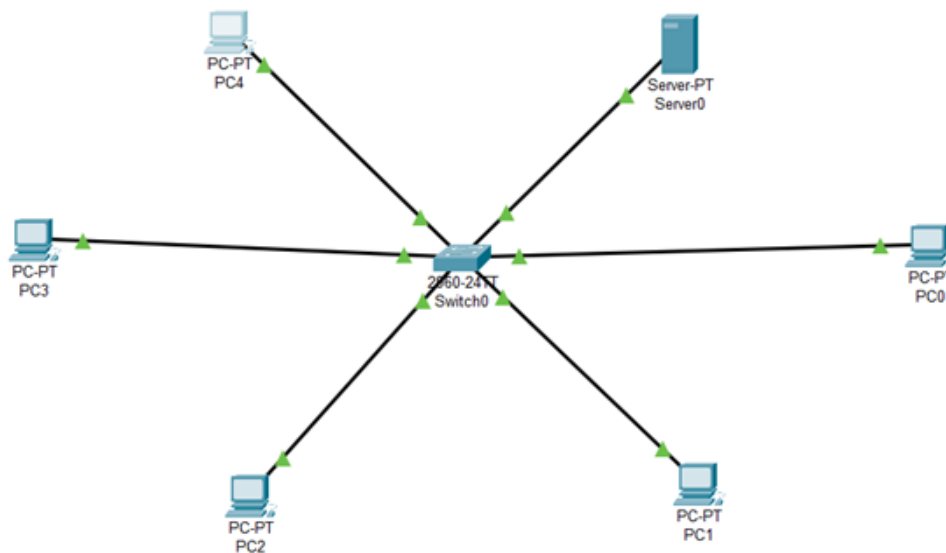
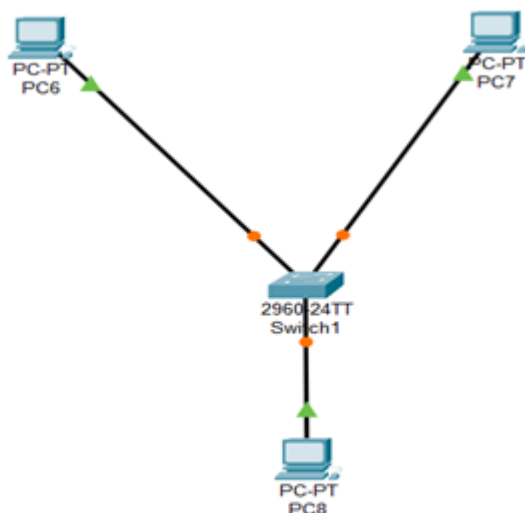


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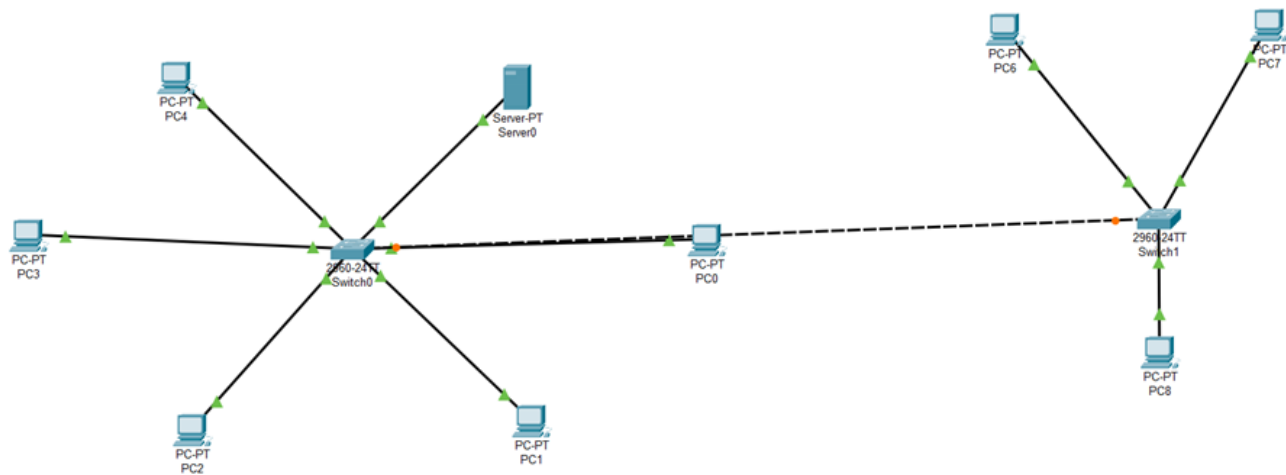
1.Connect switch with minimum 6 devices that should include a DHCP server Ans: we need to create the one server and the 5 pcs and they are all connected



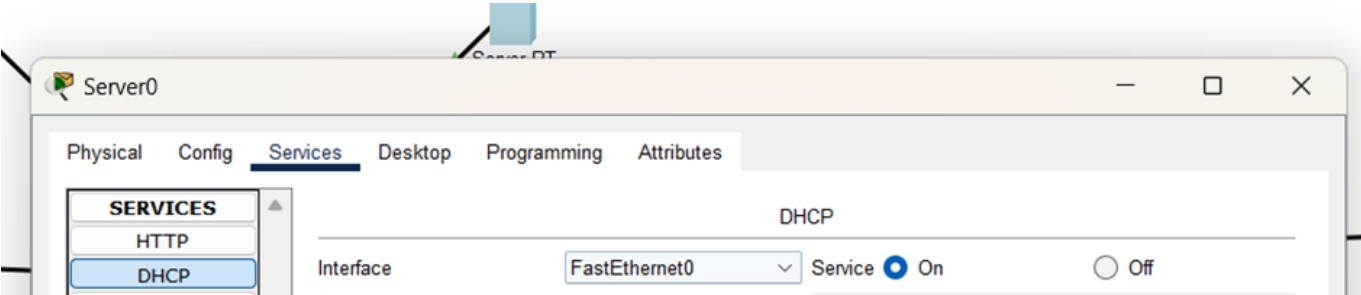
2.Connect another switch with minimum 3 devices Ans:



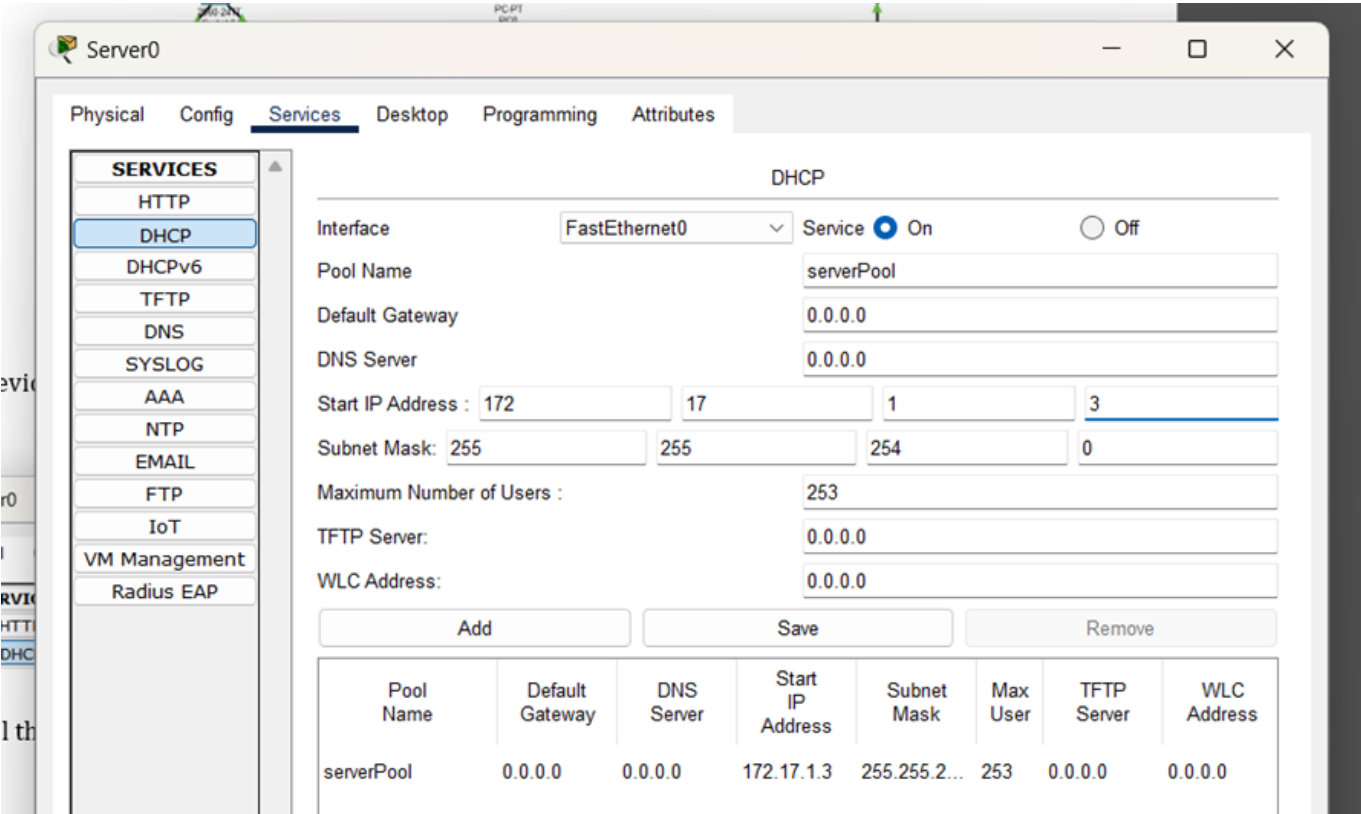
3.Connect 2 switches together Ans:

