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Class: SE Computers

Batch: B

## CEL 51, DCCN, Monsoon 2020

### Lab 4: Prototyping a Network

#### Objective:

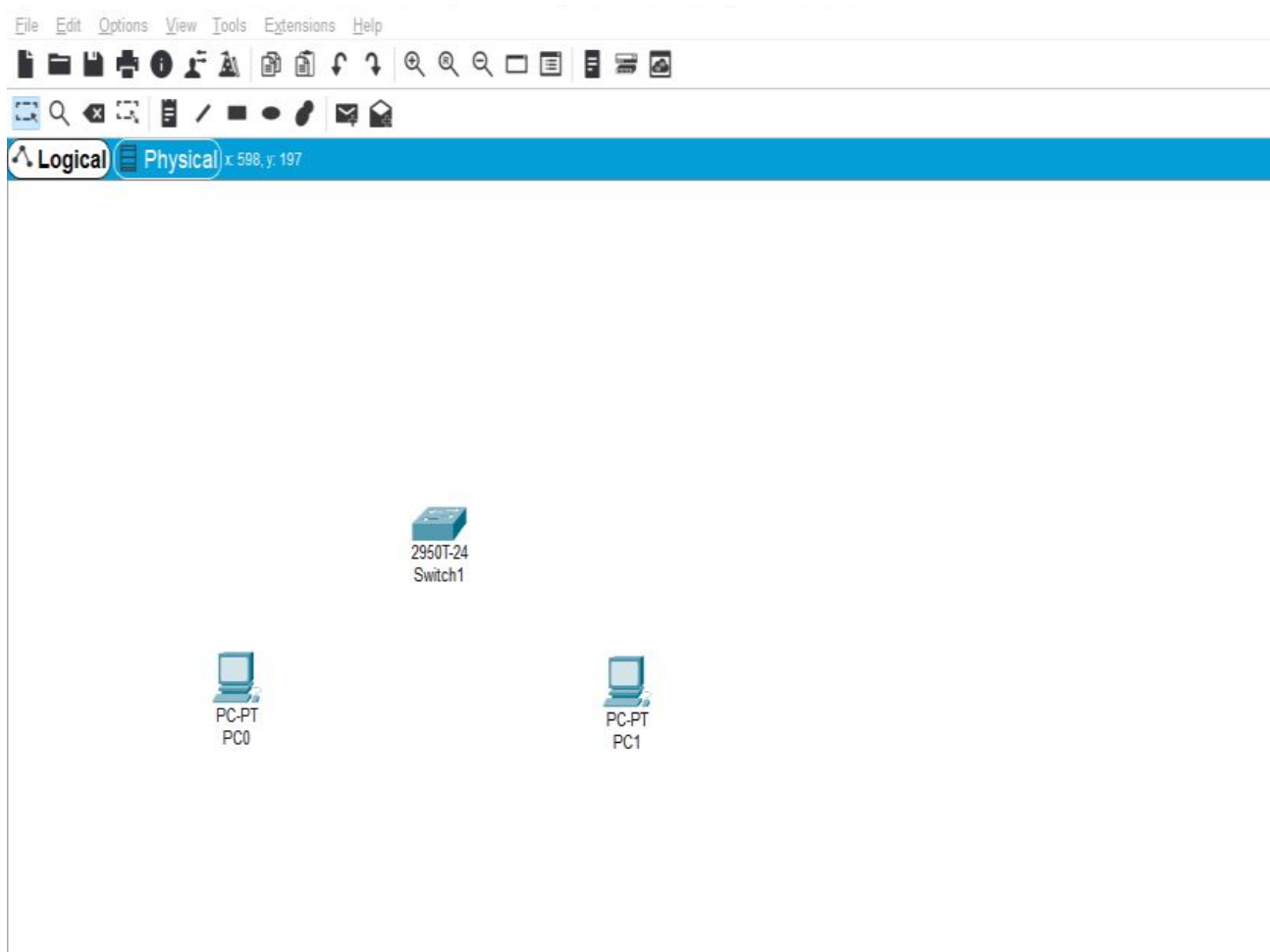
Prototype a network using Packet Tracer

#### Background

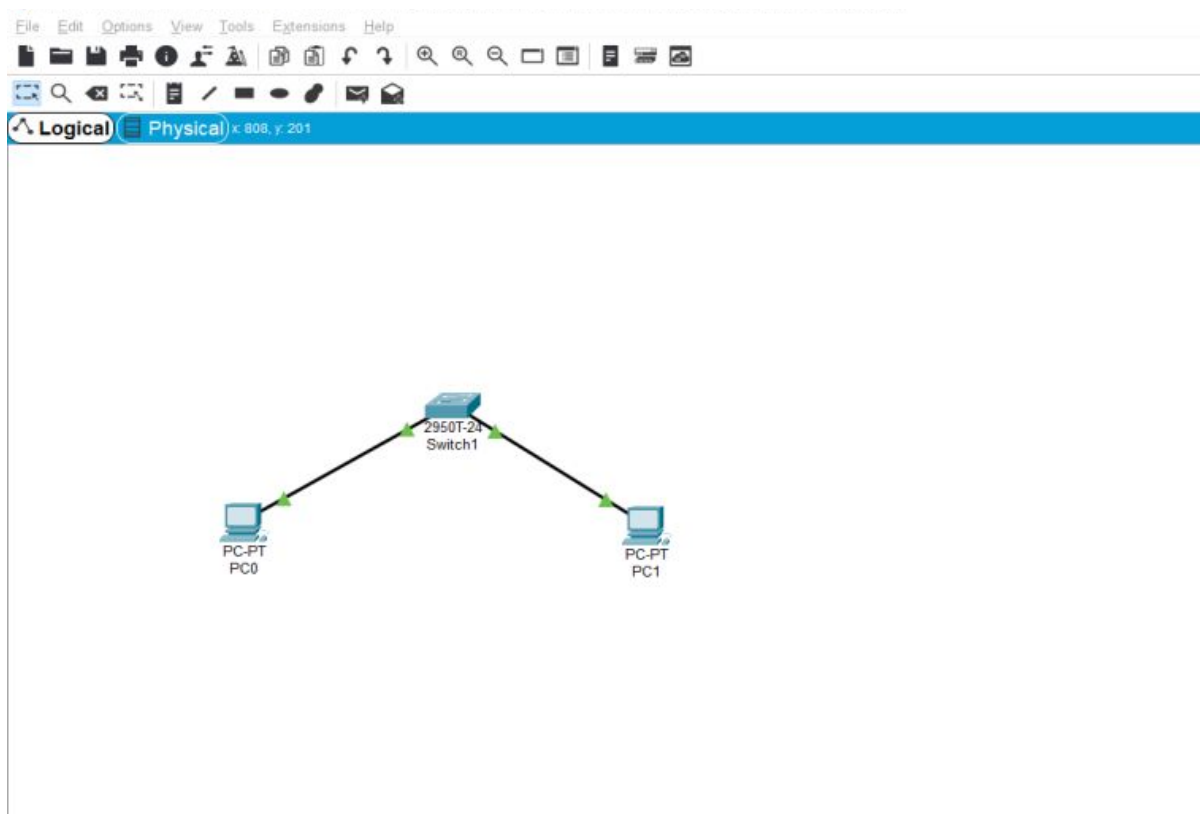
A client has requested that you set up a simple network with two PCs connected