COMPUTER NETWORKING
ASSIGNMENT 3

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ADMISSION NO::U19CS082

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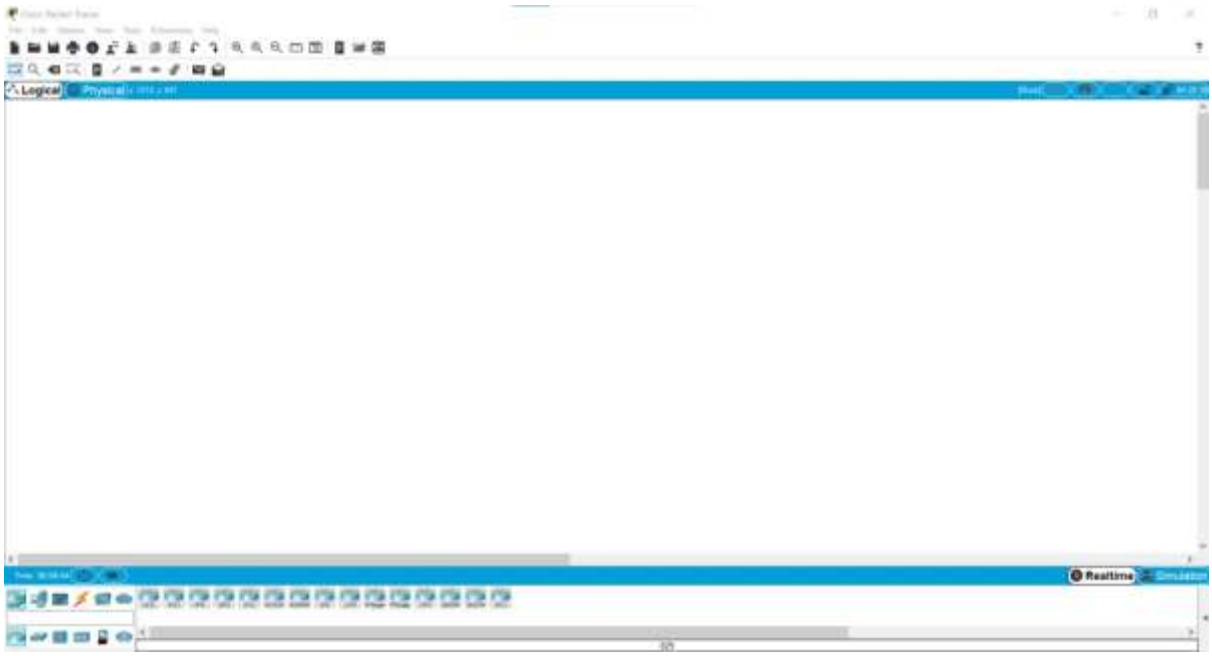
1. **Creating a network and simulating it in Cisco Packet Manager**

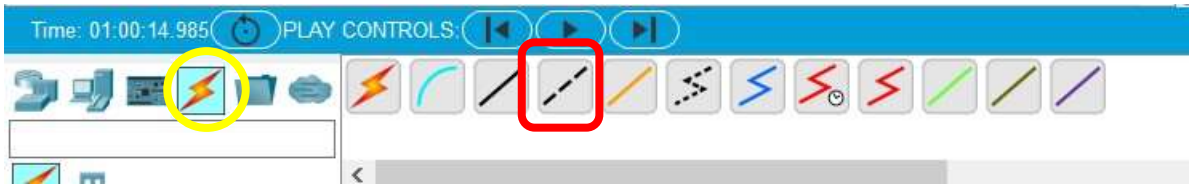
- Open the Cisco Packet Manager and its interface is as shown below:



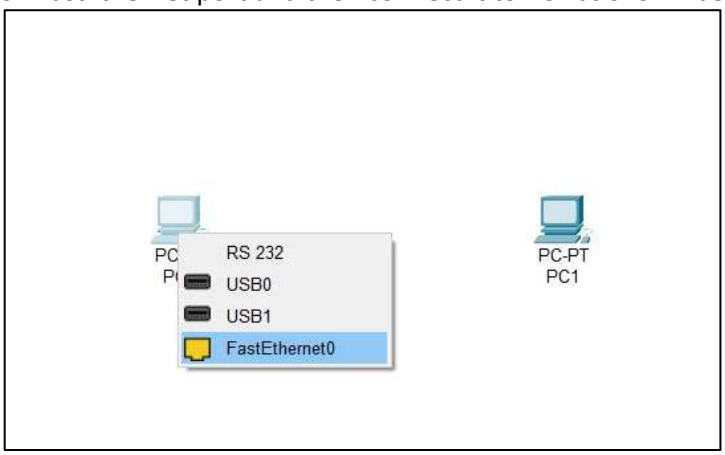
- Now, from the bottom menu select End Devices and in that select PC device.

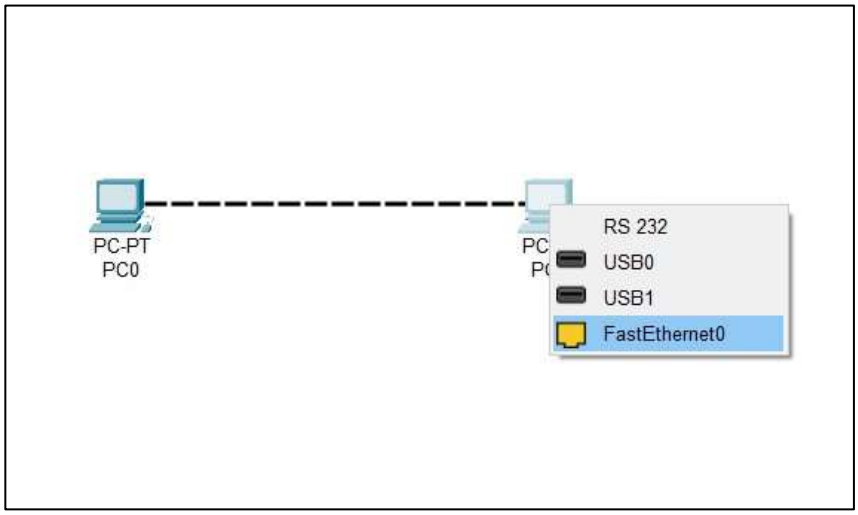
- Drag and drop two PC devices in the blank space provided for simulating network between them as shown.

