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School of Information Technology & Engineering

WINTER 2022 - 23

Programme : B.Tech **Due Date : 14-01-2022**
Course Title : Information Security Management **Course Code : CSE3502**

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1) Design a topology using 4 PC and a switch with the following IP address :

Host	IP Address	Subnet Mask
PC0	192.68.1.10	255.255.255.0
PC1	192.68.1.11	255.255.255.0
PC2	192.68.1.12	255.255.255.0
PC3	192.68.1.13	255.255.255.0

Observe the flow of data from host to host by creating traffic.

ANS :

PROCEDURE

I. Open an empty Cisco packet tracer workspace.

II. From the end devices select PC and place 4 PC's on the empty Workspace.

III. Then choose a switch from network devices and place it on the Workspace.

IV. Select one PC after the other and go to IP Configuration and assign IP address and Subnet mask as given above.

V. Next connect all the 4 PC's through the fast ethernet port with the switch using copper straight through cable.

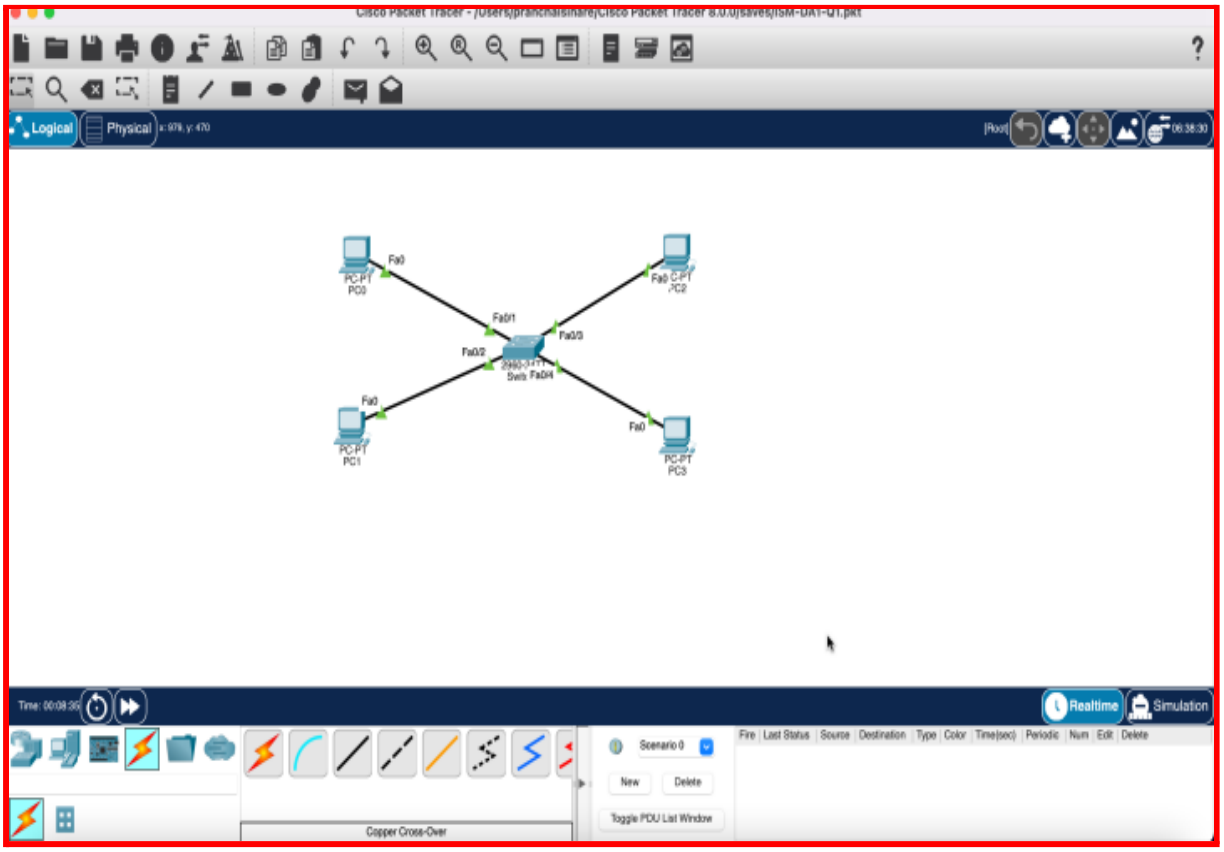
VI. Once the above steps are done the indicator present between the PC and switch will turn green (connection is established).

