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Section: BCS-5B

Course Name: Computer Networks LAB

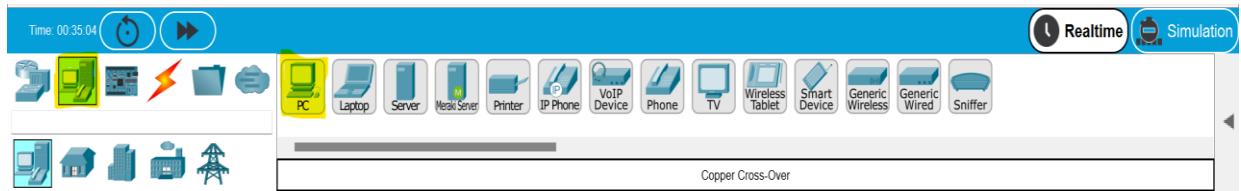
Submitted to : Mam Hurmat Hidayat

Submitted on : 9/2/2022

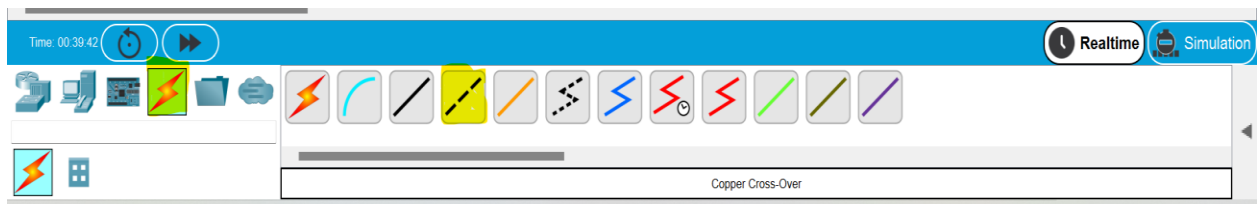
LAB 02

Task 01

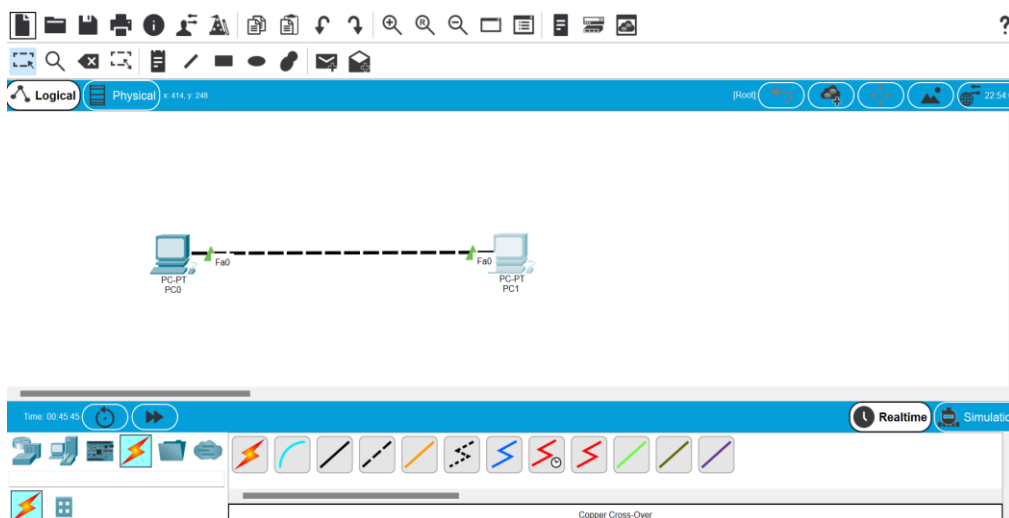
Step 1: Install CISCO packet tracer. After installing it, open it and go to bottom. Click on end devices and select PC.



