Bangladesh University of Business & Technology

Lab Report

Topic Name:	Design various Network Topologies [Bus, Ring, Tree, Mesh & Star] using Packet Tracer.
Assignment No:	01
Course Title:	Computer Networks Lab
Course Code:	CSE - 320

Submitted by:

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ID: 20234103103
Intake: 52 (sec: 3), CSE

Submitted to:

Name: Md. Mahbub-Or-Rashid
Assistant Professor,
Department of CSE

Submission Date: 3rd August 2025	**Signature of Teacher:**

Experiment Name: Design various Network Topologies [Bus, Ring, Tree, Mesh & Star] using Packet Tracer.

Devices and Component List:

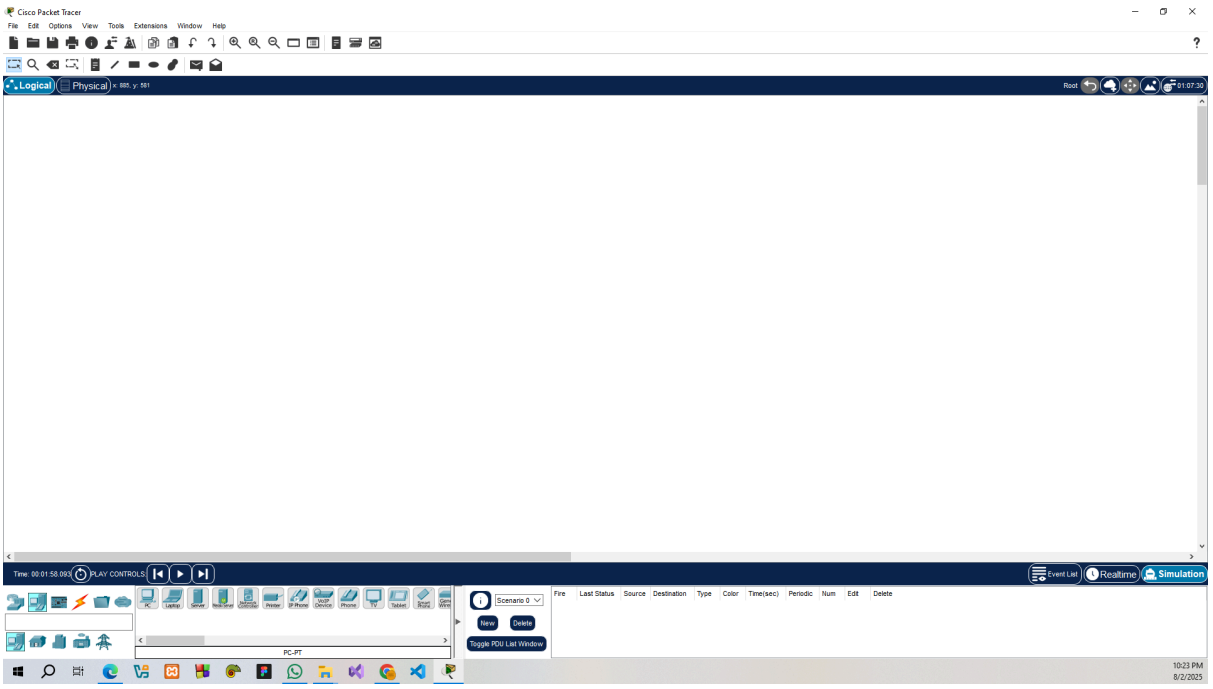
Device name Cisco Packet Tracer

Components—

- Network Connection
- Network Topology
- IP addressing

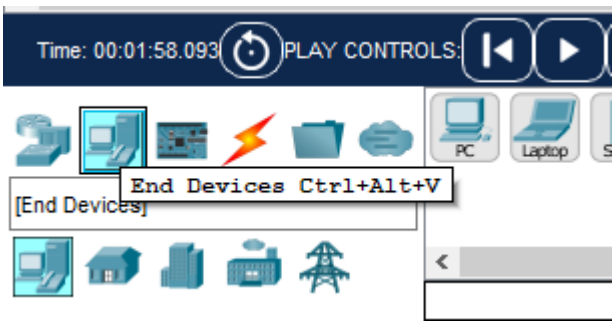
Bus Topology:

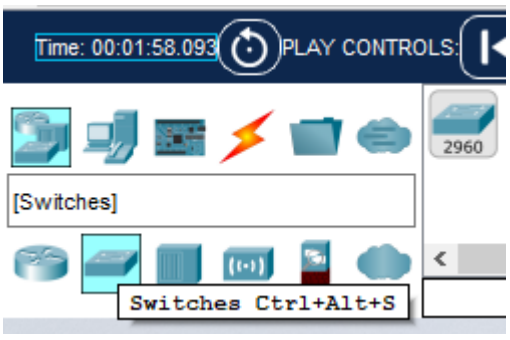
Step 1: After starting Cisco Packet Tracer, change the mode to Simulation.

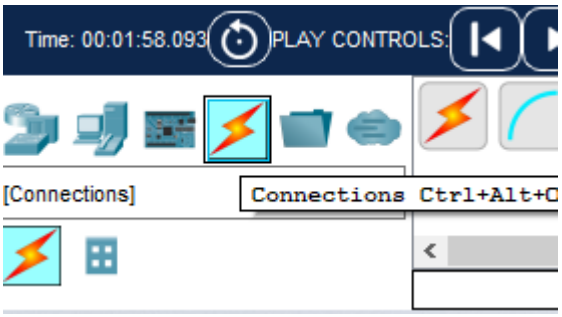


Step 2: Before setting up the network layout, it's important to first decide which devices (like routers, switches, and end-user equipment) to use and determine how they will be connected. This selection process ensures the network will function effectively once built.

