Computer Networks

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S.No.	Date	Title	Page No.	Teacher's Sign/ Remarks
1	16/7/24	Study of various network commands used in Linux and windows		
2	23/7/24	Study of Network cables.		
3	30/7/24	Experiments of CISCO POCKET TRACER simulation tools).		
4	06/8/24	Setup and configure a LAN (Local Area network) using a switch and Ethernet cables in your lab.		

EX NO: 03.

30/07/23

Practical - 3.

AIM:

To understand the packet tracer tool to Installation and user Interface overview.

c] To understand environment of CISCO POCKET TRACER to design simple network.

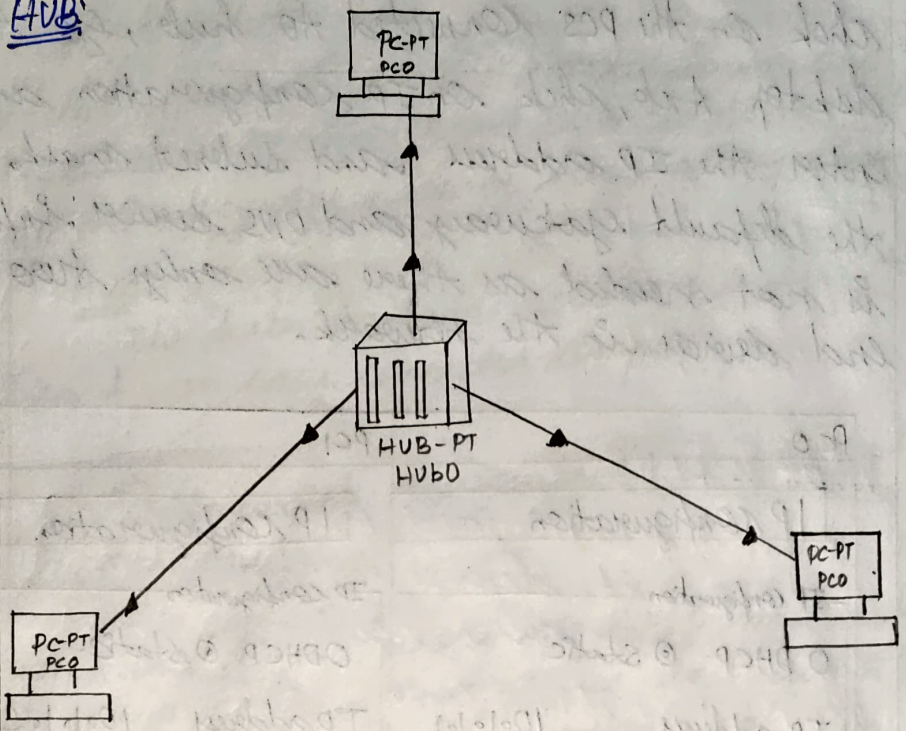
1. It allows you to model complex systems without the need for dedicated equipment.
2. It helps you to practise your network configuration and troubleshooting skills.
3] It is available for both the Linux and window desktop environments.
4] protocols in Packet tracer are coded to work and behave in the same way as they would on a real hardware.

d] Analyse the behaviour of network devices using CISCO POCKET TRACER simulator.

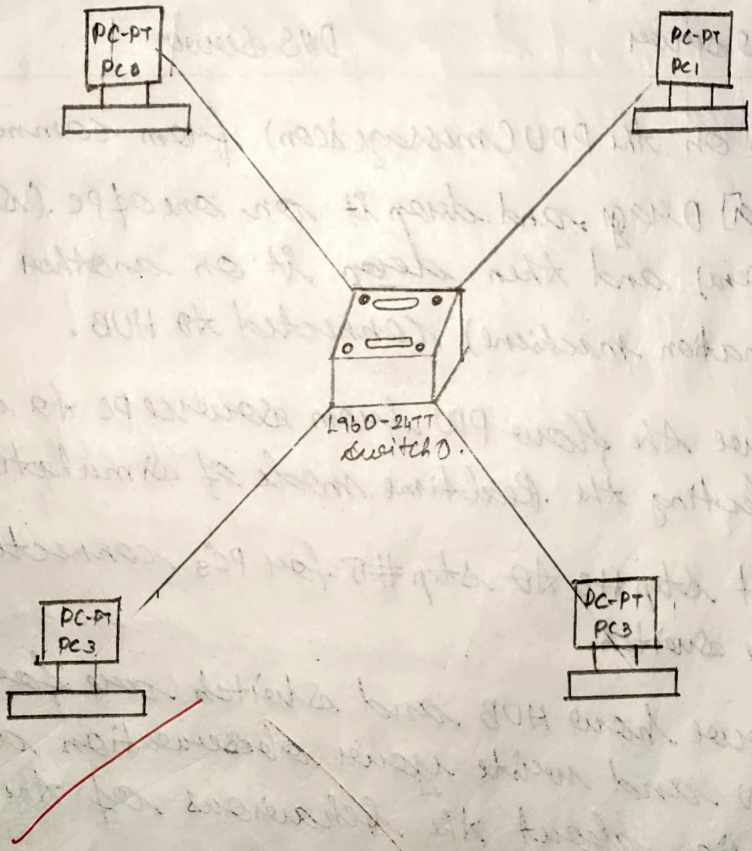
1] From the network component box, click & drag and drop the below components.
   a. 4 Generic PC's and one HUB
   b. 4 Generic PC's and one switches.

2] click on connections.
   a. click on copper straight-Through-cable.
   b. select one of the PC and connect it HUB using the cable. The link LED should glow in green, indicating that the link is up. Similarly connect remaining 3 PCs to the HUB.
   c. Similarly connect 4 PC to switch using copper straight-Through cable.

HUB:


PC-PT
PC0
HUB-PT
HUb0
PC-PT
PC0
PC-PT
PC0

Switch:


PC-PT
PC0
PC-PT
PC1
2960-24TT
Switch0
PC-PT
PC3
PC-PT
PC3

3] Click on the PCs connected to hub, go to the desktop tab, click on IP configuration and enter the IP address and subnet mask. Here, the default gateway and DNS server information is not needed as there are only two end devices in the network.

PC0	PC1
IP configuration	IP configuration
IP configuration ○ DHCP ◉ Static IP address 10.0.1.1 Subnet Mask 255.0.0.0 Default gateway DNS server	IP configuration ○ DHCP ◉ Static IP address 10.0.1.2 Subnet Mask 255.0.0.0 Default Gateway DNS Server

Click on the PDU (message icon) from common tool,

a] Drag and drop it on one of PC. (source machine) and then drop it on another PC (destination machine) connected to HUB.

4] Observe the flow PDU from source PC to destination PC selecting the Realtime mode of simulation.

5] Repeat step #3 to step #5 for PC's connected to the switch.

6] Observe how HUB and switch are forwarding the PDU and write your observation and conclusion about the behaviours of the switch and HUB

Student observation:-

a] From your observation write down the a behaviour of switch and HUB in terms of forwarding the packets received by them.

HUB:
The hub forwards data packets to each on easy connected computer.

SWITCHES:
It forwards the data to a specified destinations.

b] Find out the network topology implemented in your college and draw and label that topology in your observation book.

Star topology is used in our college.

Result:
Thus the study of packet tracer tool installation and user interface overview has been successful.

30/7/24