Exp 1: Introduction to the laboratory and the tool used Cisco packet tracer

Scenario:

- Two laptops (Laptop-1 and Laptop-2) are connected via Switch0.
- Laptop-1: IP address 192.168.1.2
- Laptop-2: IP address 192.168.1.3
- A switch (2960-24TT) is connecting the devices.

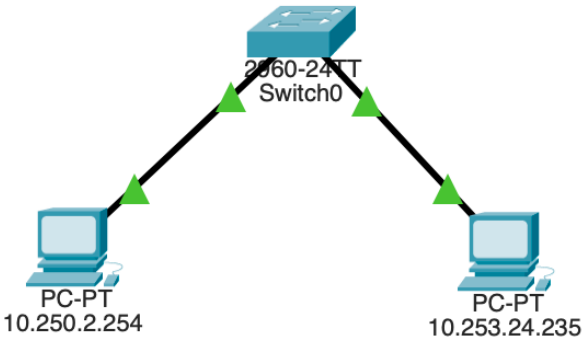
Requirements:

- Cisco Packet Tracer or any similar network simulation tool.
- Two PC-PT (representing the laptops).
- One 2960-24TT switch.

Steps:

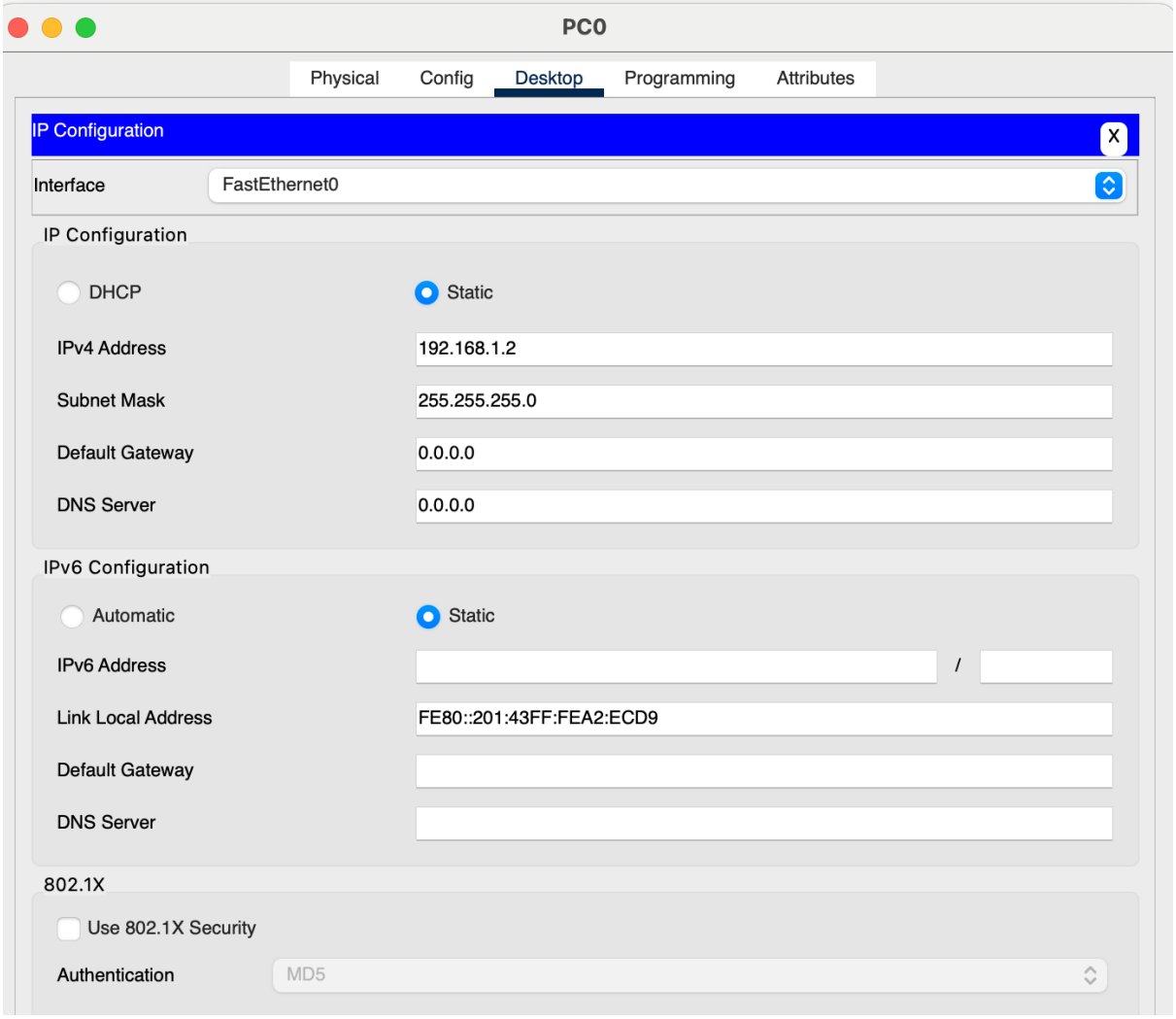
1. Set up the devices
   - Open Cisco Packet Tracer (or any compatible tool).
   - From the End Devices section, drag and drop two PC-PT devices (representing Laptop-1 and Laptop-2) onto the workspace.
   - From the Switches section, drag a 2960-24TT switch onto the workspace.