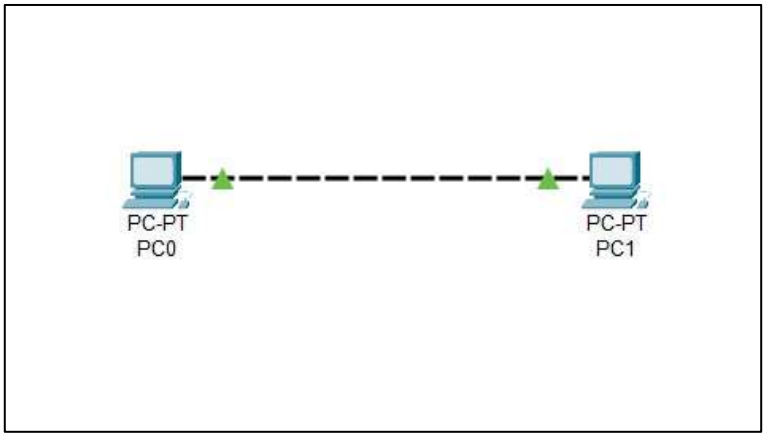
- Now, from the same menu select connections and from that select Copper cross wire.



- Add it to PC0 on FastEthernet port and then connect it to PC1 as shown below.

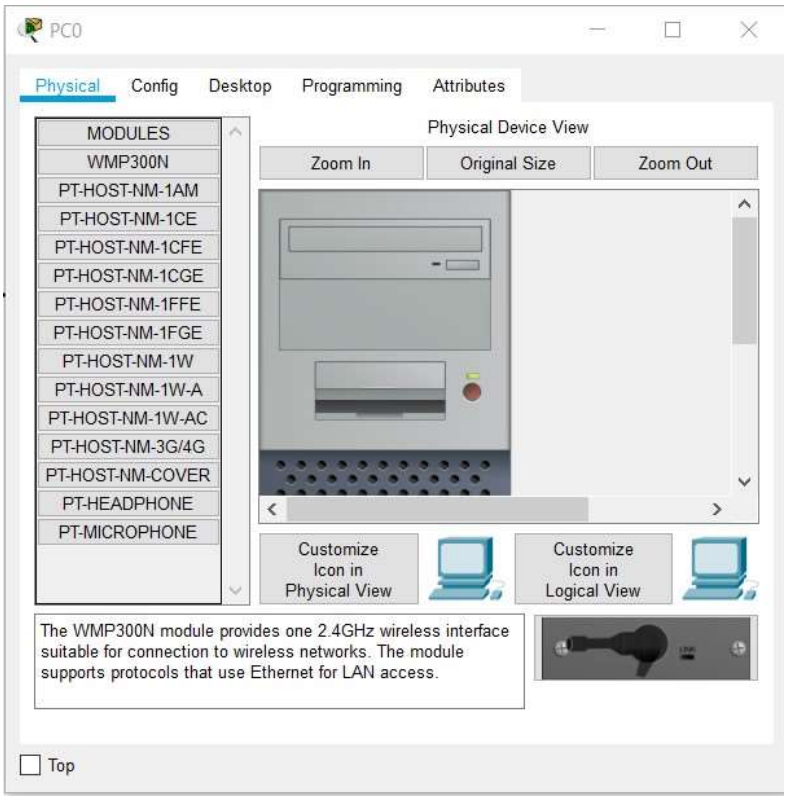




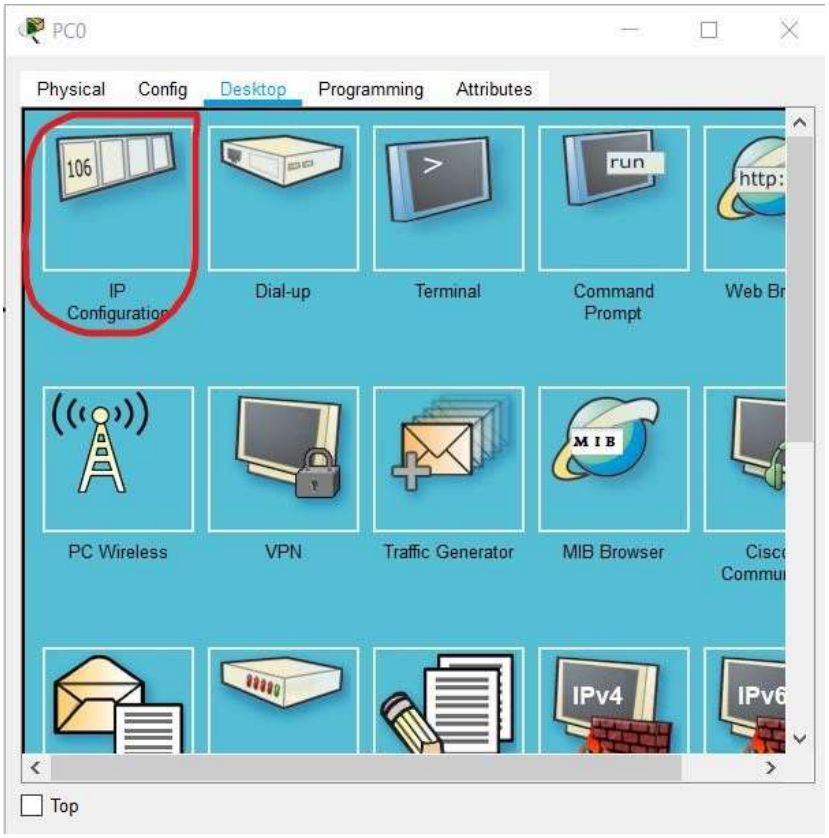


- We need to configure the IP address of the devices.

