LOCAL AREA NETWORK

AIM:

Setup & configure a local Area Network using a switch & ethernet cables in your colab.

WHAT IS LAN:

A local area Network refers to a network that connects device within a limited area, such as an office building, school or home. It enables refers to share resources, including data, pointers & internet access. LAN connects devices to promote collaboration & transfer information between users such as printers, servers & switches. A local area network (LAN) switch serves as the primary connecting device on a LAN switch can communication within the local network. Each connected device on a LAN switch can communicate directly with each other, allowing for fast and secure data transfer.

How to setup a LAN?

step-1: Plan and design an appropriate network topology taking into account network requirement & equipment location.

step-2: You can take 4 computers, a switch with 8, 16 or 24 ports which is sufficient for networks of these & 4 ethernet cables

Step-3: Connect your computer to network switch via an ethernet cable, which is simple as plugging one end of the ethernet cable into your computer & the other end into your network switch.

Step - 4: Assign IP address to your PC.

1) Log on to the client computer as administrator or as owner.

2) Click network & internet connections.

3) Right click local area connection / ethernet → go to properties → select IP (T(P(IP → click on properties - select use the following IP addresses option & assign IP address.

Step - 5: Configure a network switch

1) Connect your computer to the switch to access the switches url interface, you will need to connect your computer to the switch using an ethernet cable.

2) Long into the url interface: open a vord web browser & enter the IP address of the switch in the address bar. This should bring up the login page for the switches url interface. Enter username & password to login.

3) Configure basic settings: once you're logged in you will be able to configure basic settings for the switch.

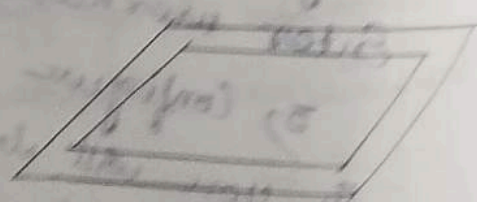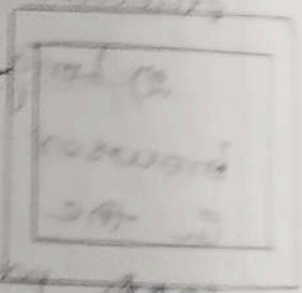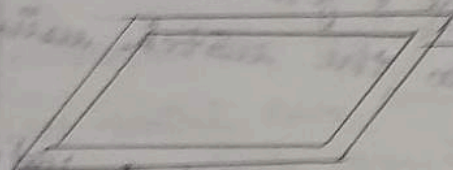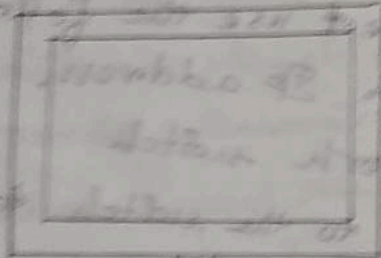4) Assign IP address as: 10.1.1.5, subnet mask 255.0.0.0

Step 6: Check the connectivity between switch & other machine by using ping command at command prompt by 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 computers to the network.

Student Observation:-

Result:

Thus the setup & configure of LAN is studied & observed.