



# **LOYALIST COLLEGE IN TORONTO**

## **Packet Tracer lab 2: Interfaces configuration**

**Course Code: CLOD1001**

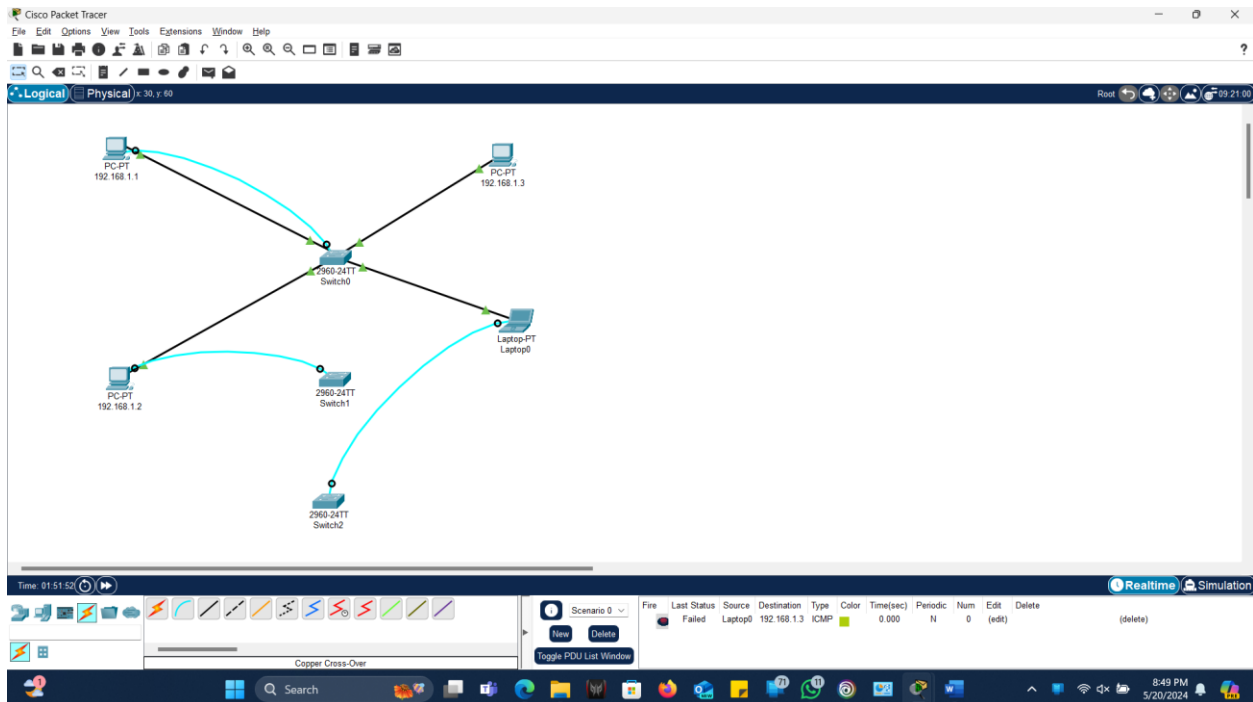
**Student Name: Seruban Peter Shan**

**Student ID: 500235797**