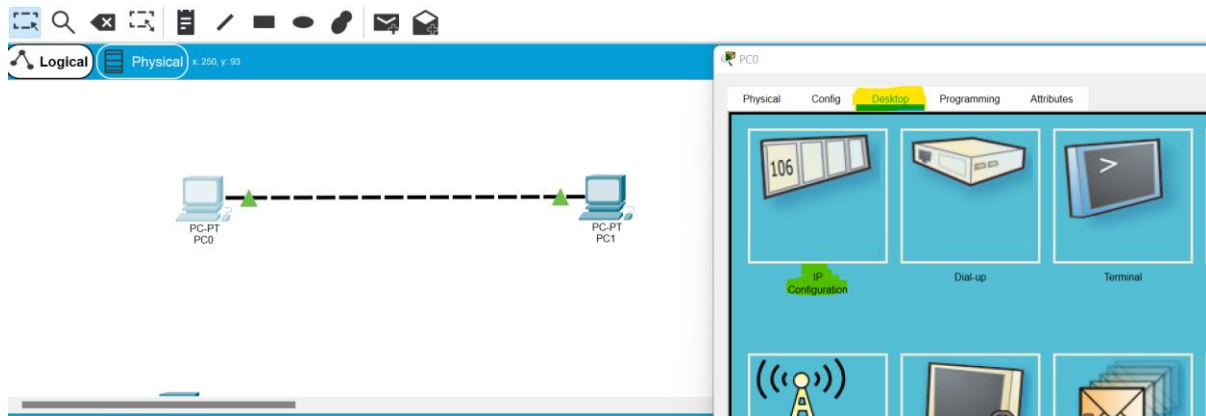
Step 2: For connecting both PC's we will select cross over cable from connection options.



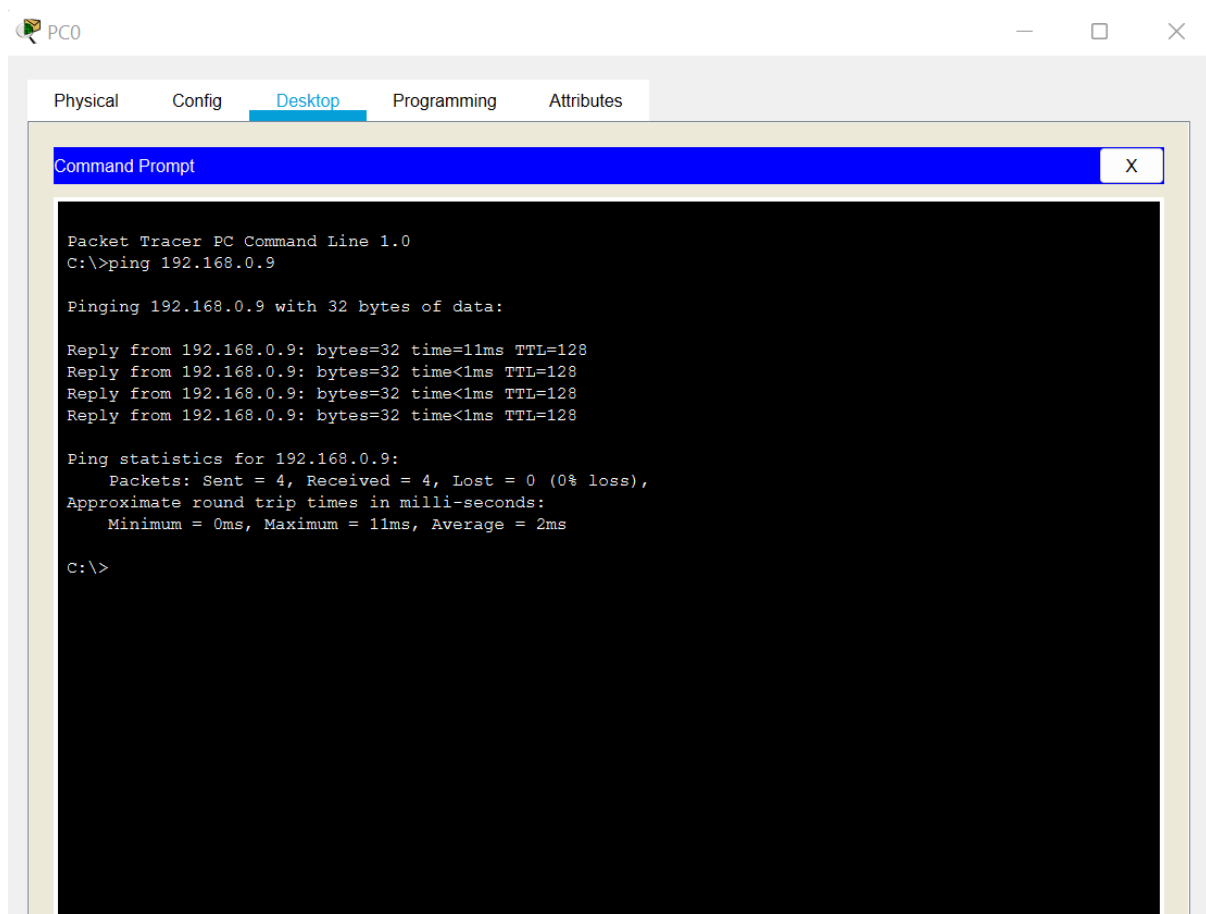
Step 3: After selecting the wire, we will select the first PC (PC0) and select FastEthernet0. Then, drag the wire to the other PC (PC1) and select FastEthernet0.