to a switch. Verify that the hardware, along with the given configurations, meet the requirements of the client.

#### Step 1: Set up the network topology

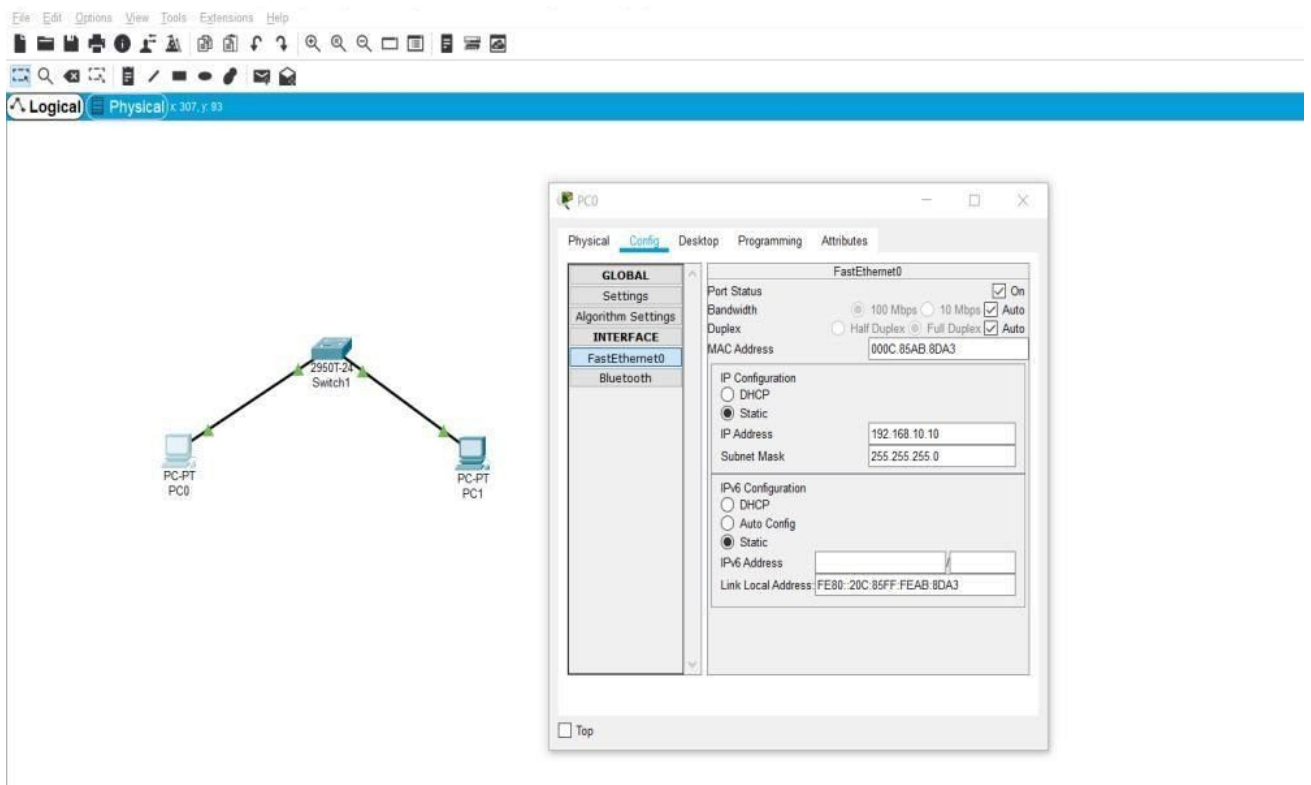
- a) Add two PCs and a Cisco 2950T switch



- b) Using straight-through cables, connect **PC0** to interface **Fa0/1** on **Switch0** and **PC1** to interface **Fa0/2** on **Switch0**.