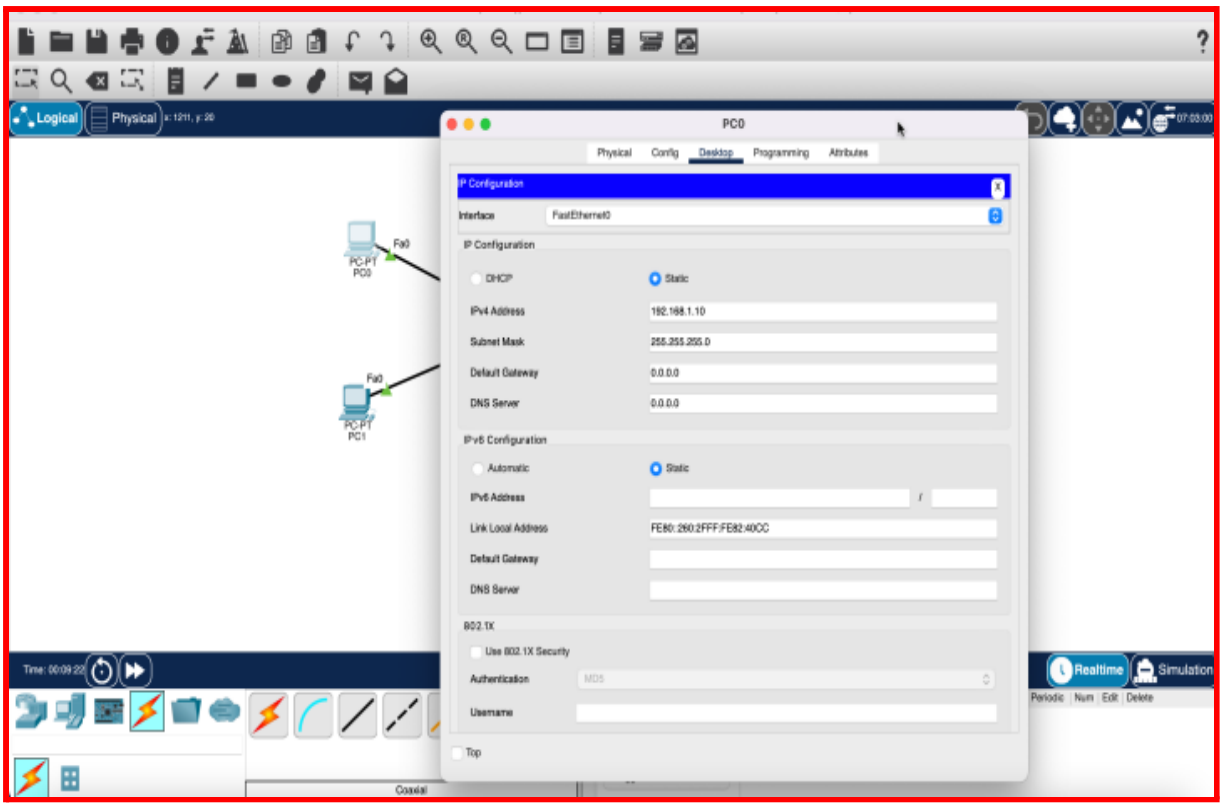
VII. Next select the simple PDU and then click on the source PC0 and then the destination PC3 for that packet.