**Course Code: CLOD1001**

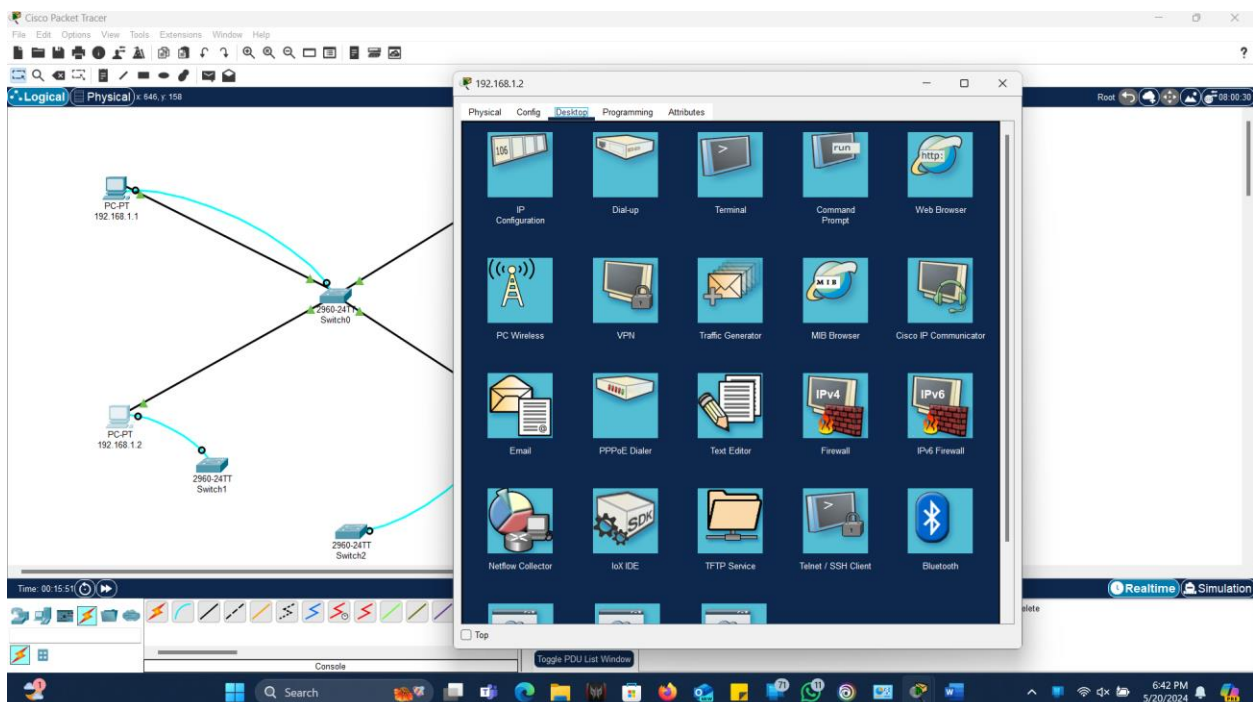
**Instructor Name: Sergio Loza**

## Configure Packet Tracer according to Question.

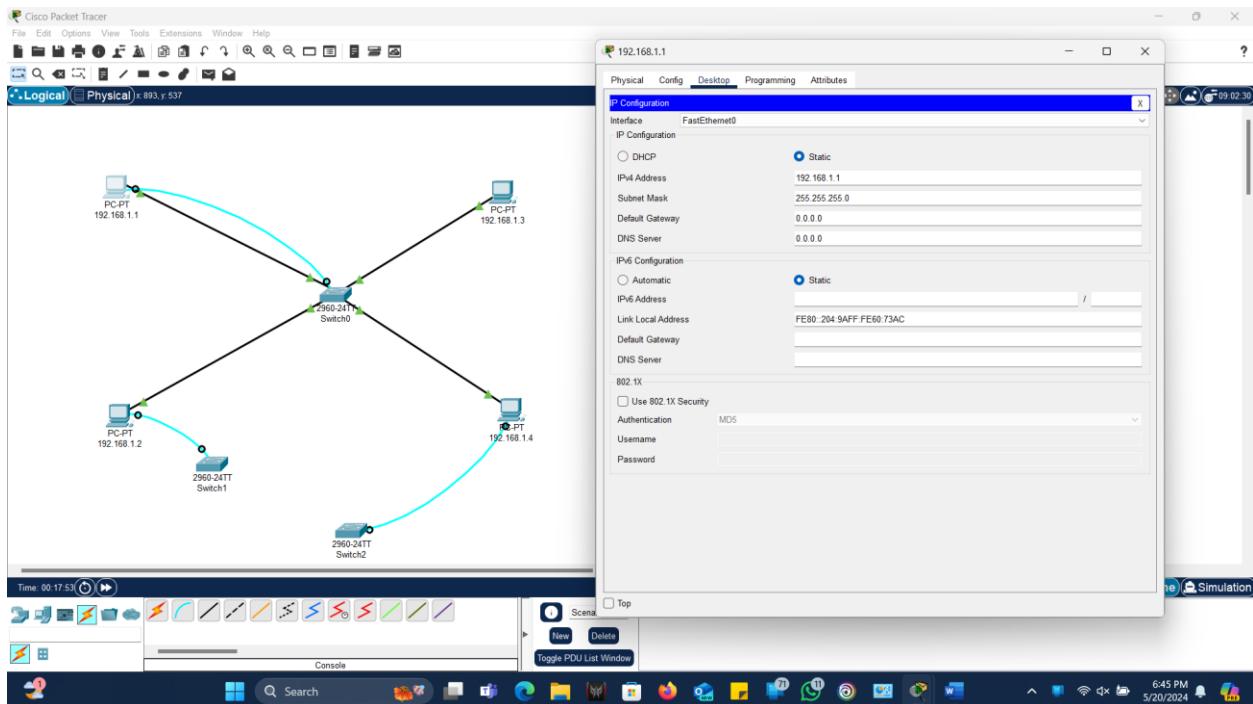


3 PCs with a laptop and 3 switches