Step 4: Now, we will assign the IP address to both the PCs (PC0 & PC1). We will click on PC0 and box will appear, we will go to desktop and go to ip configuration and will set the ip address and subnet mask.

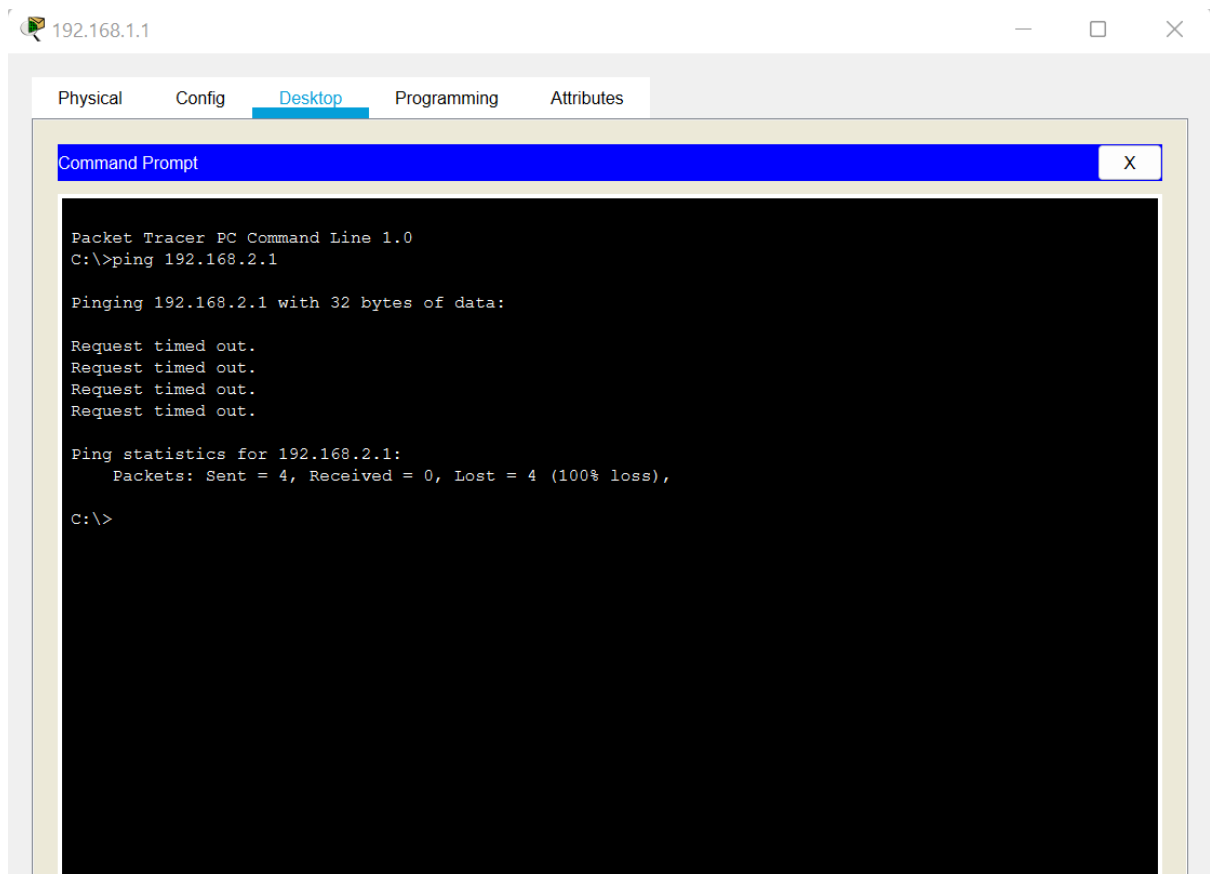


Step 5: Now we will Verify the connection by pinging the IP address of any host in PC0.