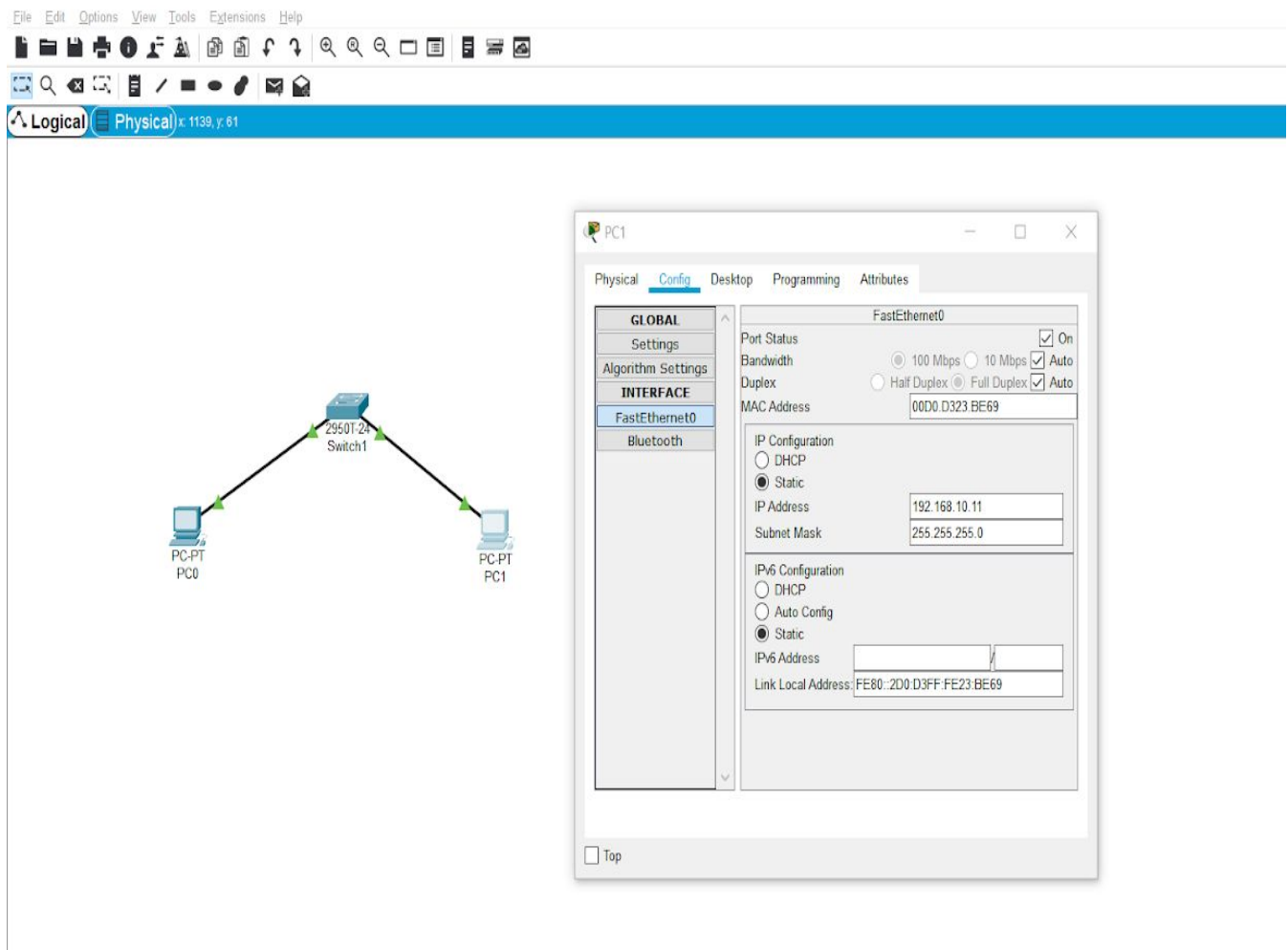
- c) Configure PC0 using the **Config** tab in the PC0 configuration window:
- IP address: 192.168.10.10
  - Subnet Mask 255.255.255.0



d) Configure PC1 using the **Config** tab in the PC1 configuration

window a. IP address: 192.168.10.11

b. Subnet Mask 255.255.255.0



## **Step 2: Test connectivity from PC0 to PC1**

a) Use the **ping** command to test connectivity.

- Click PC0.
- Choose the **Desktop** tab.
- Choose **Command Prompt**.
- Type: **ping 192.168.10.11** and press *enter*.

b) A successful **ping** indicates the network was configured correctly and the prototype validates the hardware and software configurations. A successful ping should resemble the below output:

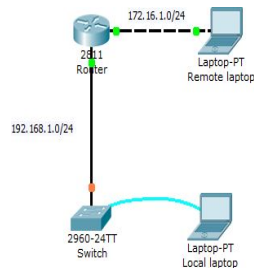


## CEL51, DCCN, Monsoon 2020

### Lab 4.1: Basic configuration - hostname, motd banner, passwd etc

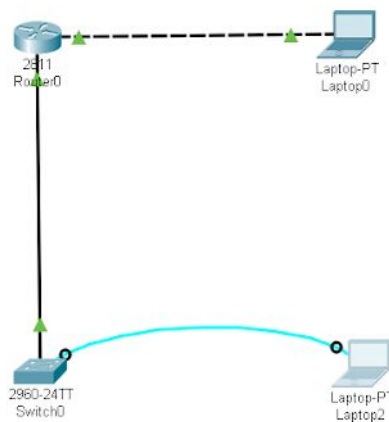
#### Objective:

This lab will test your ability to configure basic settings such as hostname, motd banner, encrypted passwords, and terminal options on a Packet Tracer 6.2 simulated Cisco Catalyst switch.