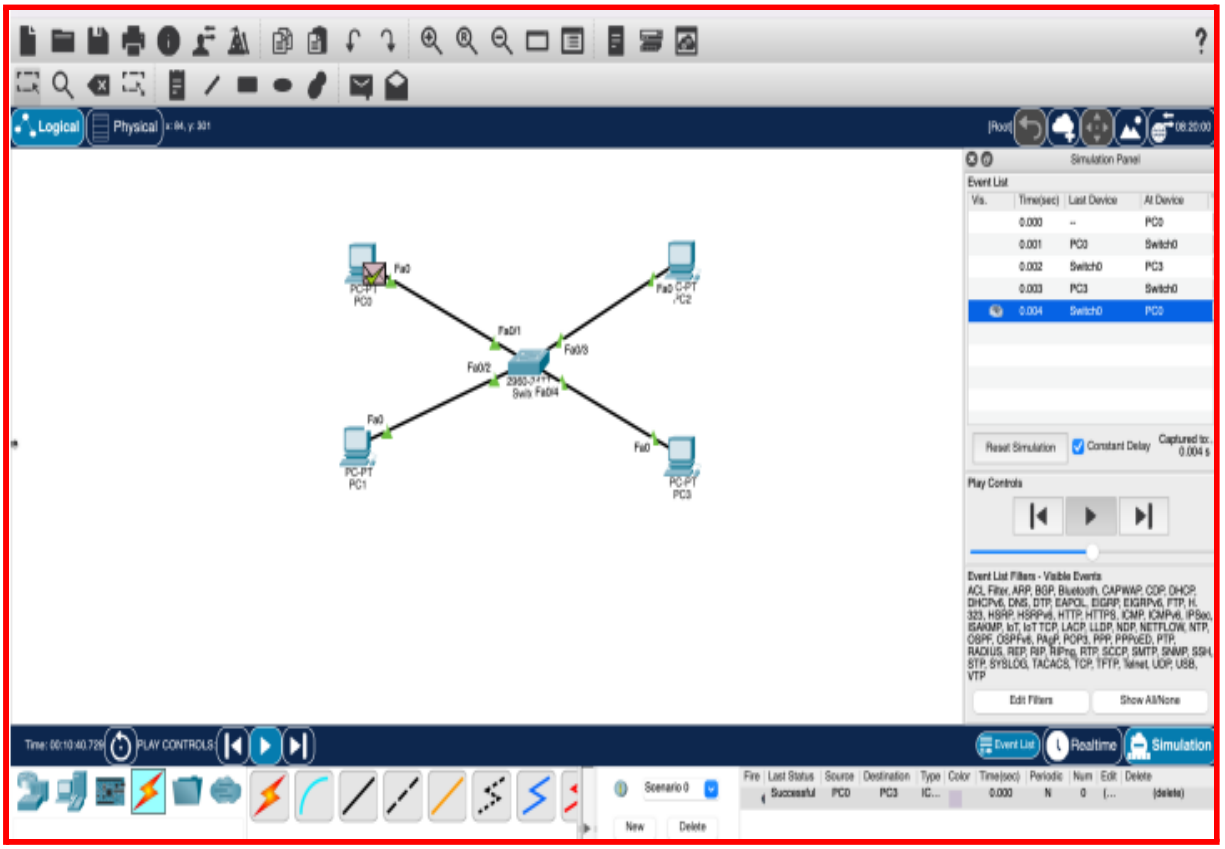
VIII.Switch to simulation mode and click on the play button to start the flow of data and then observe the flow of data and also the acknowledgement packet.

IX. IF the acknowledgement packet is returned then the flow is simulated Successfully.

OUTPUT







Conclusion

To design two different topologies. In the first one connect two PC's and verify the connection and the other one we need to connect two PC's with a router.

2)

Configure PC0 and PC1 with following IP address and Subnet Mask.

Host	IP Address	Subnet Mask
PC0	192.168.1.10	255.255.255.0
PC1	192.168.1.11	255.255.255.0

Use ping command to verify the connection from PC0 to PC1.

Do the same procedure for Router1, PC2 and PC3 with following IP. Check the connection from PC2 to PC3 using ping command.

Host	IP Address	Subnet Mask
Router1	192.168.2.1	255.255.255.0
PC2	192.168.2.10	255.255.255.0
PC3	192.168.2.11	255.255.255.0

Procedure:

I. Begin by creating a new Cisco packet tracer workspace.

II. Choose two PCs for the initial topology from the end devices and arrange them on the empty workspace.

III. Go to IP Configuration and allocate IP to each PC one by one.

The above-mentioned address and Subnet mask should be used.

