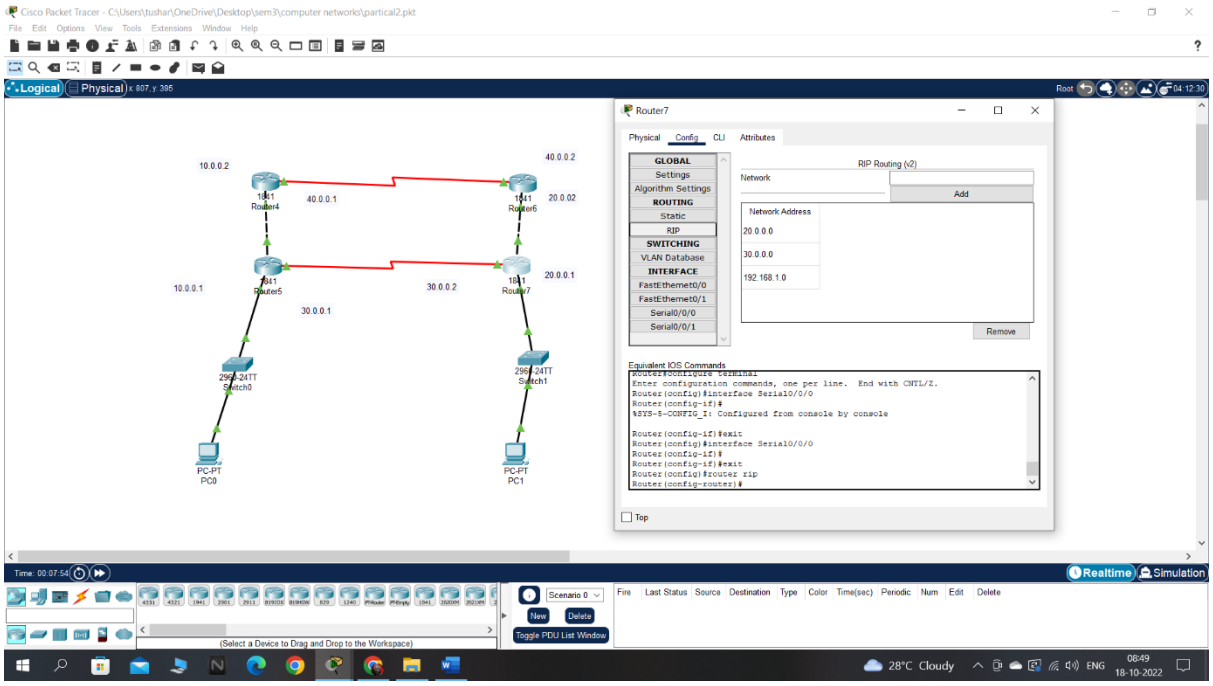



Cisco Packet Tracer - C:\Users\tushar\OneDrive\Desktop\sem3\computer networks\partical2.pkt
Router7
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
FastEthernet0/0
FastEthernet0/1
Serial0/0/0
Serial0/0/1
FastEthernet0/1
Port Status
Bandwidth
Duplex
MAC Address
0030.A372.7402
IP Configuration
IPv4 Address
20.0.0.1
Subnet Mask
255.0.0.0
Tx Ring Limit
10
Equivalent IOS Commands
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#
10.0.0.2
40.0.0.2
40.0.0.1
20.0.02
10.0.0.1
30.0.0.2
20.0.0.1
30.0.0.1
PC-PT
PC0
PC-PT
PC1

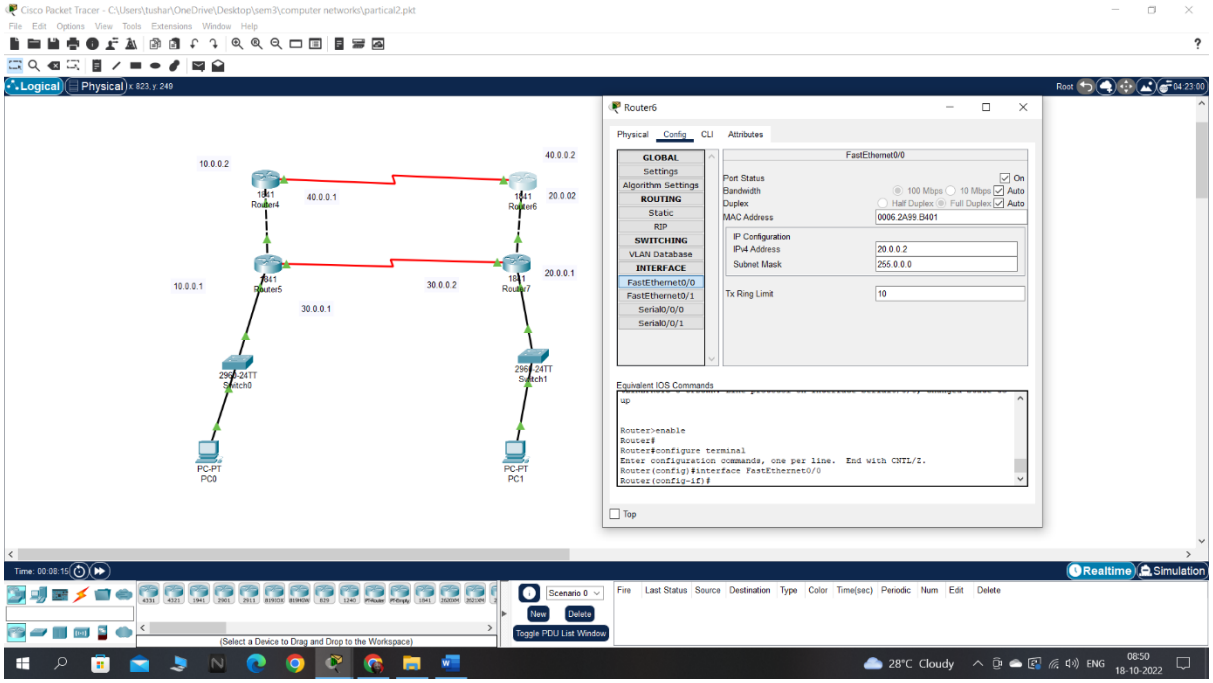

Cisco Packet Tracer - C:\Users\tushar\OneDrive\Desktop\sem3\computer networks\partical2.pkt
Router7
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
FastEthernet0/0
FastEthernet0/1
Serial0/0/0
Serial0/0/1
Serial0/0/0
Port Status
Duplex
Clock Rate
2000000
IP Configuration
IPv4 Address
30.0.0.1
Subnet Mask
255.0.0.0
Tx Ring Limit
10
Equivalent IOS Commands
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/0/0
Router(config-if)#
10.0.0.2
40.0.0.2
40.0.0.1
20.0.02
10.0.0.1
30.0.0.2
20.0.0.1
30.0.0.1
PC-PT
PC0
PC-PT
PC1

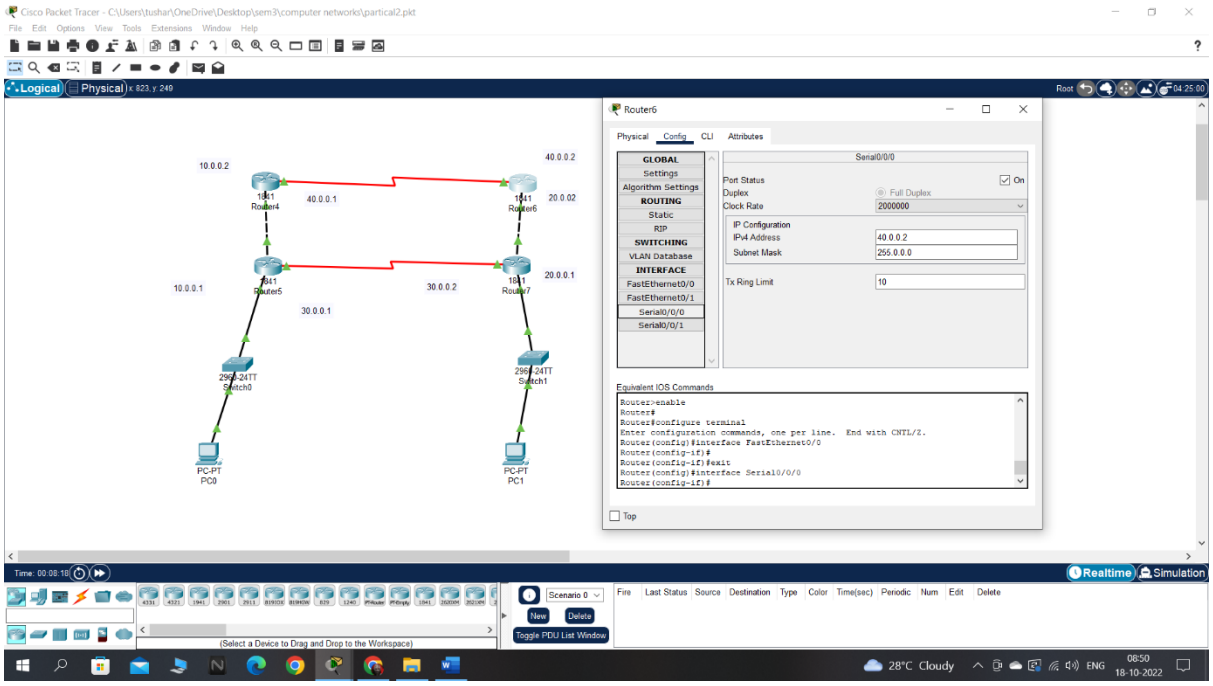
8.Set RIP for Router 7



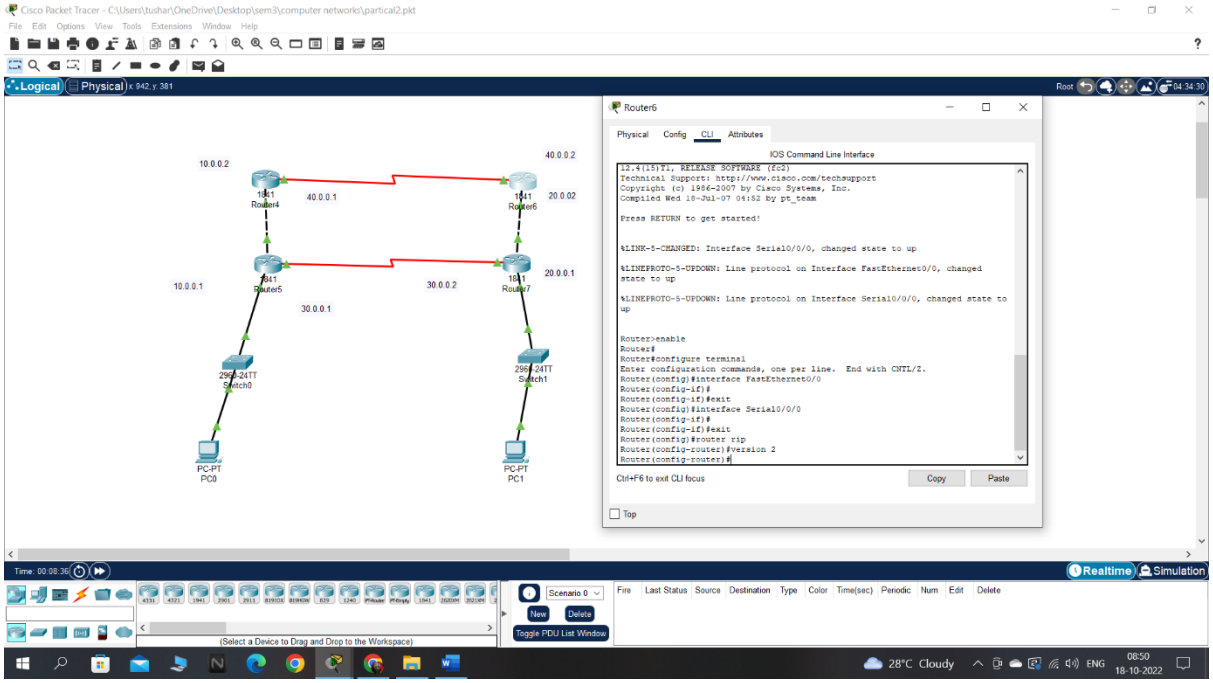


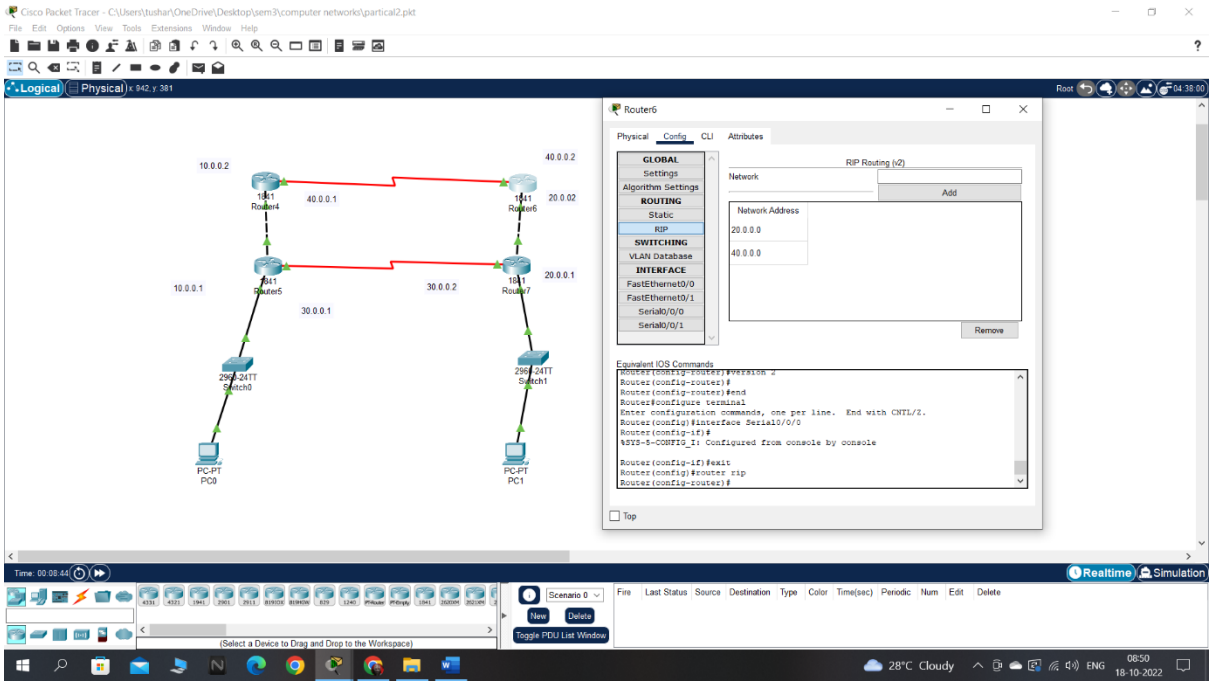
8.Give the IP for FastEthernet0/0, and Serial0/0 in the Router 6