2. Connect the devices
   - Use the Copper Straight-Through cable to connect the devices:
     - Connect Laptop-1 to the switch:
       1. Click on the Copper Straight-Through cable icon.
       2. Click on Laptop-1 and select FastEthernet0.
       3. Click on Switch0 and select FastEthernet0/1.
     - Connect Laptop-2 to the switch:
       1. Click on the Copper Straight-Through cable icon.
       2. Click on Laptop-2 and select FastEthernet0.
       3. Click on Switch0 and select FastEthernet0/2.



3. Configure IP addresses on the laptops
 - Laptop-1:
   1. Click on Laptop-1.
   2. Go to the Desktop tab.
   3. Click on IP Configuration.
   4. Set the IP address to 192.168.1.2.
   5. Set the Subnet Mask to 255.255.255.0.

 - Laptop-2:
   1. Click on Laptop-2.
   2. Go to the Desktop tab.
   3. Click on IP Configuration.
   4. Set the IP address to 192.168.1.3.
   5. Set the Subnet Mask to 255.255.255.0.



4. Configure the switch (Switch0)
To ensure the switch is properly configured, follow these steps:

1. Access the switch's CLI:
   - Click on Switch0 and select the CLI tab.

2. Enter privileged EXEC mode:

   Switch> enable

3. Enter global configuration mode:

   Switch configure terminal

4. Configure switch ports (optional but recommended for security)
   - Assign a description to each port for identification.
   - Port 1 (connecting to Laptop-1):