connected to the console to 2 PCs and 1 laptop as the question shows.

## Setting up IPv4

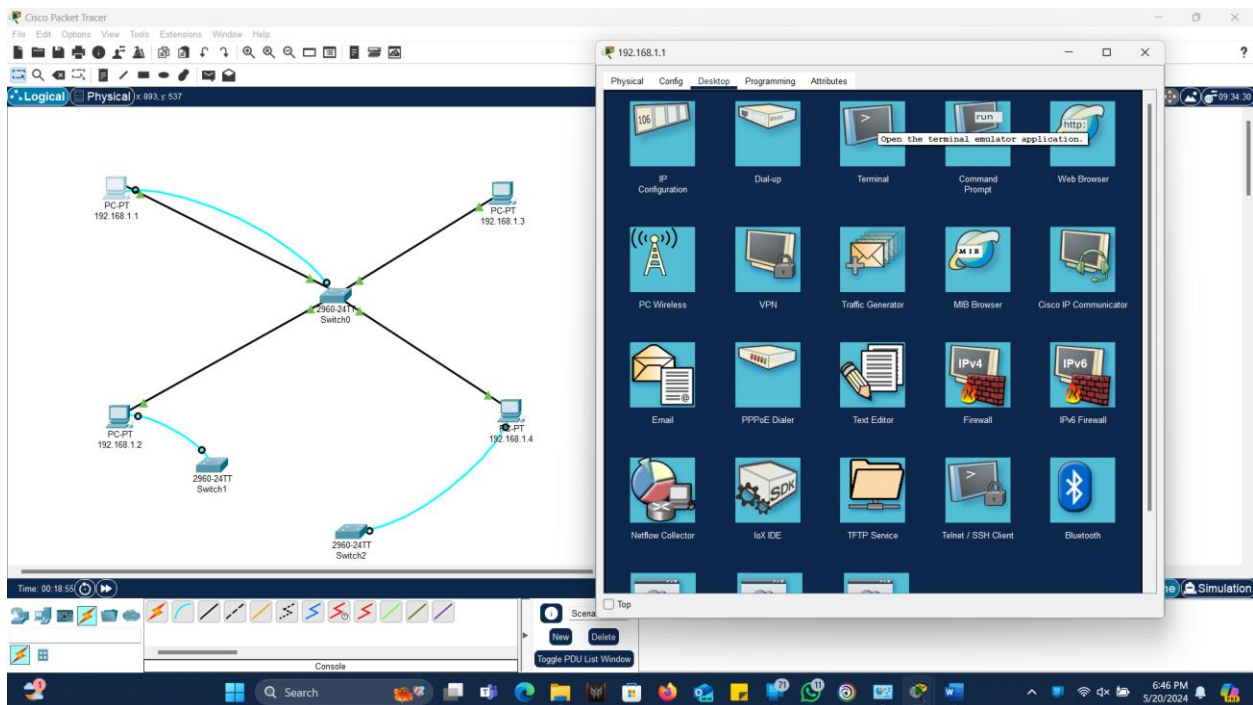


To set up the IP address click on one PC/laptop on the desktop tab and click IP configuration