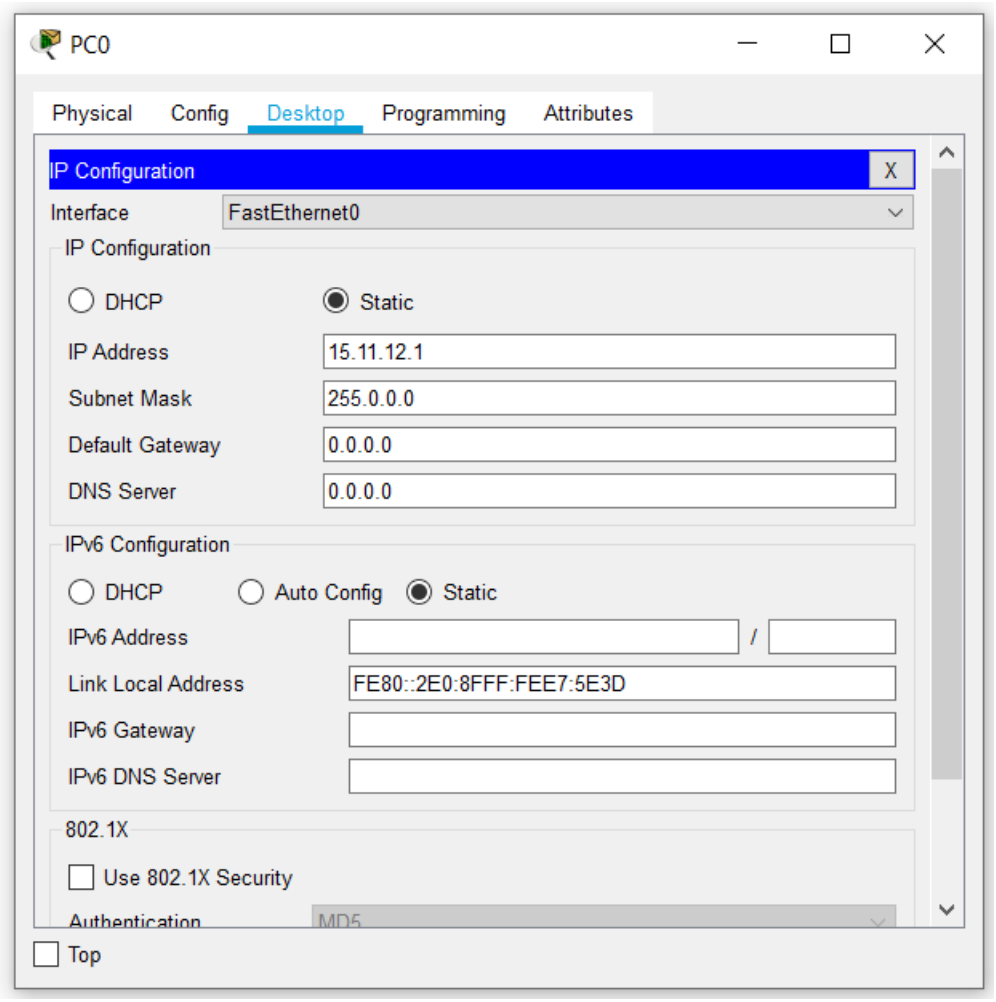
- Double Click on PC0. That will open the following dialogue box.



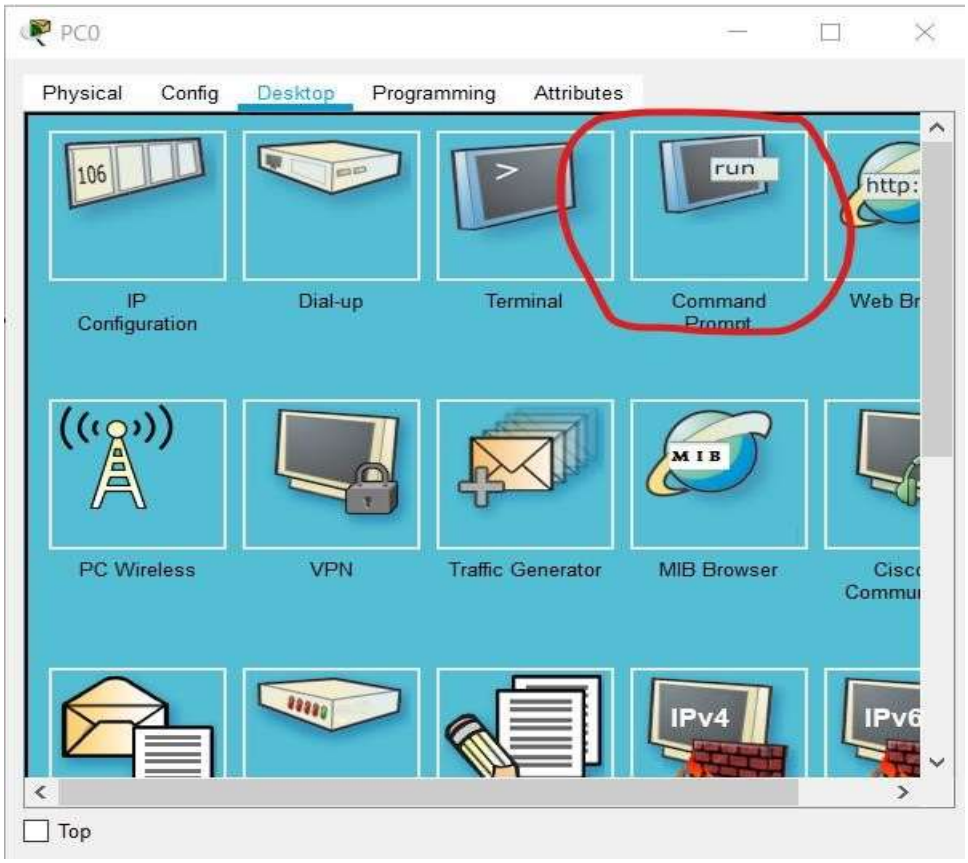
- Select Desktop in that and further IP configuration.



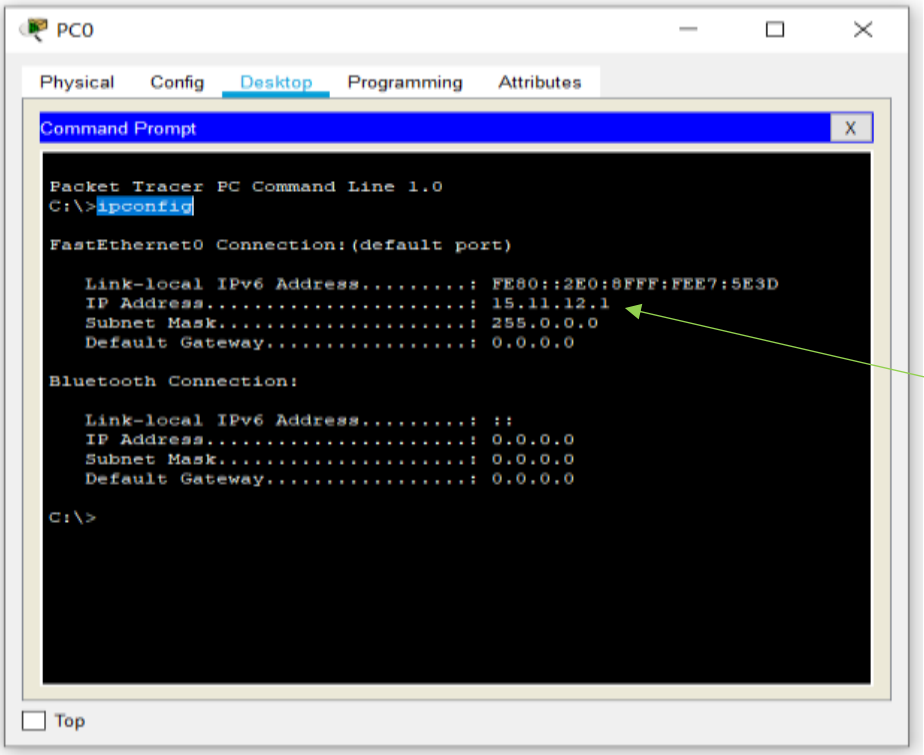
In the following dialogue box, enter IP of your choice.