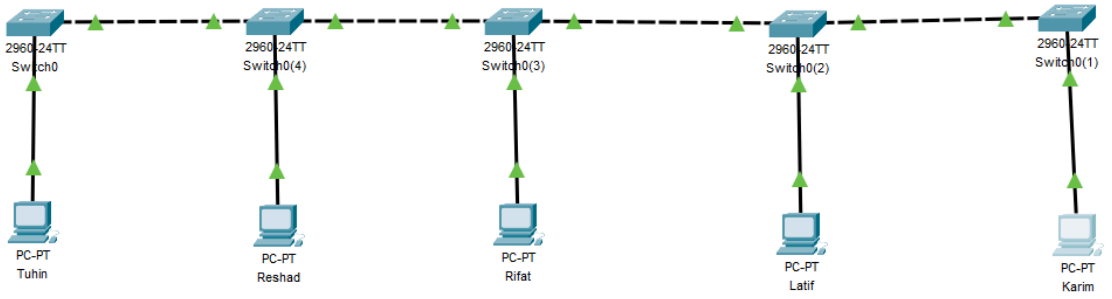
In Bus Topology, we will use **Switches, Connections, and Devices (PC)**





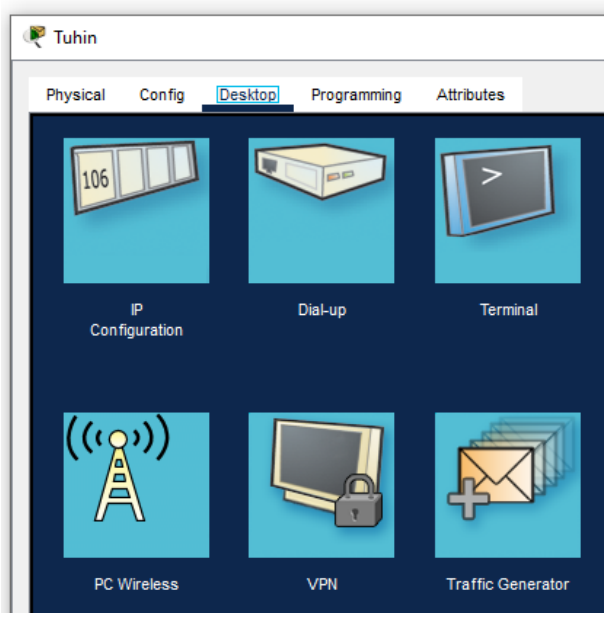


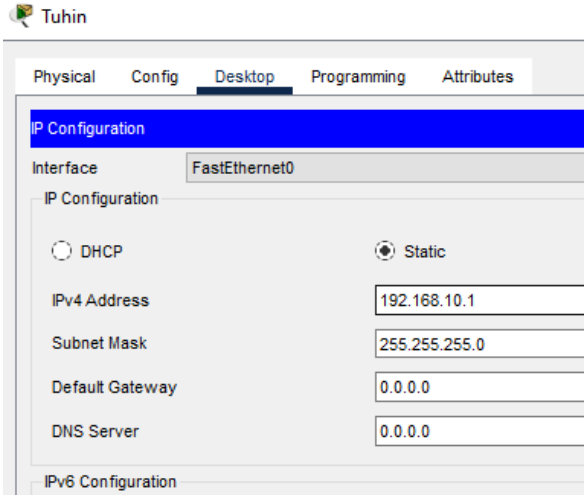
Step 3: Creating the network topology by connecting all required devices.



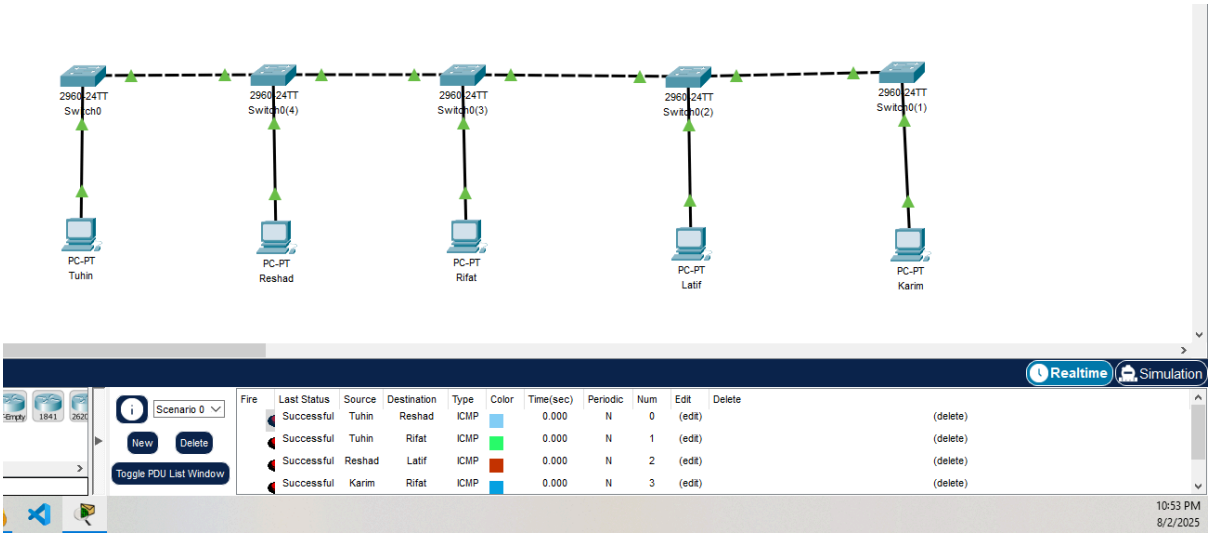
Bus Topology

Step 4: Assign unique IP addresses and subnet masks to each host in the network.
IP addresses I assigned:
Tuhin:**192.168.10.1**
Reshad:**192.168.10.2**
Rifat:**192.168.10.3**
Latif:**192.168.10.4**
Karim:**192.168.10.5**