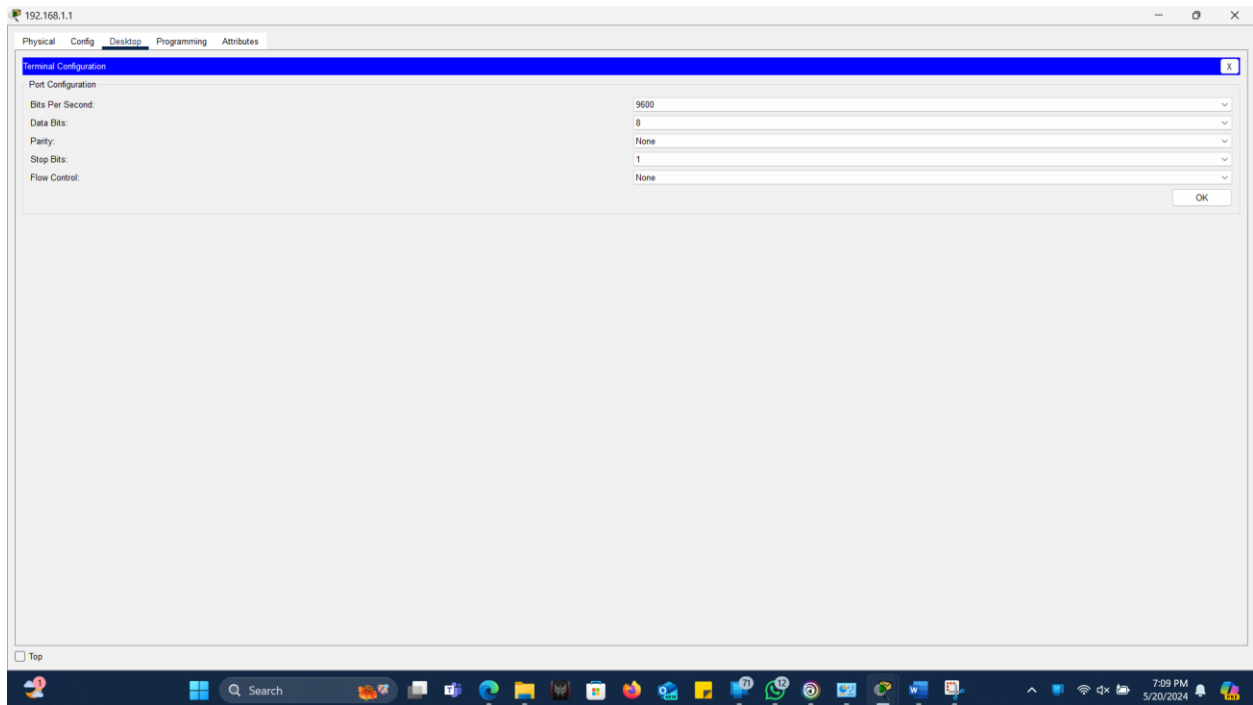


Then set the IP address and subnet. For all endpoint devices

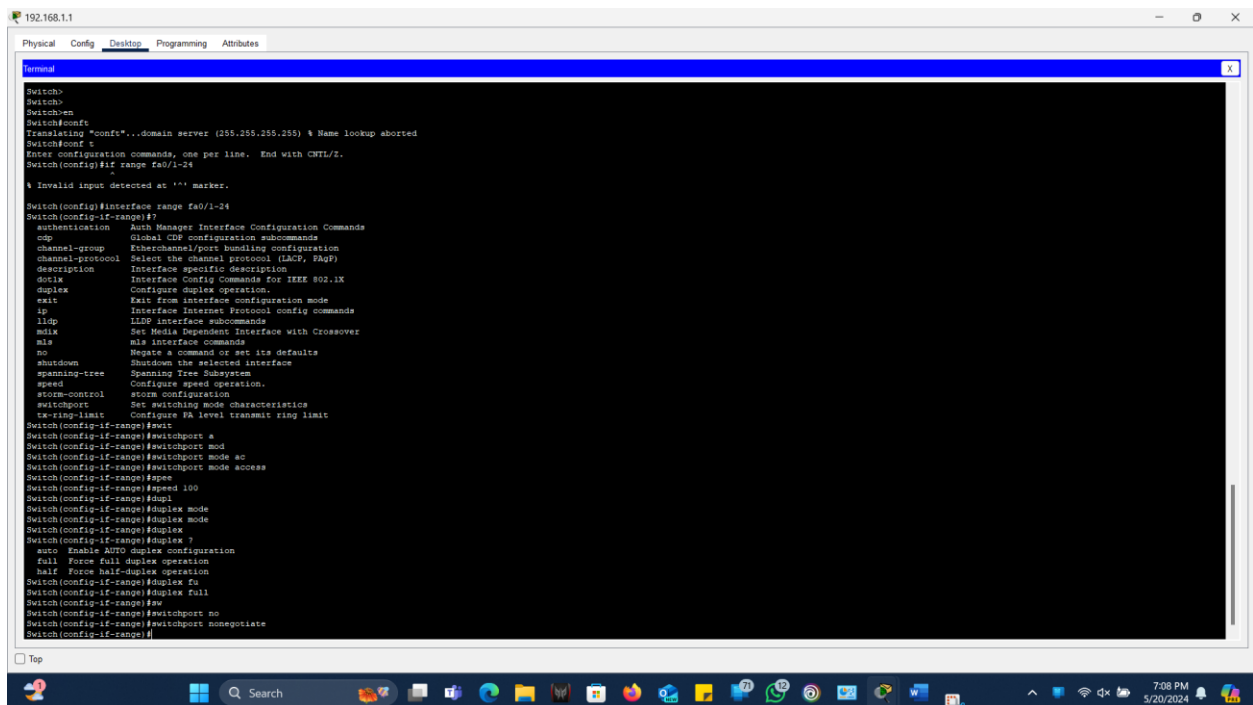
## TASK 1: Setup switch 0



To access the switch 0 console, we go to pc 1 desktop and click on the terminal



Click ok to connect to the switch console.



To access the interface configuration mode we need to change from User Mode(**enable**)>Privileged Mode (**Configure terminal**)>Configure Mode. (I used the short word method which Cisco routers recognize).

```
Switch>en
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
```

Now to access the interface configuration we can use **interface fastEthernet 0/1** but since we need to access all the ports we can use (I used the short word method which Cisco routers recognize.)

```
Switch(config)#in range fa0/1-24
Switch(config-if-range)#
```

This will make changes to all 24 ports

1. To set port to access port.

```
Switch(config-if-range) #switchport mode access
```

2. To set the port speed to 100Mbps/s

```
Switch(config-if-range) #speed 100
```

3. To set the duplex mode to full

```
Switch(config-if-range) #duplex full
```

4. To Disable Auto Negotiation (Even though these settings are disabled automatically as we change the bandwidth speed and Duplex mode-using this we make sure to stop dynamic trunking)

```
Switch(config-if-range) #switchport nonegotiate
```

