EXP:04	**Setup and configure a LAN (Local area network) using a Switch and Ethernet cables in your lab.**

Aim

To set up and configure a Local Area Network (LAN) using a Switch and Ethernet cables and to test connectivity and file sharing.
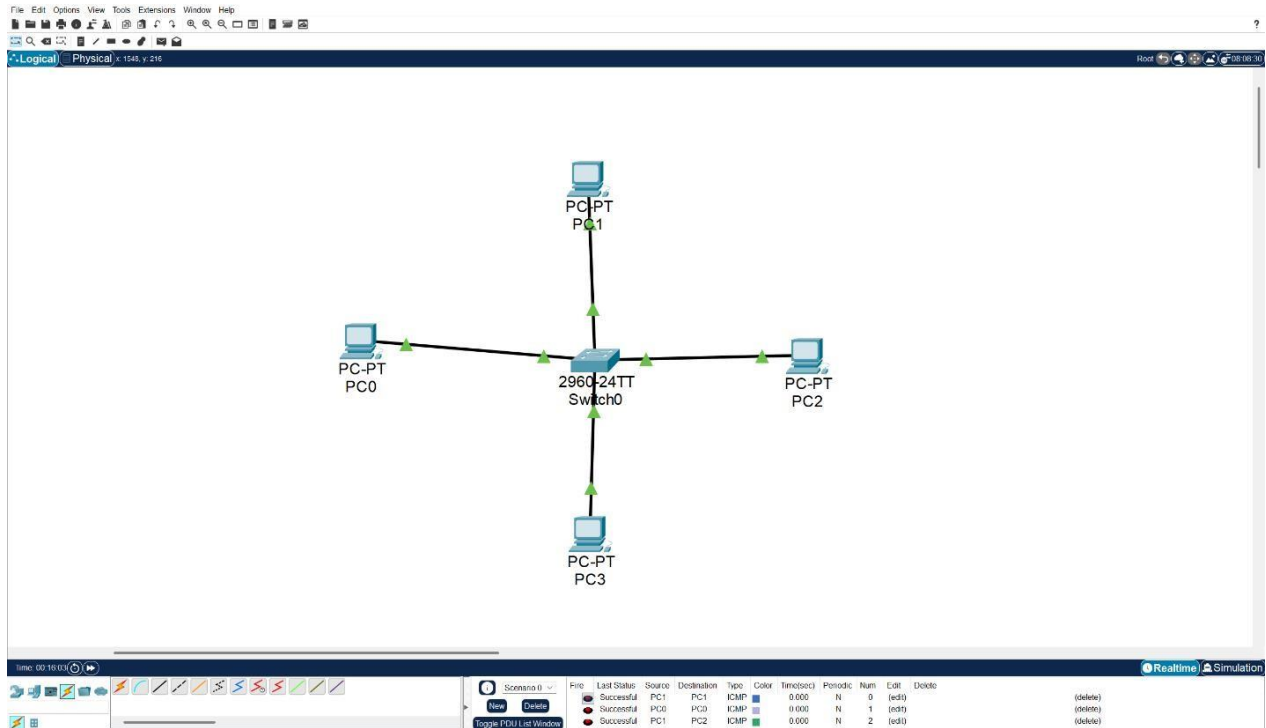
Algorithm / Procedure

1. **Connect** 3-4 host machines to a central Switch using Ethernet cables.
2. **Assign** static or dynamic IP addresses to each host machine within the same subnet.
3. **Verify** connectivity between all host machines using the `ping` command.
4. **Configure** file and folder sharing settings on one of the host machines.
5. **Access** the shared files and folders from the other machines on the LAN.

Result

A functional LAN was successfully set up and configured. Connectivity was verified using the `ping` command, and file sharing across the network was demonstrated.

Output Images

EXP:05	**Experiments on Packet capture tool: Wireshark**

Aim

To understand the features of Wireshark as a packet capture tool and analyze the encapsulation of information at various layers of the Protocol stack.

Algorithm / Procedure

1. **Install** and launch the Wireshark packet capture tool.
2. **Select** the appropriate network interface for capturing traffic.
3. **Start** a packet capture session.
4. **Generate** network traffic (e.g., browse a website, ping a host).
5. **Stop** the capture and **analyze** the captured packets, focusing on the header information at the Data Link, Network, and Transport layers to understand encapsulation.
6. **Apply** filters (e.g., `http`, `tcp`, `ip.addr == x.x.x.x`) to isolate specific traffic.

Output Images