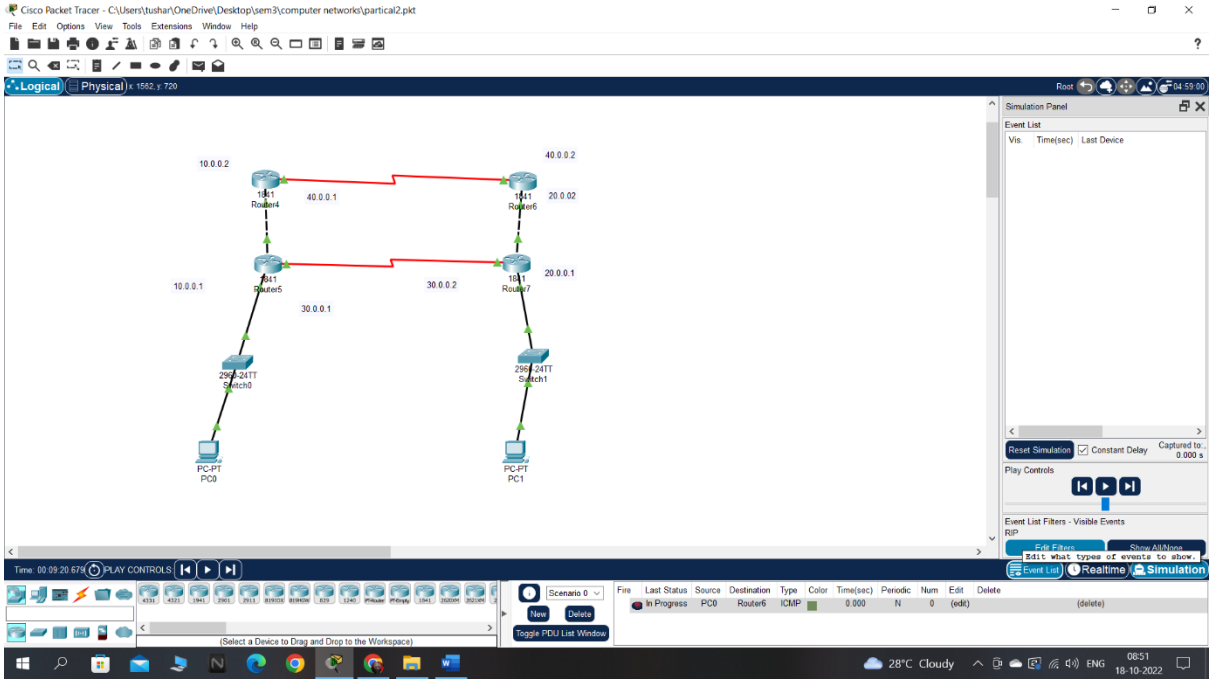


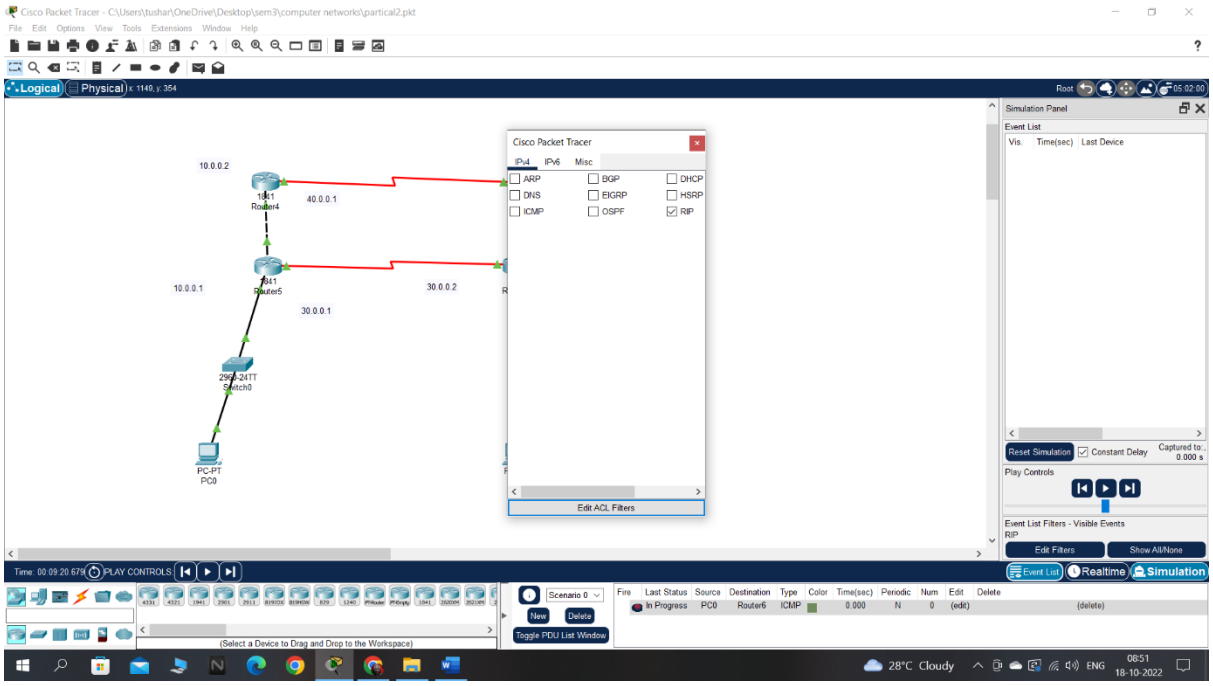
9.Set RIP for Router 6

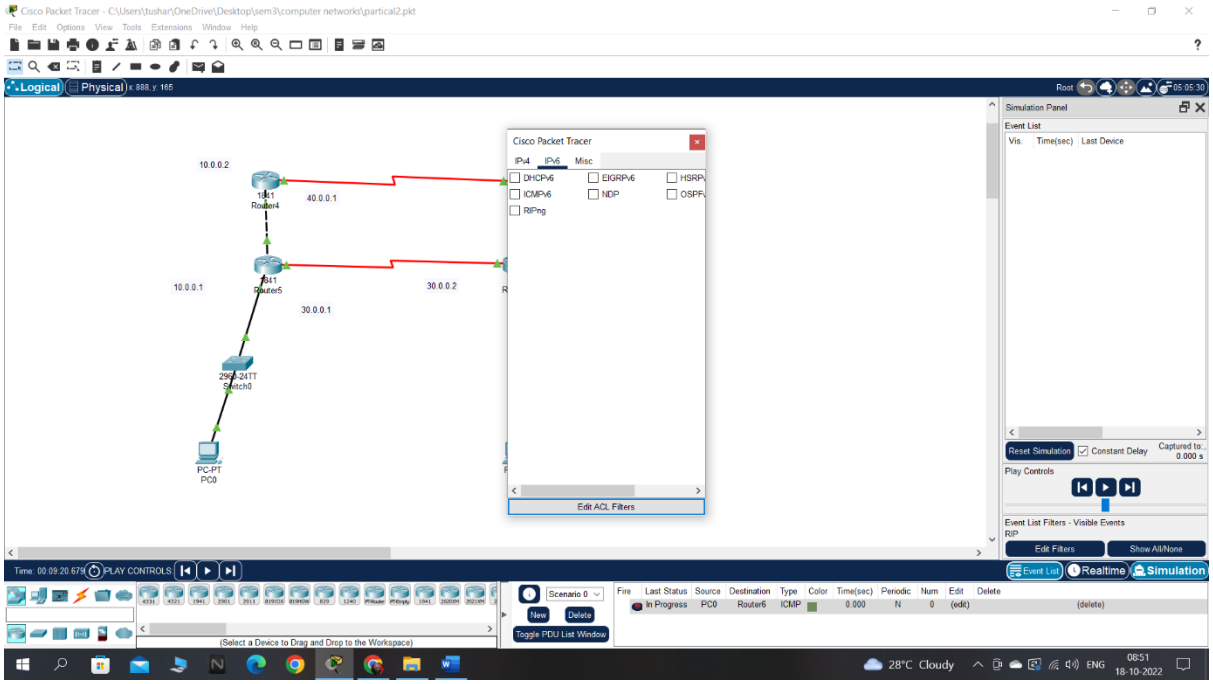


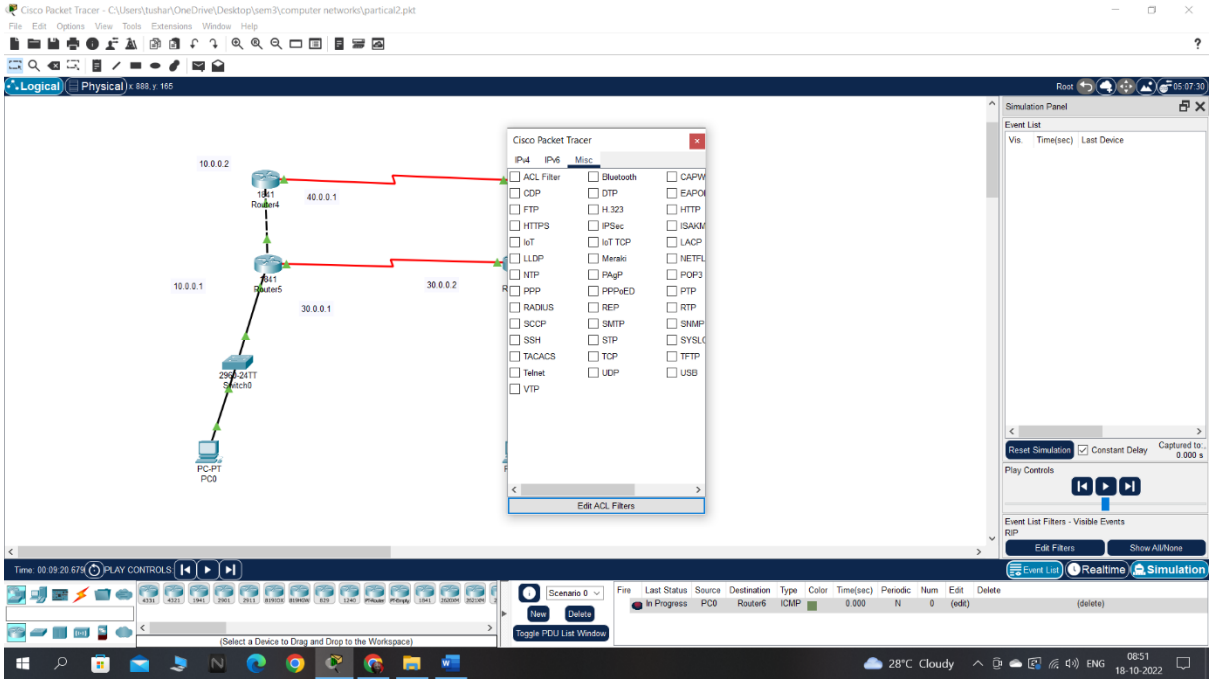


10.To Start Simulation

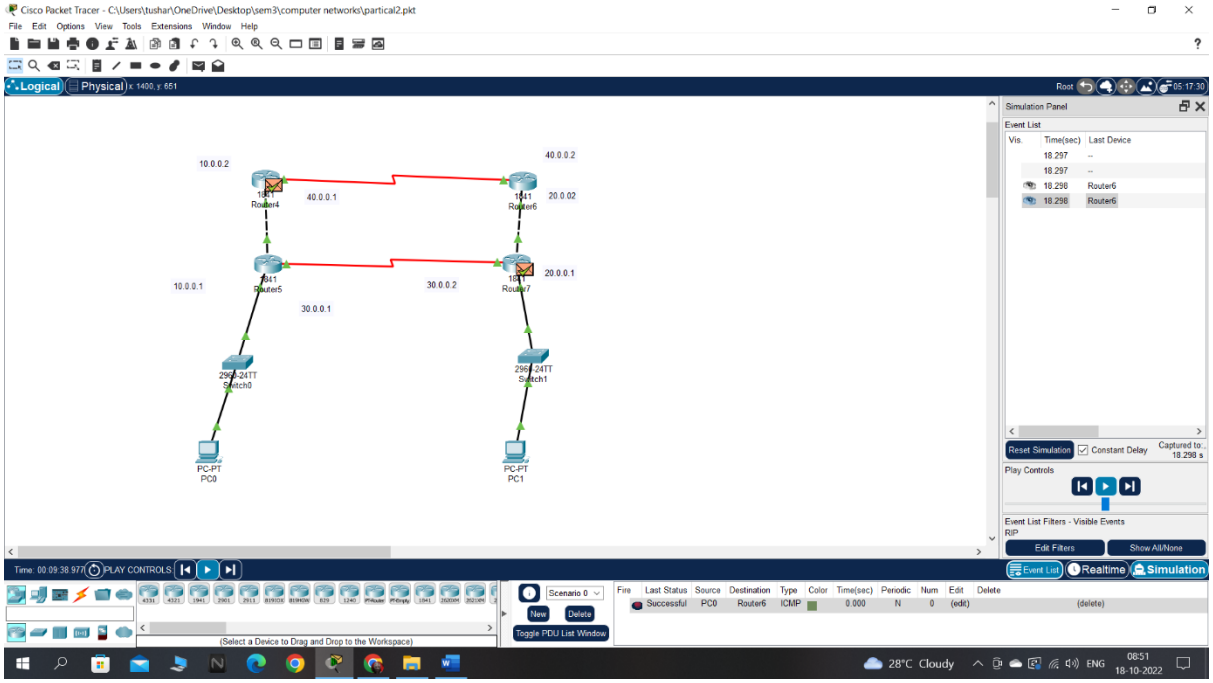





Cisco Packet Tracer - C:\Users\tushar\OneDrive\Desktop\sem3\computer networks\partical2.pkt
Logical
Physical
10.0.0.2
40.0.0.1
10.0.0.1
30.0.0.2
30.0.0.1
Router4
Router5
Switch0
PC-PT
PC0
Cisco Packet Tracer
IPv4
IPv6
Misc
DHCPv6
EIGRPv6
HSRP
ICMPv6
NDP
OSPF
RIPng
Edit ACL Filters
Simulation Panel
Event List
Vis.
Time(sec)
Last Device
Reset Simulation
Constant Delay
Play Controls
Event List Filters - Visible Events
RIP
Edit Filters
Show All/None
Time: 00:09:20.678
PLAY CONTROLS
Event List
Realtime
Simulation
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
In Progress
PC0
Router6
ICMP
0.000
N
0
(edit)
(delete)
(Select a Device to Drag and Drop to the Workspace)
28°C Cloudy
ENG
08:51
18-10-2022