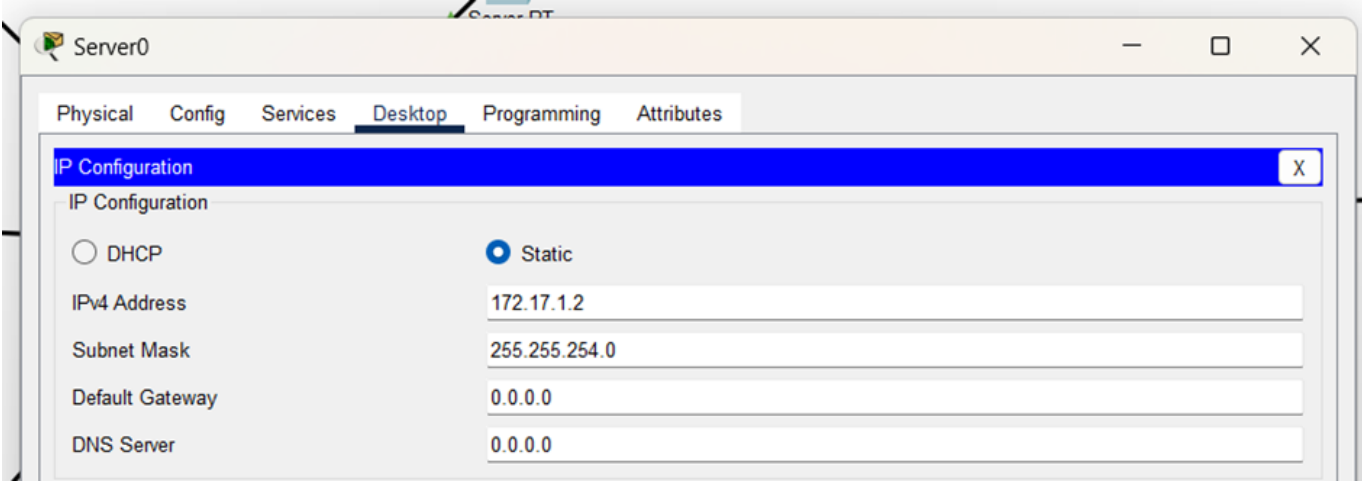


4. Devices in first switch should get IP Addresses from DHCP Server Ans:

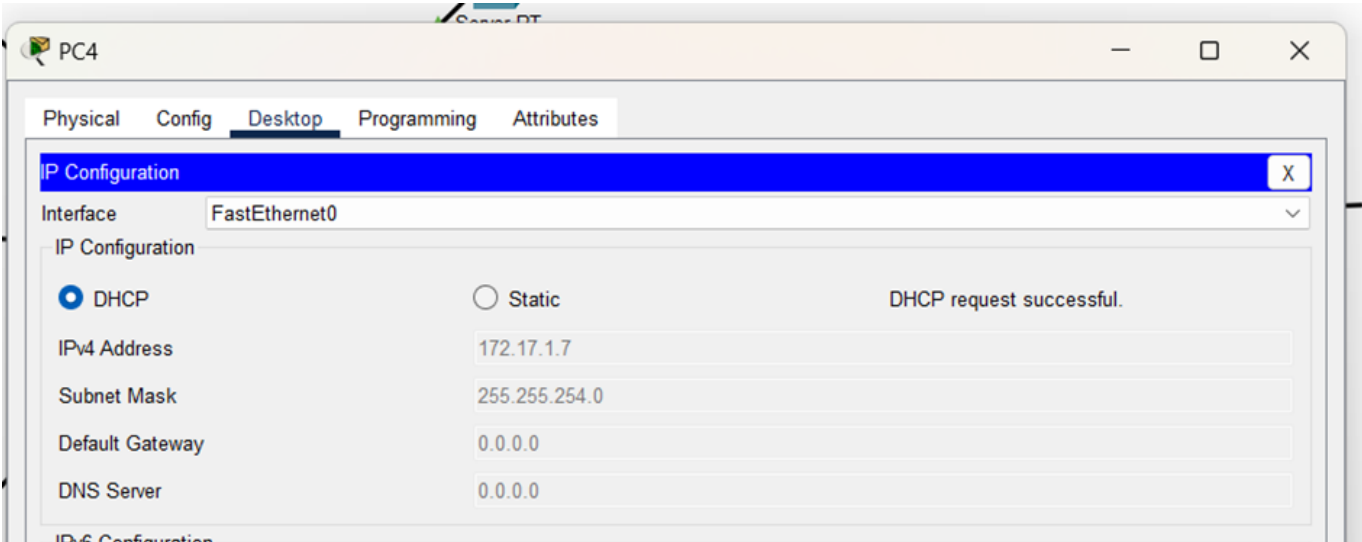
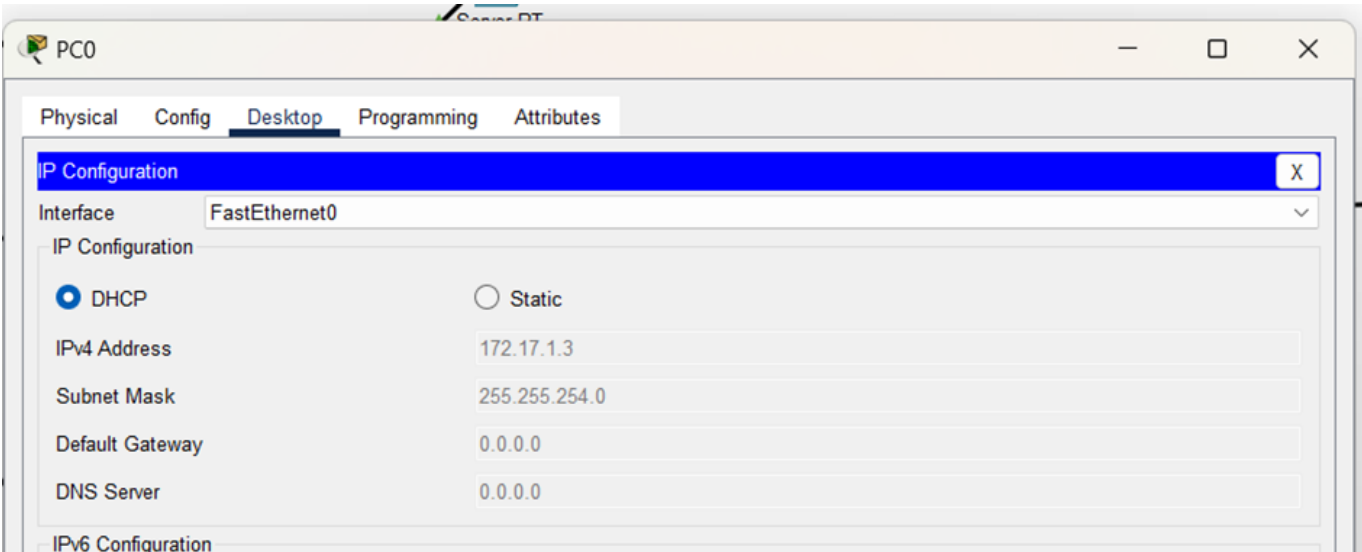