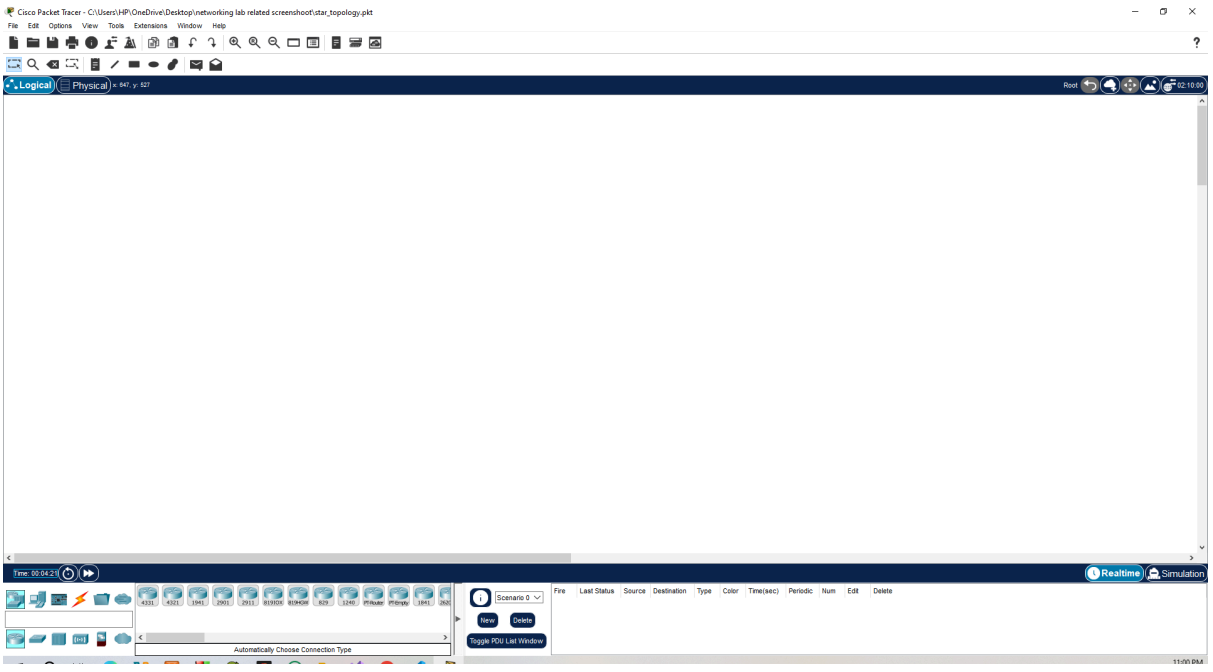


Step 5: Verify that all configurations are correct and the devices are properly connected.



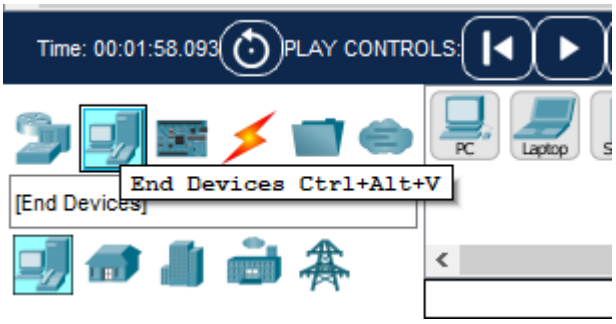
Star Topology:

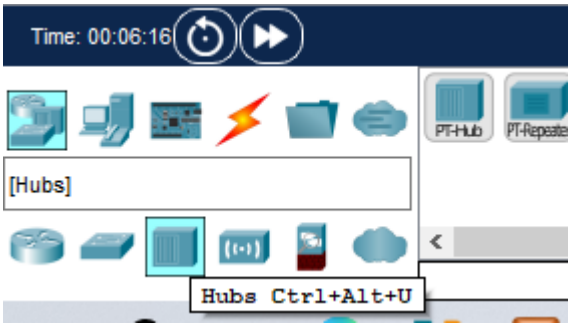
Step 1: After starting Cisco Packet Tracer, change the mode to Simulation.

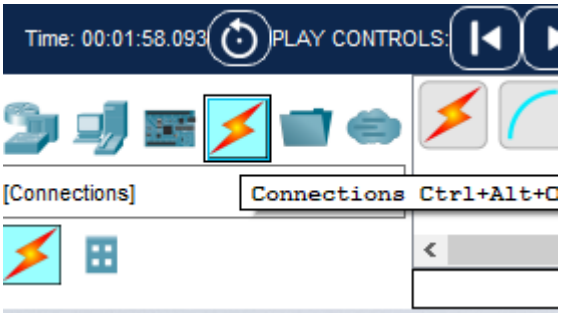


Step 2: Before setting up the network layout, it's important to first decide which devices (like routers, switches, and end-user equipment) to use and determine how they will be connected. This selection process ensures the network will function effectively once built.

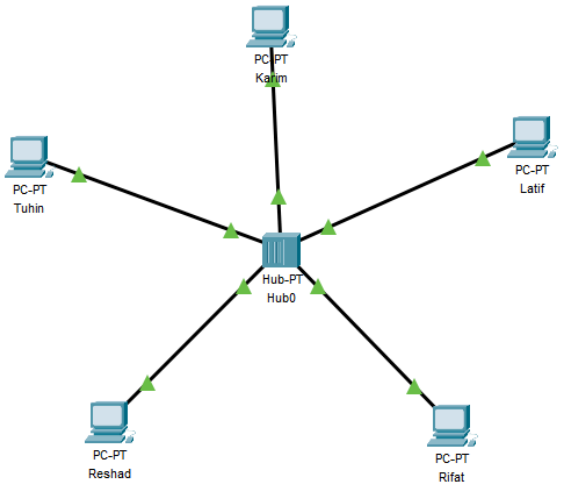
In Bus Topology, we will use **Switches, Connections, and Devices (PC)**



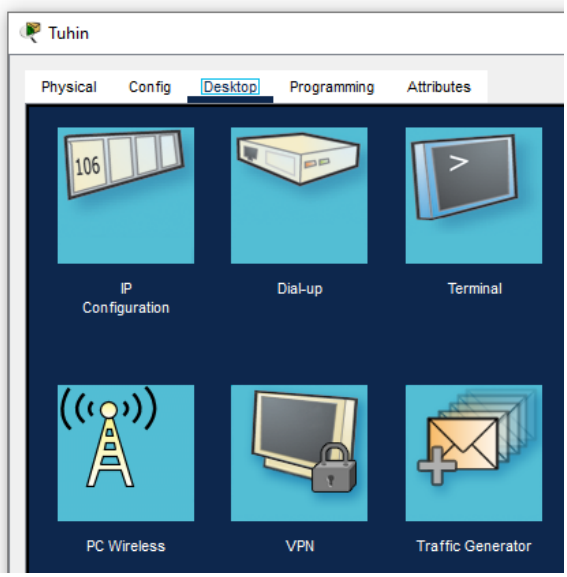


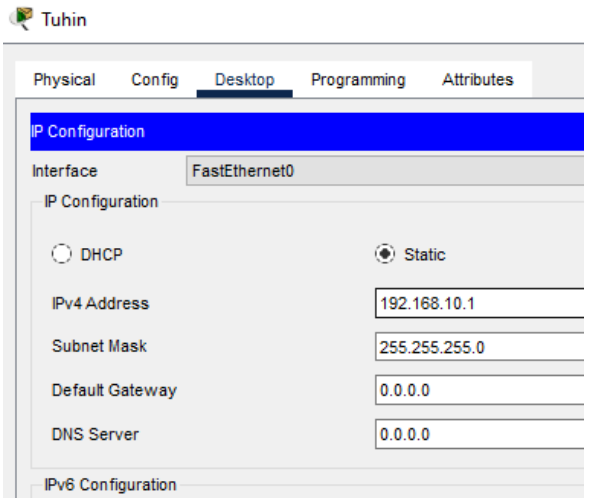


Step 3: Creating the network topology by connecting all required devices.