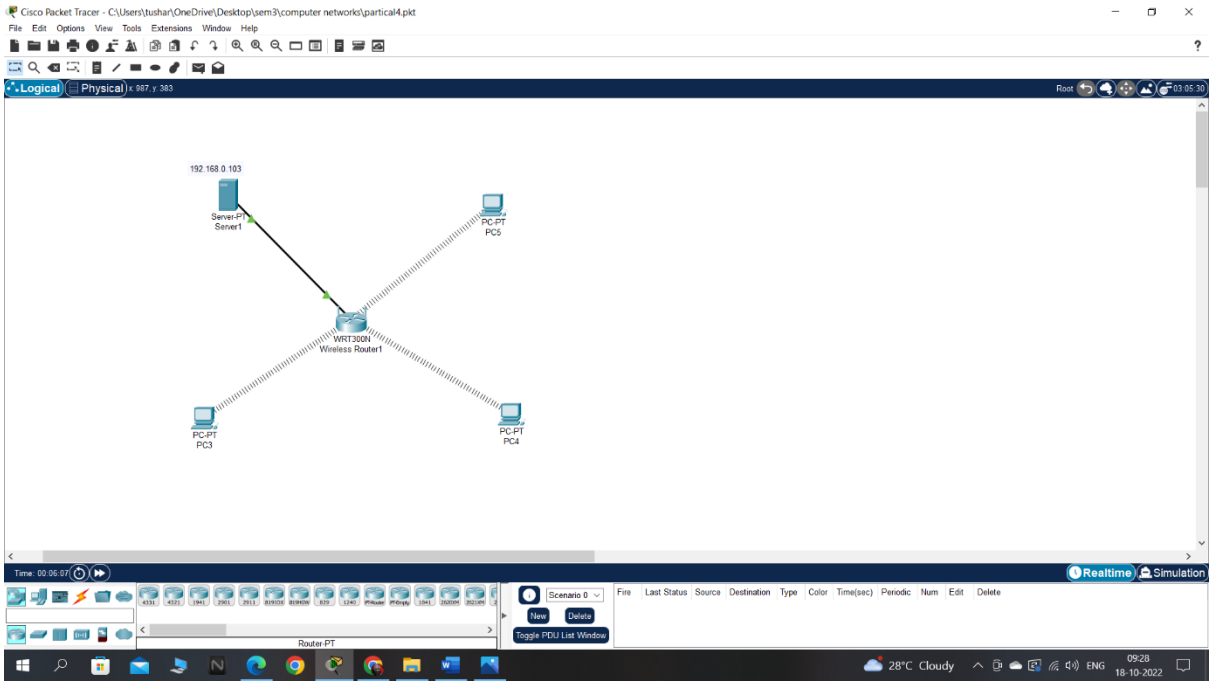

Cisco Packet Tracer - C:\Users\tushar\OneDrive\Desktop\sem3\computer networks\partical2.pkt
Logical
Physical
10.0.0.2
40.0.0.1
10.0.0.1
30.0.0.2
30.0.0.1
Router4
Router5
Switch0
PC-PT
PC0
Cisco Packet Tracer
IPv4
IPv6
Misc
ACL Filter
Bluetooth
CDP
DTP
FTP
H.323
HTTP
HTTPS
IPSec
IoT
IoT TCP
LLDP
Meraki
NTP
PAgP
PPP
PPPoED
RADIUS
REP
SCCP
SMTP
SSH
STP
TACACS
TCP
Telnet
UDP
VTP
Edit ACL Filters
Simulation Panel
Event List
Vis.
Time(sec)
Last Device
Reset Simulation
Constant Delay
Play Controls
Event List Filters - Visible Events
RIP
Edit Filters
Show All/None
Time: 00:09:20.678
PLAY CONTROLS
Event List
Realtime
Simulation
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
In Progress
PC0
Router6
ICMP
0.000
N
0
(edit)
(delete)
(Select a Device to Drag and Drop to the Workspace)
28°C Cloudy
ENG
08:51
18-10-2022

