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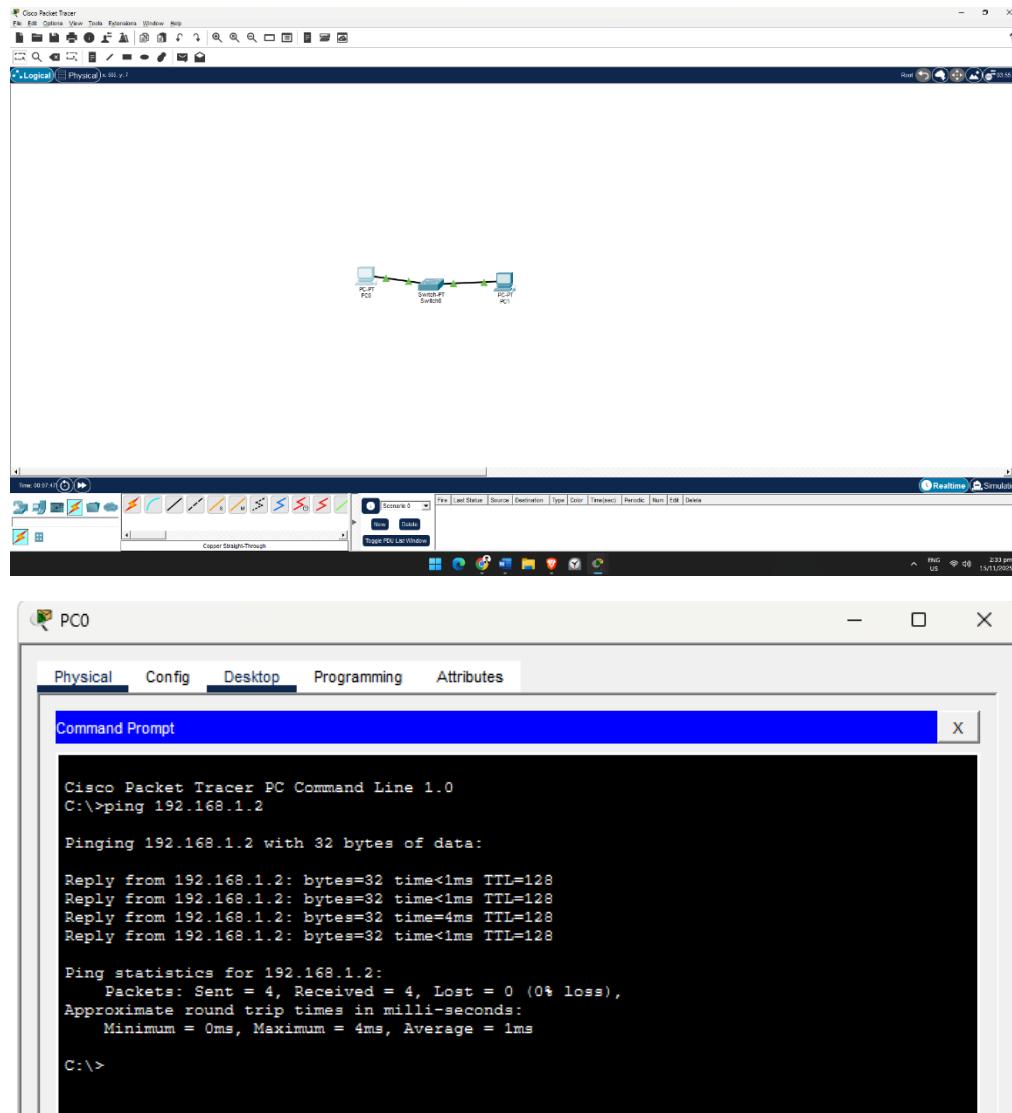
Date: 15/11/25