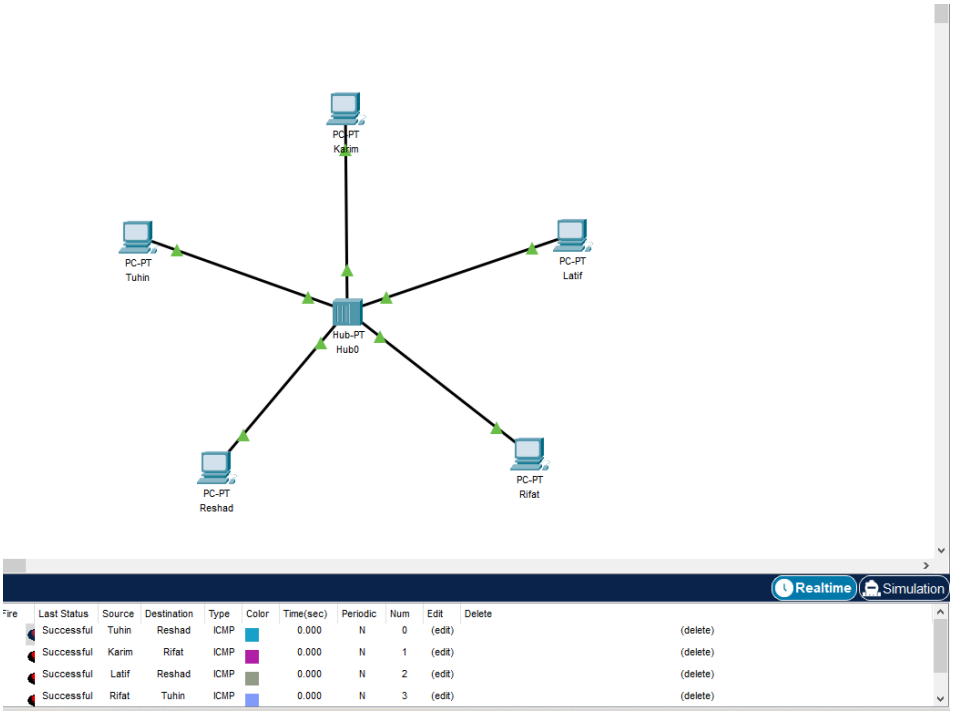


Step 4: Assign unique IP addresses and subnet masks to each host in the network.
IP addresses I assigned:
Tuhin:**192.168.10.1**
Reshad:**192.168.10.2**
Rifat:**192.168.10.3**
Latif:**192.168.10.4**
Karim:**192.168.10.5**



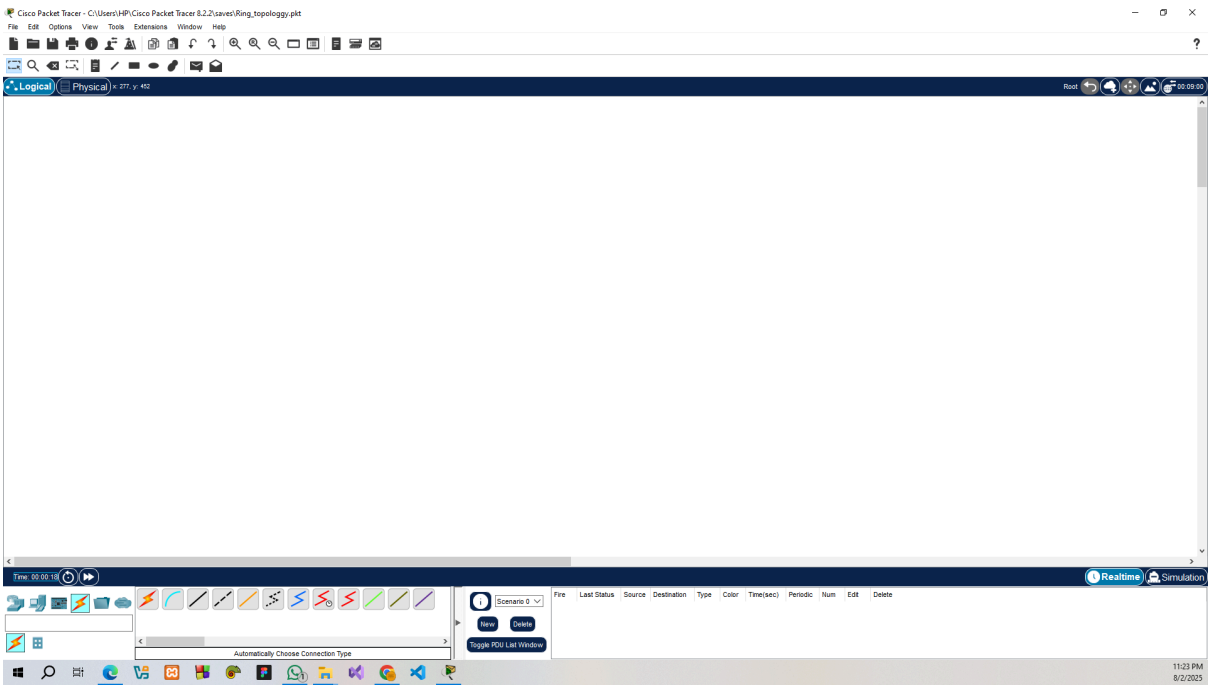


Step 5: Verify that all configurations are correct and the devices are properly connected.



Ring Topology:

Step 1: After starting Cisco Packet Tracer, change the mode to Simulation.