Task 2

Configure PC1 as follow: IPv4: 192.168.1.1 Subnet mask: 255.255.255.0 and PC2 as: IPv4: 192.168.2.1 Subnet mask: 255.255.255.0

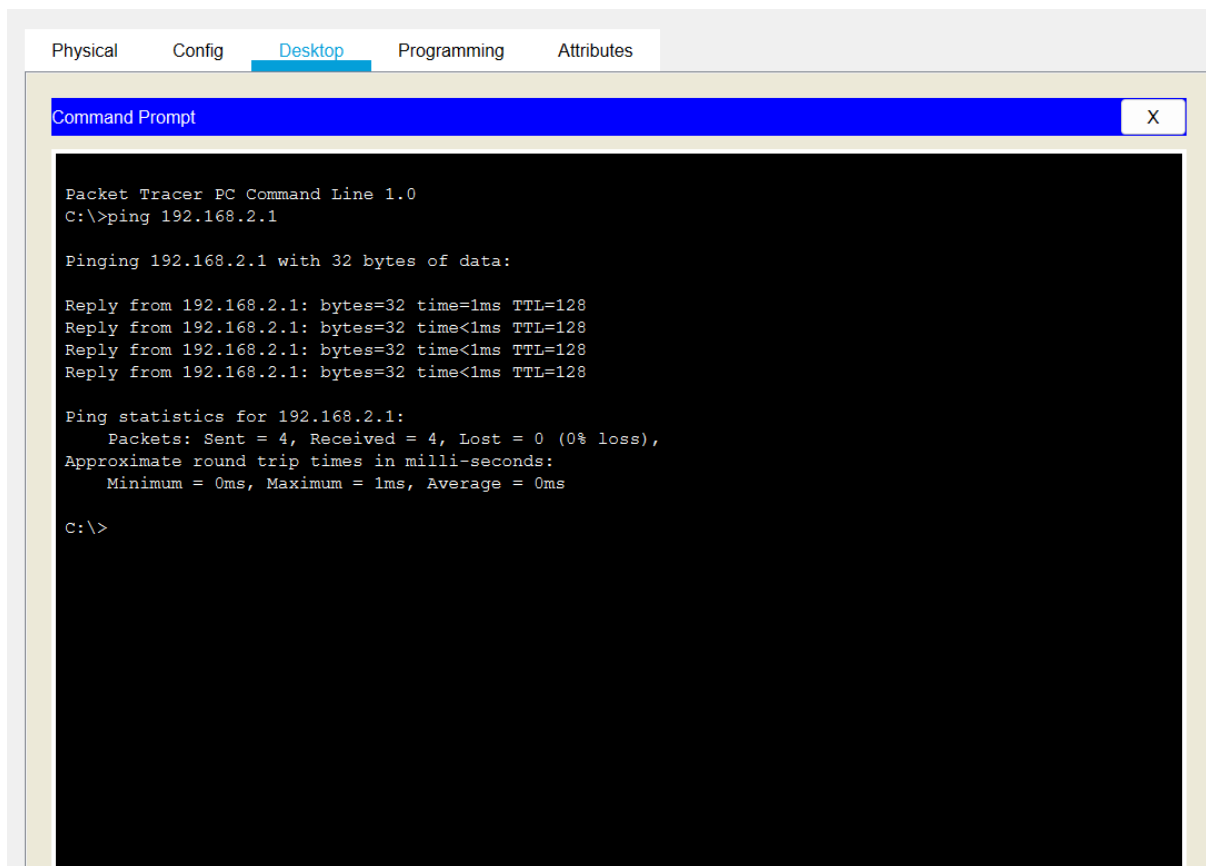


The result coming out is Request timed out is because of change of segment in network ID. PC1 has IPv4: 192.162.1.1 PC2 has IPv4: 192.168.2.1 and subnet mask 255.255.255.0 so it means that first three segments are of network ID and last one of host id so Both PC's don't have same network ID which is why the command sent on the network is not received and it is giving us Request Timed out.