After Simulation Start

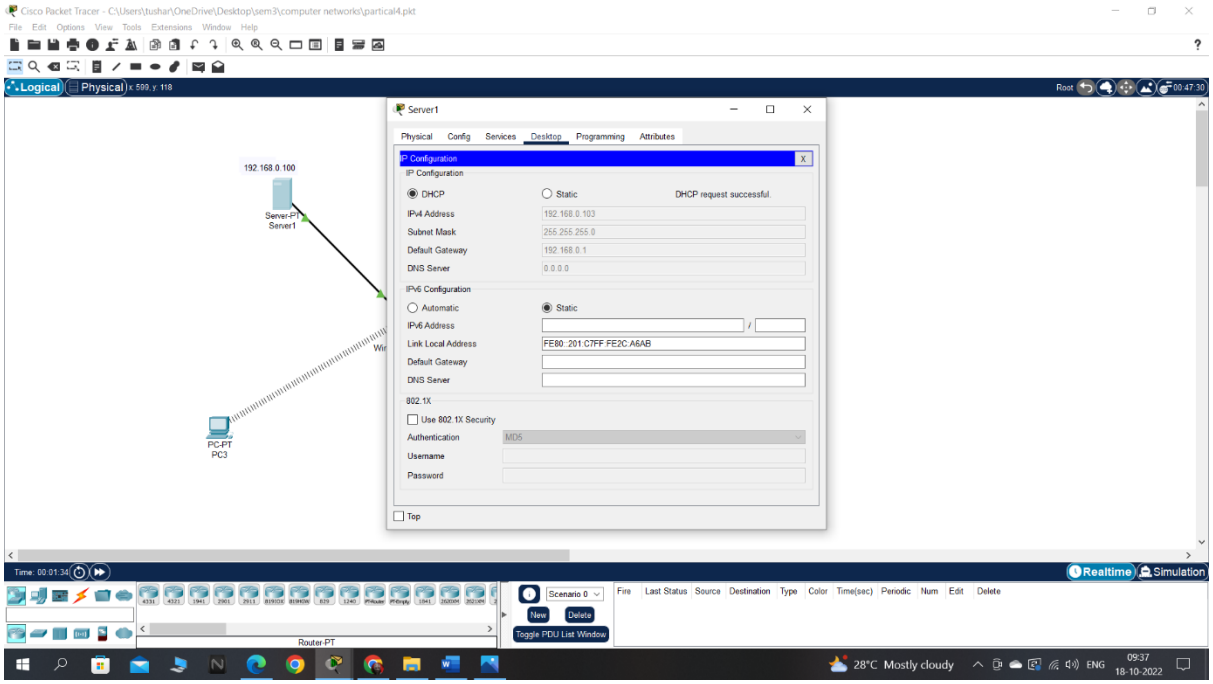


Pratical:4

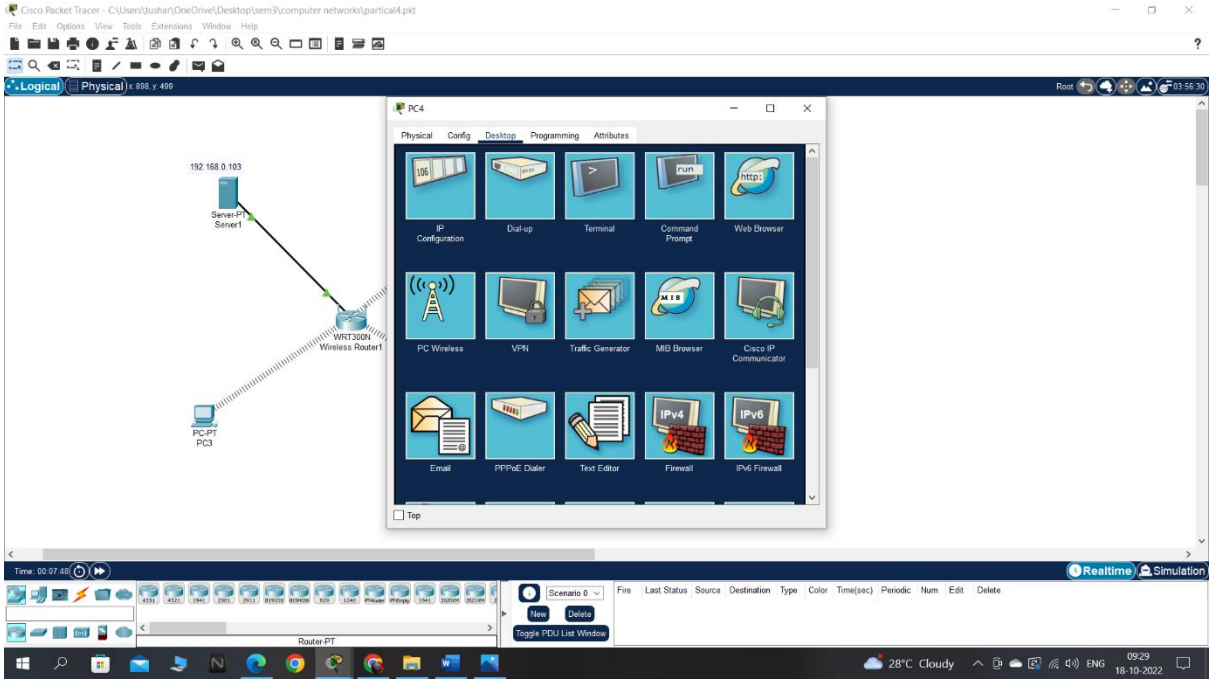
Aim: Planning Network-based Firewalls



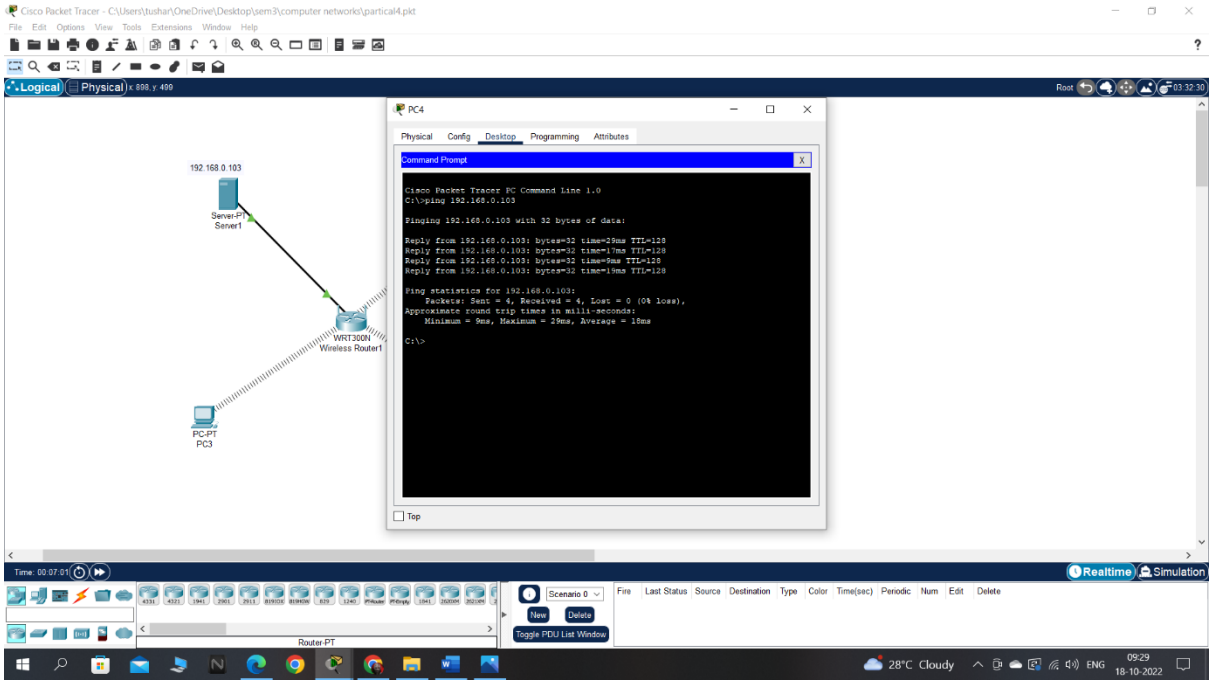
In Server 1



Select any Pc

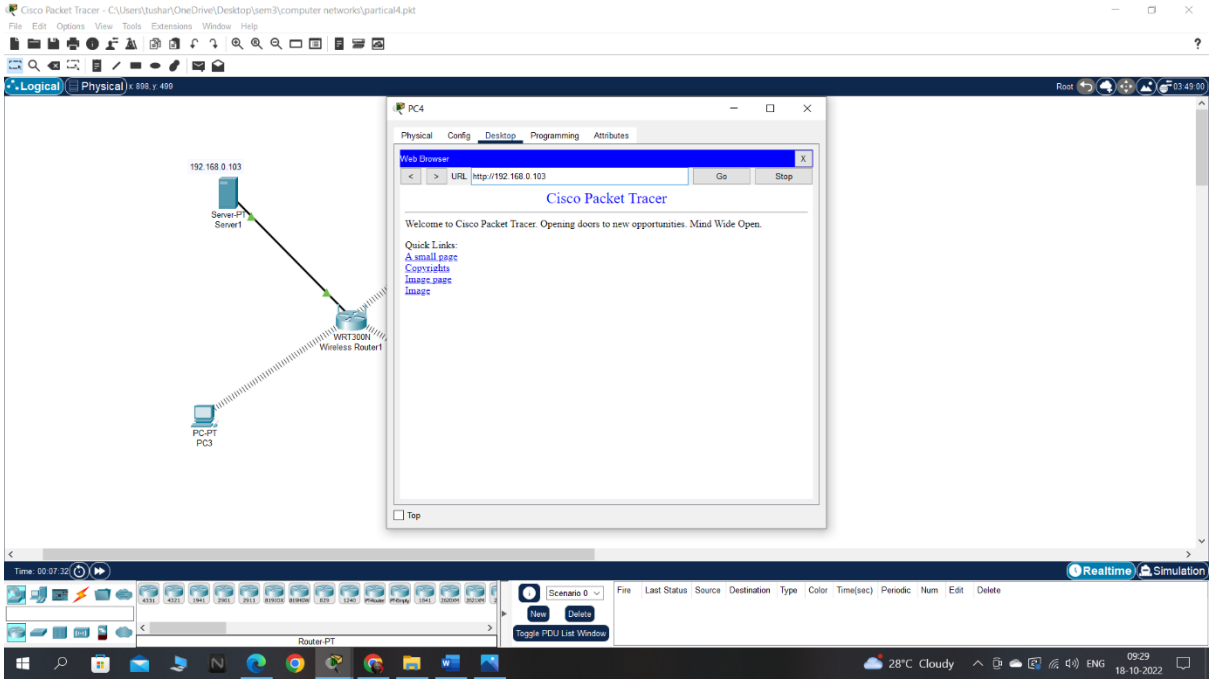


Go to command prompt and ping the ip of the Server



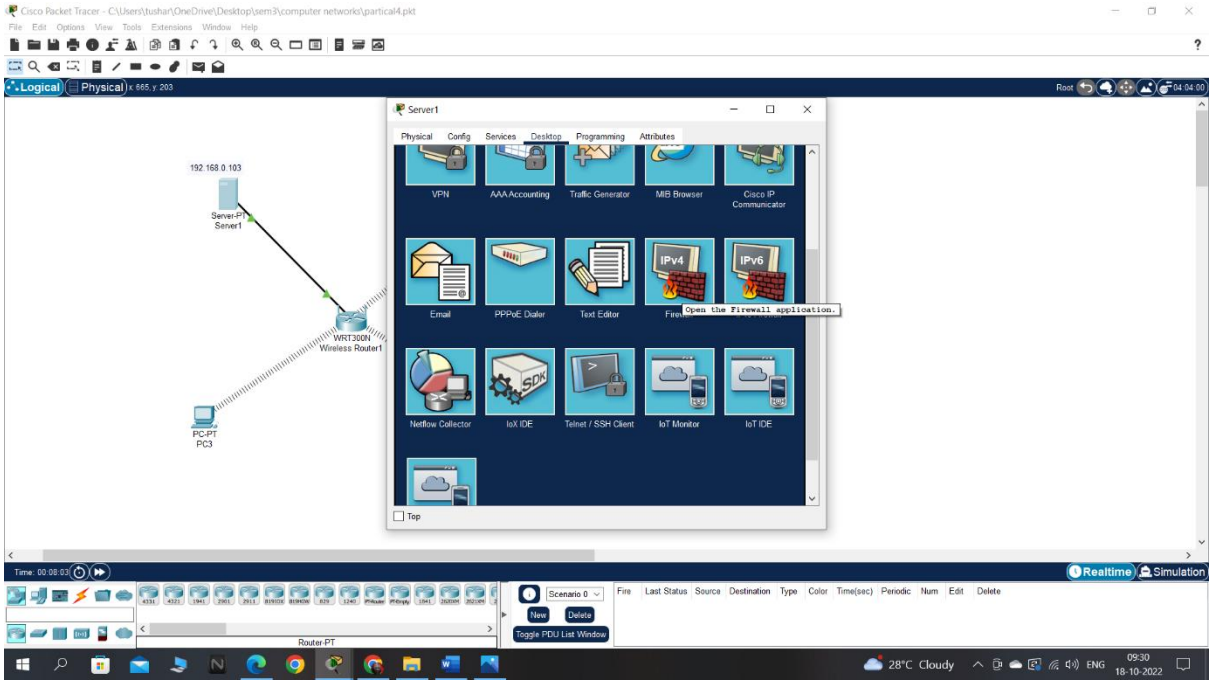
we can access the Server

we can access ip



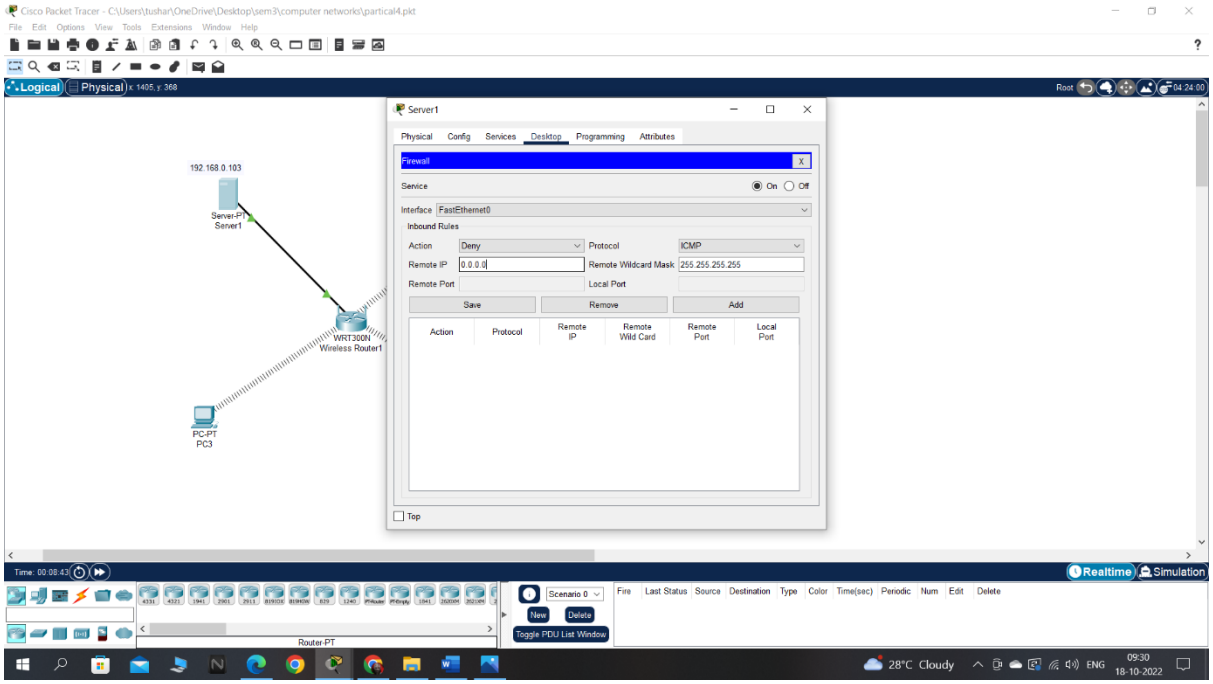
We have to Deny the access of the Server and only allow the ip