5. All the DHCP IP addresses should start from 259th usable IP of 172.17.0.0/23 network Ans:

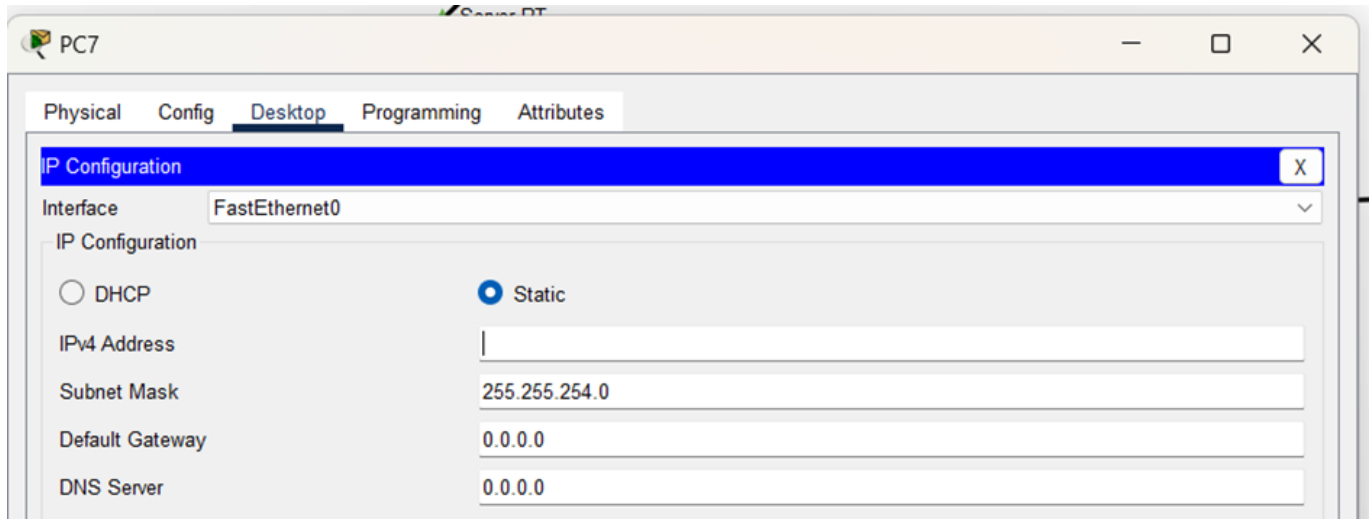




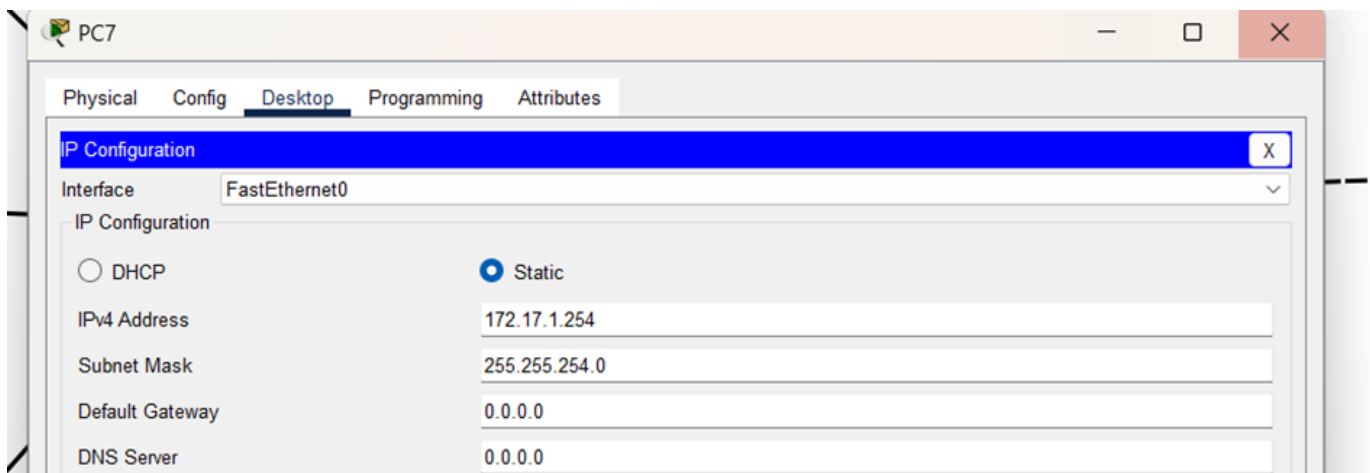
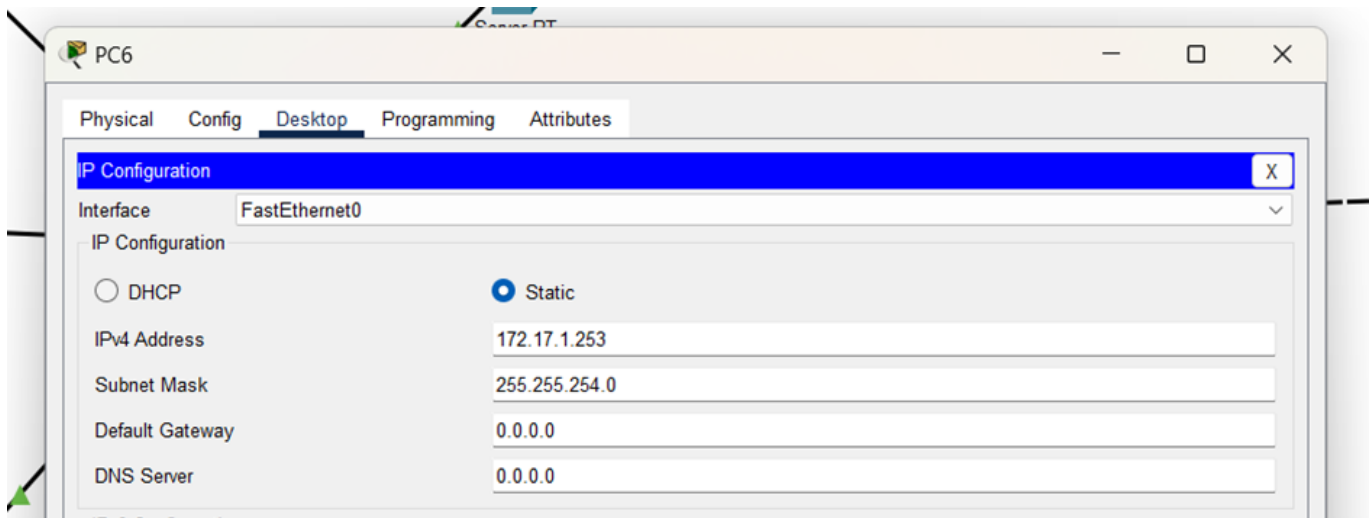
6.Manual IP Address should be assigned to DHCP Server and this should be one IP Address before the start of DHCP IP Addresses Ans:



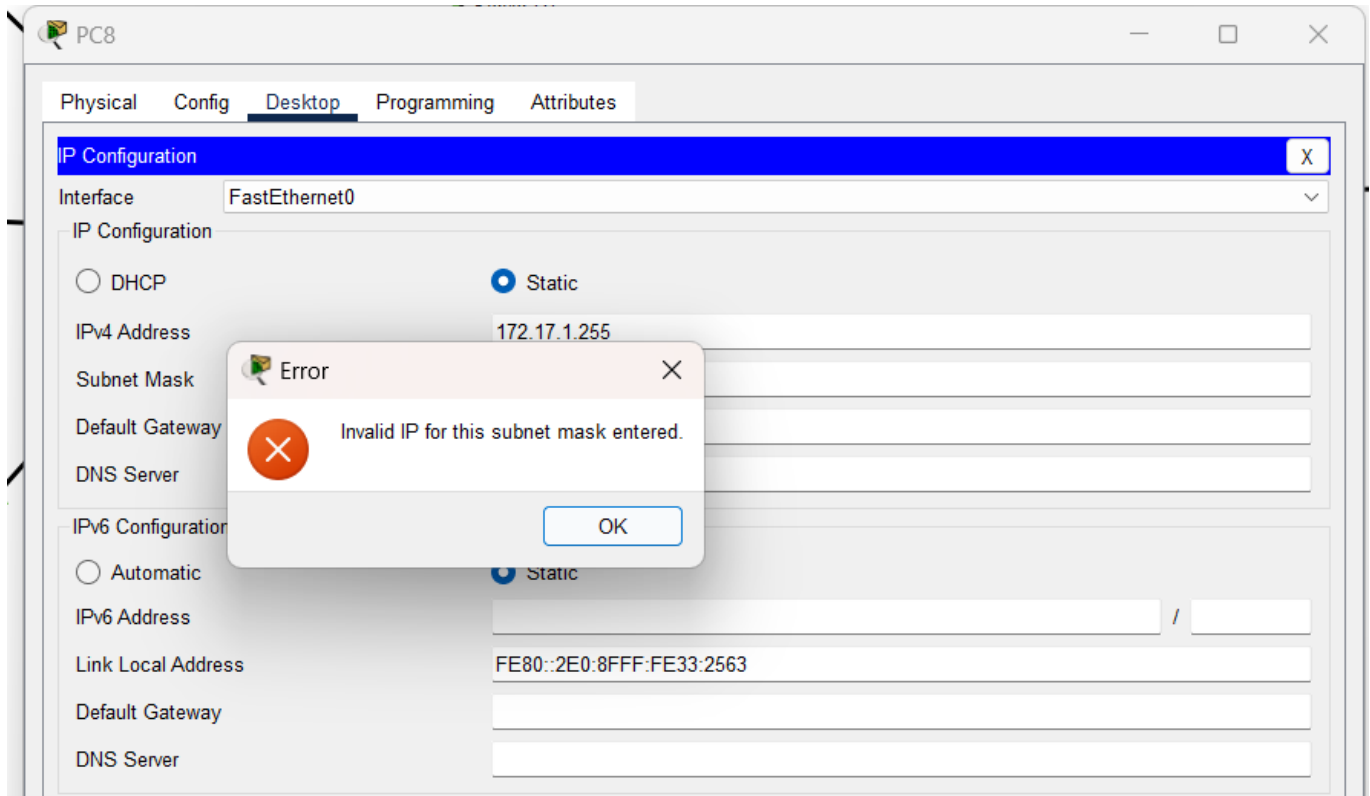
7. Manual IP Addresses should be assigned to devices of second switch Ans:



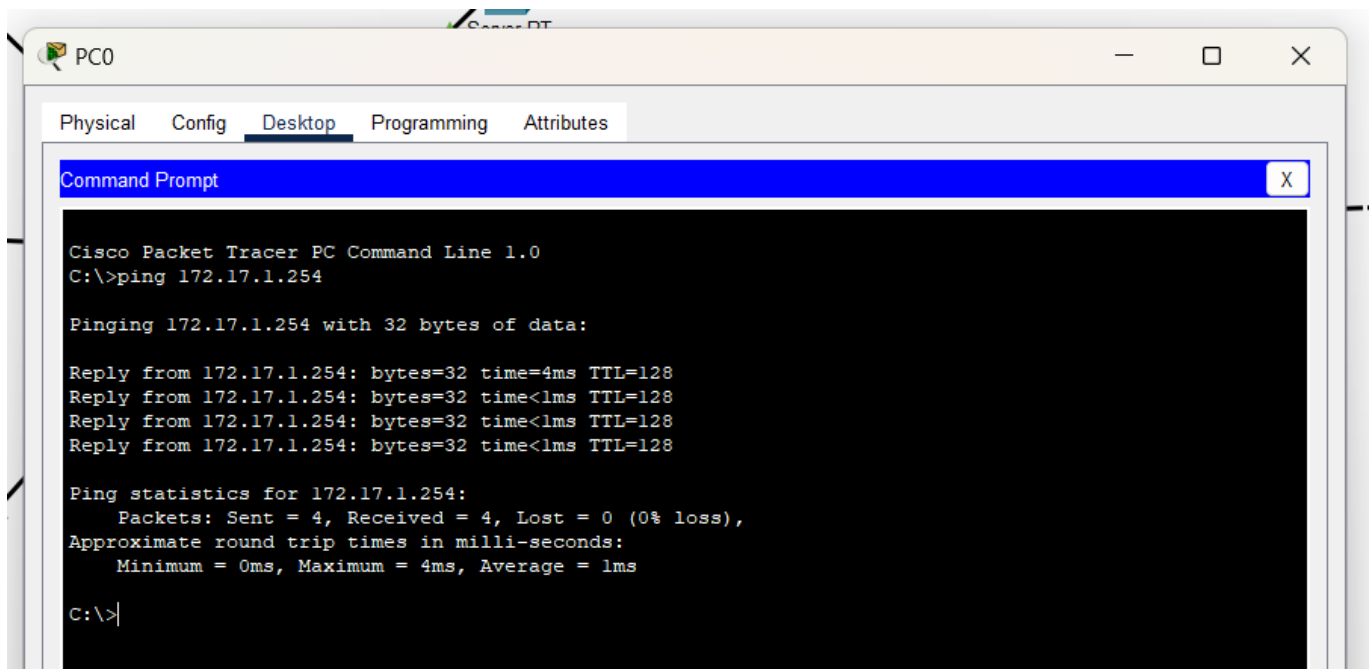
8. These IP Addresses should be from 509th usable IP of 172.17.0.0/23 network ** **Ans:



→here for the third pc(pc8) we cant create the IP address because we are having only 512 hosts and in the 512 two are the network id and the last is the broadcast id so we will have only 510 we cant assign the ip for the third system so there is no 511 ip to assign