Course & Block: BSIT-3B

Subject: Networking 1

SIMULATING LAN CONNECTIONS USING STRAIGHT-THROUGH AND CROSSOVER CABLES IN CISCO PACKET TRACER

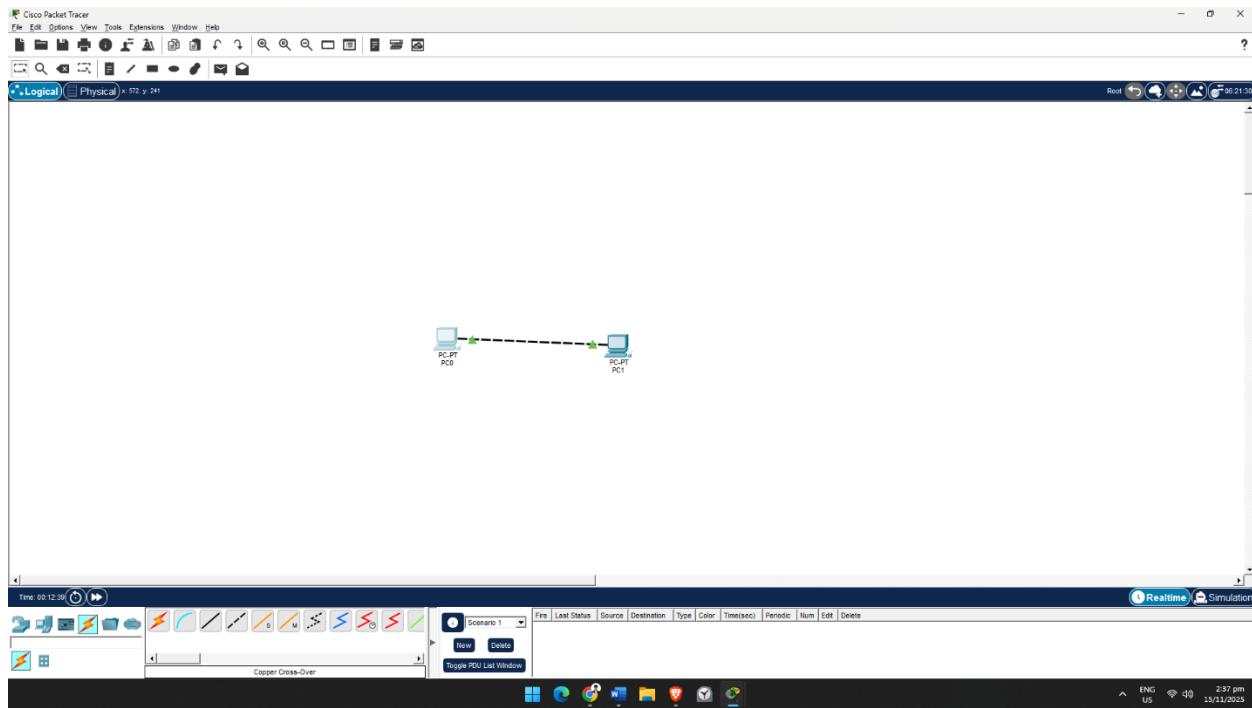
Task 1



OBSERVATION

Ping replies successful with zero loss. PC0 and PC1 can communicate through the switch using straight-through cable

Task 2



```
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time<1ms TTL=128

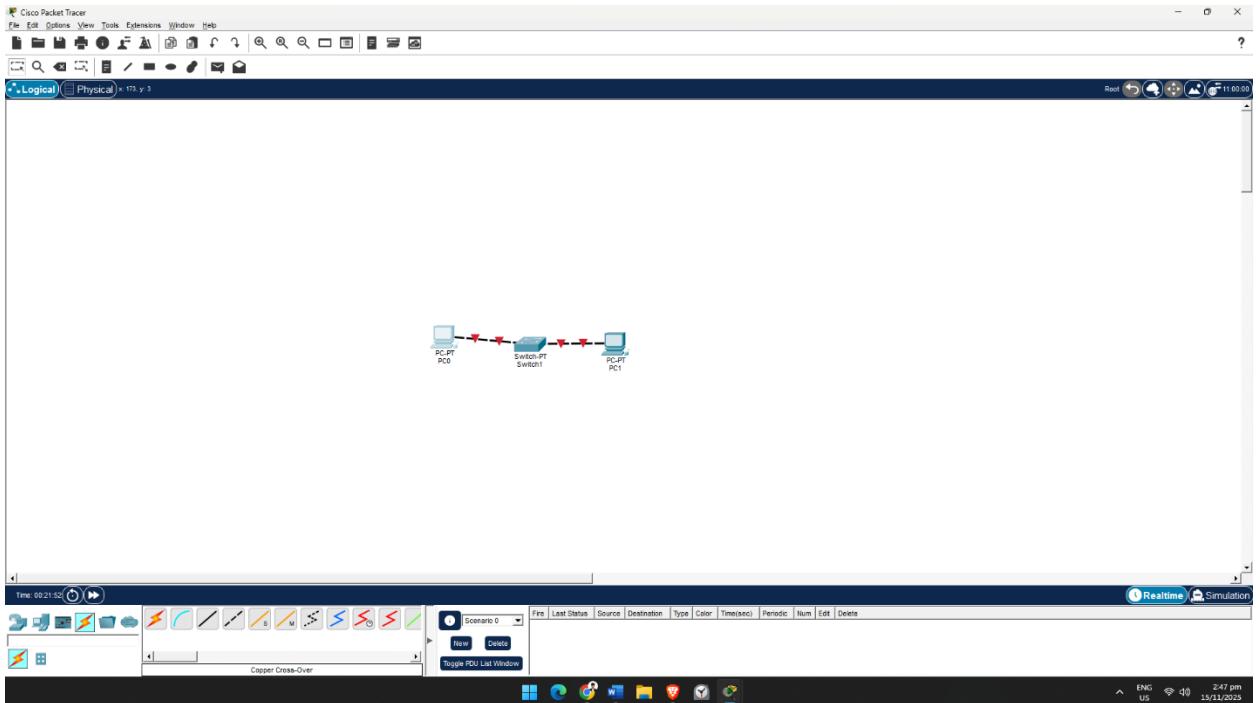
Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

OBSERVATION

Ping is successful. We can see that packet sent is 4 and received is 4 and has zero loss. Using crossover cable in a direct pc connection works perfectly and it's the best type of cable to use for connecting similar devices.

Task 3

1. Recreate **Scenario A** (PC0 → Switch0 → PC1) but use a **Copper Cross-Over** cable instead of straight-through.