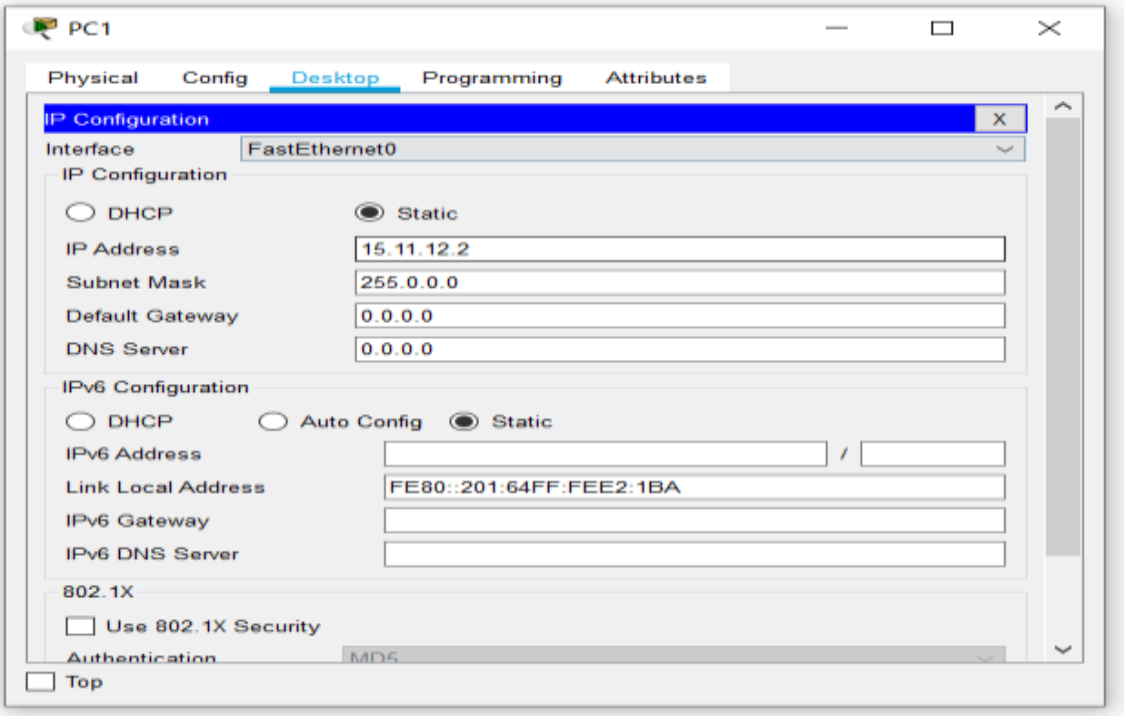
Verify the IP by opening the Command Prompt of PC0 in Desktop tab.

