Ex.no:4
11/9/25

Practical - 4

Setup and Configure a LAN using a Switch and Ethernet cables in your lab.

AIM:

To setup and configure a LAN using a switch and Ethernet cables

Procedure:-

step 1: Plan and Design an appropriate network topology into equipment location.

step 2: Take 4 computer, a switch with 8, 16 or 24 ports

step 3: Connect your Computers to network via switch on Ethernet cable into your computer, plug on and Ethernet cable into your computer and other end into your network switch.

step 4: Assign IP address to your PC's

i) Log on to client as Admin

ii) click network & internet connection

iii) Right-click local area connection bro to properties → select Internet Protocol (TCP/IPA) → click on properties → Assign

iv) Allocate ip address to all PC's like 10.0.0.1, 10.0.0.2 which creates a common subnet mask 255.0.

step 5: check connectivity between switch & other machine using 'ping' command.

→ ping 10.0.0.3

step 6: Configure network switch

i) Connect computer to switch

ii) Log into web interface

iii) Configure basic setting

iv) Assign IP address 10.0.0.3;
Subnet mask 255.0.0.0

step 7: Select folder -> properties -> click sharing
-> share everyone on same LAN

step 8: Try to access shared folder from others computers of network.

Student Observation

Draw a neat diagram of LAN in configure observation book that you have implemented in your lab, ip configure of each and every device. write outcome and challenges faced while configure the LAN

We implement LAN connect PCs switch. Each system was assign IP 192.168.1.2) without Subnet 255.255.255.0 & gateway 192.168.1.1. All PCs communicate successfully using ping. Main challenges faced IP conflicts wrong Subnet mask, loose cable connection.

Result:

Hence, setup and configure a LAN and switch cables in lab, has been successfully completed.