Empty working space

1. Use the local laptop connect to the switch console.



Cisco Packet Tracer

File Edit Options View Tools Extensions Help

Logical Physical x 1463, y 349 [Root] 13:39:00

Router0

Physical Config CLI Attributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/0

FastEthernet0/1

FastEthernet0/1

Port Status

Bandwidth

Duplex

MAC Address

IP Configuration

IPv4 Address

Subnet Mask

Tx Ring Limit

Equivalent IOS Commands

```
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#
```

Top

Time: 00:27:15

Scenario 0

New Delete

Toggle PDU List Window

Fire Last Status Source Destination Type Color Time(sec) Po

Screenshot saved

The screenshot was added to your OneDrive.

OneDrive

Type here to search

ENG 12:10 15-09-2020

Cisco Packet Tracer

File Edit Options View Tools Extensions Help

Logical Physical x 1533, y 309 [Root] 13:37:30

Router0

Physical Config CLI Attributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/0

FastEthernet0/1

FastEthernet0/0

FastEthernet0/1

Port Status

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IPv4 Address

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Equivalent IOS Commands

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Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#
```

Top

Time: 00:27:11

Scenario 0

New Delete

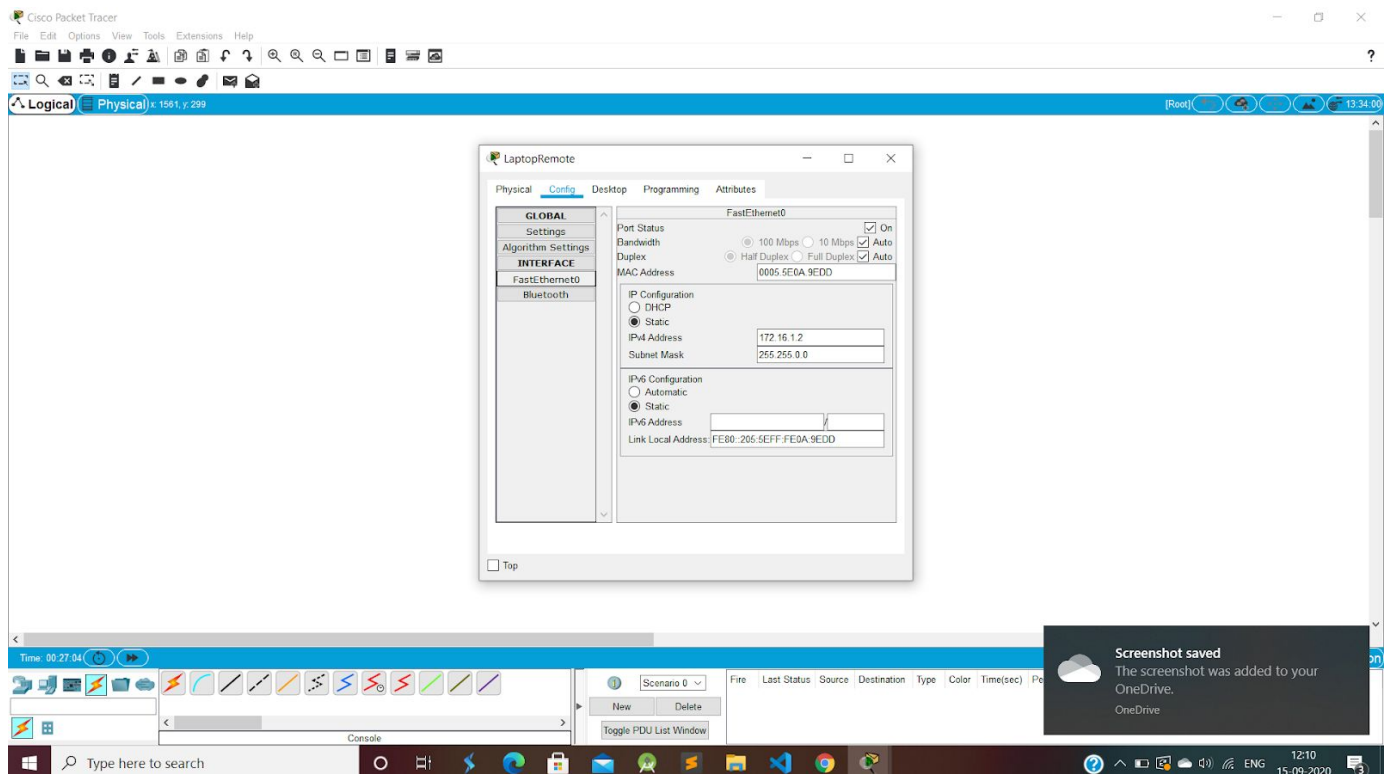
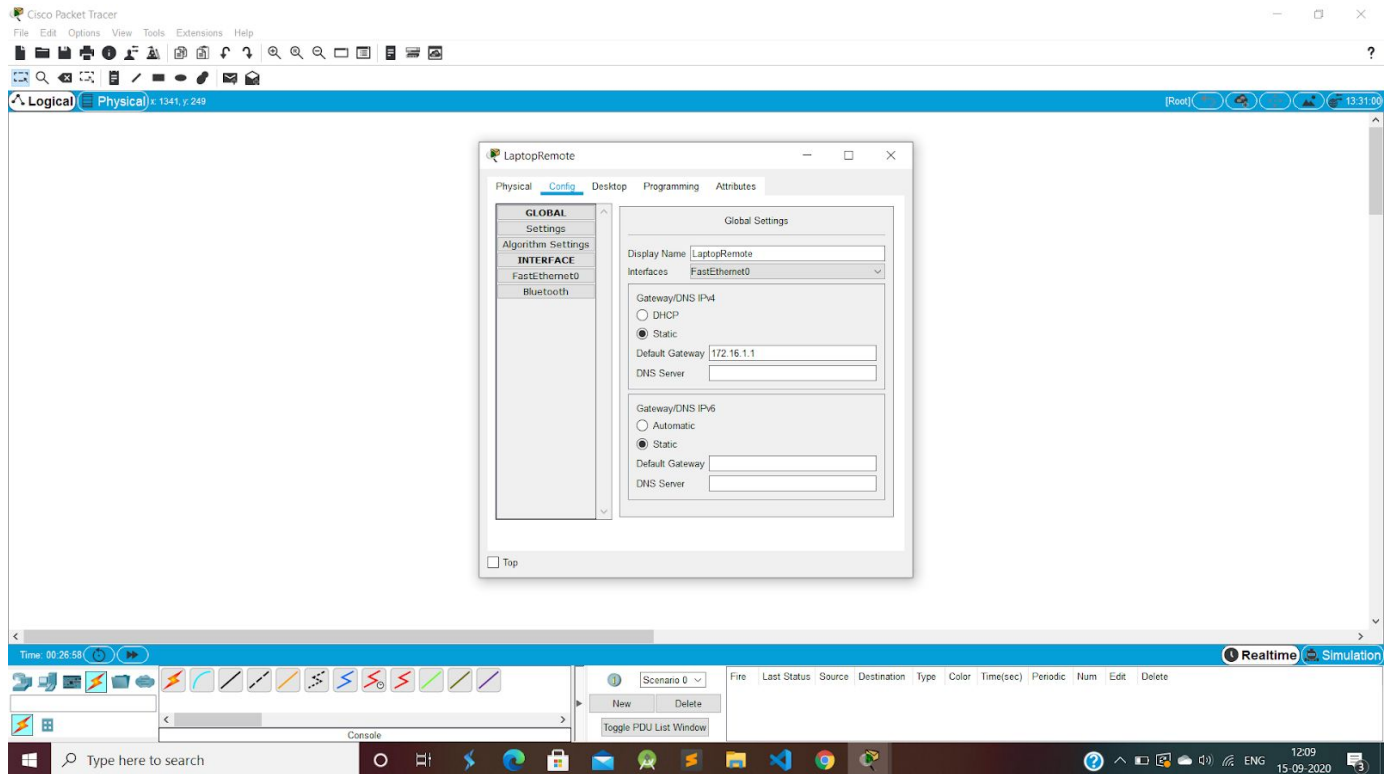
Toggle PDU List Window

Fire Last Status Source Destination Type Color Time(sec) Periodic Num Edit Delete

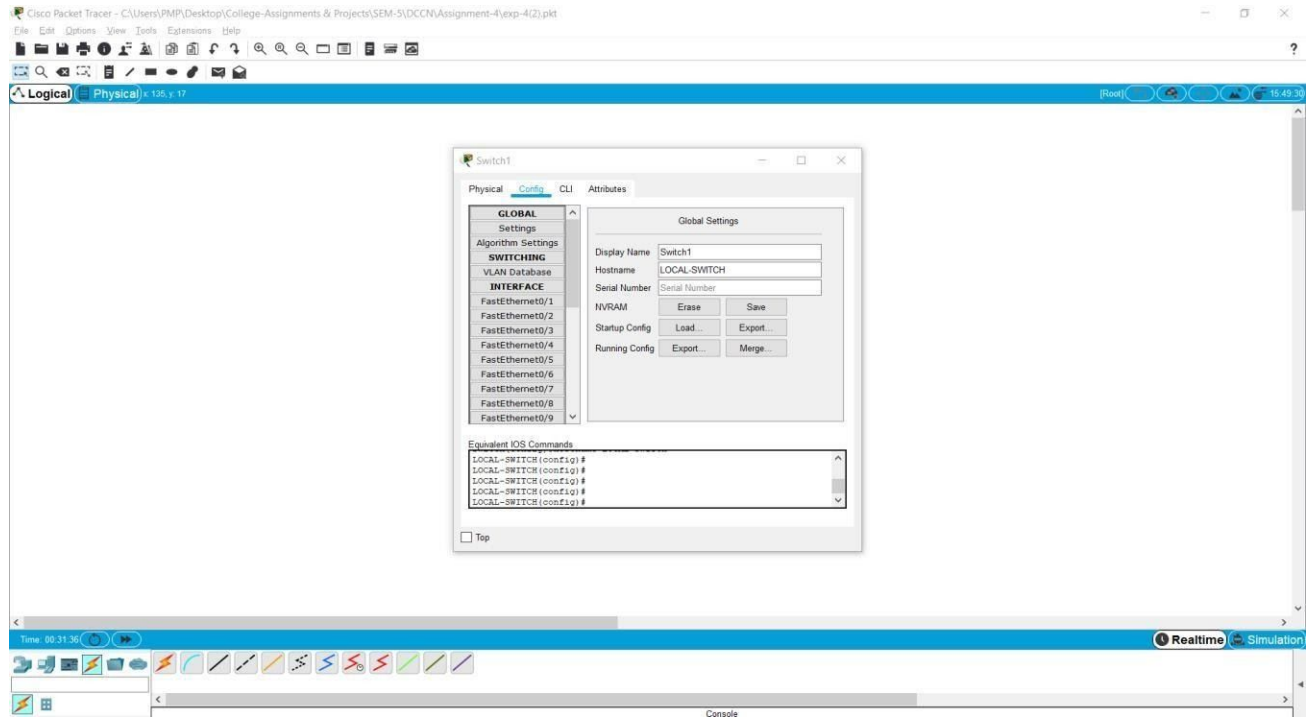
Realtime Simulation

Type here to search

ENG 12:10 15-09-2020

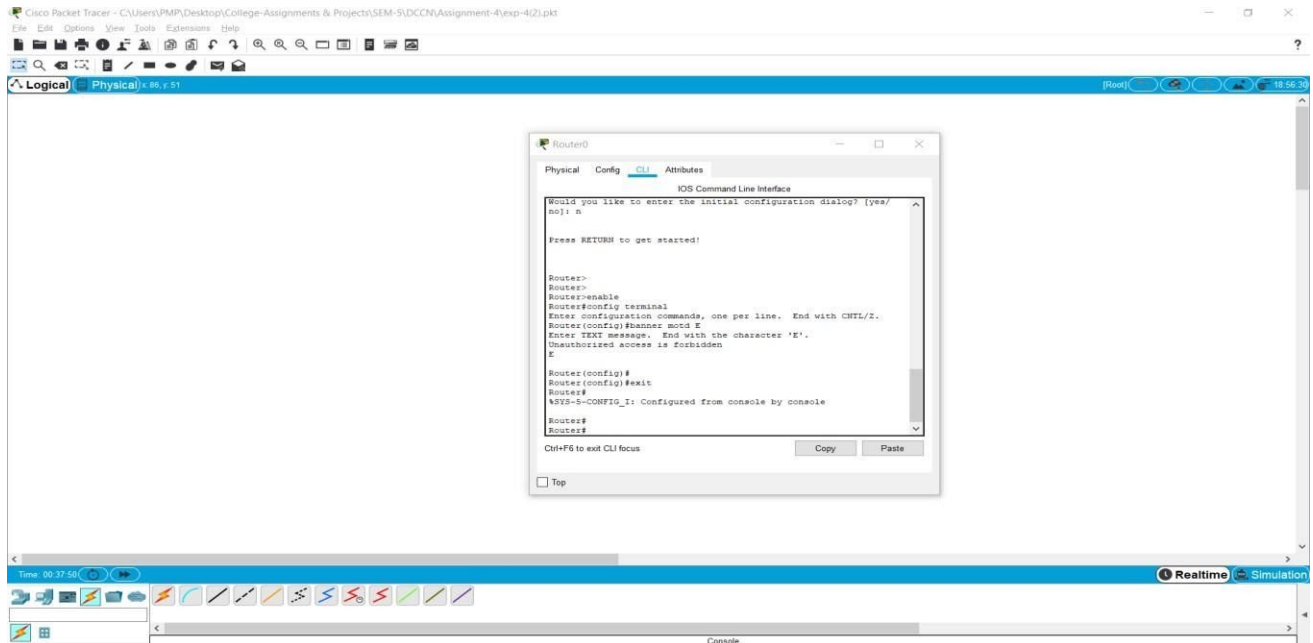


## 2. Configure Switch hostname as LOCAL-SWITCH



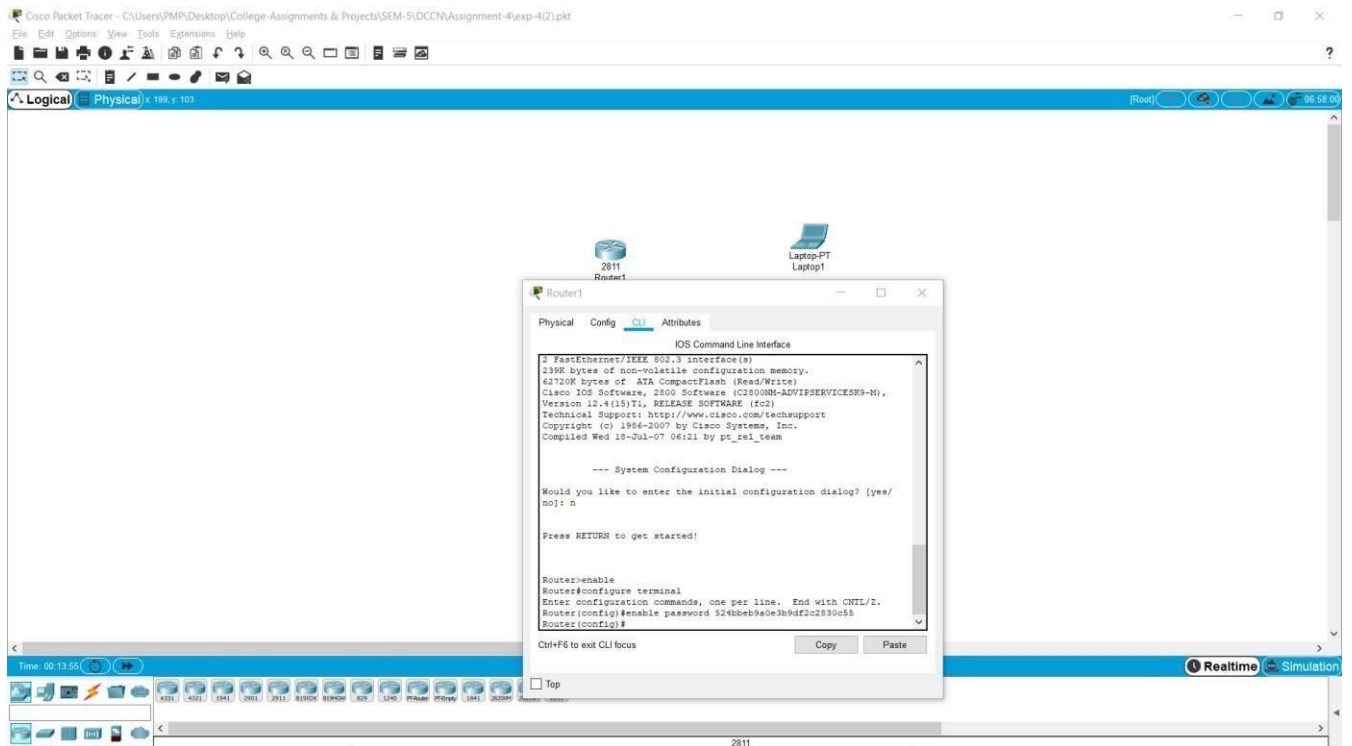