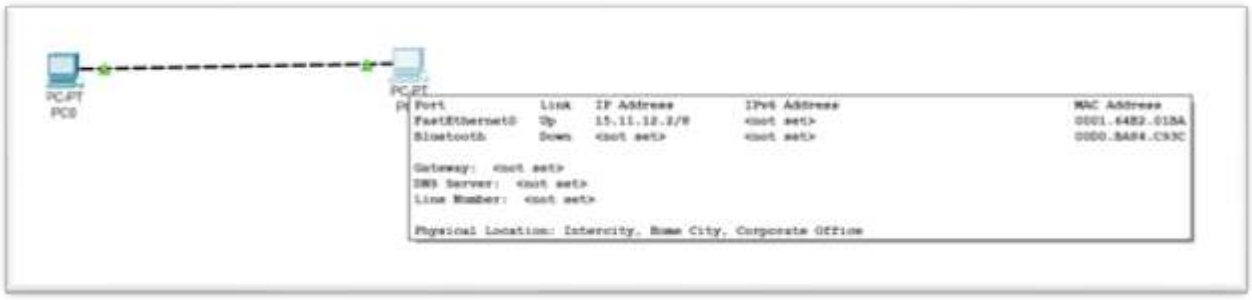


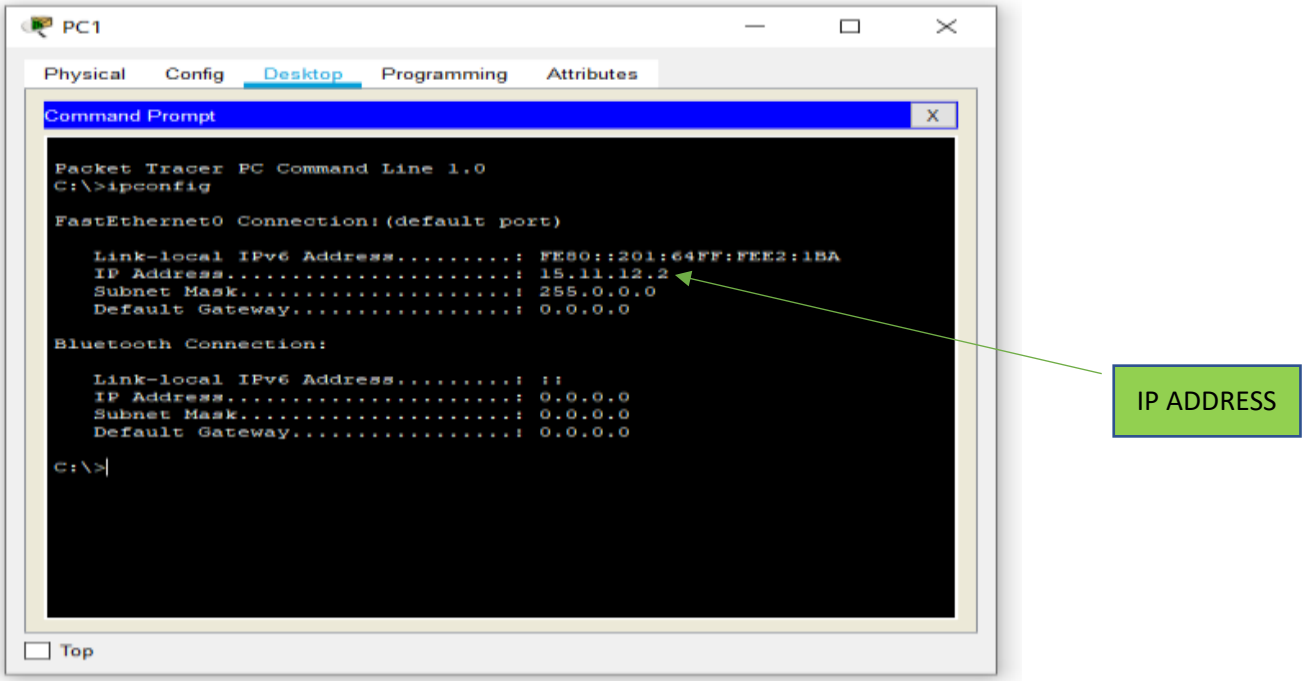
•Use **ipconfig command** to view the **IP address**.



Now, perform the same procedure for PC1 as well to configure it.

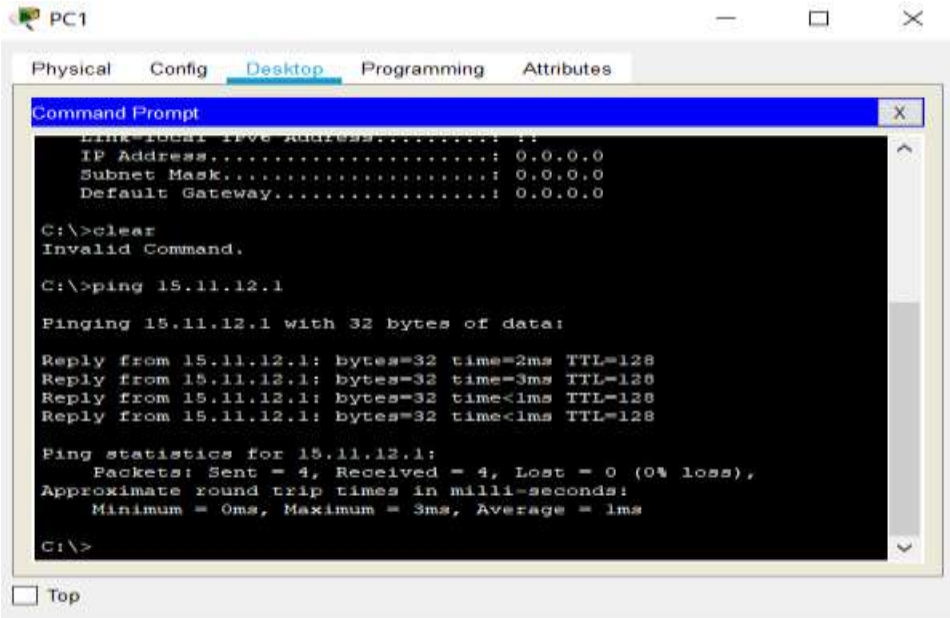




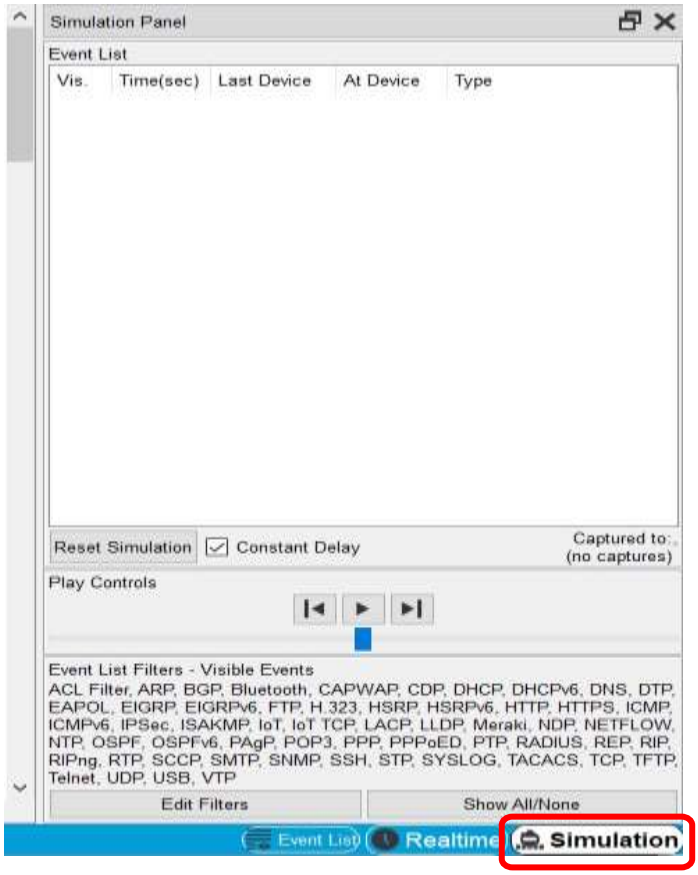


We can simulate a network between these two PCs.

