EXPERIMENT 04:

SET AND CONFIGURE A LAN (LOGAL AREA NETWORK) USING A SWITCH AND ETHERNET CABLES IN YOUR LAB

Aim:

To setup and configure a LAN using a switch and Ethernet cable.

Steps:

STEP 01:

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

STEP 02:

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

STEP 03:

Connect your computers to network via an 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 04:

Assign IP address to your PCS:

1. Long on to the client computer as Administrator or as owner
2. Click Network and Internet connections
3. Right-click Local Area connection / Ethernet -> Go to Properties -> Select Internet Protocol (TCP/IP4) -> Click on Properties -> Select use the following IP address option and assign IP address

STEP 05:

Configure a network switch:

1. Connect your computer to the switch:
   To access the switch's web interface, you will need to connect your computer to the switch using an Ethernet cable.

2. login to the web interface:

Open a web browser and enter an IP address of the switch in the address box. This should bring up the login page of the switch's web interface. Enter the username and password to login

3. Configure basic settings:

Once you're logged in you will be able to configure basic settings for the switch.

4. Assign IP address as: 10.1.1.5, subnet mask 255.0.0.0

STEP 06:

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

STEP 07:

Select a folder → go to properties → click sharing tab → share it with everyone on the same LAN.
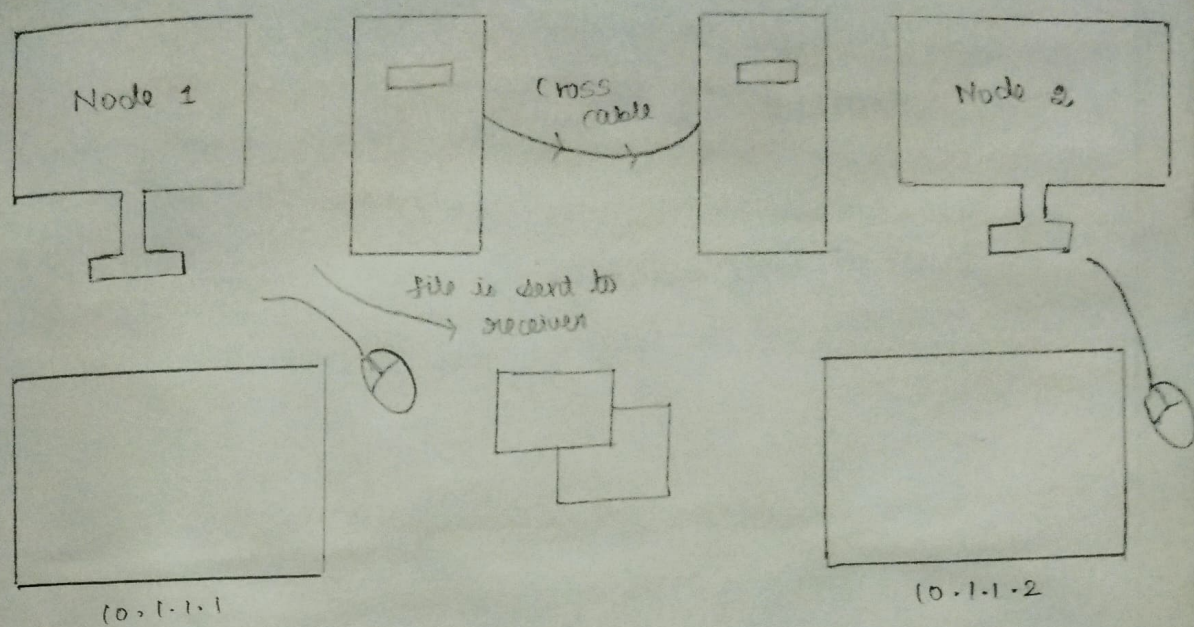
STEP 08:

Try to access the shared folder from others computer of the network.

Student Observation:

Draw a neat diagram of the LAN in the configuration observation book, that you have implemented in your lab. Write the IP configuration of each and every device. Write the outcome and challenges faced while configuring the LAN

Diagram of the LAN:

Node 1   Cross cable   Node 2

file is sent to receiver

(0.1.1.1)   (0.1.1.2)

IP configuration:

Node - 1 : IPV4   -Address : 10.1.1.1
Node - 2 : IPV4   Address : 10.1.1.2

Actual steps:

1. Open cmd, inconfig : See the IPV4 Address in the Ethernet Adapter Ethernet

2. Open run, open : 11 [IPV4 address of a receiver PC].

Eg: open : 11 10.1.1.1

3. After opening go to the users. Select REC Go to Desktop | DDouments| Downloads (wherever you want)

4. Paste the file there to share in the receiver PC

5. Then click the receiver PC on the respective directory that can previously selected and verify that the file have sent.

Outcome:

The file that sent through [click Run. [//C\ype) 10.1.1.2] → //users → //REC// Desktop] is sent successfully.

Result :

Thus, the setup for IOT is successfully configured and the data is sent and verified. Therefore, the file transfer and received is studied.