### 3. Configure the message of the day as "Unauthorized access is forbidden"



### 4. Configure the password for privileged mode access as "cisco". The password must be md5 encrypted

### 5. Configure password encryption on the switch using the global configuration command



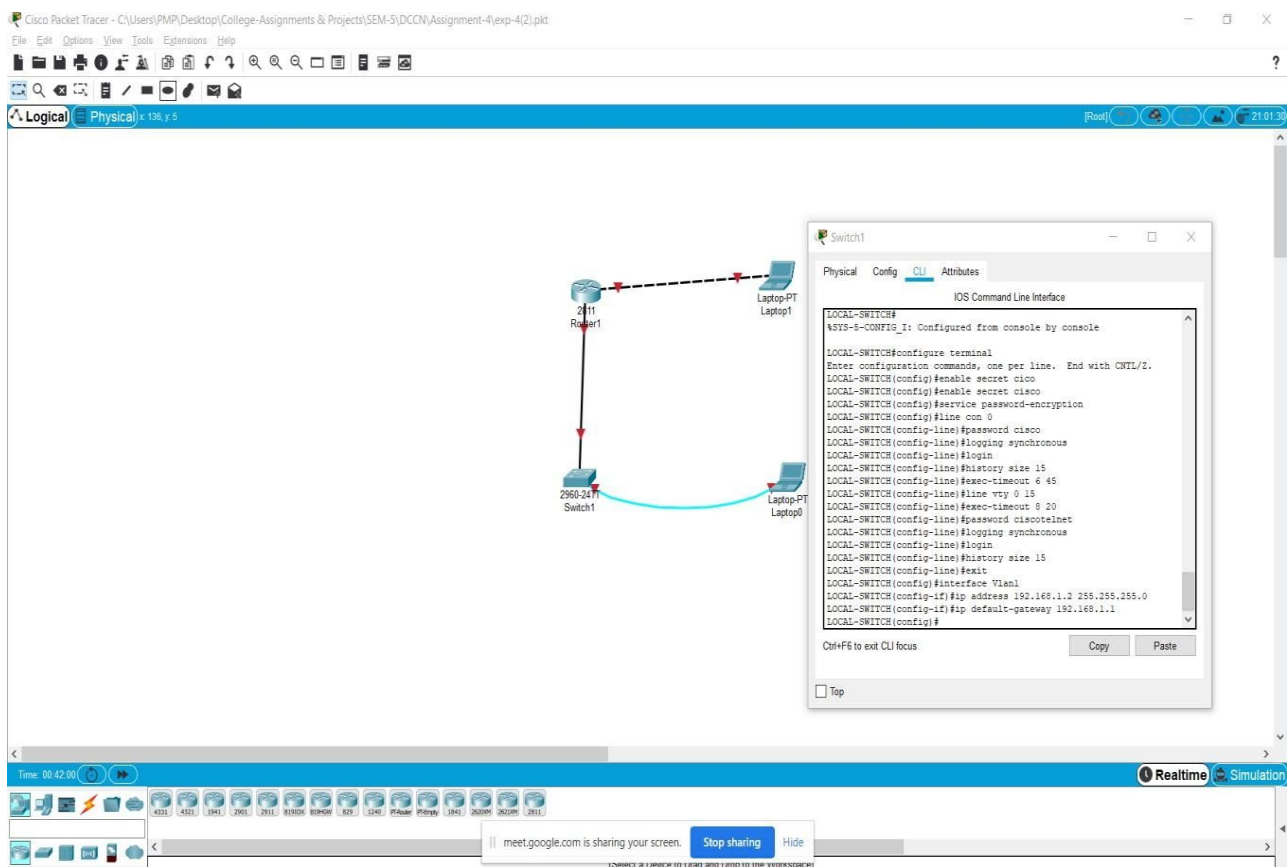
6. Configure CONSOLE access with the following settings:

- Login enabled
- Password: whatever you like
- History size: 15 commands
- Timeout: 6'45"
- Synchronous logging

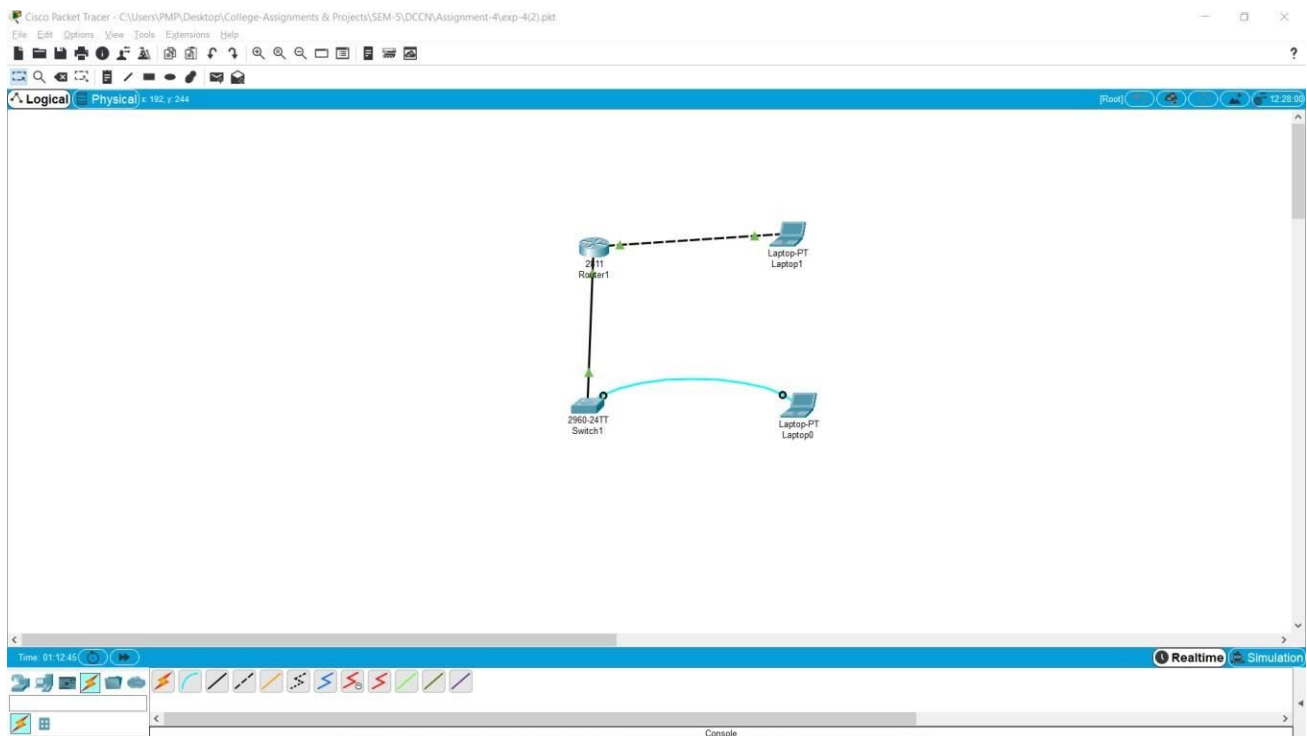