IV. Next, use copper crossover wire to link the PCs through fast ethernet.

V. Ping PC1 from PC0's command prompt to confirm the connection.

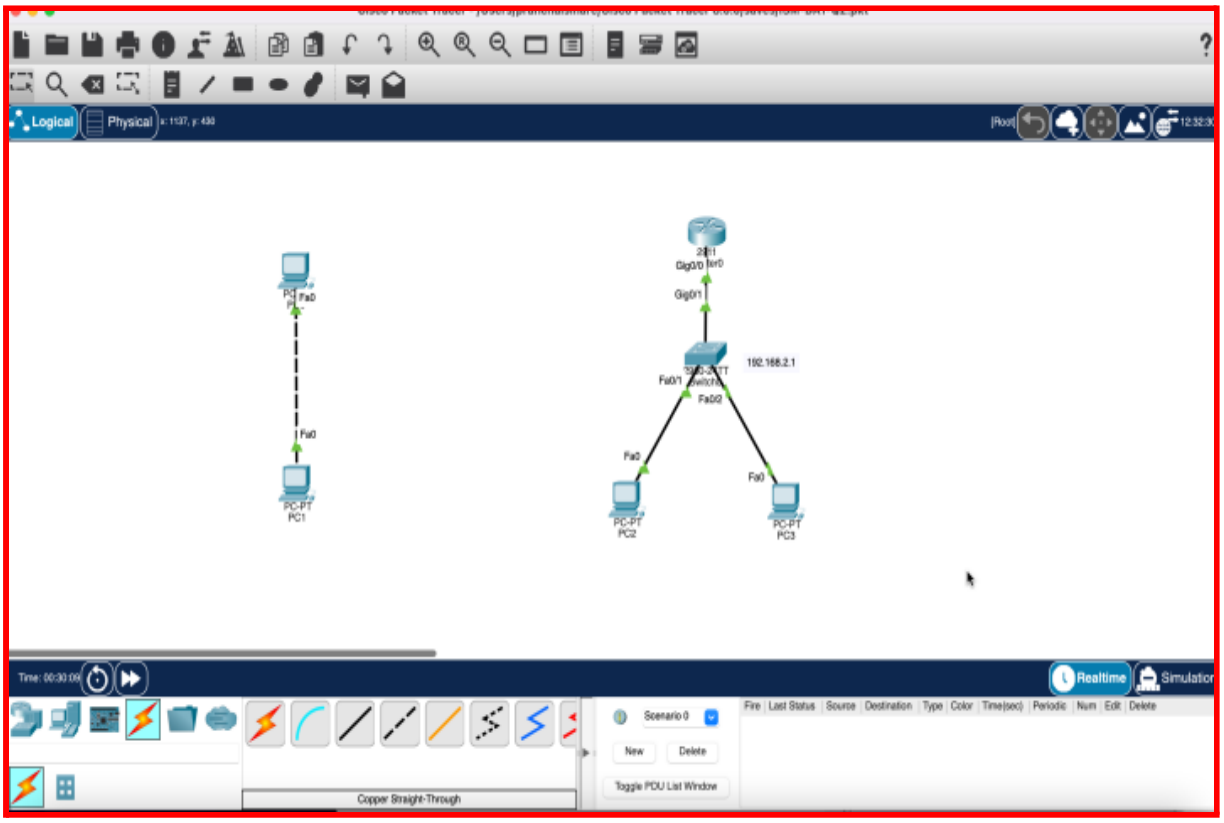
VI. For the second topology, choose PC from the end devices and arrange two PCs and a switch on an empty workspace.

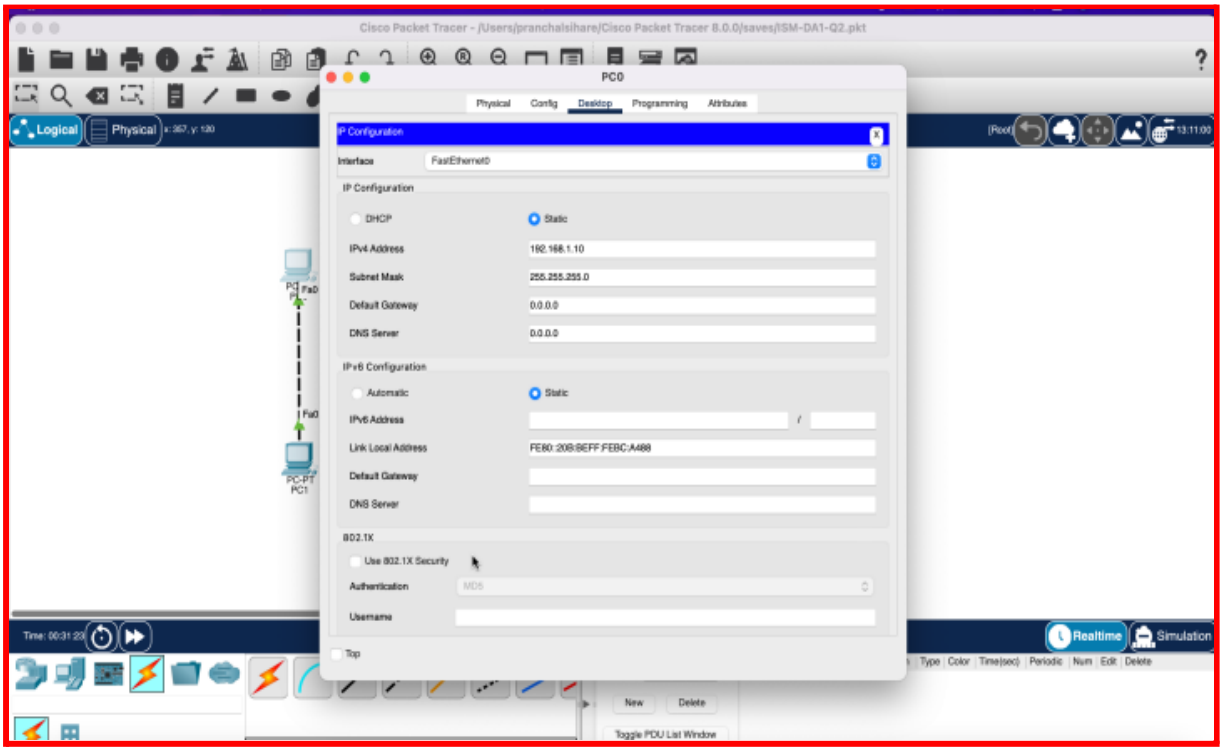
VII. Finally, choose a router from the network device list and install it on the workspace.