## TASK 2: Identify why Laptop (PC4) can't communicate with other devices

So to find out why the Laptop can't communicate with other systems we need to first check the VLANs and its associated ports that we use we check if they are in the same vVlan because switch has broadcast domain and when I looked in to the ports assigned to Vlan 1 even fastEthernet 0/4 is still available in the Vlan 1 that when I came to conclusion that there was so many broadcast messages which is called broadcast storm then it will shut down the last port

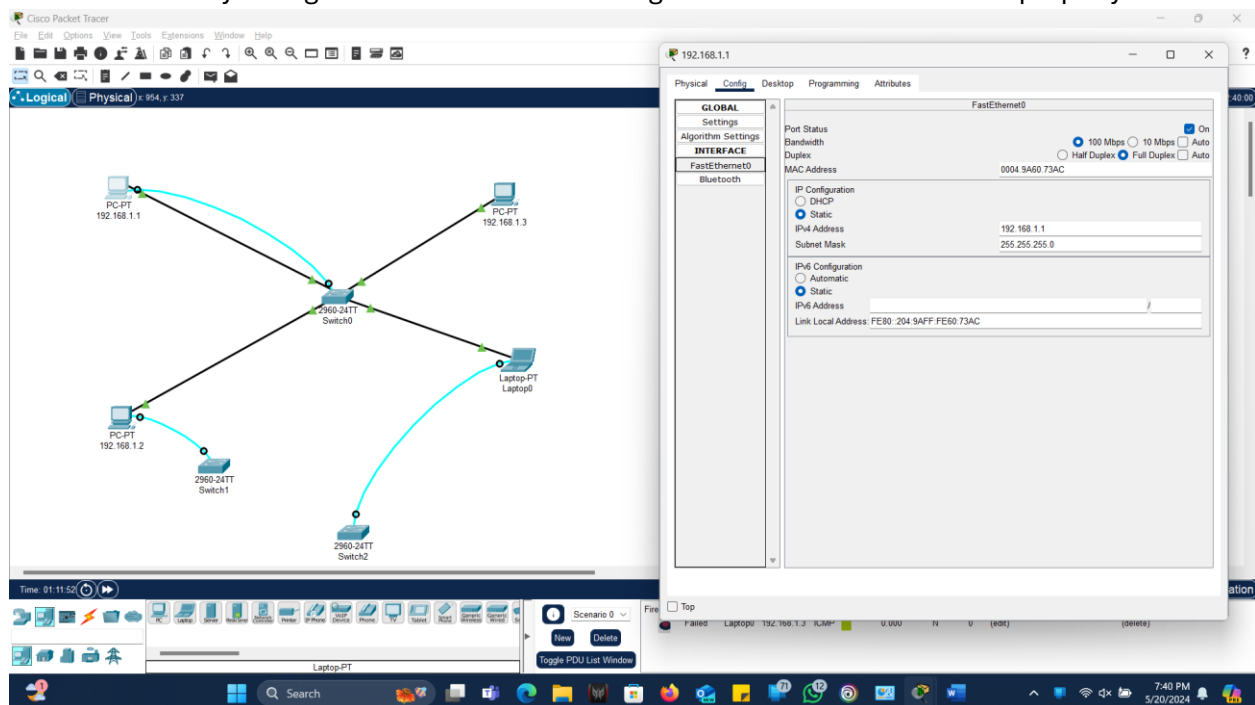
The image shows a Cisco Packet Tracer network diagram and a terminal window. The network diagram on the left shows four PCs (PC-PT 192.168.1.1, 192.168.1.2, 192.168.1.3, 192.168.1.4) connected to a central switch (2960-24TT Switch0). The switch is also connected to a laptop (Laptop-PT Laptop0) and another switch (2960-24TT Switch1). The terminal window on the right shows the configuration of the switch, including the creation of VLANs 1002 through 1005 and the assignment of ports to these VLANs. The terminal output shows that the switch is in a broadcast storm state, with the message "Invalid input detected at \*\*\* marker." appearing multiple times. The terminal also shows the status of the VLANs and the ports assigned to them.

```
Switch(config)#interface range fastEthernet 0/1
Switch(config-if-range)#switchport nonegotiate
Switch(config-if-range)#exit
Switch(config)#
Switch(config)#
Switch(config)#
Switch(config)#
Switch(config)#show vlan
% Invalid input detected at *** marker.
Switch(config)#show vlan
% Invalid input detected at *** marker.
Switch(config)#exit
Switch#
Switch#show vlan
VLAN Name      Status      Ports
-----
1    default     active      Fa0/1, Fa0/2, Fa0/3, Fa0/4,
                    Fa0/5, Fa0/6, Fa0/7, Fa0/8,
                    Fa0/9, Fa0/10, Fa0/11, Fa0/12,
                    Fa0/13, Fa0/14, Fa0/15, Fa0/16,
                    Fa0/17, Fa0/18, Fa0/19, Fa0/20,
                    Fa0/21, Fa0/22, Fa0/23, Fa0/24,
                    Gig0/2
1002 fddi-default    active
1003 token-ring-default active
1004 fddi-default    active
1005 token-ring-default active
VLAN Type  SAID      MTU    Parent RingNo BridgeNo Stp  BrdgMode Trans1 Trans2
-----
1    etnet  100001    1500   -       -       -   -       0       0
1002 fddi    101002    1500   -       -       -   -       0       0
1003 tr     101003    1500   -       -       -   -       0       0
1004 fdnet 101004    1500   -       -       -   ieee    0       0
1005 trnet  101005    1500   -       -       -   ibm     0       0
--More--
```