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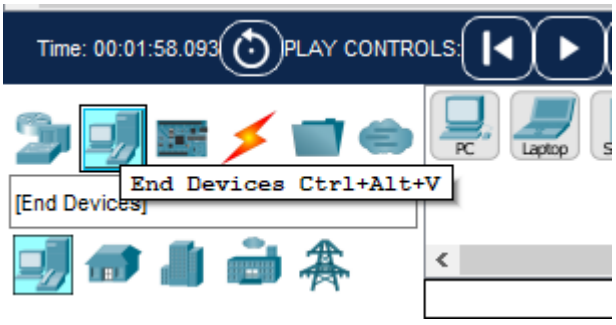
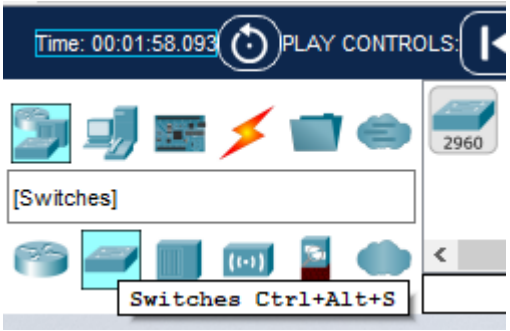
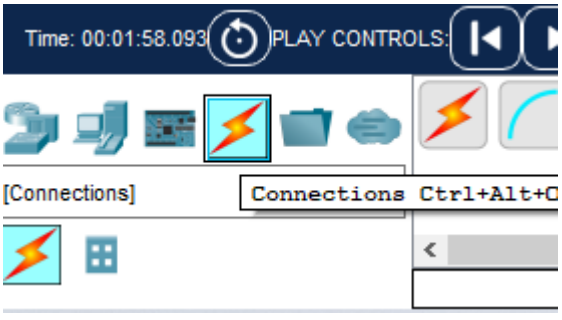
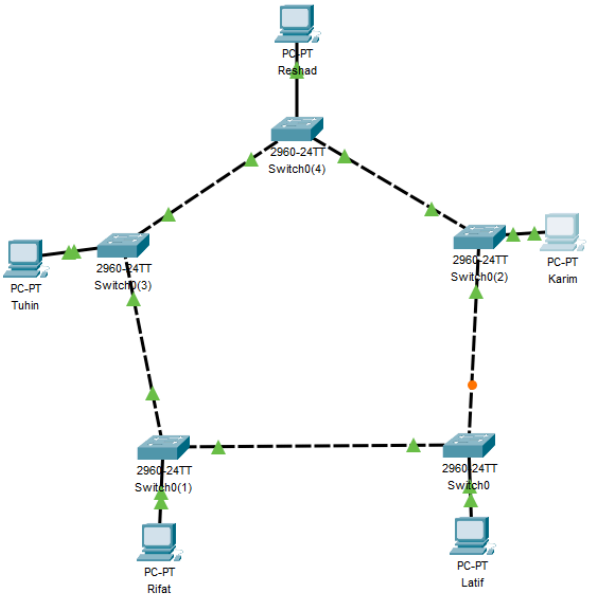
In Bus Topology, we will use **Switches, Connections, and Devices (PC)**







Step 3: Creating the network topology by connecting all required devices.



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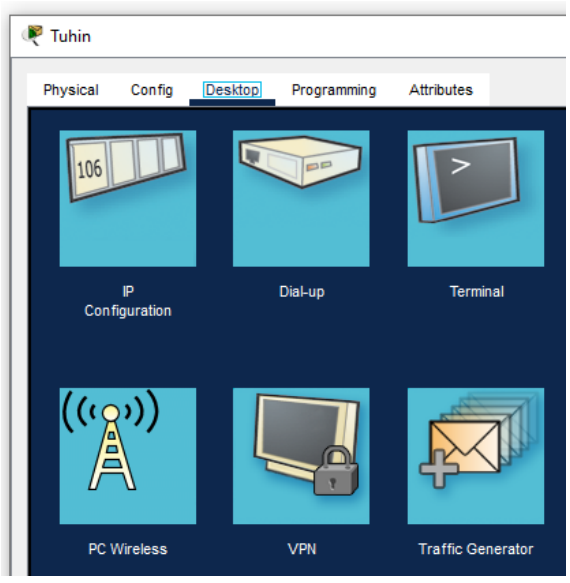