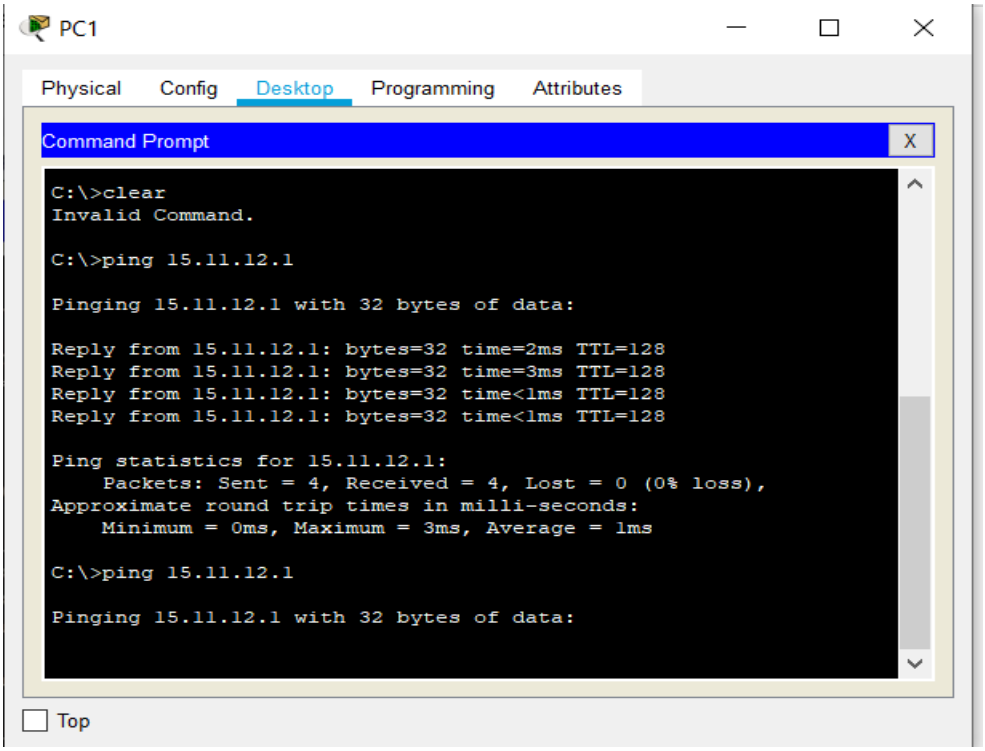
- Let's ping PC0 from PC1. Open the command prompt of PC1 and ping PC0 using ***ping*** command and its IP address ***15.11.12.1***.



- Since, PC1 got the reply from PC0, its confirmed that they are connected.
- Now, lets study the ping process using the Simulation option in Cisco Packet Manager.

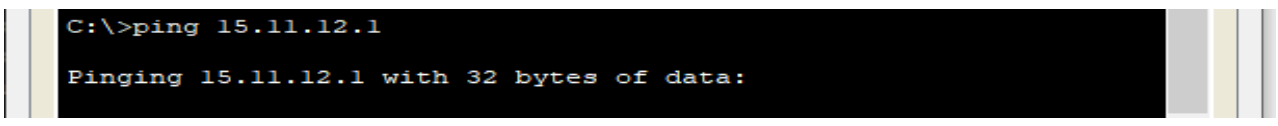


Again, open the command prompt and ping PC0 from PC1.

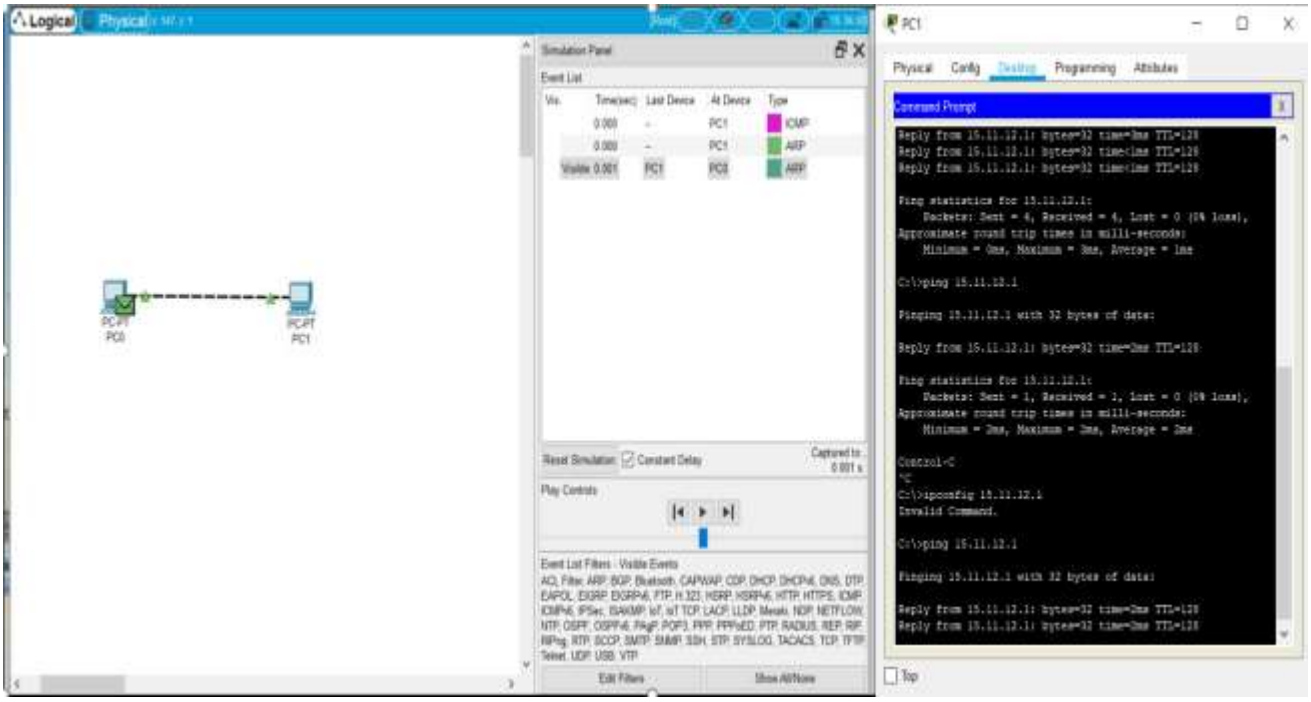


- It is clearly visible that the command doesn't run because in simulation mode, we have to go to the next event.