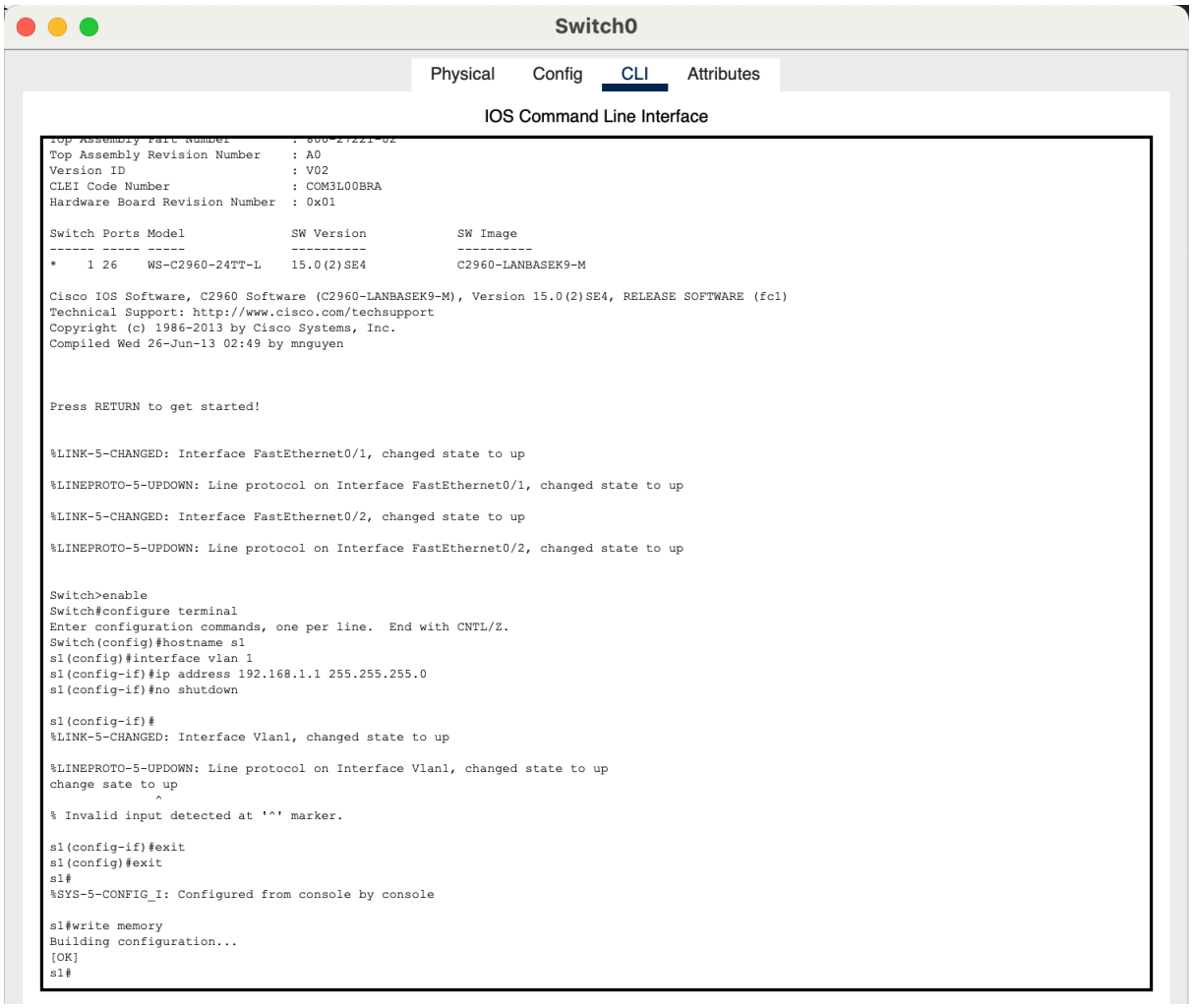
Switch(config) interface FastEthernet0/1
Switch(config-if) description Connection to Laptop-1
Switch(config-if) no shutdown
Switch(config-if) exit

- Port 2 (connecting to Laptop-2):

Switch(config) interface FastEthernet0/2
Switch(config-if) description Connection to Laptop-2
Switch(config-if) no shutdown
Switch(config-if) exit

5. Configure the switch's management interface (optional)
- If you want to manage the switch via IP, configure VLAN1 with an IP address.

Switch(config) interface vlan 1
Switch(config-if) ip address 192.168.1.1 255.255.255.0
Switch(config-if) no shutdown
Switch(config-if) exit



6. Save the configuration:

Switch(config) exit
Switch write memory

5. Verify Switch Configuration
- To confirm that the ports are up and connected, use the following command:

Switch show ip interface brief

- You should see that FastEthernet0/1 and FastEthernet0/2 are in the up/up state.

6. Test the connection between Laptop-1 and Laptop-2
- Once the IP addresses are configured on the laptops and the switch is set up, you can test the network connectivity:
1. Go to Laptop-1.
2. Open the Command Prompt in the Desktop tab.
3. Type ping 192.168.1.3 (the IP of Laptop-2) and press Enter.

4. If everything is configured correctly, you should receive replies from Laptop-2.
5. Similarly, you can ping Laptop-1 from Laptop-2 by typing ping 192.168.1.2.