

Exp NO 4

DATE: 11-08-2025

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 information.

A LAN switch serves as a primary communication within a local network, each connected device with each other following 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 computers, 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 an ethernet cable, which is a 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 as to your client computer as administrator or as an

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cable, which is
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ent computer as
network or as owner.

2. click network and internet connections

3. Right click local area connection (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 enter
the browser, enter the username and password.

3. Configure the basic settings for the switch.

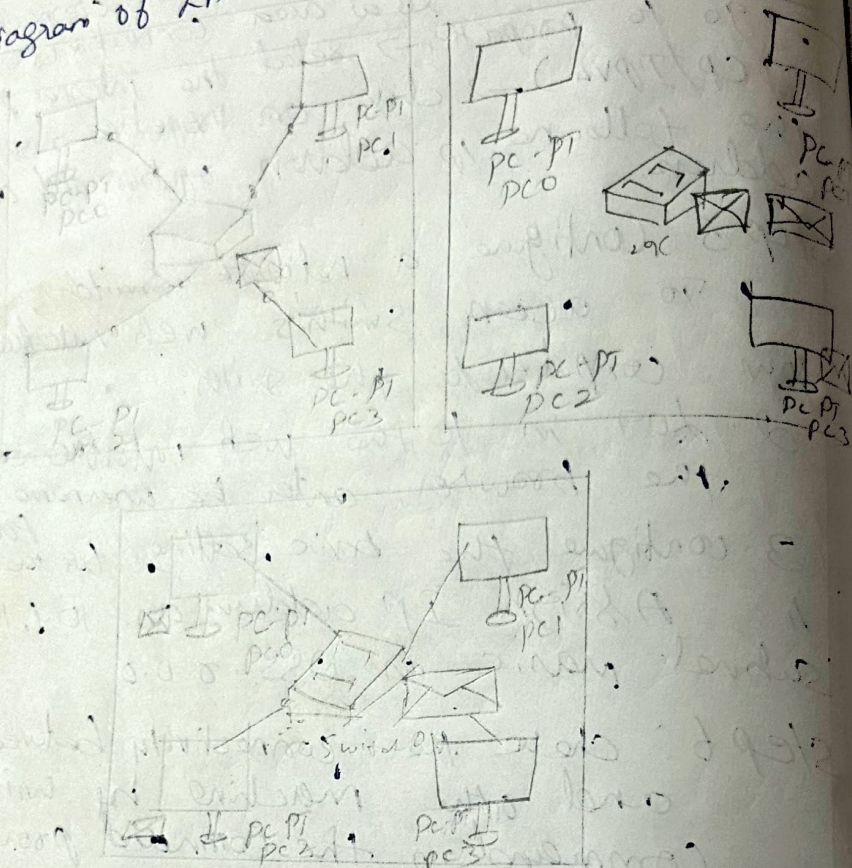
4. Assign IP address as 10.1.15 and
subnet mask as 255.0.0.0

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 tab → 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 observation:



Result:

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

Exp NO: 6
DATE 28.08.25

Aim:

Write a program to write a test case for error correction.

Error

Hamming codes that the error data is the developed correction. Create

- 1) Input to any len to bin
- 2) Apply h data a
3. Save Create.
1. Receiver channel
2. Apply & check
3. If the error
4. Else Conver