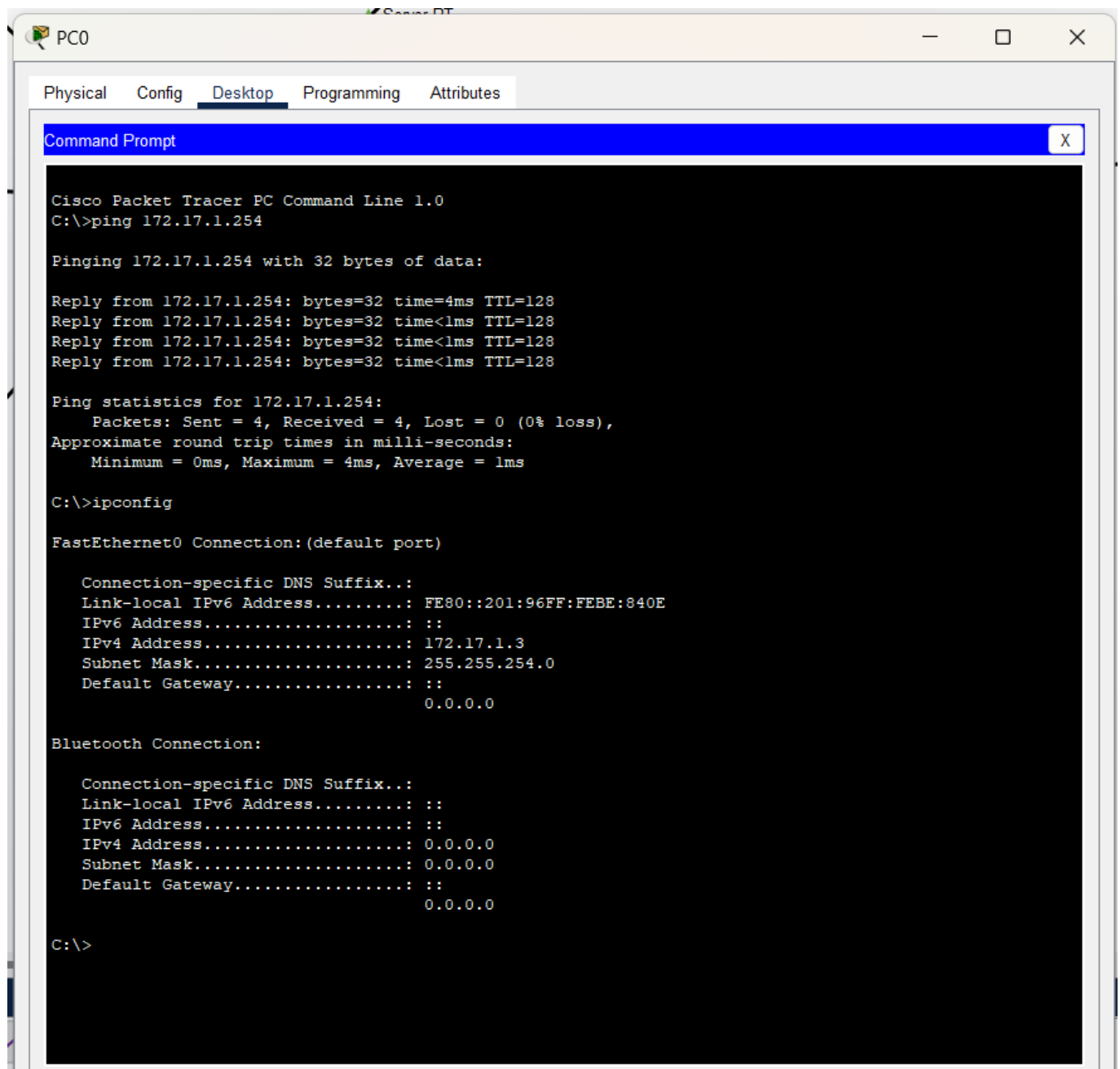
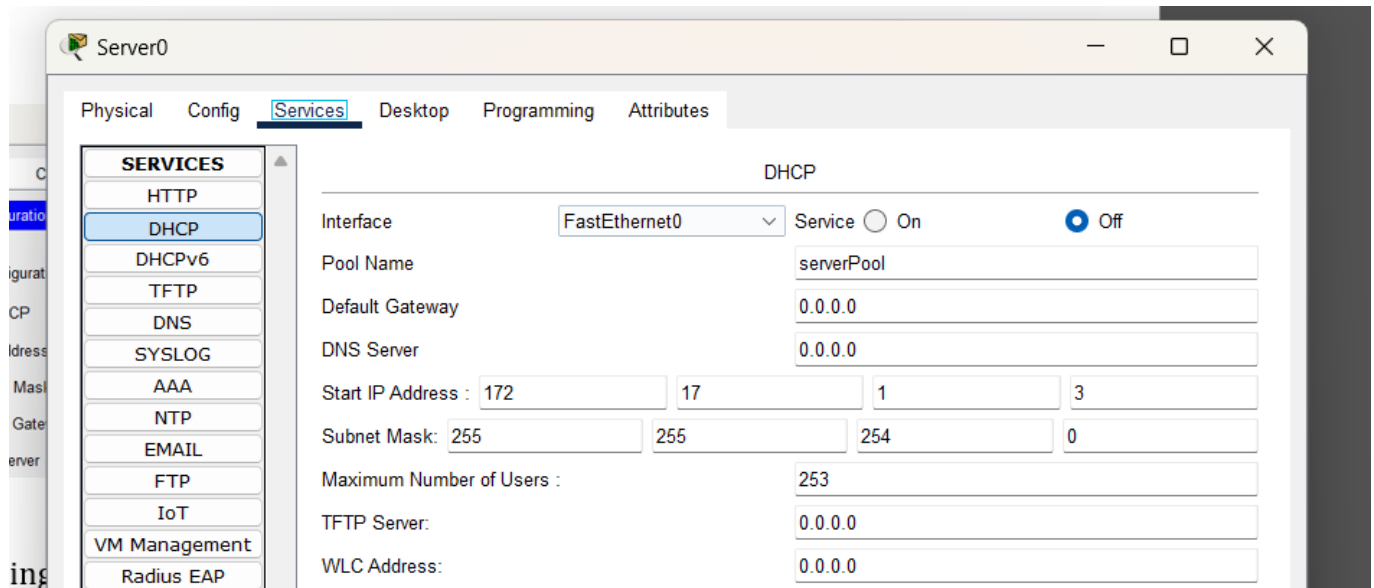


9. Ping from 259th IP Address device to 510th IP Address device, and write your observation below
Ans:



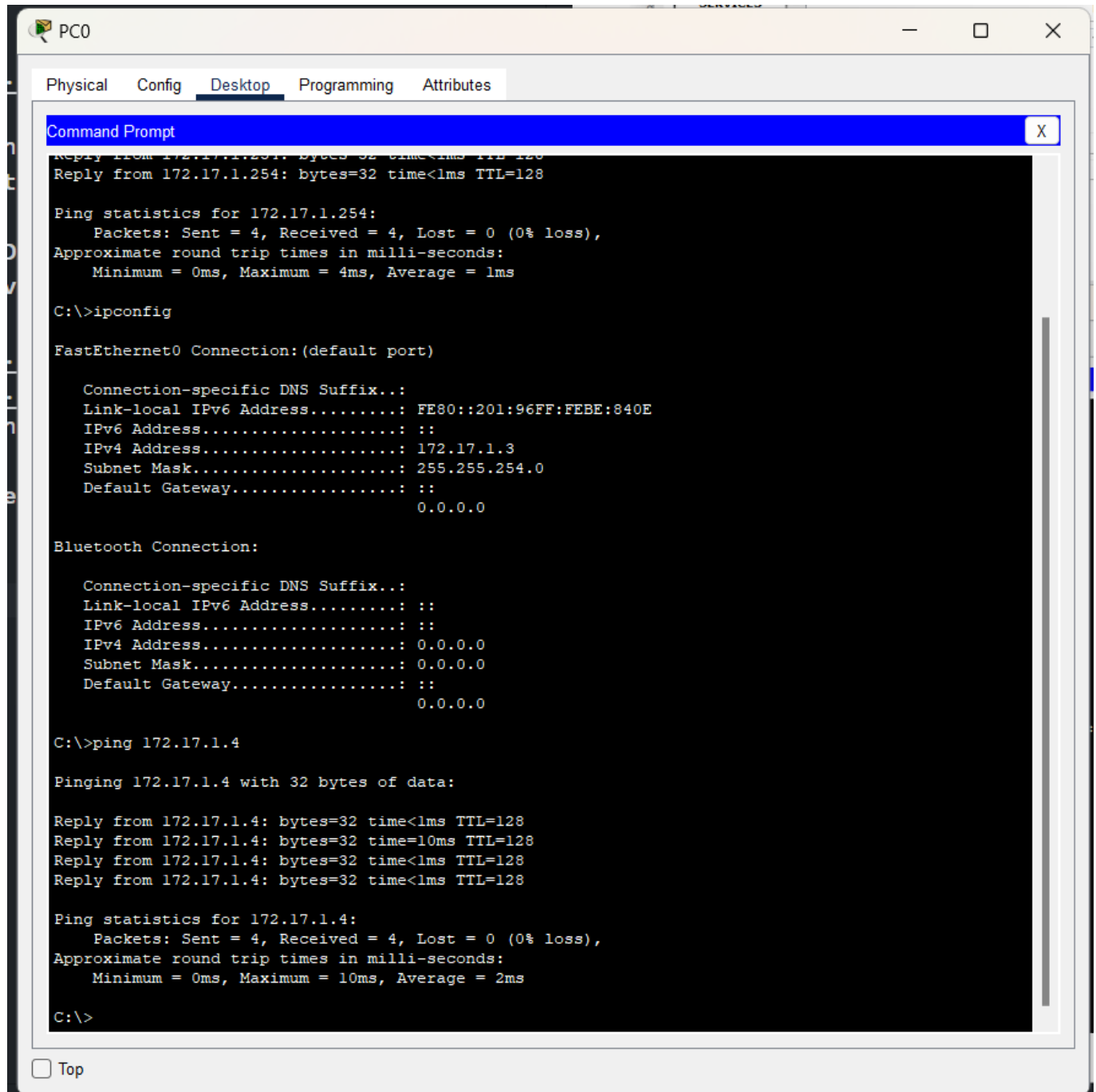
→since they are in same network we can ping them otherwise we cant ping between them if the network changes they will not ping (because of the same subnet mask) 10. Disable the DHCP service and check

which IPs the client devices receive Ans:



→ after disabling the DHCP services also the ip are not changes **11. Ping the received IP addresses and**

write observation Ans:



The screenshot shows a PC0 window with a Command Prompt open. The Command Prompt displays the results of a ping command to 172.17.1.254, followed by the output of the ipconfig command. The ipconfig output shows the FastEthernet0 connection details, including the IPv4 address 172.17.1.3 and the subnet mask 255.255.254.0. It also shows the Bluetooth connection details. Finally, the Command Prompt displays the results of a ping command to 172.17.1.4, showing a successful connection with a 0% loss rate.

```
PC0
Physical Config Desktop Programming Attributes
Command Prompt
Reply from 172.17.1.254: bytes=32 time<1ms TTL=128
Reply from 172.17.1.254: bytes=32 time<1ms TTL=128

Ping statistics for 172.17.1.254:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 4ms, Average = 1ms

C:\>ipconfig

FastEthernet0 Connection: (default port)

    Connection-specific DNS Suffix...:
    Link-local IPv6 Address . . . . .: FE80::201:96FF:FEBE:840E
    IPv6 Address . . . . .: ::
    IPv4 Address. . . . .: 172.17.1.3
    Subnet Mask . . . . .: 255.255.254.0
    Default Gateway . . . . .: ::
                                0.0.0.0

Bluetooth Connection:

    Connection-specific DNS Suffix...:
    Link-local IPv6 Address . . . . .: ::
    IPv6 Address . . . . .: ::