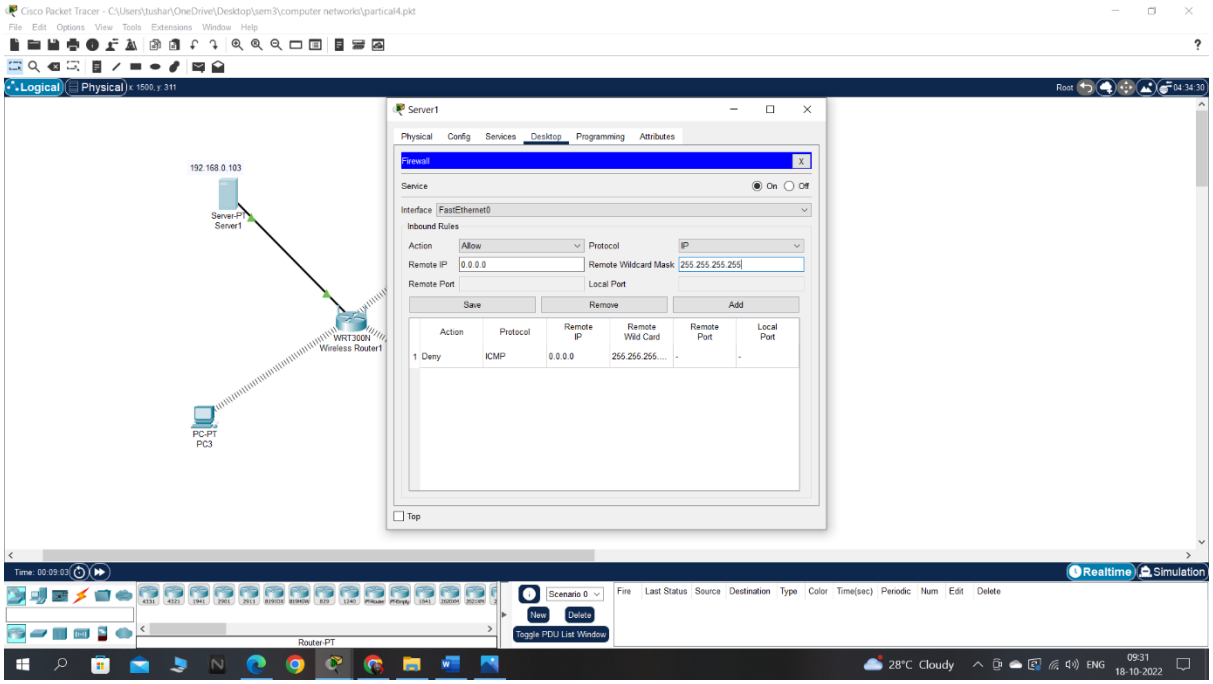
In Server 1



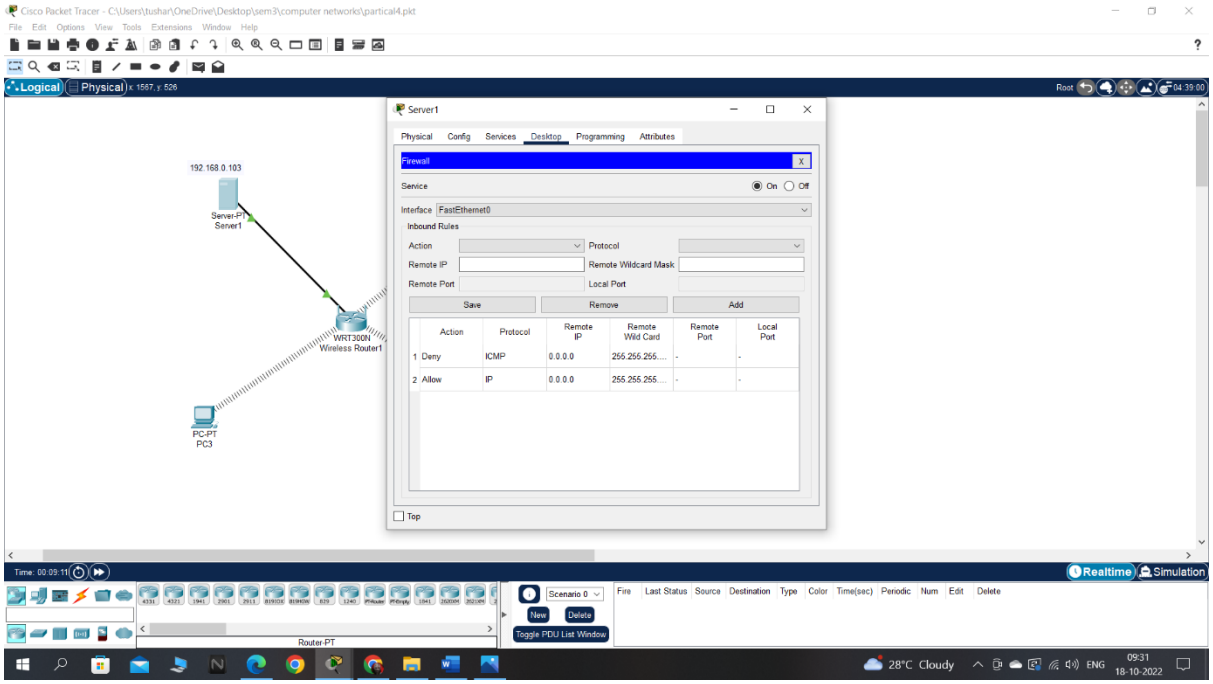
Go to IPv4 Firewall

ICMP is Protocol for ping

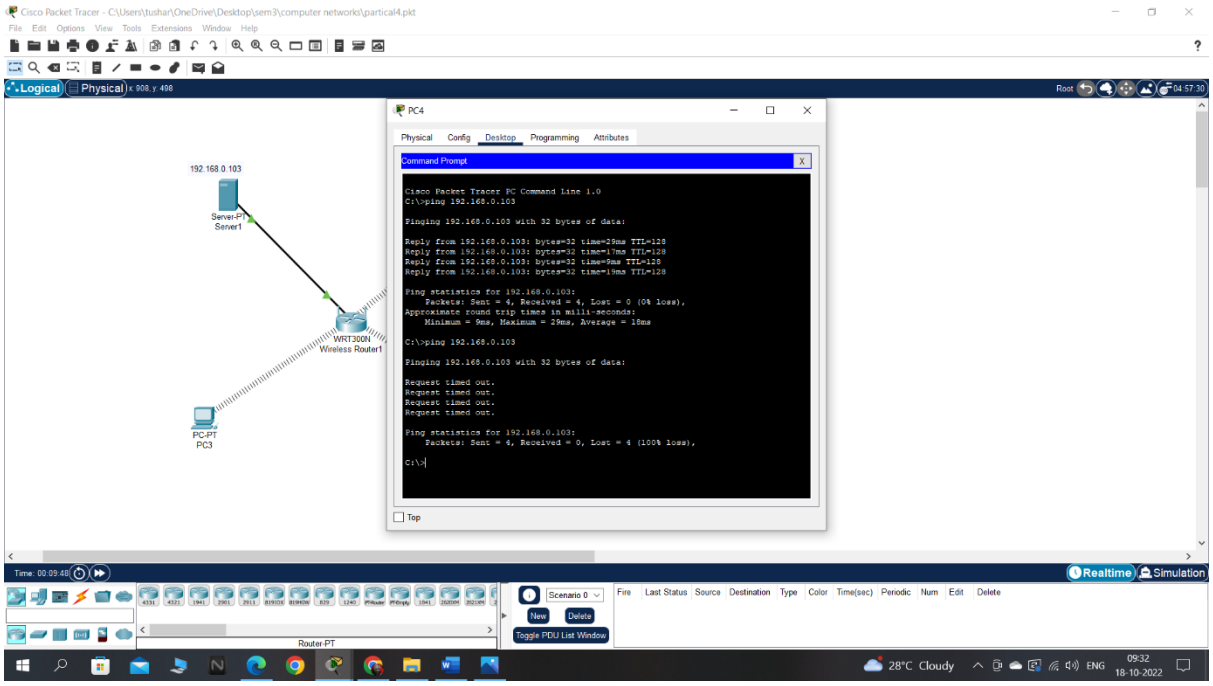




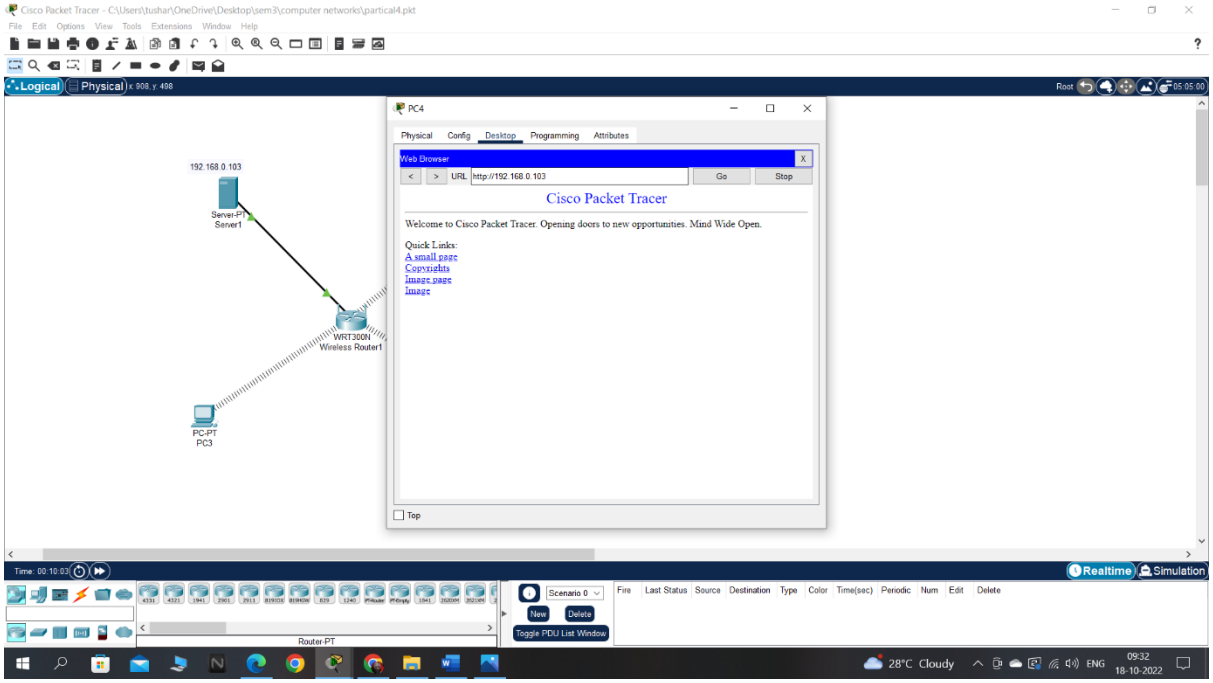
Click on Add Button



Now we can Not Access the Server1

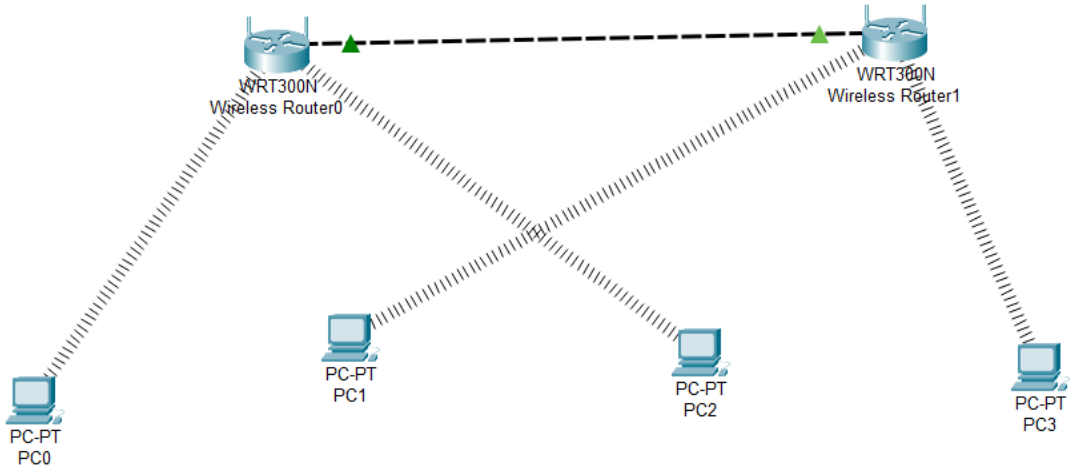


We Can Access the IP



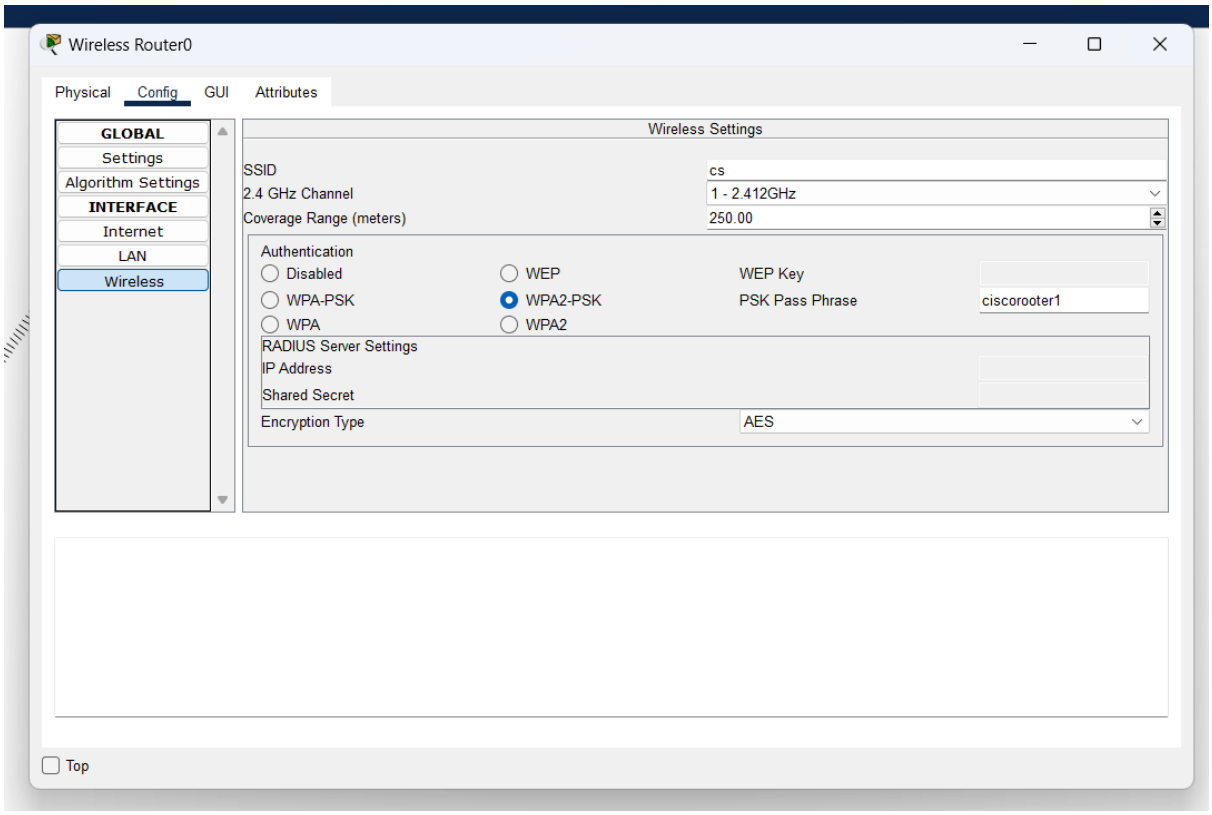
Pratical:6

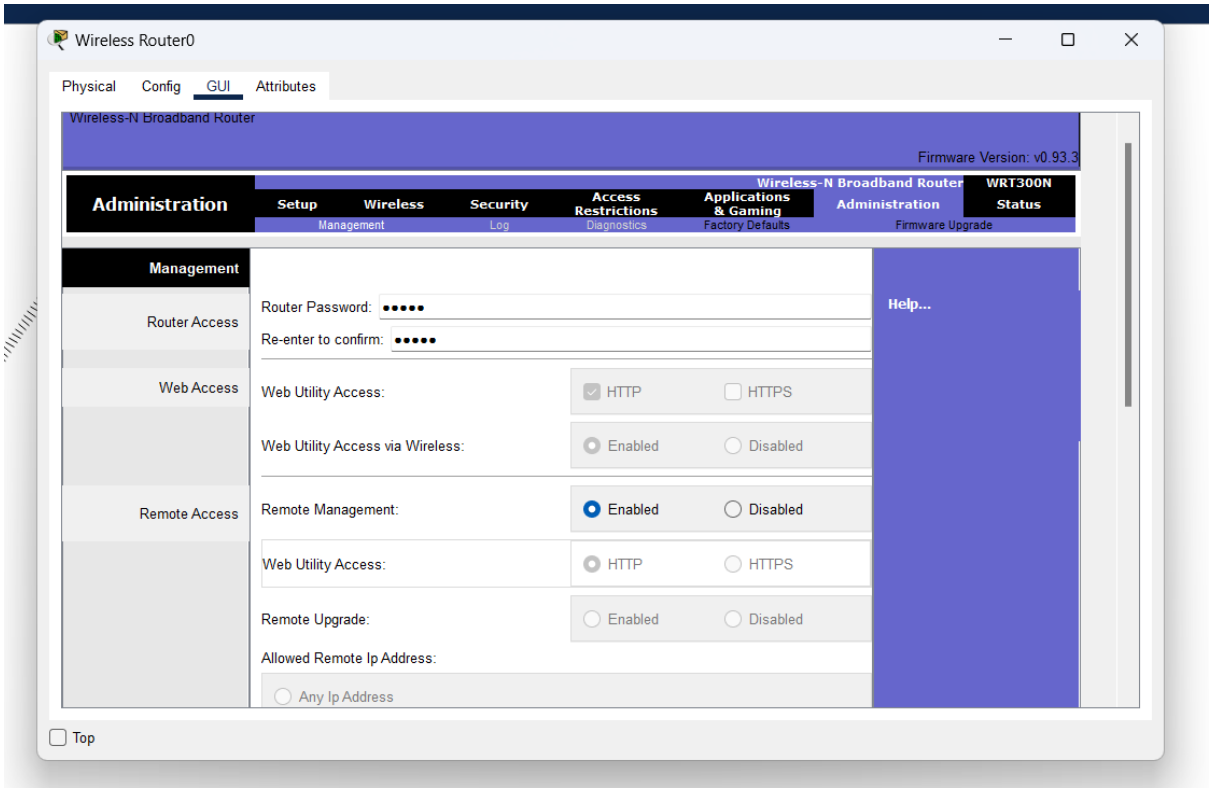
Aim: Creating an Adhoc Network



In router 0:

- Give SSD = CS and save
- WPA2-PSK = ciscorooter1

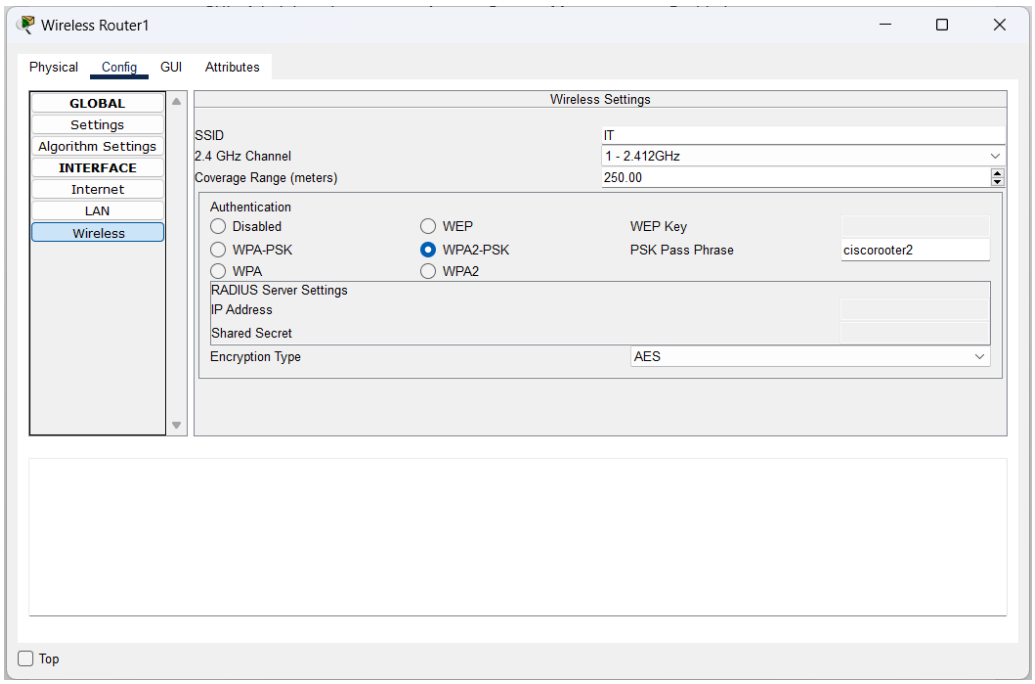




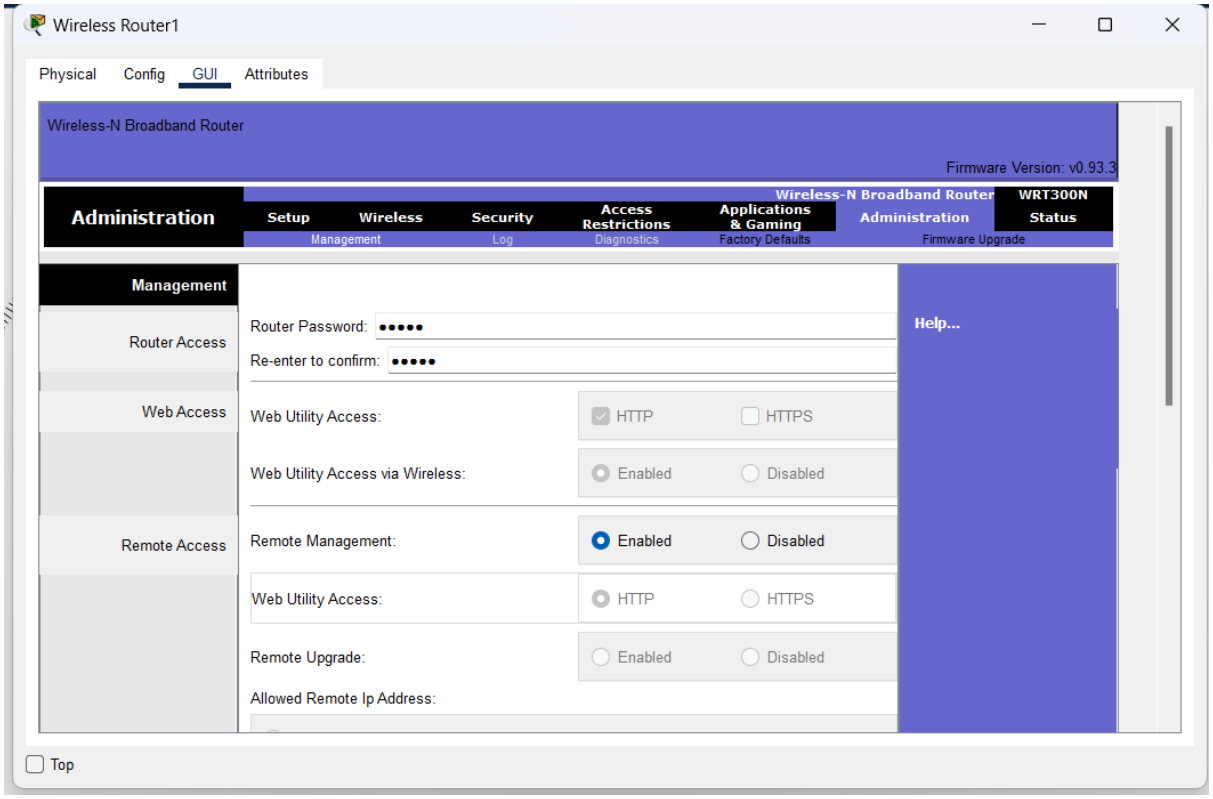
- GUI->Administration->remote Access->Remote Management = Enabled

In router 1:

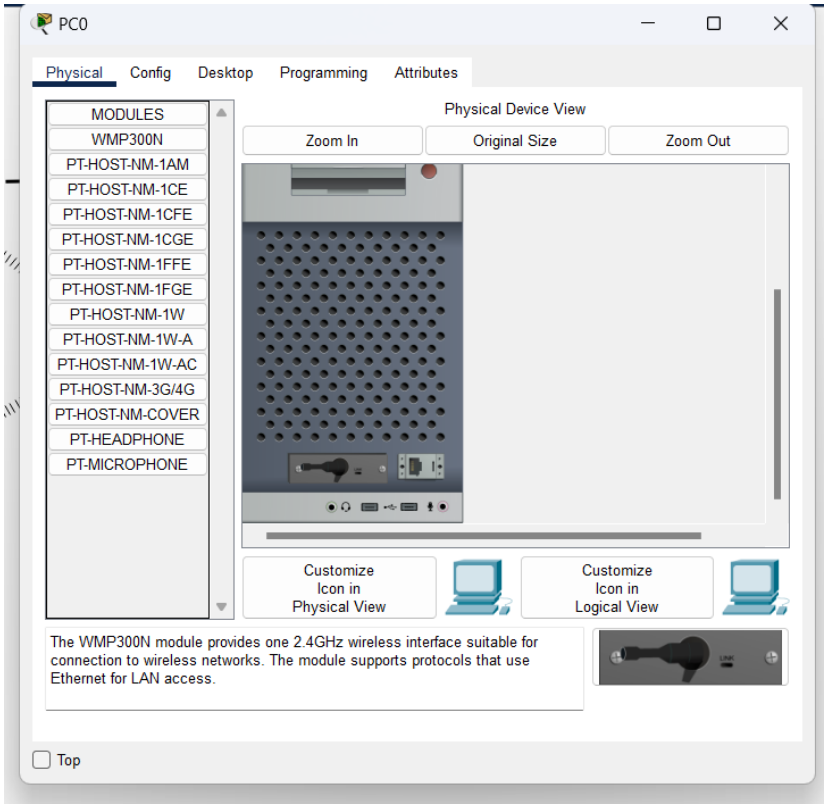
- Give SSD = ITand save
- WPA2-PSK = ciscorooter2