Task 3

Configure PC1 as follow: IPv4: 192.168.1.1 Subnet mask: 255.255.0.0

And PC2 as: IPv4: 192.168.2.1 Subnet mask: 255.255.0.0



The screenshot shows the Packet Tracer PC Command Line interface for PC1. The 'Desktop' tab is selected. The command prompt shows the execution of the command 'ping 192.168.2.1'. The output indicates that the ping was successful, with 4 packets sent and received, and a 0% loss rate. The round trip times are all 0ms.

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.2.1

Pinging 192.168.2.1 with 32 bytes of data:

Reply from 192.168.2.1: bytes=32 time=1ms TTL=128
Reply from 192.168.2.1: bytes=32 time<1ms TTL=128
Reply from 192.168.2.1: bytes=32 time<1ms TTL=128
Reply from 192.168.2.1: bytes=32 time<1ms TTL=128

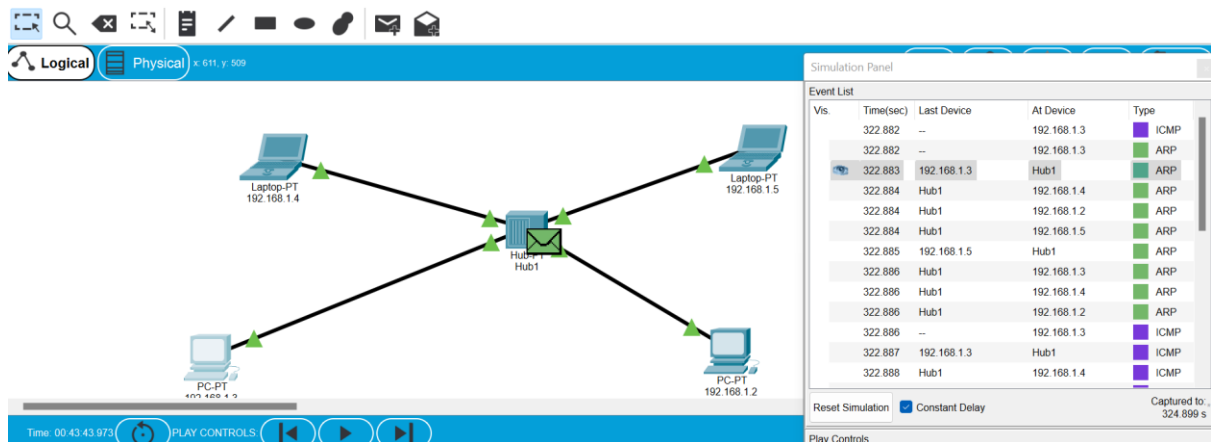
Ping statistics for 192.168.2.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```

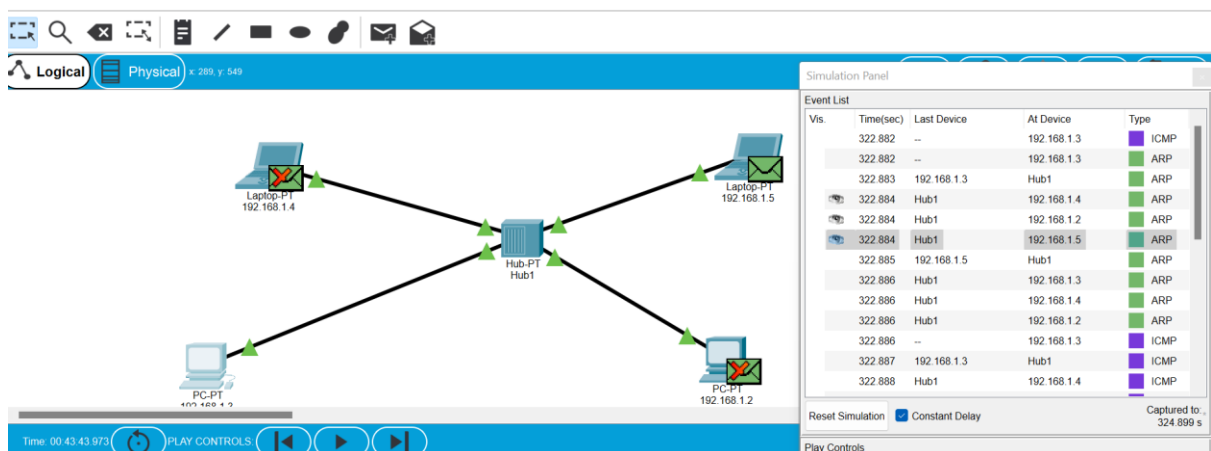
The Network ID is same This is why the command sent on the network is received by the other PC.