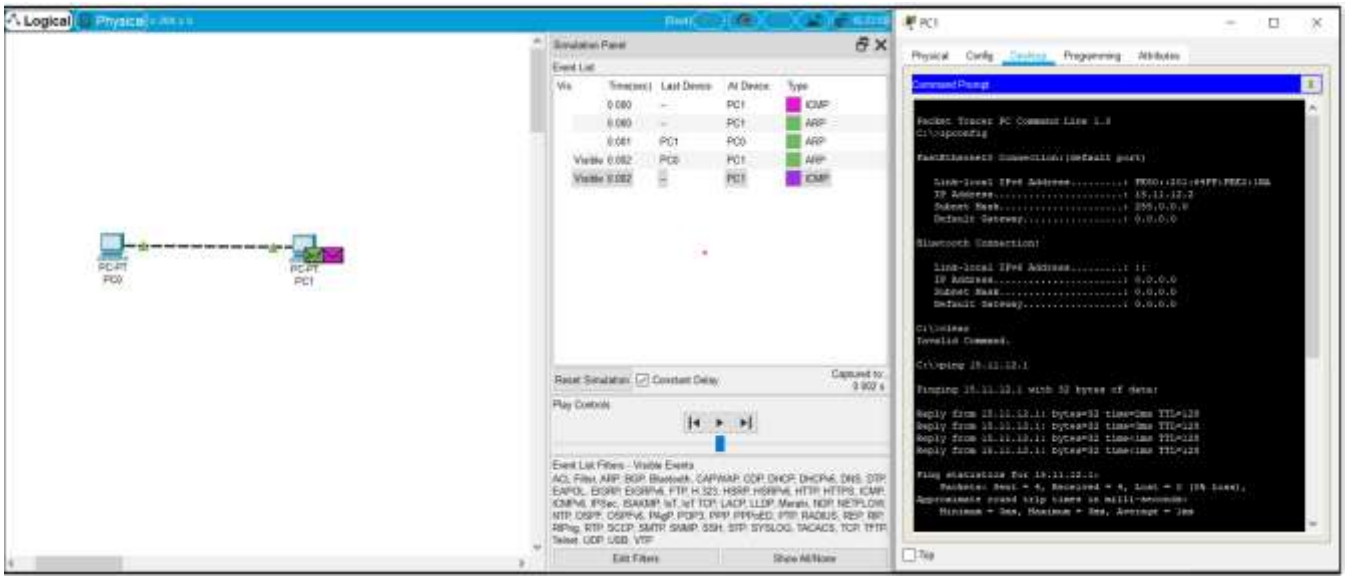
Now, lets observe the ping process.



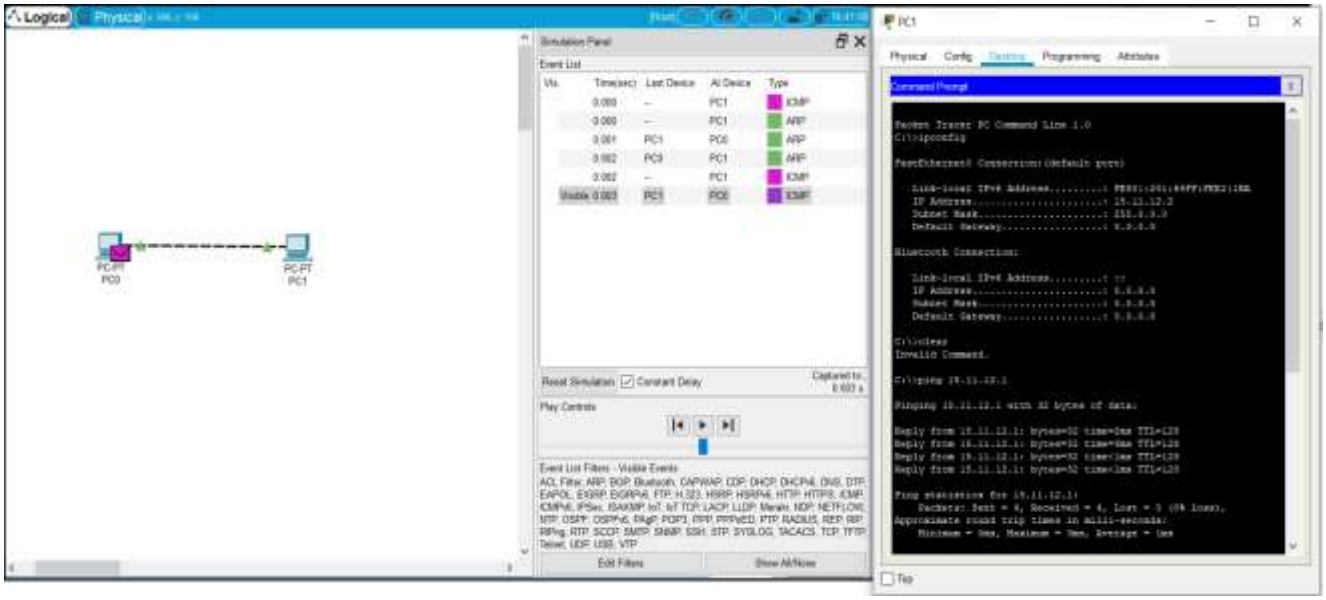
- The ***ping*** command first sends and echo request packet to an address and waits for a reply as shown.



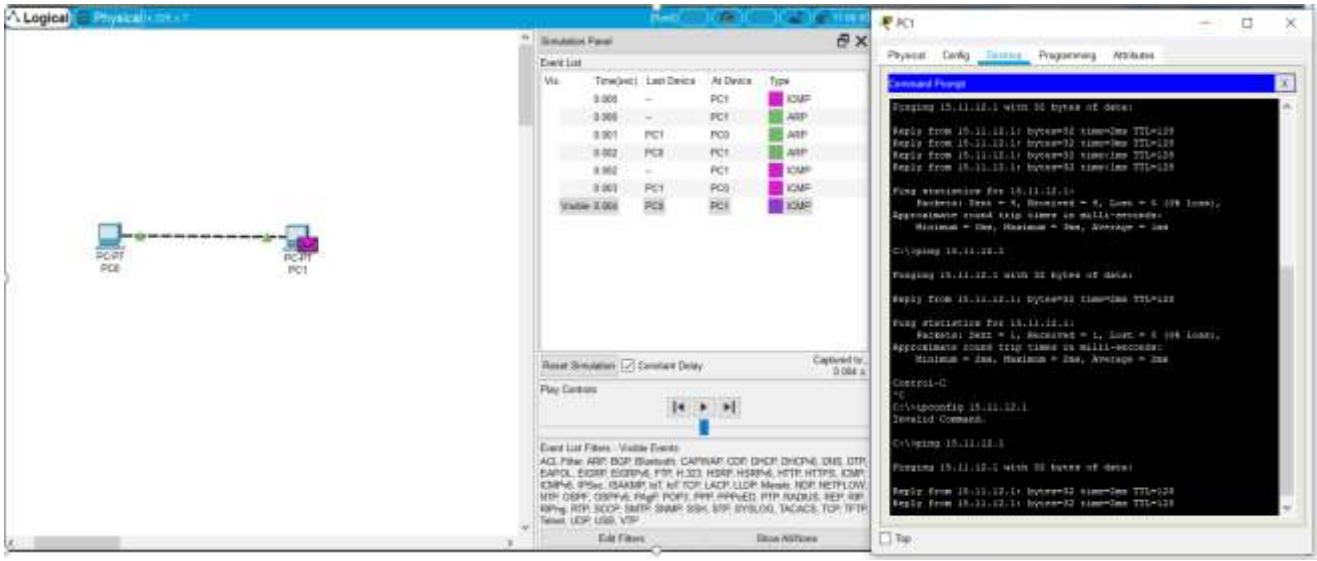
The destination sends an echo reply back to the source within a predetermined time called a timeout. As shown below, the source got the reply from destination.