But after you do manual negotiations like setting up the Bandwidth and Duplex settings, we must be able to connect it back as we stop auto negotiations.

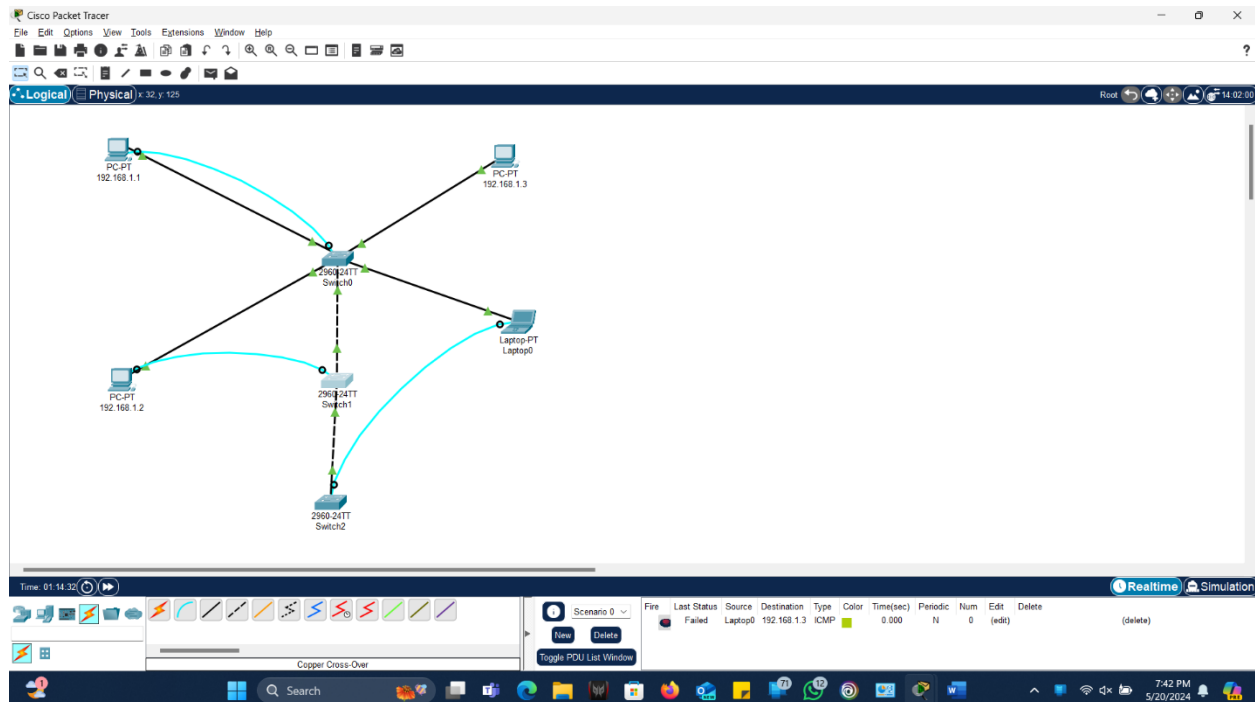
The configuration was successful because we set the switch to non-negotiate mode and manually specified the speed and duplex settings. Since auto-negotiation is disabled, the endpoint device will not receive any information about the speed and duplex settings from the switch.

This means that the switch port is configured with a fixed speed of 100 Mbit/s and full duplex mode, and it will not attempt to negotiate these settings with the connected device. The connected device must be manually configured to match these settings for the connection to work properly.