HUB Task

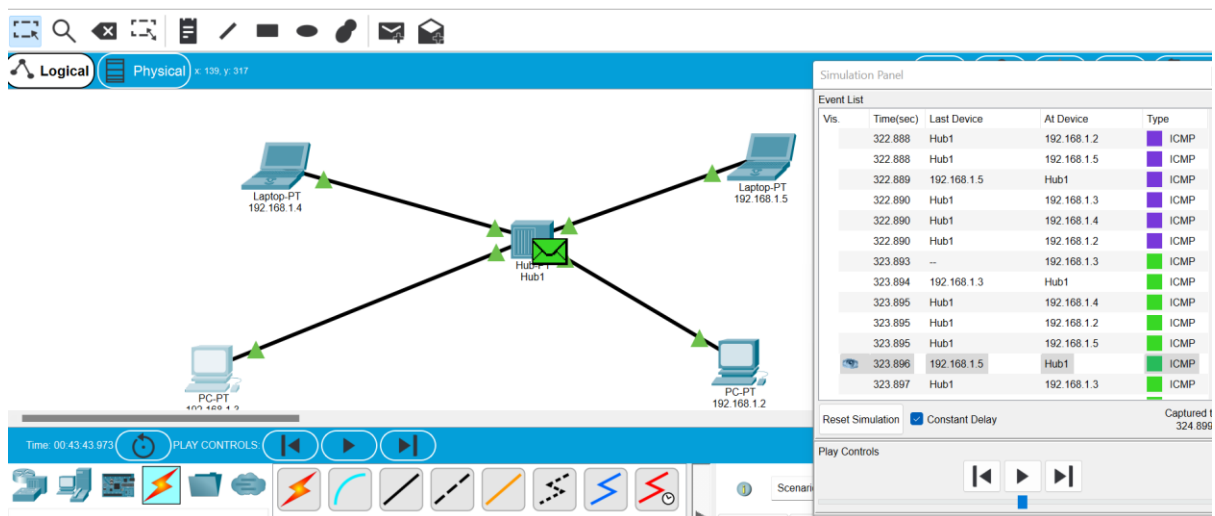
1 First of all the message will be sent to hub.



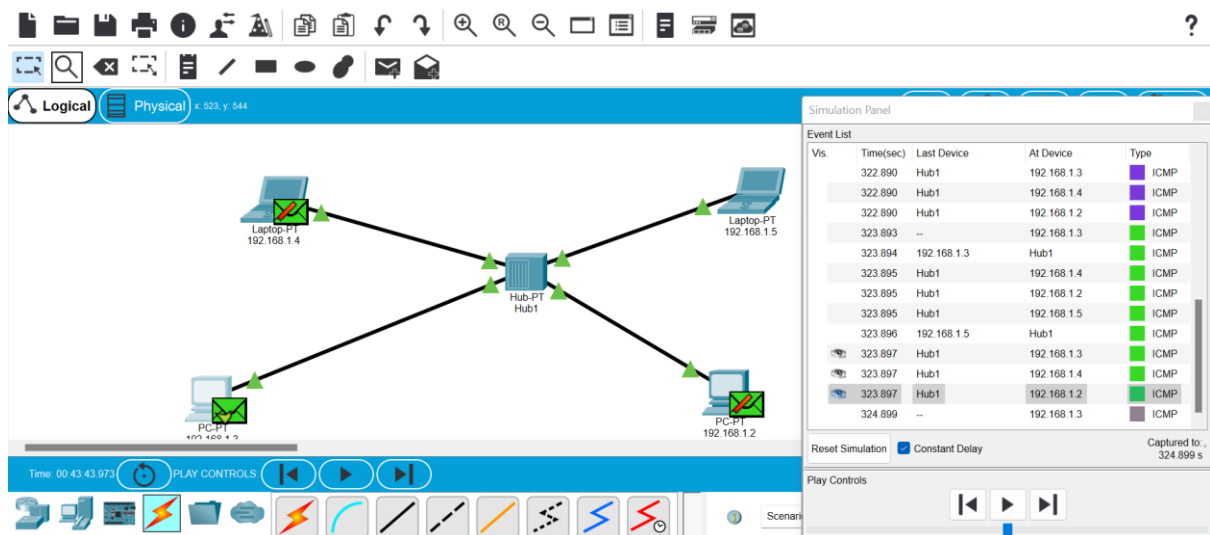
2 Hub will broadcast that data to each connection on the network. But will be accepted by the one whose address is given.