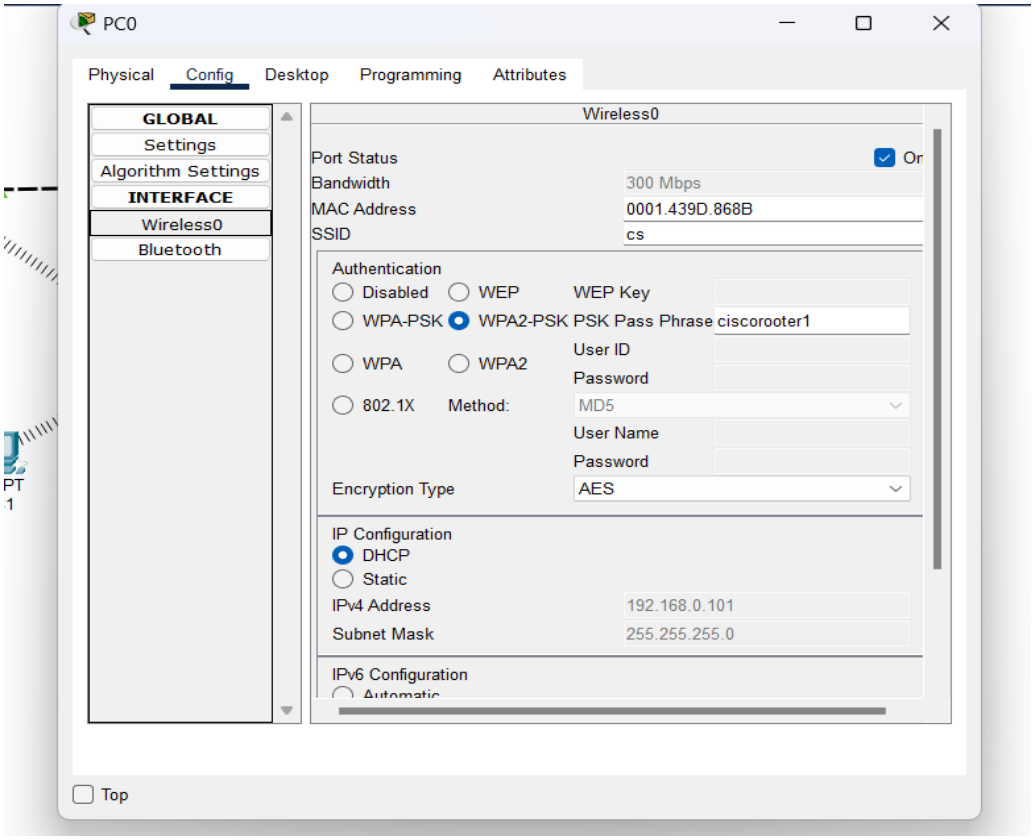
- GUI->Administration->remote Access->Remote Management = Enabled



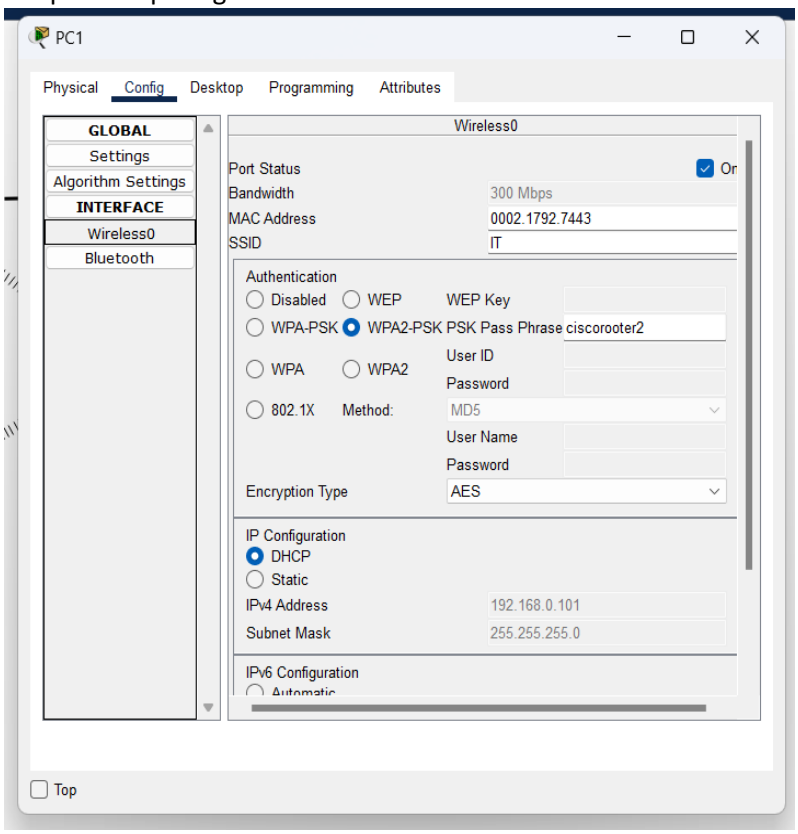
Take 4 pc and replace all pc with wire to wireless adapter



- For pc0 and pc 2 give the WPA2-PSK = ciscorooter1



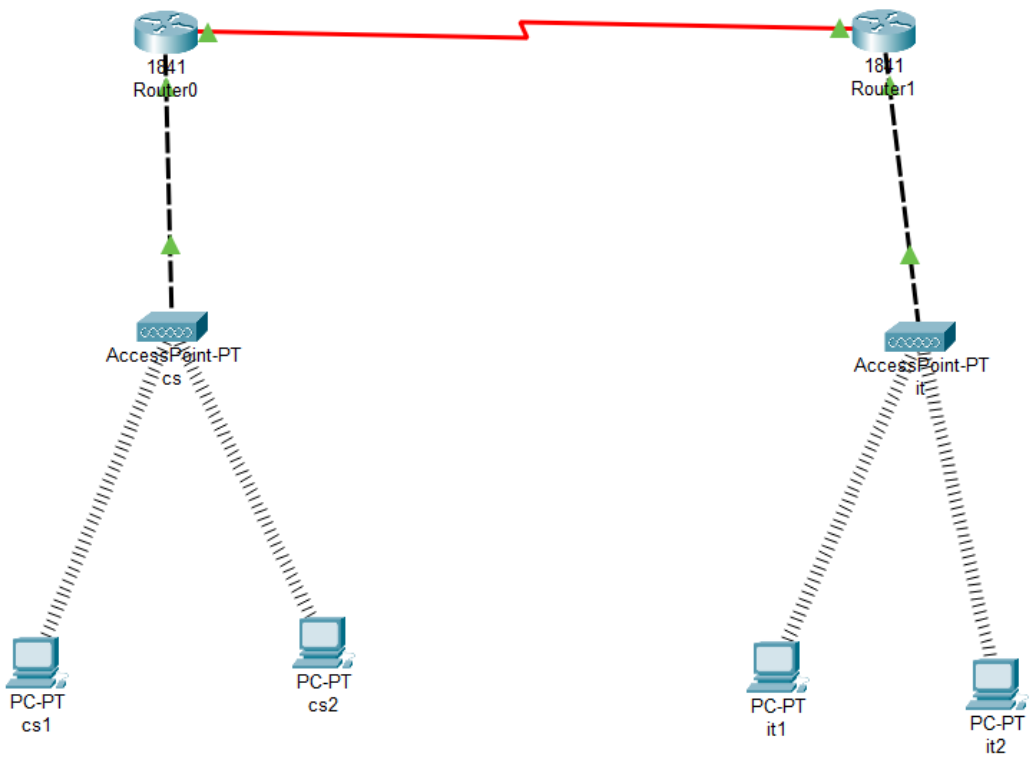
- For pc1 and pc 3 give the WPA2-PSK = ciscorooter2 and check the connection



-

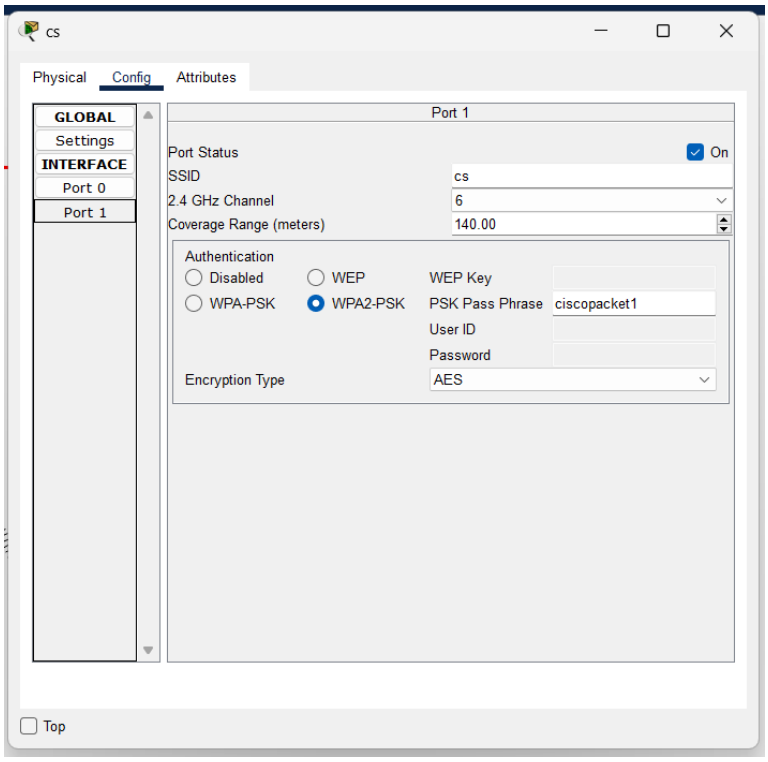
Pratical:7

Aim: Configuring Basic AP Setting



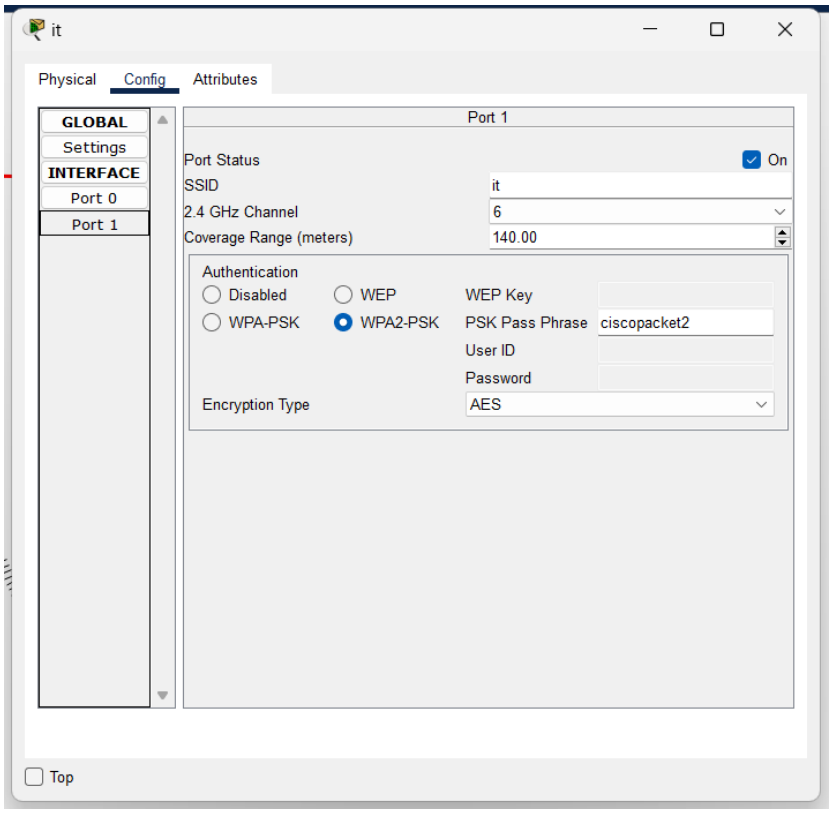
AccessPoint1:

Give ssid = cs and WPA2-PSK=ciscopacket1;

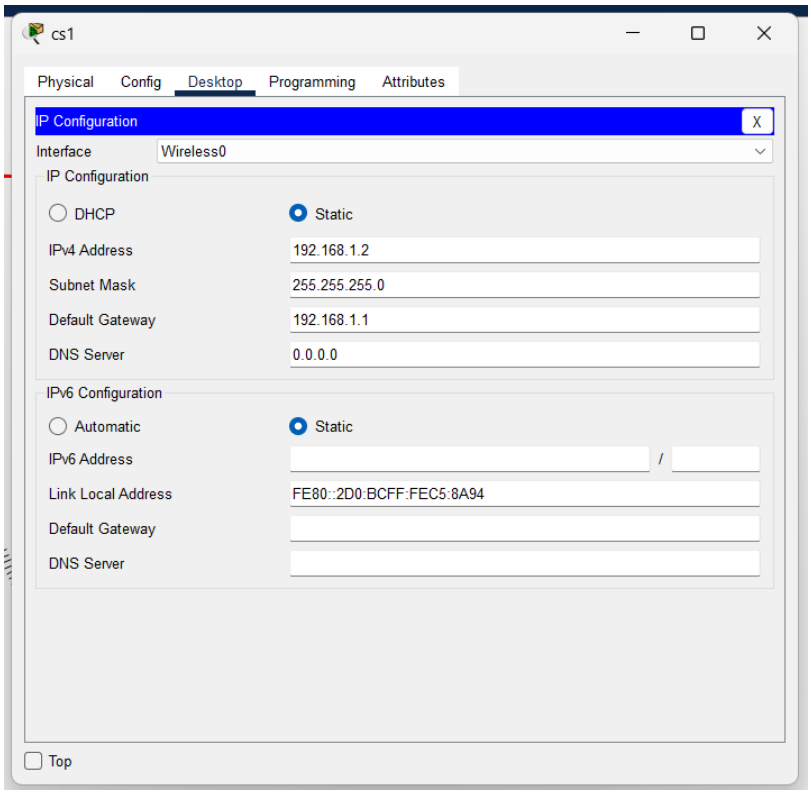


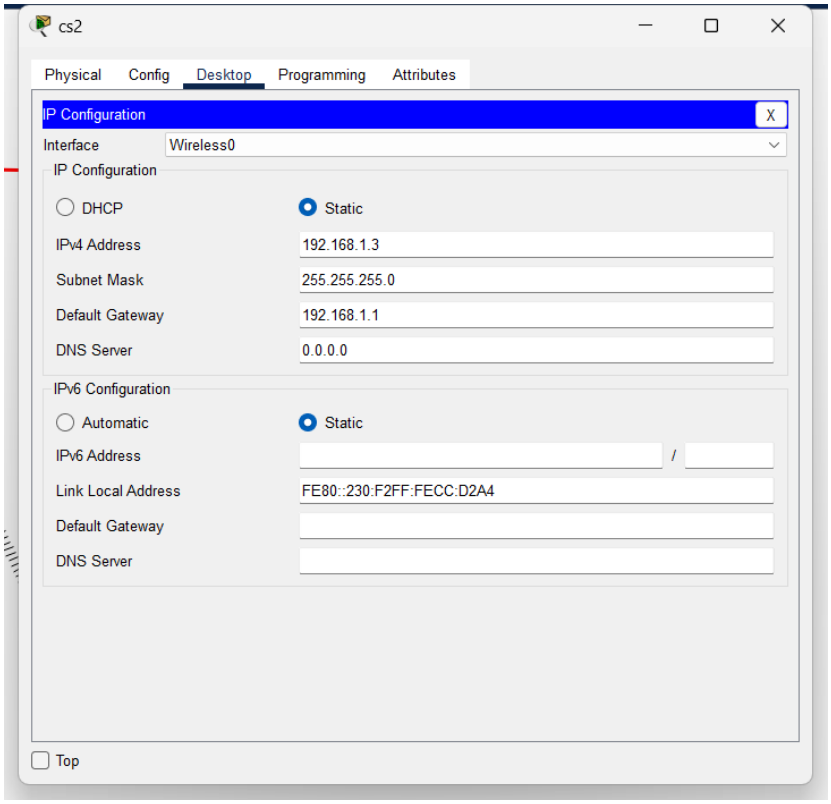
AccessPoint2:

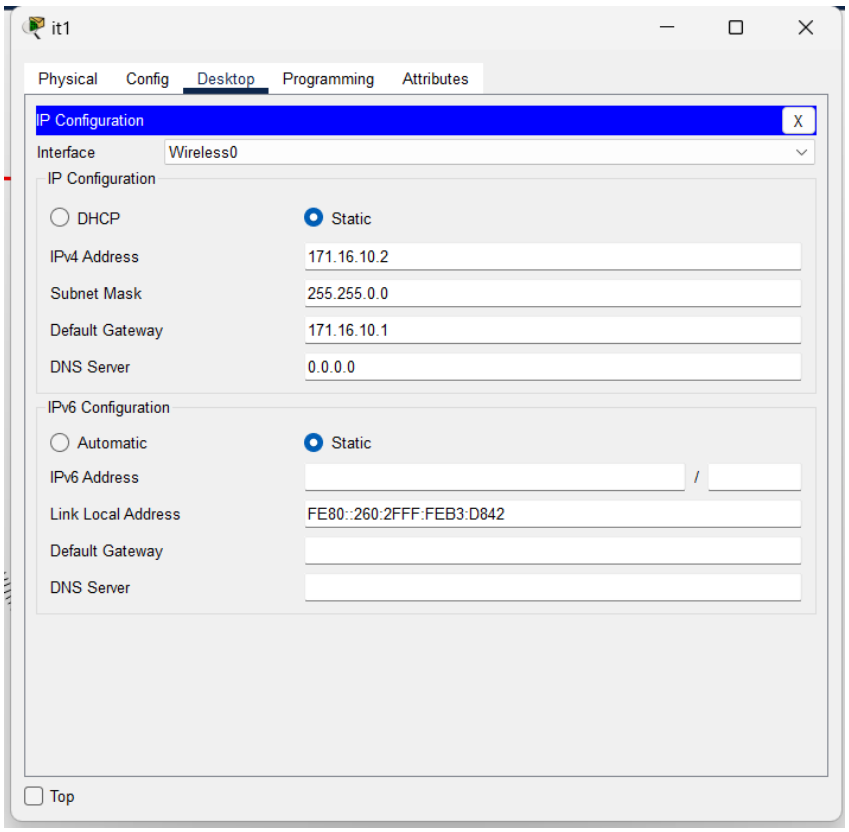
Give ssid = It and WPA2-PSK=ciscopacket2;

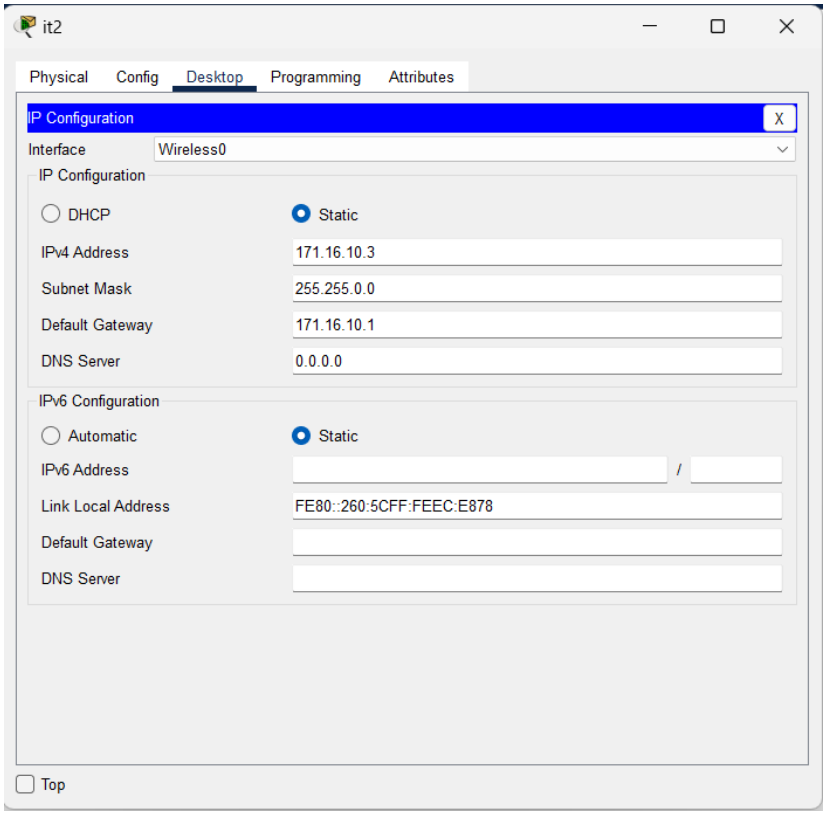


Give ip and default gateway for all pc

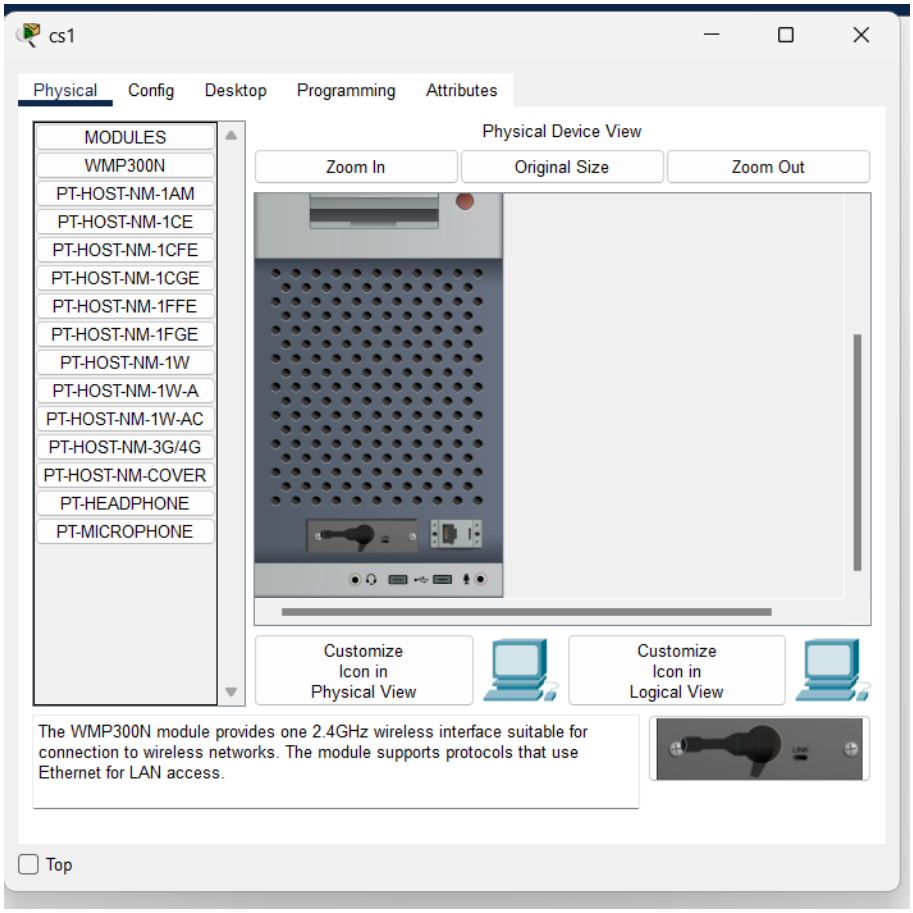



cs2
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
Wireless0
IP Configuration
DHCP
Static
IPv4 Address
192.168.1.3
Subnet Mask
255.255.255.0
Default Gateway
192.168.1.1
DNS Server
0.0.0.0
IPv6 Configuration
Automatic
Static
IPv6 Address
/
Link Local Address
FE80::230:F2FF:FECC:D2A4
Default Gateway
DNS Server
Top

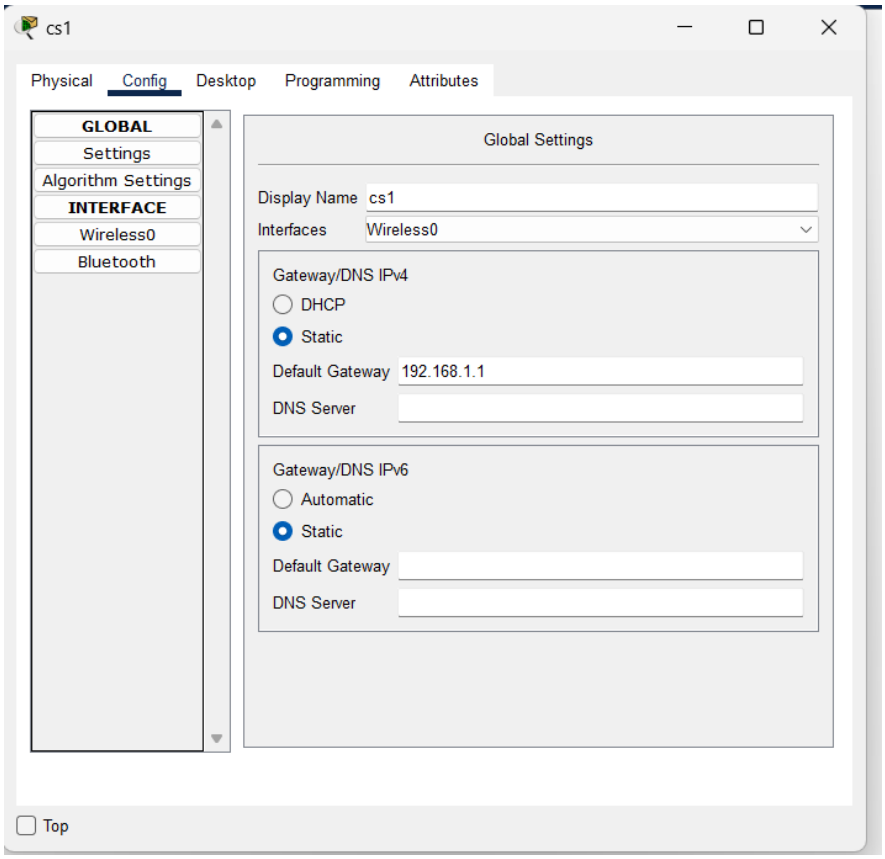

it1
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
Wireless0
IP Configuration
DHCP
Static
IPv4 Address
171.16.10.2
Subnet Mask
255.255.0.0
Default Gateway
171.16.10.1
DNS Server
0.0.0.0
IPv6 Configuration
Automatic
Static
IPv6 Address
/
Link Local Address
FE80::260:2FFF:FEB3:D842
Default Gateway
DNS Server
Top



