EX NO: 4   EXPERIMENT ON SETTING UP & CONFIGURATION
DATE: 16.08.2025   A LAN USING A SWITCH & ETHERNET CABLES

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 promotes collaboration and transfer information

A LAN switch serves as a primary connecting service, managing and directing communications within a local network. Each connected device on a LAN switch can communicate directly with each other allowing faster and secure data transfer.

How to set up a LAN:

1. Plan and design an appropriate network topology taking into account, the network requirements and equipment location.

2. You can take 4 computers, a switch with 8, 16, or 24 ports which is sufficient for networks of these sizes and ethernet cables.

3. Connect your computer 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.

4. Assign IP address to your PC's
   a) Login on to your ~~client~~ client computer as administrator or as owner.
   b) click network and internet connections.
   c) 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.

5. Configure a network switch
   a) To access switch's web interface, connect your computer to the switch.
   b) Log in, to the web interface and open the browser, enter the username and password.
   c) Configure the basic settings for the switch.
   d) Assign IP address as: 10.1.15 and subnet mask as 255.0.0.0.
6. Check the connectivity between switch and other machine by using ping command in the command prompt of the device.
7. Select a folder → go to properties → click sharing tab → share it with everyone on the same LAN.
8. Try to access the shared folder from others computer of the network.

Result:
Using switch & ethernet cables, a LAN has been setup and configured.