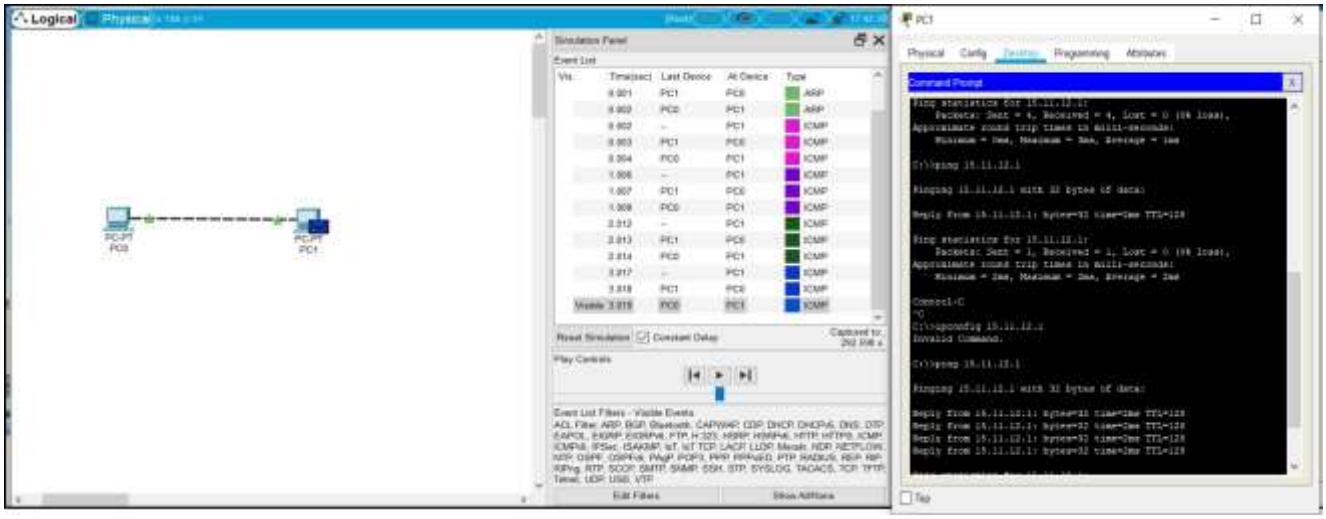
- By default, ***ping*** commands sends multiple requests (usually 4 to 5) and displays the result. The echo ping results show whether a particular request received a successful response. It also includes the number of bytes received and the time it took to receive a reply.



The first reply from destination is completed.



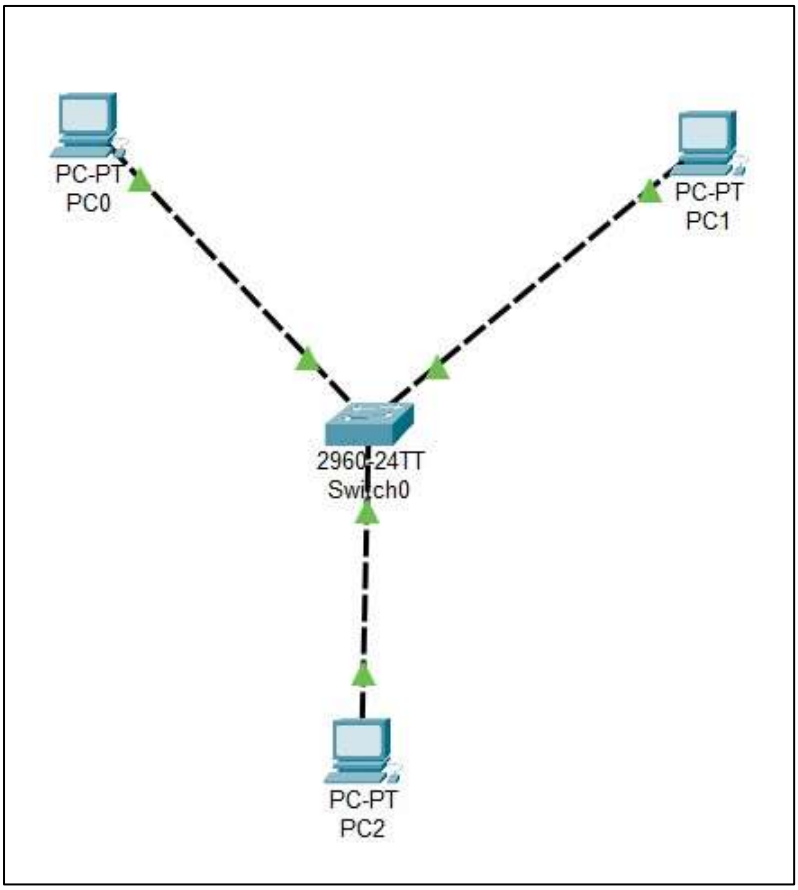
- Similarly, 3 more requests are completed as shown below.



2. Creating a network with more than 2PCs.

- Since each PC has only one FastEthernet port in our simulator, it is not possible to connect PCs only via copper cross over cable.
- So, we will use a switch for connecting them.
- Drag and drop 3PCs in the blank area.
- Now, go to network devices and then switches. Drag a 2960 switch from it and add it in the blank area.

- Then using copper cross wire connect all the 3PCs to the switch.



- This network can be used to ping from any one PC to other. For example, we have pinged successfully from PC2(***15.11.12.3***) to PC0(***15.11.12.1***) and PC1(***15.11.12.2***).