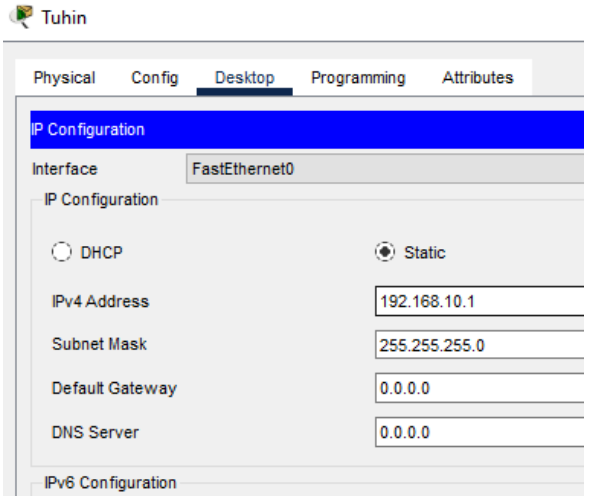

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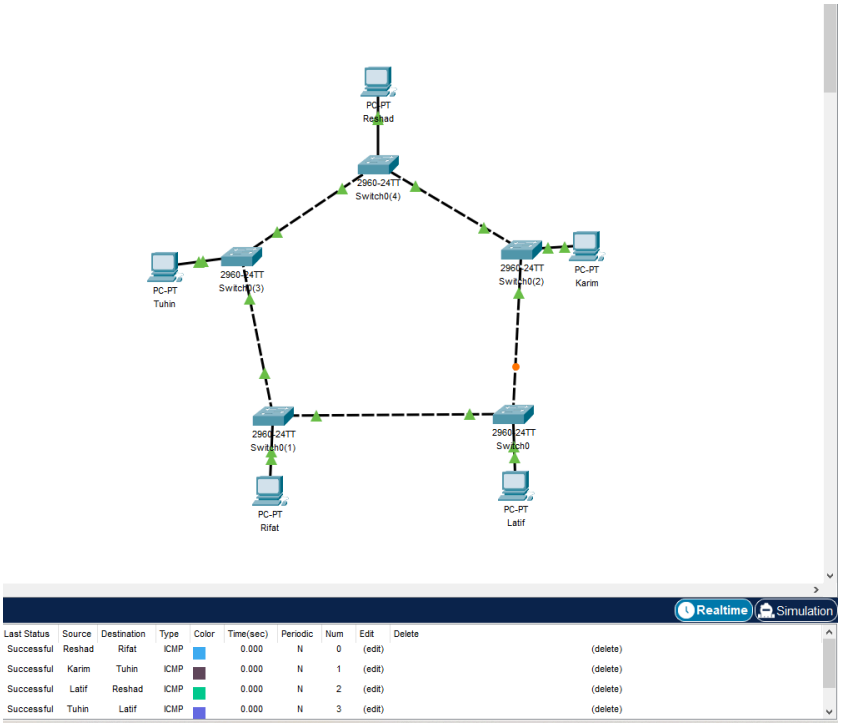
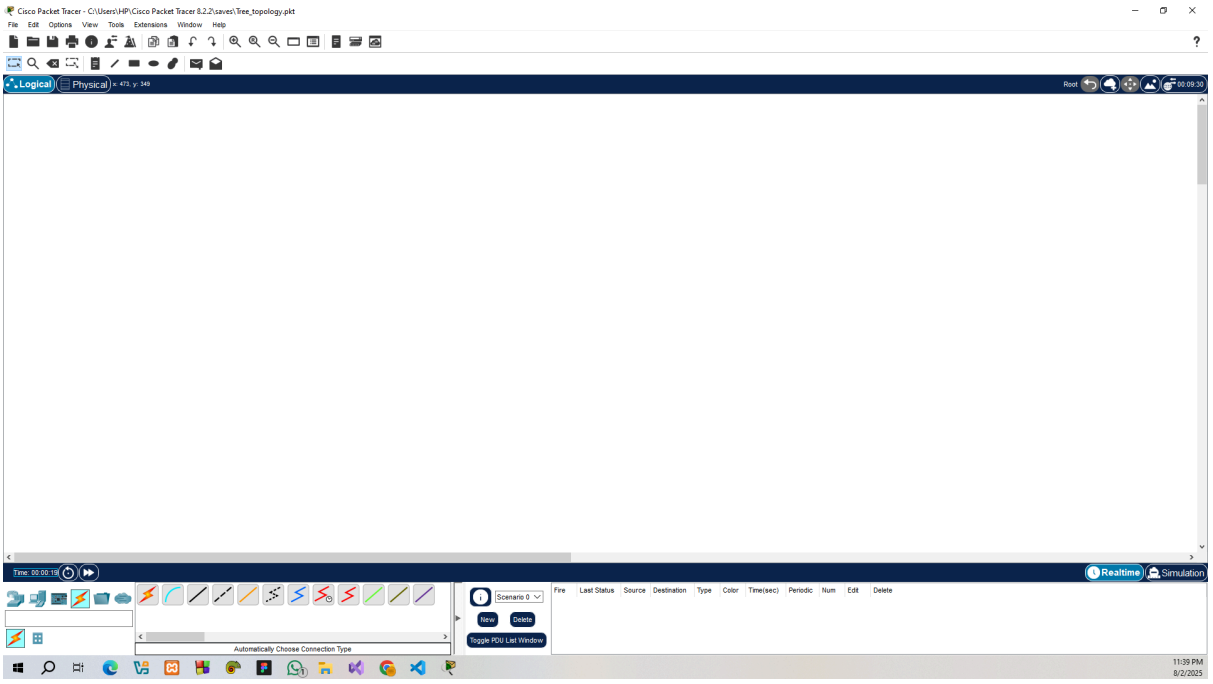


Tree Topology:

Step 1: After starting Cisco Packet Tracer, change the mode to Simulation.



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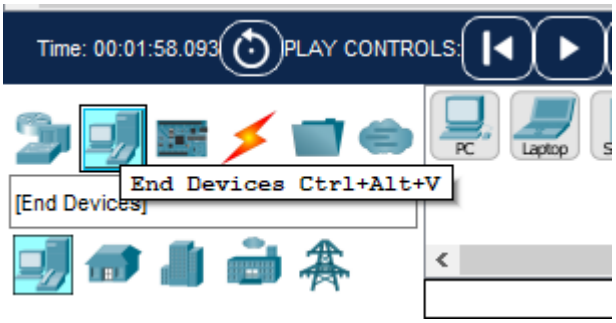
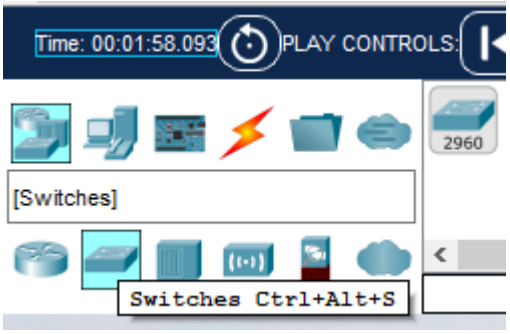
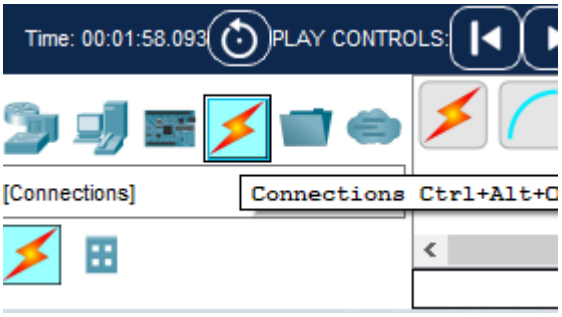
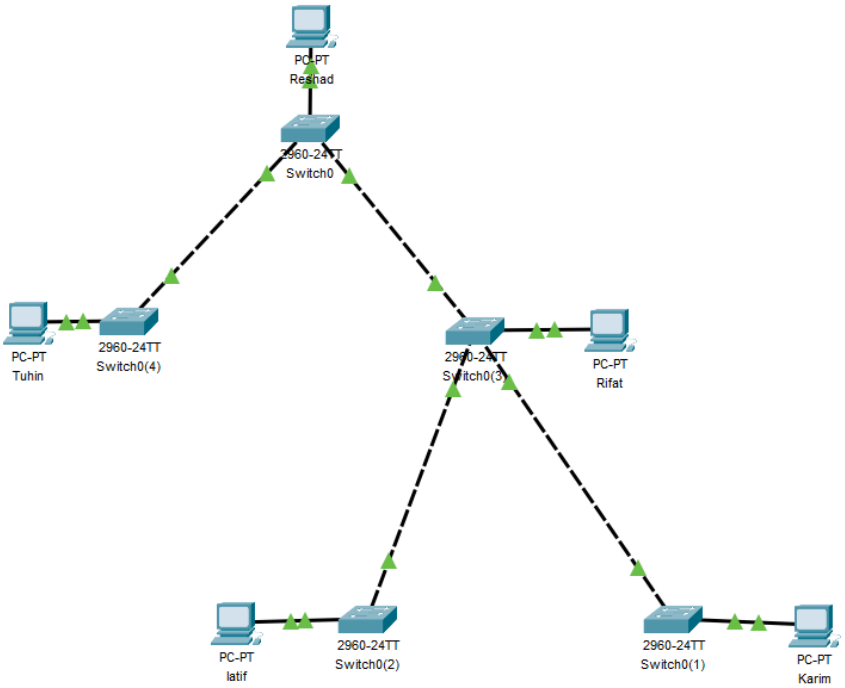






Step 3: Creating the network topology by connecting all required devices.



