EXPERIMENT – 10

Making A Computer Lab in Cisco Packet Tracker

Aim: To design and implement a Computer Lab network in Cisco Packet Tracer and verify communication between the PCs.

Apparatus / Software Required:

1. Cisco Packet Tracer software
2. 10 PCs (End Devices)
3. 1 Switch (2960)
4. 1 Router (2811 or any compatible model)
5. Copper Straight-through Cables
6. (Optional) Server for DHCP/Web services

Procedure:

Step 1:

Start Cisco Packet Tracer.

Step 2:

Drag and drop 10 PCs from the End Devices section into the workspace.

Step 3:

Add one Switch (2960) to the workspace.

Step 4:

Add one Router to the workspace (optional, for internet access).

Step 5:

Connect each PC to the switch using Copper Straight-through cables.

Step 6:

Connect the switch to the router using a Copper Straight-through cable.

- Use Copper Straight-Through cable to connect each PC to the switch.
- If using a router → connect switch to router (FastEthernet).

- If using a server → connect it to the switch.

Step 7:

Assign IP addresses to the PCs either manually (Static) or configure a DHCP Server to provide IPs automatically.

Assign IP Addresses

- If **static**:

1. Click each PC → Desktop → IP Configuration.
2. Give IPs like:
    - PC1: 192.168.1.2
    - PC2: 192.168.1.3
    - … up to PC10
    - Subnet Mask: 255.255.255.0
    - Gateway: 192.168.1.1 (Router IP, if router exists)

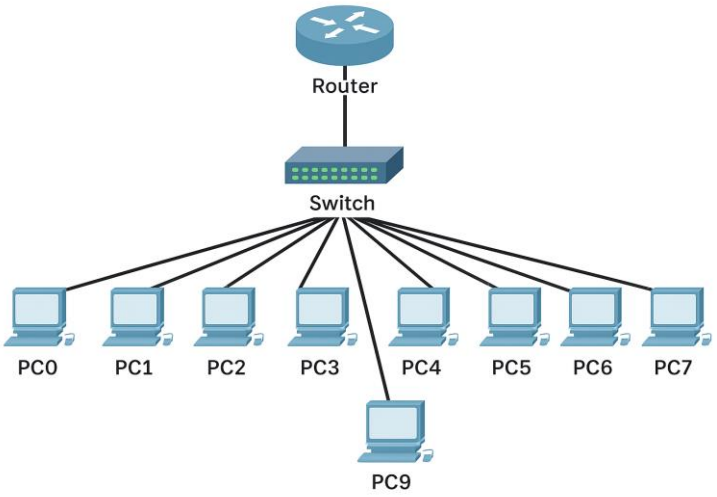
- If **DHCP**:
    - Configure the Server with DHCP service.
    - PCs will get IPs automatically.

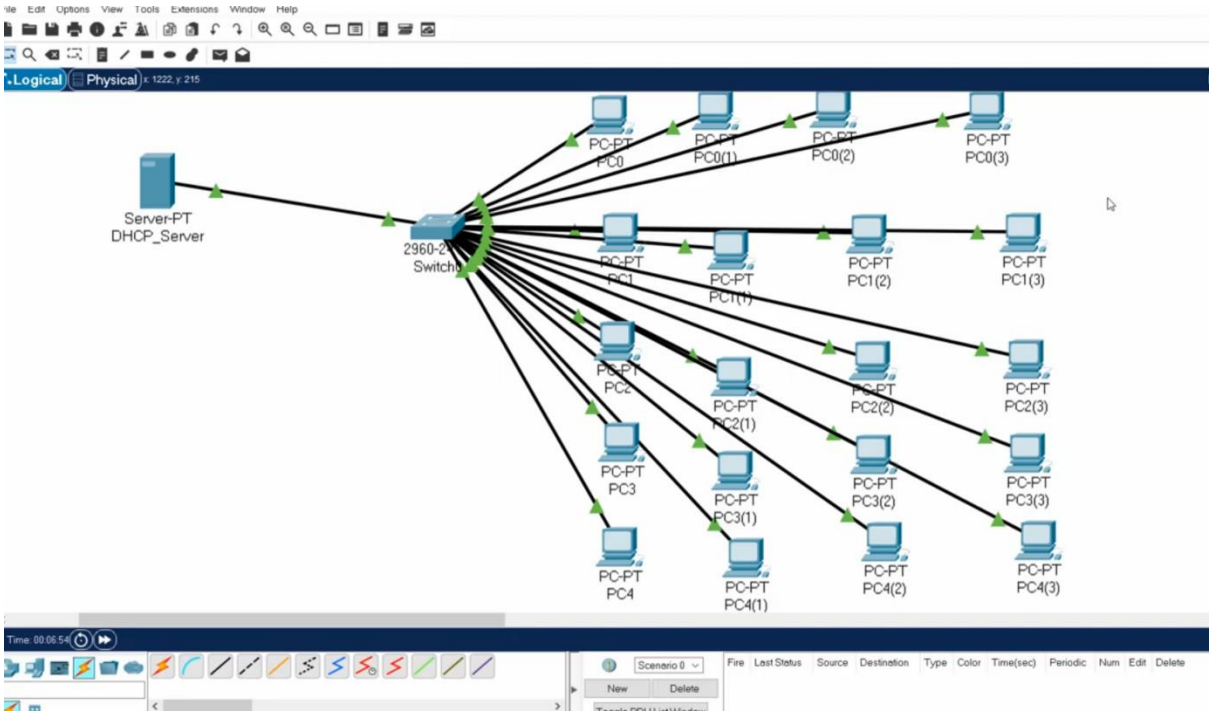
Step 8:

Test connectivity between the PCs using the ping command.

Verify successful communication within the lab network.

Network Topology Diagram:





Result:

Thus, the Computer Lab network was successfully designed and implemented in Cisco Packet Tracer, and communication between the PCs was verified.