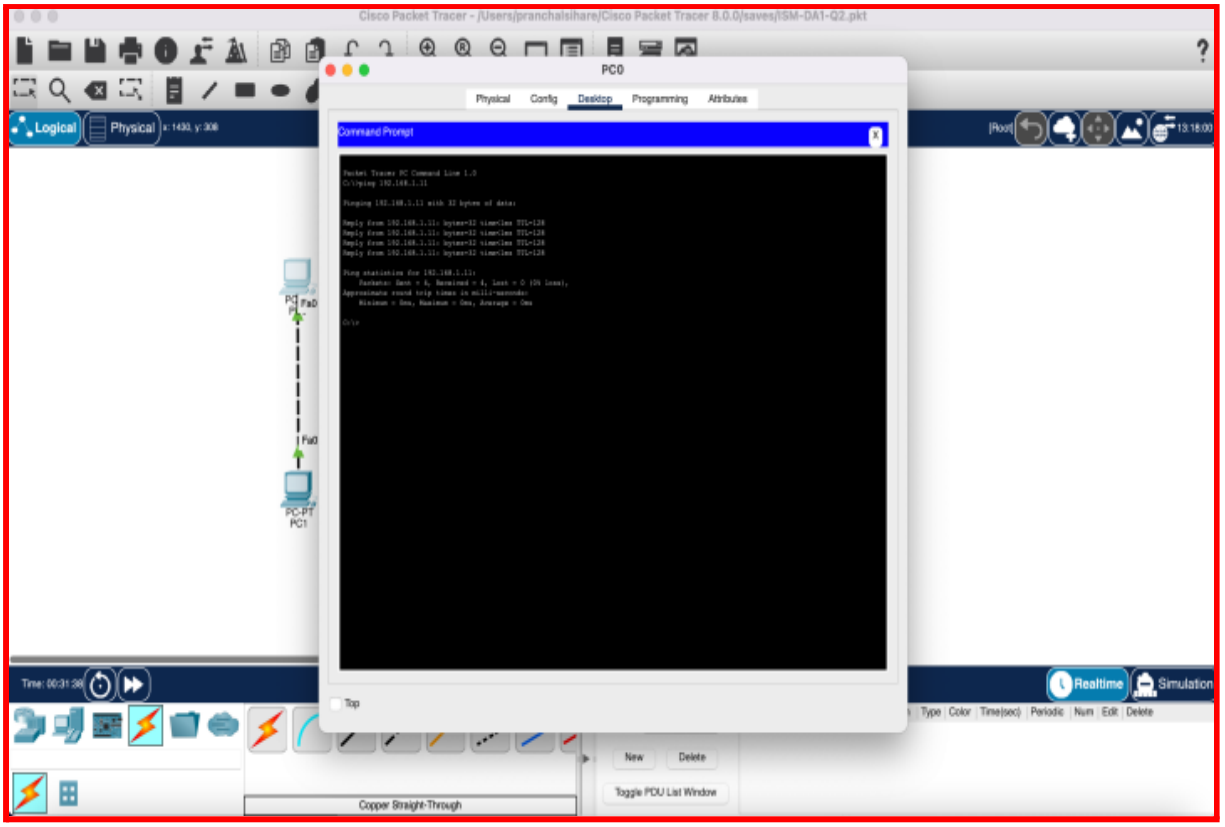
VIII.Go to IP Configuration on each PC and assign the IP address and Subnet mask as described previously, as well as the gateway as the router IP (192.168.2.1) listed in the table.