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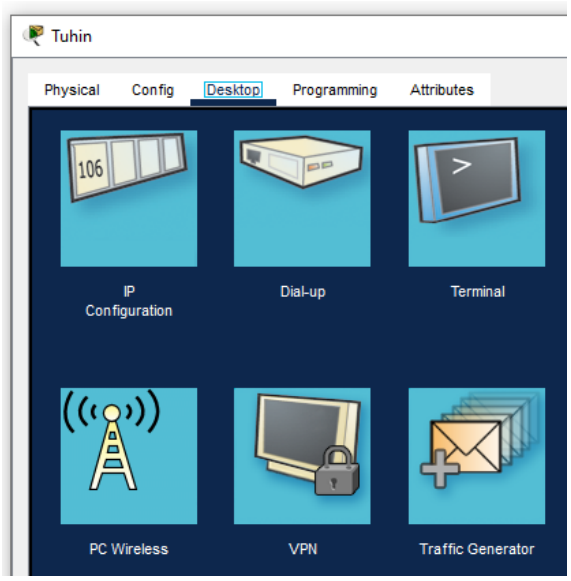

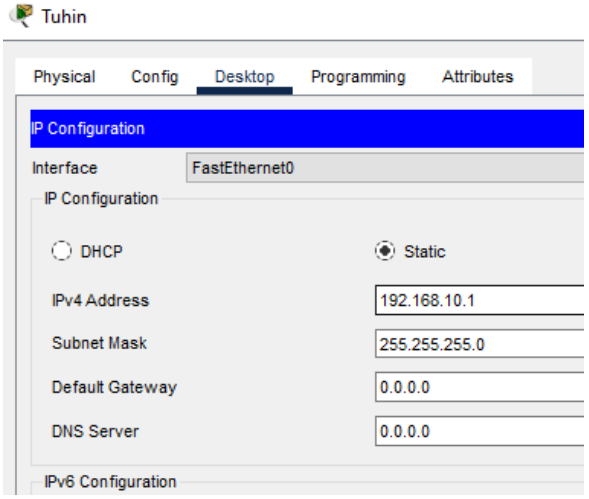

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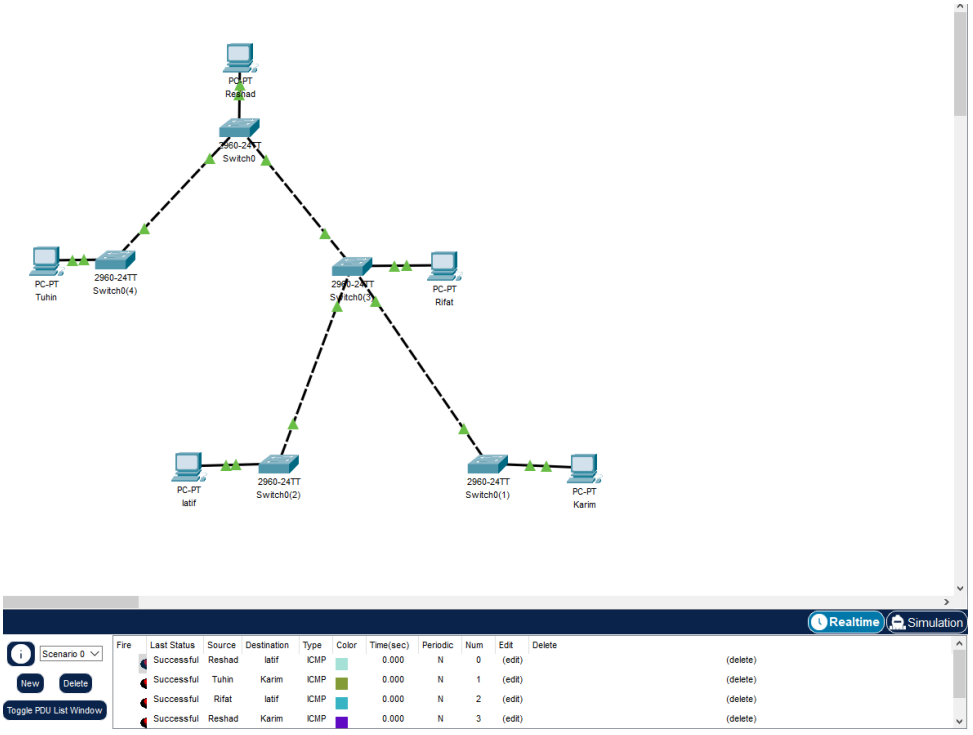
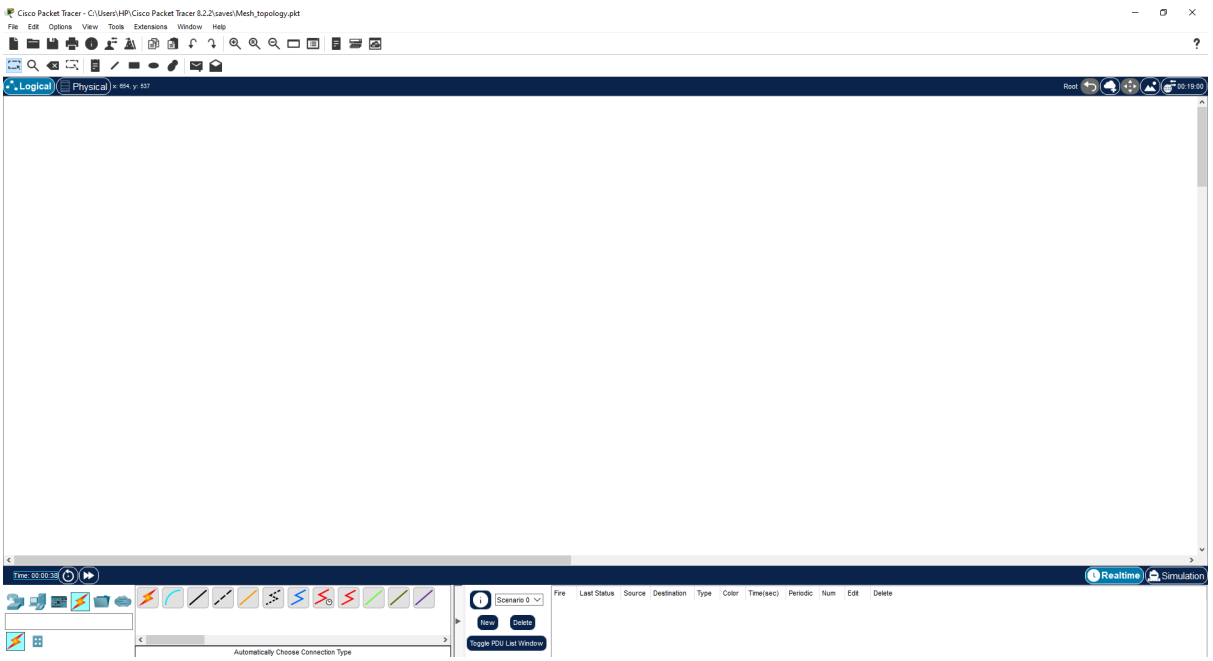