```
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

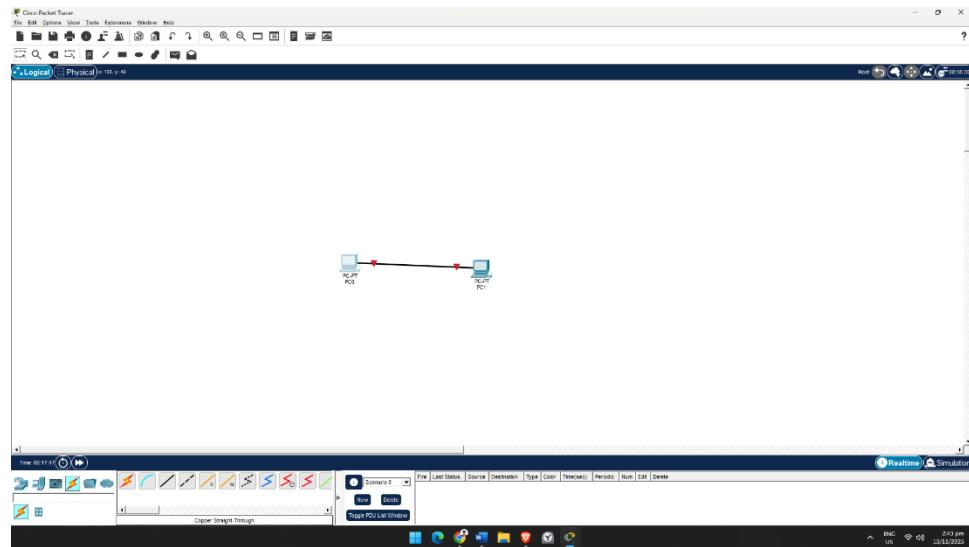
Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\>
```

OBSERVATION

By using the same scenario but with different cable type causes an error. We can see in the console that 4 packets were sent and received 0, and the lost was 4

Task 3

2. Recreate **Scenario B** (**PC0** → **PC1**) but use a **Copper Straight-Through** cable instead of crossover.



```
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\>
```

OBSERVATION

Using straight through PC cannot communicate because straight-through cables are not meant for similar devices

Task 4. Post activity questions

1. Why did the straight-through cable work in the switch setup but not in a PC-to-PC setup?

The straight-through cable work in the switch setup because that cables are designed to connect different devices which is pc0 connected to the switch. However, it doesn't work with pc to pc connection because it is a similar device.

2. What happens if you use a straight-through cable between two PCs?

The device will not communicate. We can see that in task 3 no.2 result. And the reason they will not be able to communicate was because both transmit and receive pins are connected to the wrong counterparts.

3. What happens if you use the wrong cable type between two similar devices?

Communication will fail. Using the wrong cable type between two similar devices can lead to a non-functional connection

4. What command is used to verify network connectivity in Packet Tracer?

The command: ping

The ping command is used to verify network connectivity in Packet Tracer