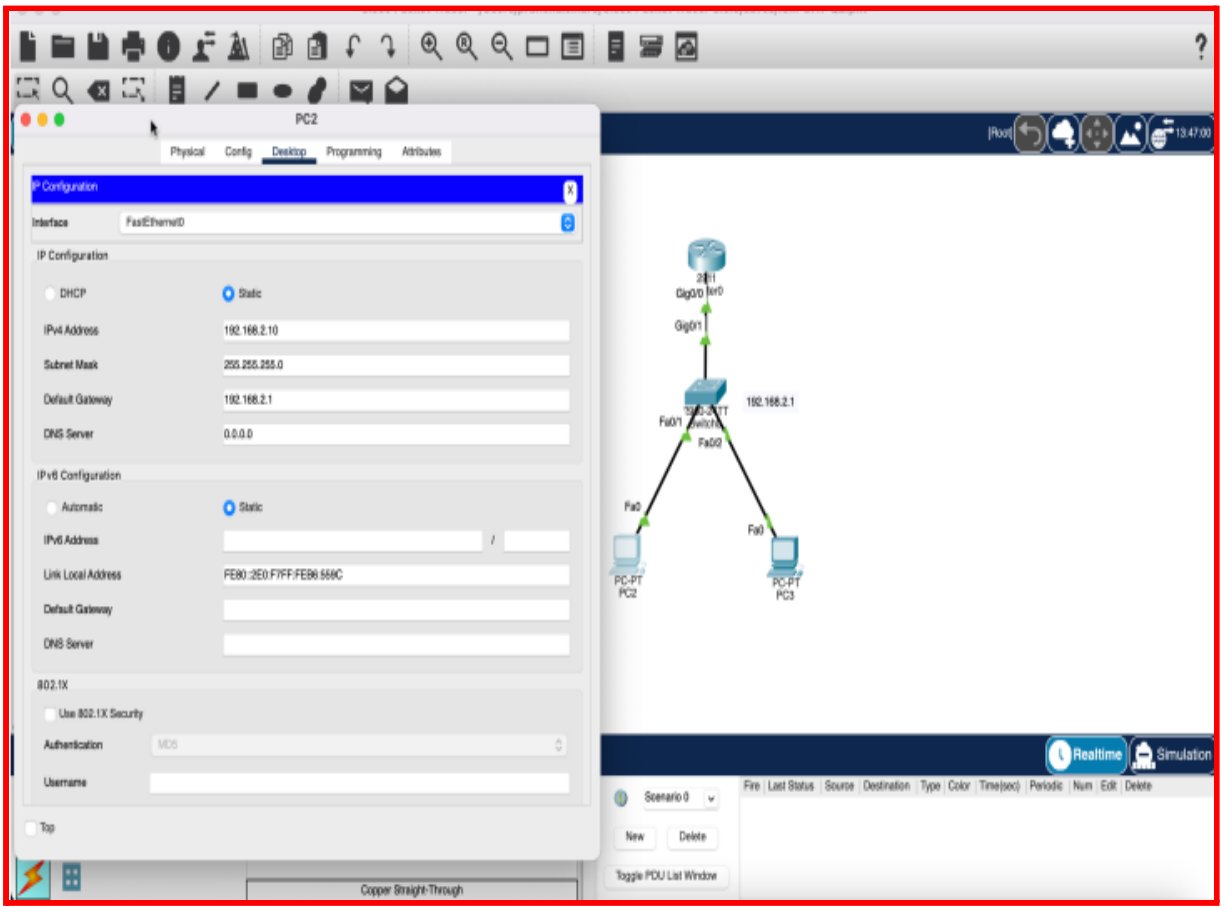
IX. Use copper straight through connection to connect the devices, and use the gigabit ethernet port between the router and the switch.