Mess Topology:

Step 1: After starting Cisco Packet Tracer, change the mode to Simulation.



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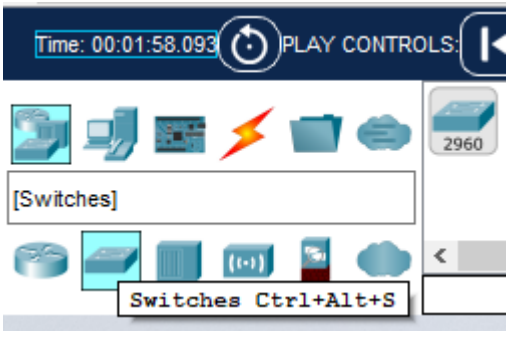
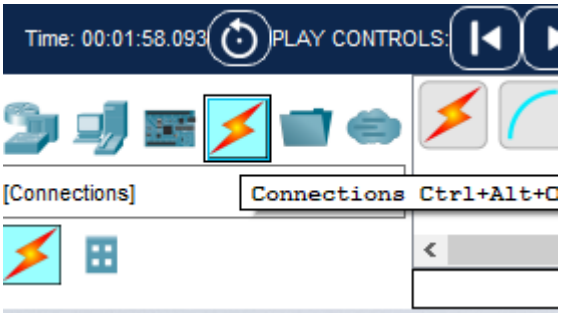
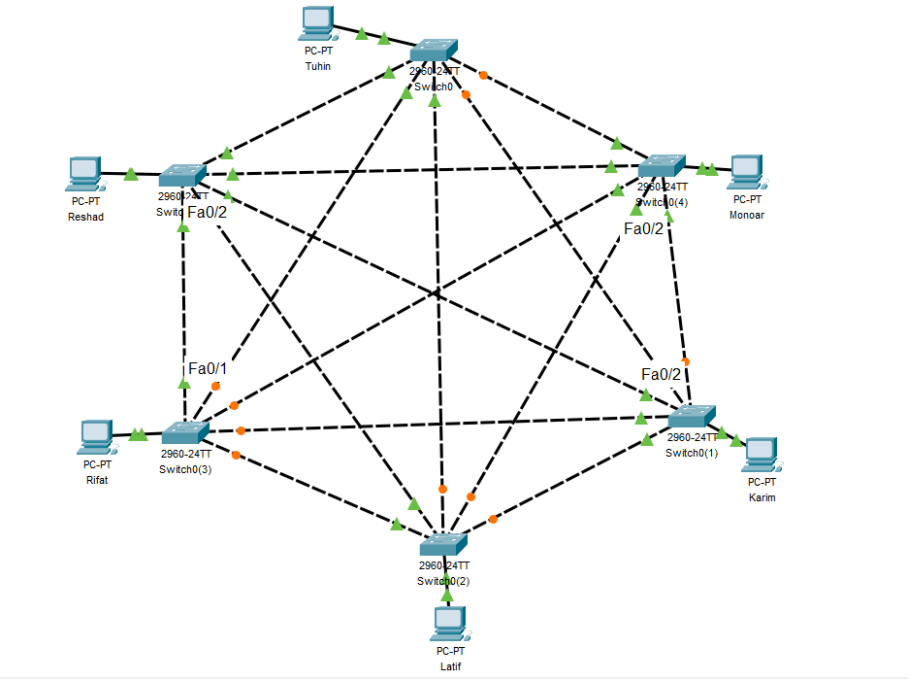




Step 3: Creating the network topology by connecting all required devices.



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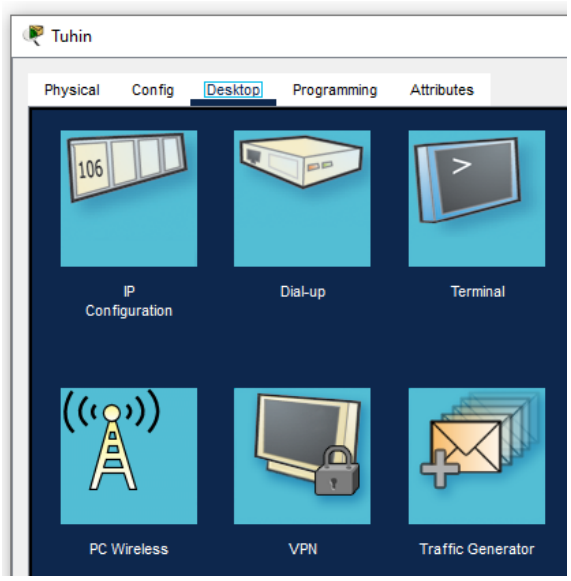

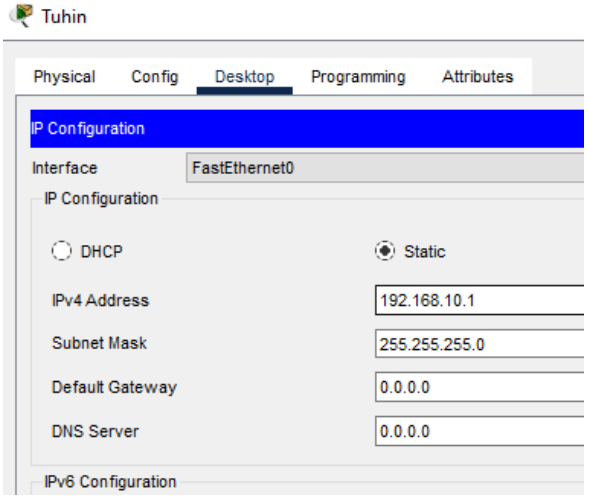

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