## TASK 3: Connect all switches with the appropriate Cabel type

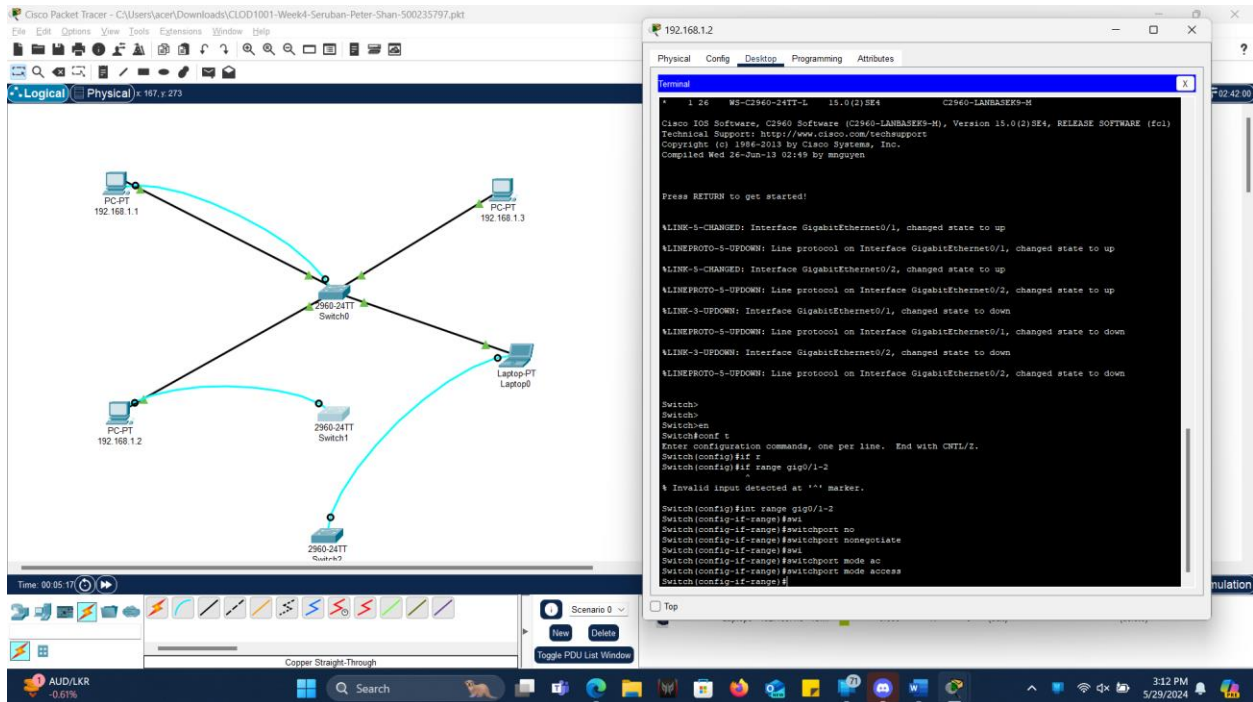
The cable I chose is crossover cable the reason I chose crossover cable, two same devices may have the same receiving and transmitting pins which will make the data to collide and create a data loss so in that case it's better to cross over cables to prevent this issue with same device connections



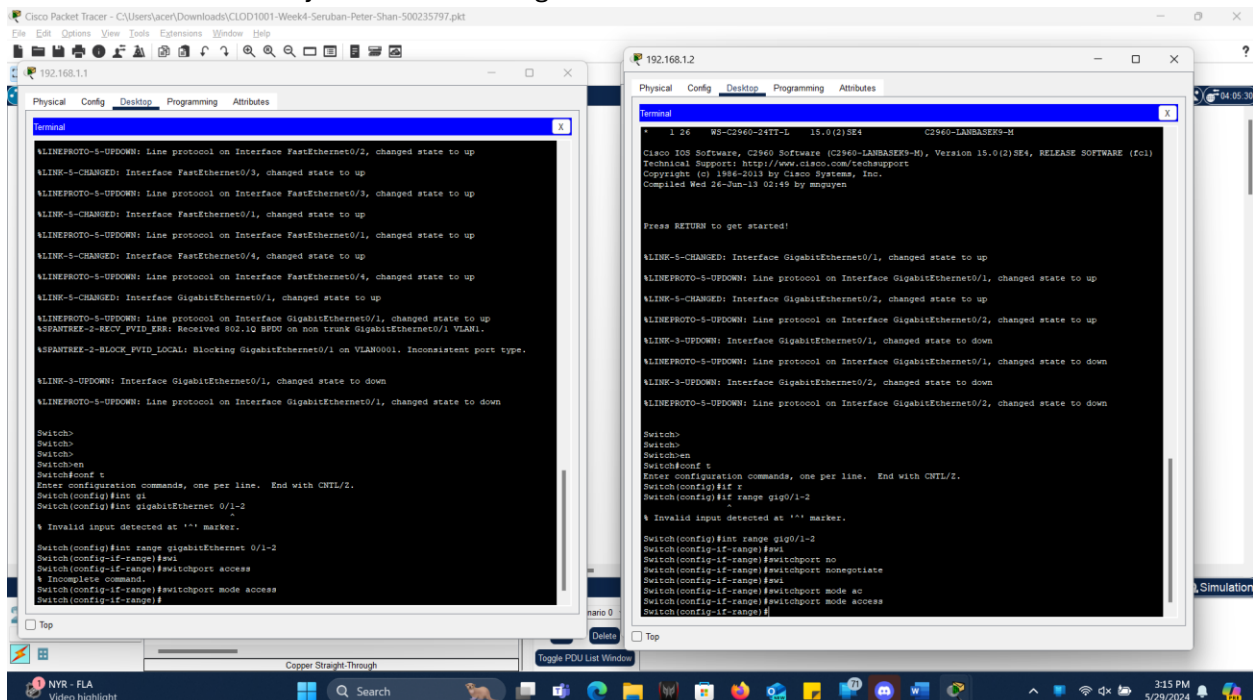


## TASK 4:Setting Gigabit cable to Trunk with no negotiation

When we do this, I remove my Switch Gigabit cables as we need to disable negotiation. Later I configure switch 1 pc 2(192.168.1.2) to nonegotiate for both gigabit ports and change the port mode to access.