3 Then the receiver will give acknowledgment and send reply to hub.

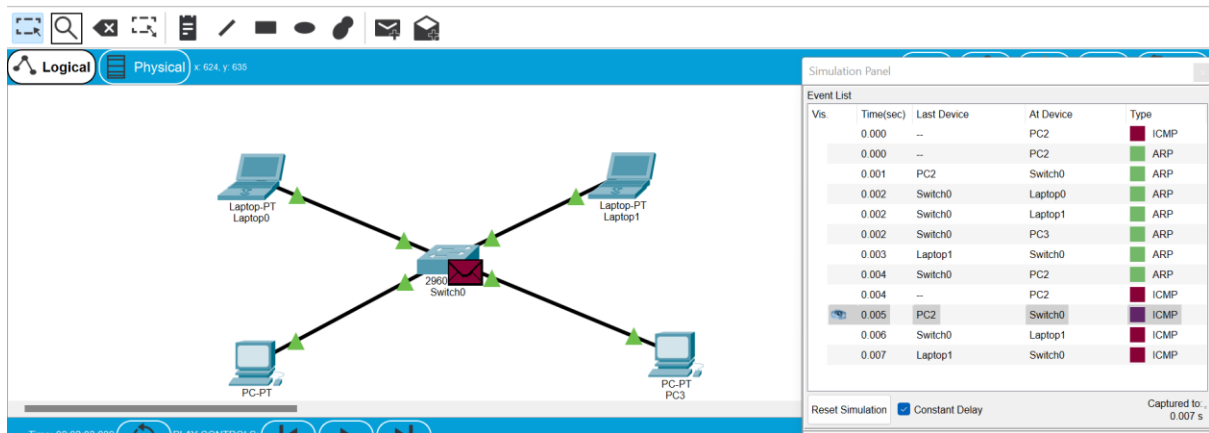


4 Then hub will forward the data to all the ports except that has sent the data. All other will reject the data except one whom the reply was sent.

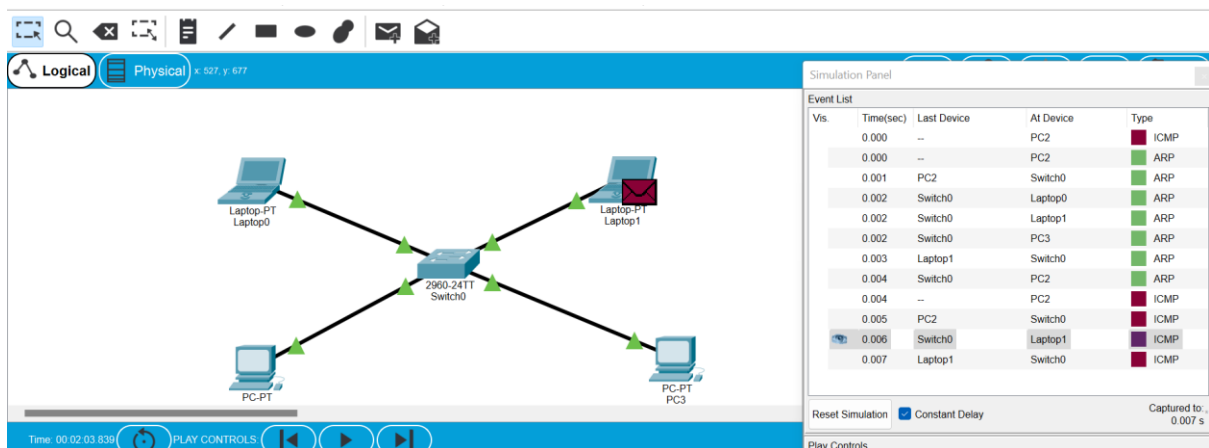


Switch Task

1 First of all the message will be sent to switch.



2 switch will send that data to that connection whose mac address is in the header because switch is smart device and it stores the mac address of all the connection which are connected to it.



The End

