Experiment on Setting up. & Configuring a LAN using a Switch & ethernet cable.

AIM:

To setup a lan network connection and configure using ethernet Cables and Switches.

A LAN refers to a network that connects devices within a limited area and enables users to share resources and promote collaboration and transfer its information.

A LAN Switch serves as a primary connection service, managing and directing communication within a local network Such connected devices on a LAN Switch can communication directly with each other allowing faster and secure data transfer.

How to setup a LAN :-

Step 1 : plan and design an appropriate network topology taking into account the network requirements and equipment location.

Step 2 : You can take 4 computer. a Switch with 8, 16 or 24 ports which is Sufficient for networks if these sizes and 4 ethernet cable.

Step 3 : connect your computers to a network Switch via a ethernet cable, which is as simple as plugging one end of the ethernet cable into your computer and the other end into your network Switch.

Step 4 : Assign IP address to your PC's
1. Login on to your client computer as administrator or as owner

2. Click → network and internet connections
3. Right click local area connection or ethernet
→ go to properties → select the internet protocol
(TCP/IPV4) → click on properties → select use
the following ip address option and assign ip
address.

Step 5. Configure a network switch
1. To access switch's web interface connect
your computer to the switch.
2. Log in to the web interface and open
the browser. enter the username and
password.
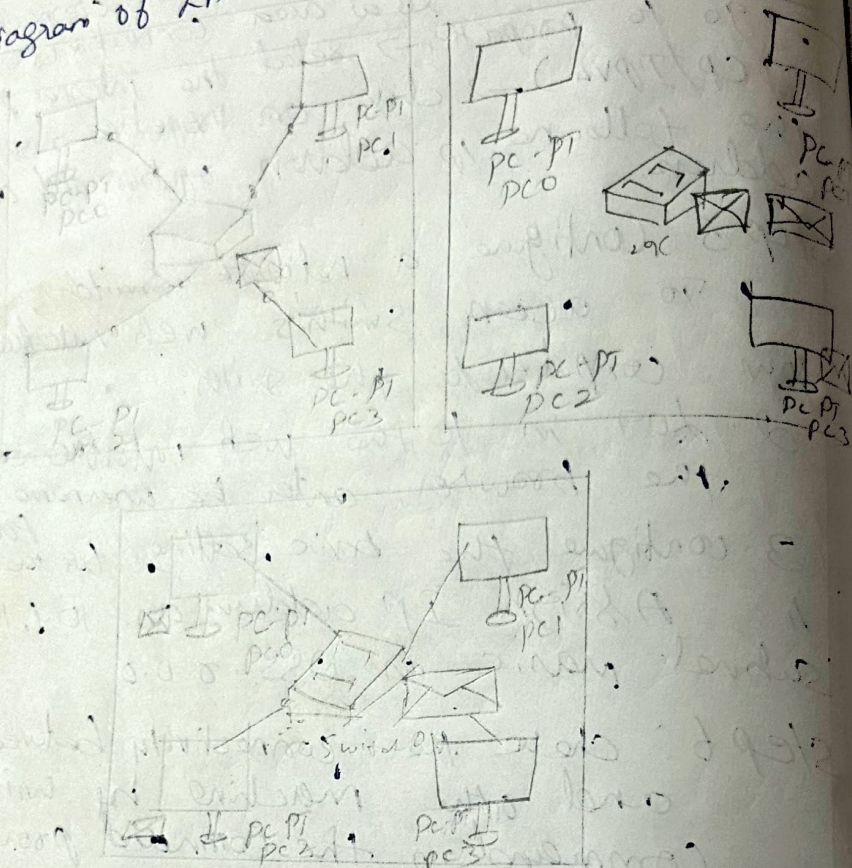3. Configure the basic settings for the switch.
4. Assign IP address as: 10.1.15 and
subnet masic as 255.0.0.0

Step 6: Check the connectivity between switch
and other machine by using ping
command in the command prompt of the
device.

Step 7: Select a folder → go to properties →
click sharing tale → share it with
everyone on the same LAN

Step 8: Try to access the shared folder from
other computer of the network

Diagram of LAN in Configuration observations:

Result:

Using switch & Ethernet cable, a LAN has been setup and configured.