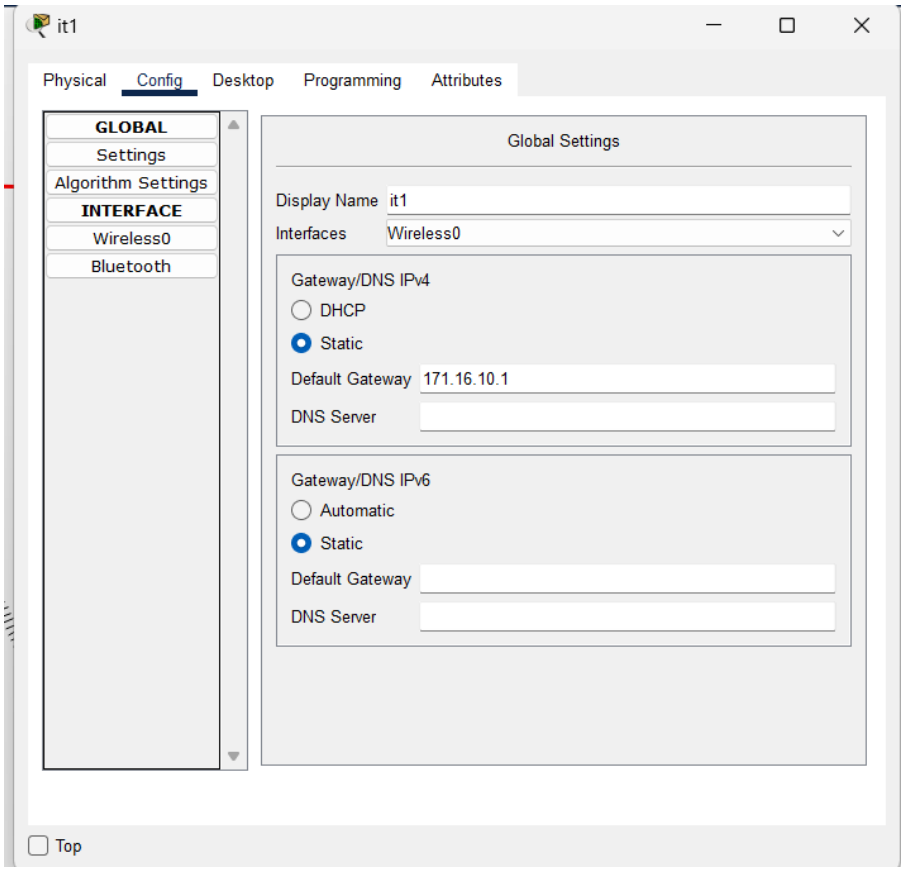
Convert all pc wire to wireless adapter



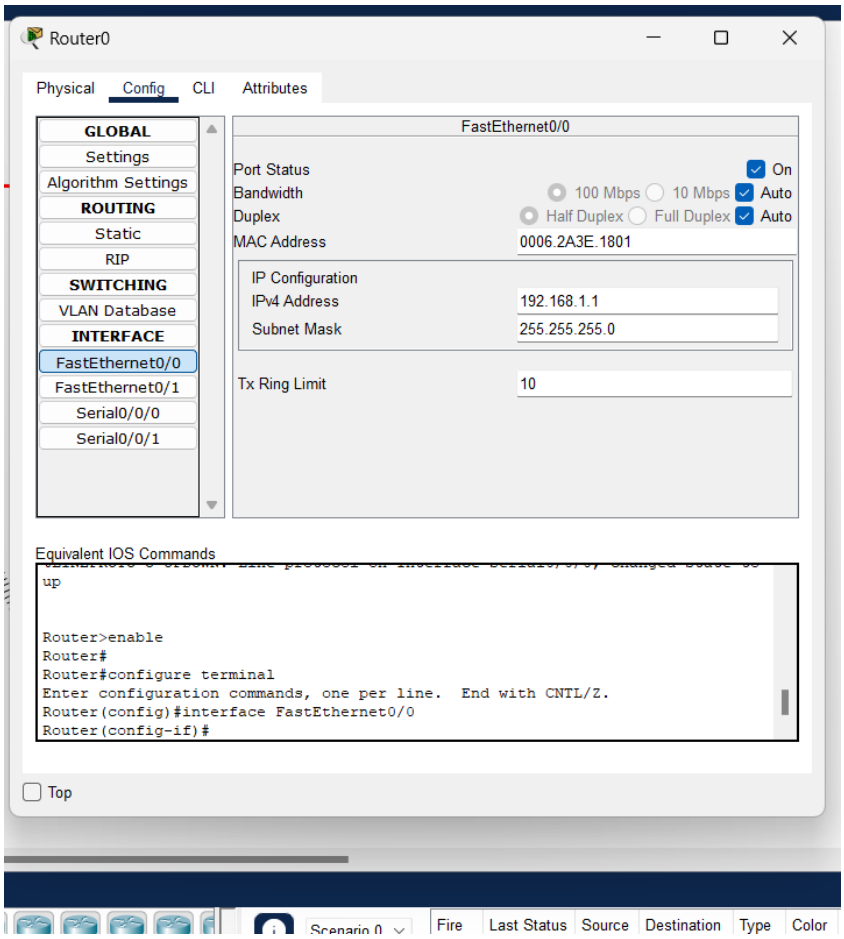
To connect PC1 and PC2 with AC-PT1;



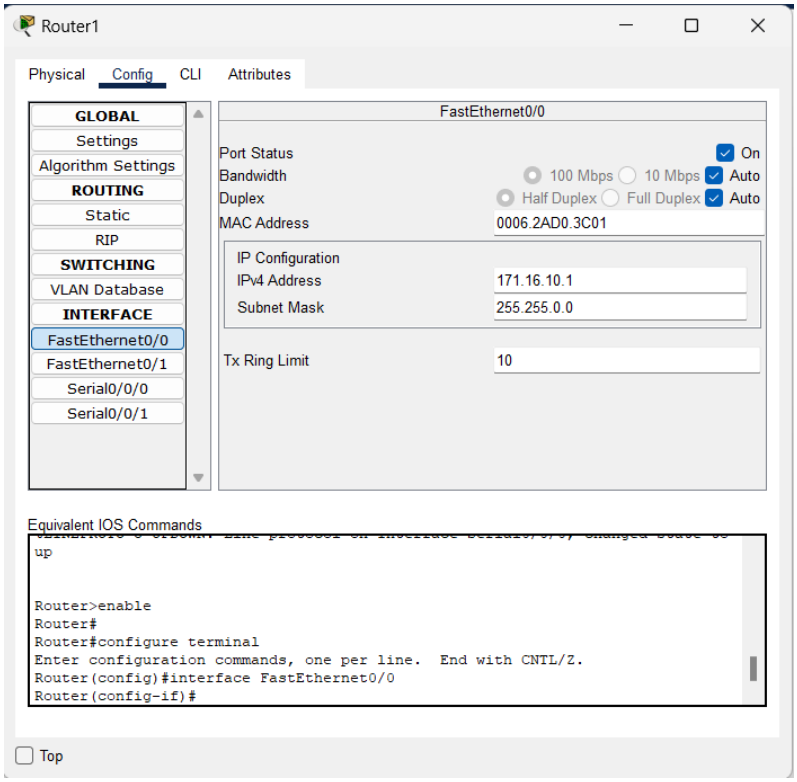
To connect PC3 and PC4 with ACPT2;



Router 0:

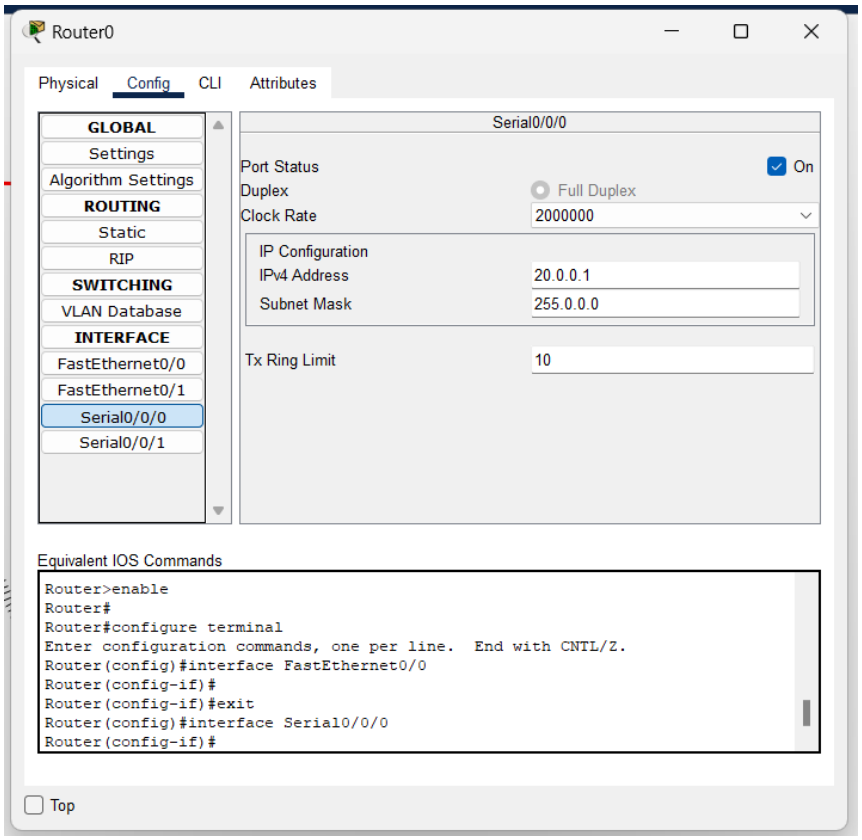


Router 1:

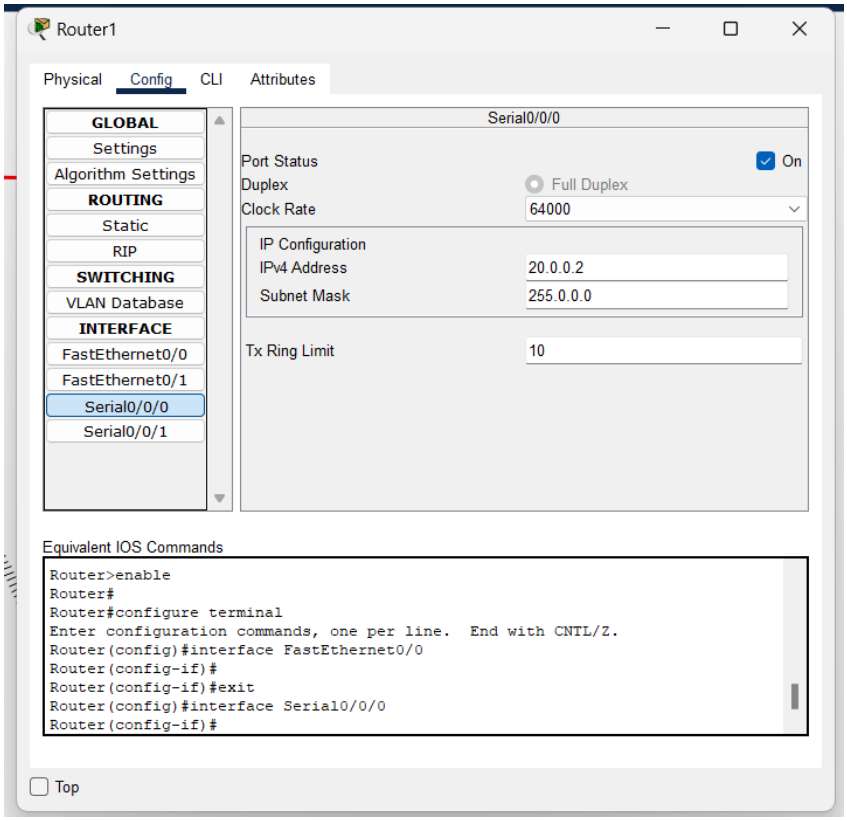


Connect the both the router with Serial

Router 0:

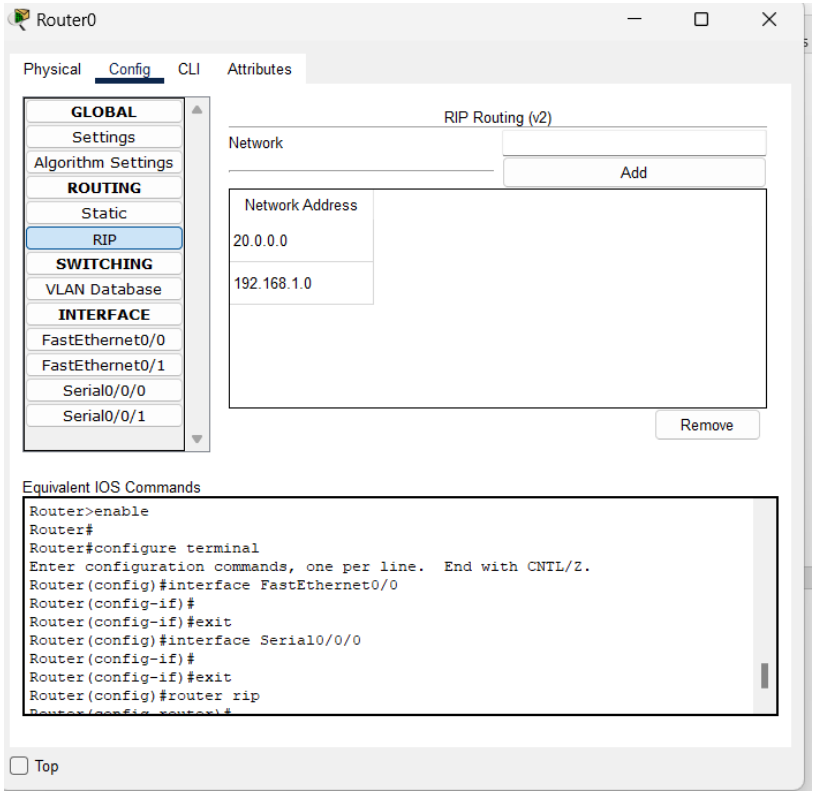


Router 1:

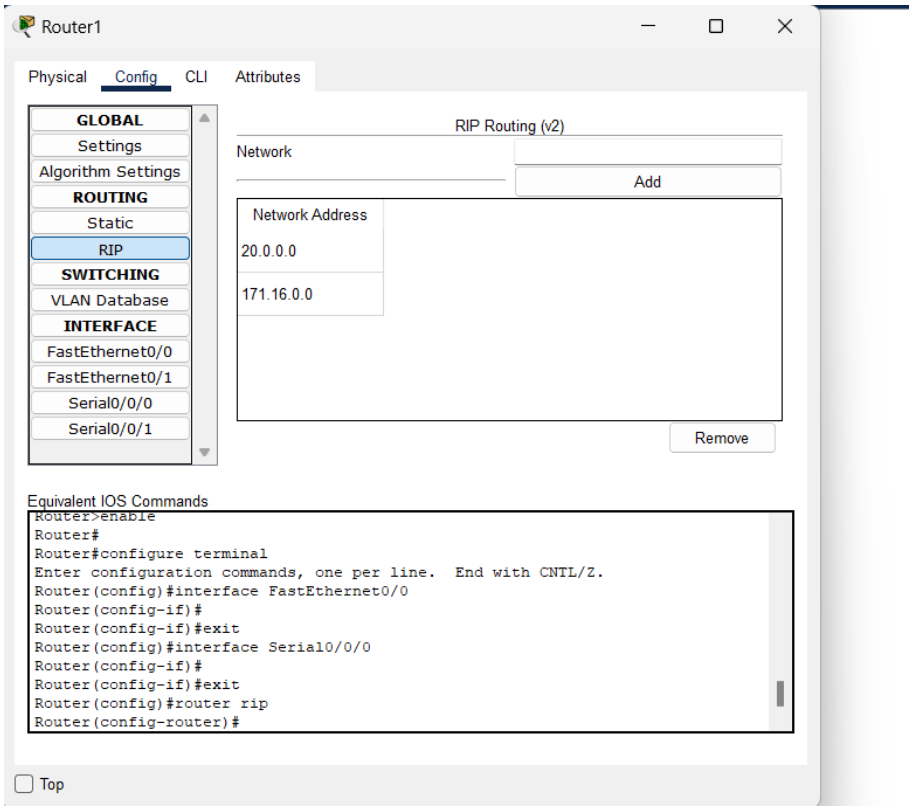


Set RIP for both the router with version 2:

Router 0:

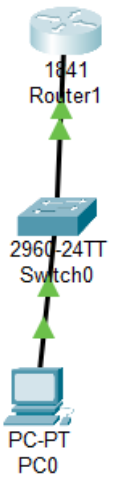


Router 1:



Pratical 8:

Aim:Configure Ethernet/Fast Ethernet Interface



Router:

In CLI

- “no” command to Manually configure the router with command
- “enable” command to enable privileged EXEX mode
- “configure terminal “ command to enter Global Configuration Mode
- “interface fast ethernet 0/0” command to enter the configuration mode for a fast ethernet Interface on the router
- Set the ip Address & Subnet Mask for the Specified Fast Etherent interface.
- “ip address 172.50.50.1 255.255.0.0” command
- “no shutdown” command to enable the fast ethernet Interface changing its state from Administrative Down Administrative Up
- “exit” command to exit form config mode to fast ethernet interface and return to Global Configuration Mode
- “copy running-config startup-config” command to copy the running- config to startup-config
- Therefore, when the next time router will boot up it will load the configuration that we have copied.

In router ->cli

```
         --- System Configuration Dialog ---

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


Press RETURN to get started!



Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface fastethernet 0/0
Router(config-if)#ip address 172.50.50.1 255.255.0.0
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)#copy running-config startup-config
               ^
% Invalid input detected at '^' marker.

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

Router#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
Router#
```