7. Configure TELNET access with the following settings:

- Login enabled
- Password: whatever you like
- History size: 15 commands
- Timeout: 8'20"
- Synchronous logging

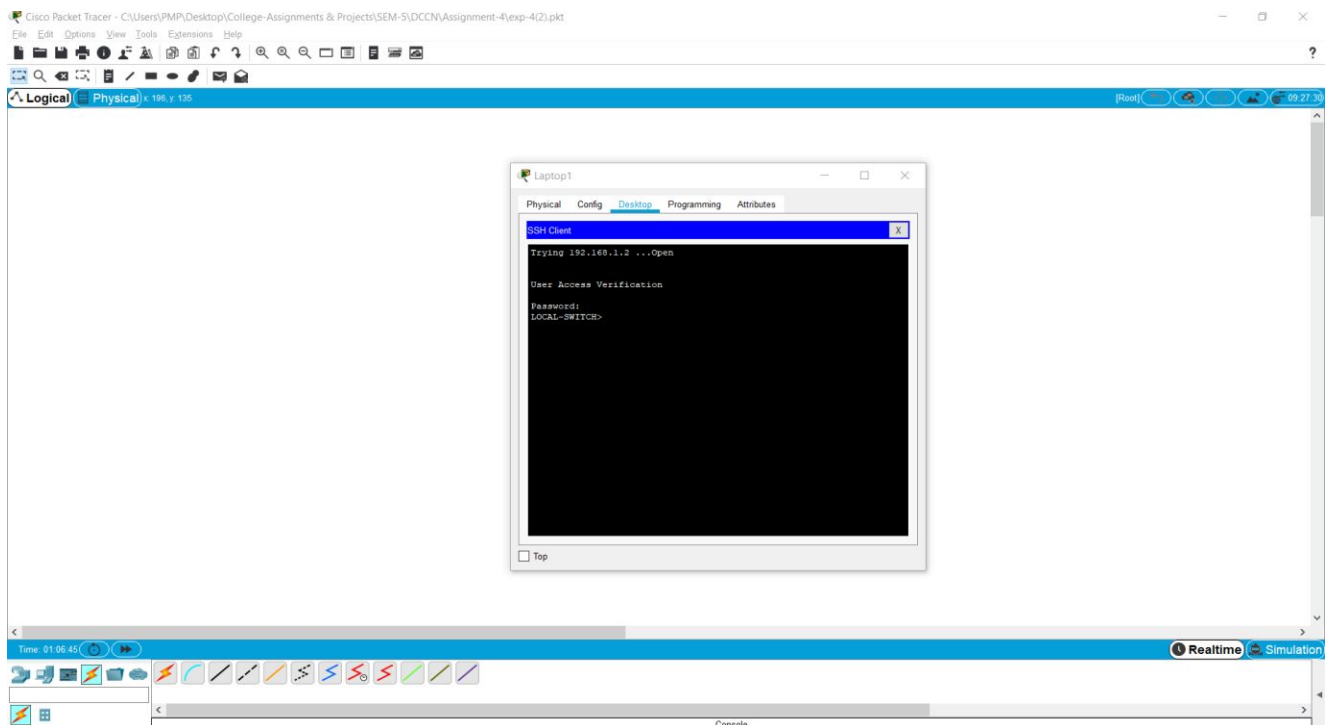
8. Configure the IP address of the switch as 192.168.1.2/24 and its default gateway IP (192.168.1.1).



## 8. Final output



## 9. Test telnet connectivity from the Remote Laptop using the telnet client.



**Conclusion** – After completing the above experiment, I understood the connectivity of router and switch with end devices and also understood how to configure the telnet.