I made sure that the other switch is also in access mode as I made changes to it before I wrote this document to check if my code was working.



The screenshot displays the Cisco Packet Tracer interface. On the left, a network diagram shows a central switch (2960-24T1) connected to four PCs (192.168.1.1, 192.168.1.2, 192.168.1.3, and 192.168.1.4), a laptop (Laptop0), and another switch (2960-24T1). The bottom right corner of the main window shows a 'Scenario 0' button and a 'Toggle POE List Window' button. Overlaid on the right side is a terminal window titled '192.168.1.2'. The terminal output shows commands being entered at the PC prompt, such as 'interface GigabitEthernet0/2', 'shutdown', 'no shutdown', and 'exit'. The status of the interface changes from 'DOWN' to 'UP' after the 'no shutdown' command. The terminal also shows the configuration of the switch, including setting the mode to 'access' and 'trunk' for different interfaces. The bottom status bar indicates 'Copper Cross-Over' and 'Time: 00:10:49'.

Wireshark Packet Tracer - CS-Users\laciur Downloads\CLOD1001-Week4-Setup-Peter-Shan-20235797.pkt

File Edit Options View Tools Favorites Windows Help

192.168.1.1

Physical Config Desktop Programming Attributes

Terminal

```

VLINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up
VLINE-5-CHANGED: Interface FastEthernet0/4, changed state to up
VLINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/4, changed state to up
VLINE-5-CHANGED: Interface GigabitEthernet0/1, changed state to up
VLINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up
%SPANTREE-2-RECV_PVID_ERR: Received 802.1Q BPDU on non trunk GigabitEthernet0/1 VLAN1.
%SPANTREE-2-BLOCK_PVID_LOCAL: Blocking GigabitEthernet0/1 on VLAN0001. Inconsistent port type.

VLINE-3-UPDOWN: Interface GigabitEthernet0/1, changed state to down
VLINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to down

Switch>
Switch>
Switch>
Switch>en
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#int gi
Switch(config)#int gigabitEthernet 0/1-2
% Invalid input detected at '' marker.

Switch(config)#int range gigabitEthernet 0/1-2
Switch(config-if-range)#swi
Switch(config-if-range)#switchport access
% Duplicate command.
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#
VLINE-5-CHANGED: Interface GigabitEthernet0/1, changed state to up
VLINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up
%SPANTREE-2-RECV_PVID_ERR: Received 802.1Q BPDU on non trunk GigabitEthernet0/1 VLAN1.
%SPANTREE-2-BLOCK_PVID_LOCAL: Blocking GigabitEthernet0/1 on VLAN0001. Inconsistent port type.

```

Top

Copper Cross-Over

Toggle PDU List Window

Laptop0

Physical Config Desktop Programming Attributes

Terminal

```

1 192.168.1.1 192.168.1.1 15.0(1)SE4 C2960-LANBASEK9-M
Cisco IOS Software, C2960 Software (C2960-LANBASEK9-M), Version 15.0(2)SE4, RELEASE SOFTWARE (fc1)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2015 by Cisco Systems, Inc.
Compiled Wed 26-Jun-13 02:49 by amguney

Press RETURN to get started!

VLINE-5-CHANGED: Interface GigabitEthernet0/2, changed state to up
VLINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/2, changed state to up
VLINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/2, changed state to down
VLINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/2, changed state to up
VLINE-3-UPDOWN: Interface GigabitEthernet0/2, changed state to down
VLINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/2, changed state to down

Switch>
Switch>
Switch>
Switch>en
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#int rang
Switch(config)#int range gi
Switch(config)#int range gigabitEthernet 0/1-2
Switch(config-if-range)#swi
Switch(config-if-range)#switchport mode
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#
VLINE-5-CHANGED: Interface GigabitEthernet0/2, changed state to up
VLINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/2, changed state to up
%SPANTREE-2-RECV_PVID_ERR: Received 802.1Q BPDU on non trunk GigabitEthernet0/2 VLAN1.
%SPANTREE-2-BLOCK_PVID_LOCAL: Blocking GigabitEthernet0/2 on VLAN0001. Inconsistent port type.

```

Top

Simulation

3:22 PM 5/29/2024

[illegible]