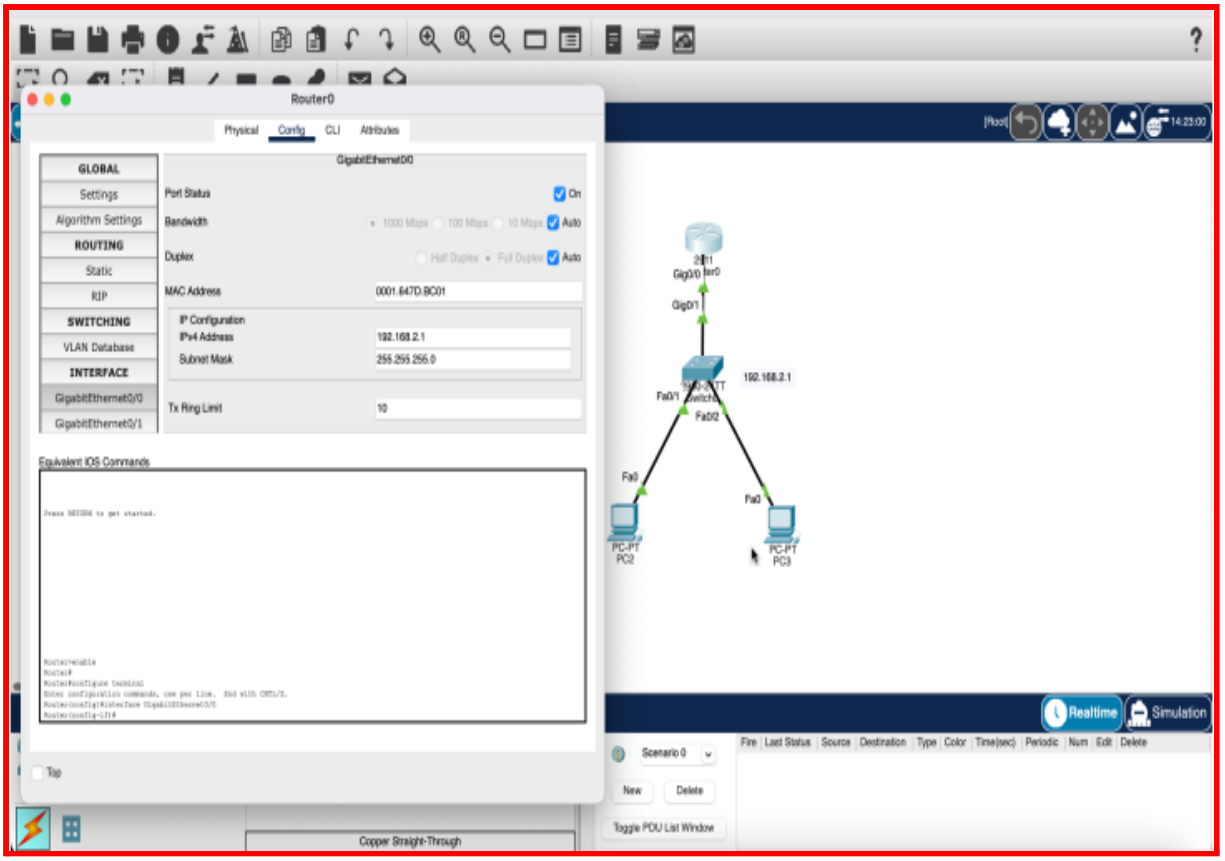
OUTPUT:

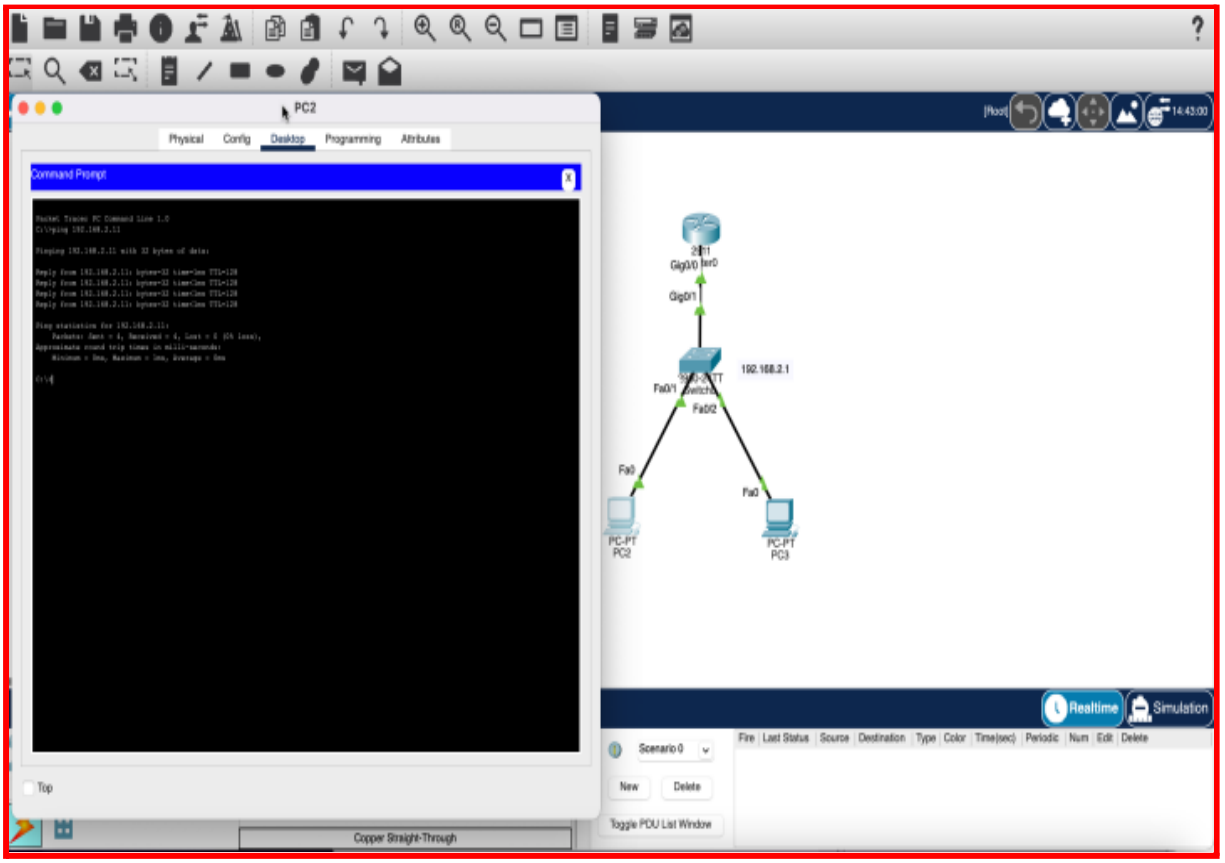

Logical
Physical
PC-PT PC1
PC-PT PC2
PC-PT PC3
192.168.2.1
Gig0/1
Fa0/1
Fa0/2
Fa0
Realtime
Simulation
Copper Straight-Through
Scenario 0
New
Delete
Toggle PDU List Window


Cisco Packet Tracer - /Users/pranchalsihare/Cisco Packet Tracer 8.0.0/saves/ISM-DA1-Q2.pkt
PC0
Physical
Config
Desktop
Programming
Attributes
IP Configuration
Interface
FastEthernet0
DHCP
Static
IPv4 Address
192.168.1.10
Subnet Mask
255.255.255.0
Default Gateway
0.0.0.0
DNS Server
0.0.0.0
IPv6 Configuration
Automatic
Static
IPv6 Address
Link Local Address
FE80::209:8EFF:FEBC:A488
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication
Username
Top
Logical
Physical
PC-PT PC1
Realtime
Simulation
New
Delete
Toggle PDU List Window


Cisco Packet Tracer - /Users/pranchalsihare/Cisco Packet Tracer 8.0.0/saves/ISM-DA1-Q2.pkt
PC0
Physical
Config
Desktop
Programming
Attributes
Command Prompt
Logical
Physical
Realtime
Simulation
Copper Straight-Through
New
Delete
Toggle PDU List Window


PC2
Physical
Config
Desktop
Programming
Attributes
IP Configuration
Interface
FastEthernet0
DHCP
Static
IPv4 Address
192.168.2.10
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::2E0:F7FF:FEB6:568C
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication
Username
Top
Gig0/1
Fa0/1
Fa0/2
Fa0
192.168.2.1
PC-PT PC2
PC-PT PC3
Realtime
Simulation
Scenario 0
New
Delete
Toggle PDU List Window
Copper Straight-Through


Router0
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0
GigabitEthernet0/1
GigabitEthernet0/0
Port Status
On
Bandwidth
Auto
Duplex
Auto
MAC Address
0001.647D.BC01
IP Configuration
IPv4 Address
192.168.2.1
Subnet Mask
255.255.255.0
Tx Ring Limit
10
Equivalent IOS Commands
Top
192.168.2.1
Fa0
Fa0
PC-PT PC2
PC-PT PC3
Realtime
Simulation
Scenario 0
New
Delete
Toggle PDU List Window
Copper Straight-Through


PC2
Physical
Config
Desktop
Programming
Attributes
Command Prompt
Top
192.168.2.1
Fa0
Fa0
PC-PT PC2
PC-PT PC3
Realtime
Simulation
Scenario 0
New
Delete
Toggle PDU List Window
Copper Straight-Through