    IPv4 Address. . . . .: 0.0.0.0
    Subnet Mask . . . . .: 0.0.0.0
    Default Gateway . . . . .: ::
                                0.0.0.0

C:\>ping 172.17.1.4

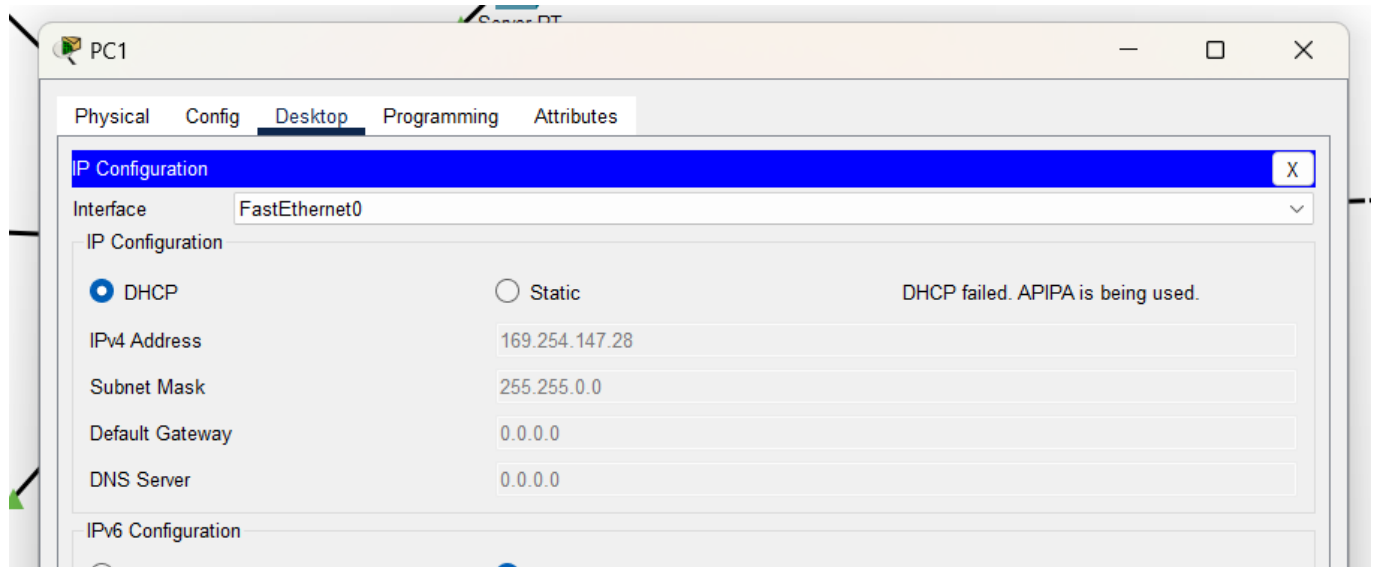
Pinging 172.17.1.4 with 32 bytes of data:

Reply from 172.17.1.4: bytes=32 time<1ms TTL=128
Reply from 172.17.1.4: bytes=32 time=10ms TTL=128
Reply from 172.17.1.4: bytes=32 time<1ms TTL=128
Reply from 172.17.1.4: bytes=32 time<1ms TTL=128

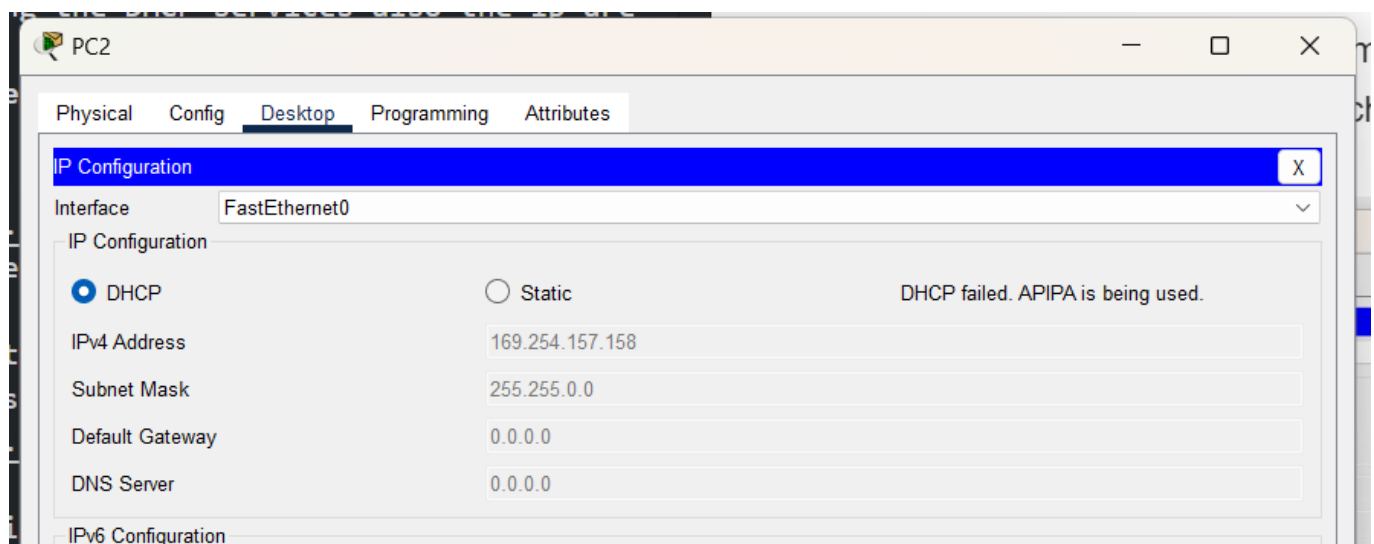
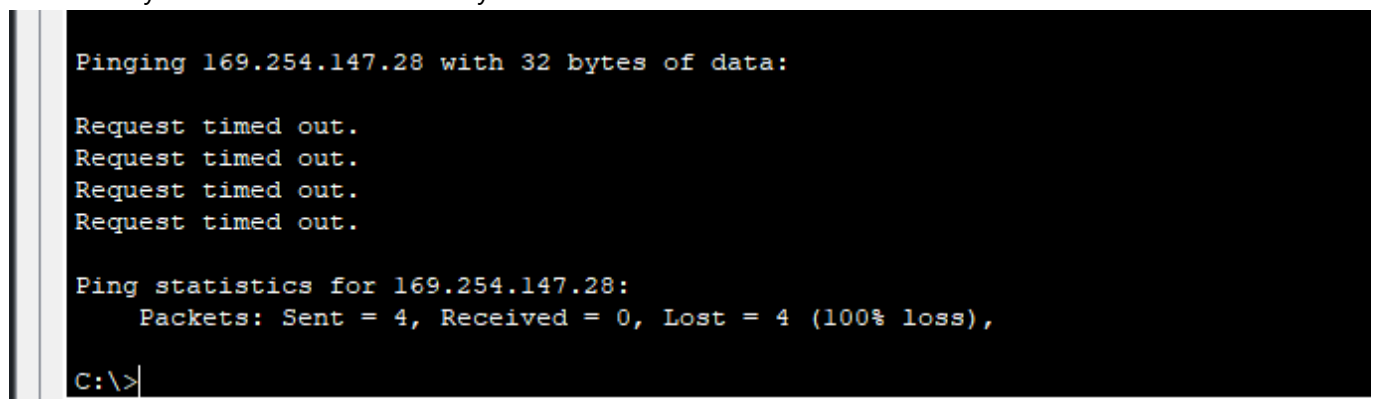
Ping statistics for 172.17.1.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 10ms, Average = 2ms

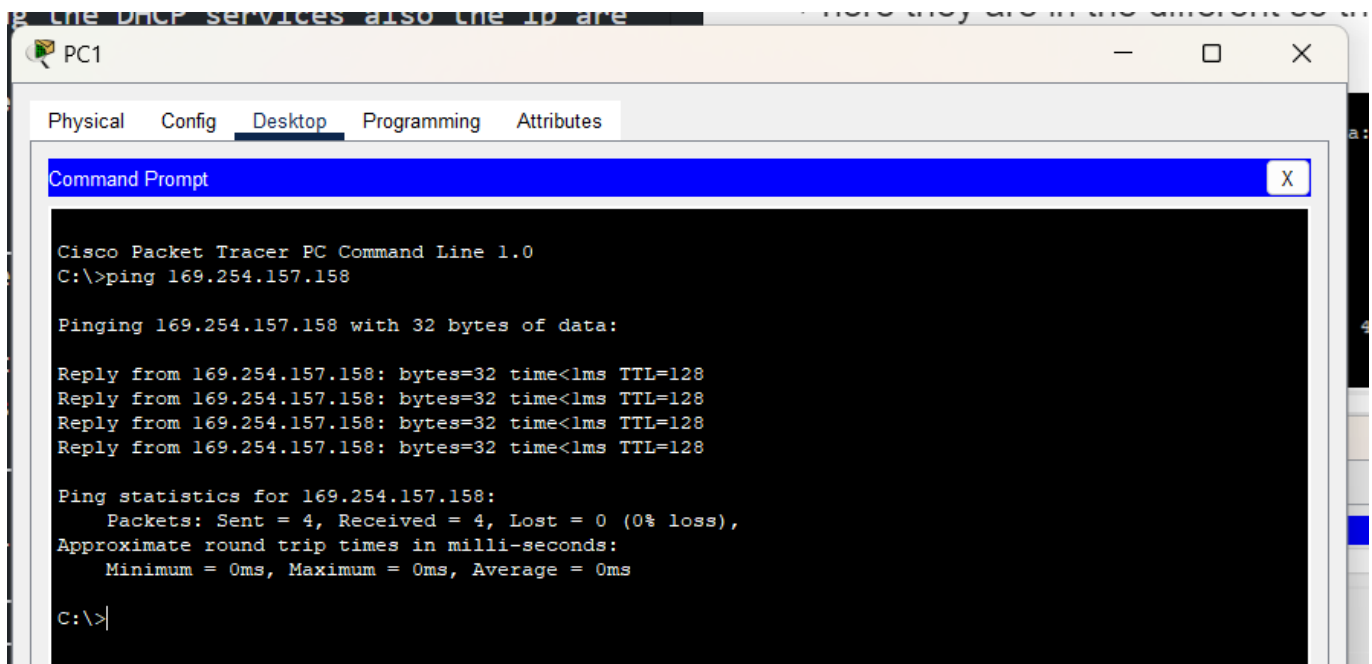
C:\>
```

→ even after the disable of the dhcp connection also they can communicate if we not change the mode to static → if we enable the static and then changed to dhcp api pa will be used as the ip



→ here they are in the different so they will be connected and communicated





→ here in the pc1 and pc2 the ips are changed to the apipa so that they can communicate

- The conclusion is that if we not change the mode to static then all will be communicated if we change them they will be getting the apipa ip so that the network will change so that they cant communicate. here we can see in the pc0 and pc1 they are not communicating and in the pc1 and pc2 they are using apipa so that they can communicate