30/01/2024   Exercise #3

Aim :-

To study the Packet tracer tool Installation and Uses Interfaces overview

Analyse the behaviour of network devices using CISCO PACKET TRACER simulation.

1) From the network component box, click and drag - and - drop the below components.
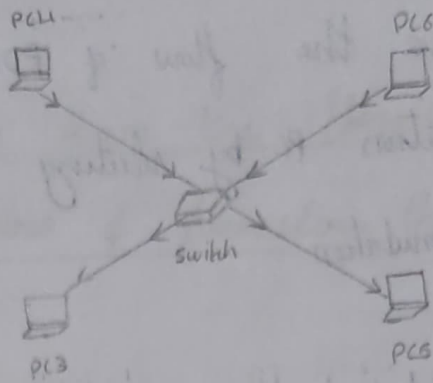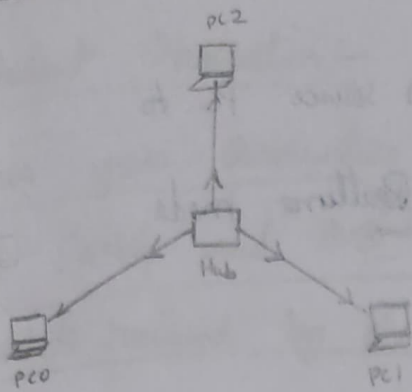
    a) 4 Generic PCs and One HUB

    b) 4 Generic PCs and one switch

2) Click on Connections.

    a) Click on Copper Straight - Through cable.

    b) Select one of the PC and connect it to 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 PCs to the switch using copper straight - through cable.

3) Click on the PCs connected the hub, go to the Desktop tab, click on IP configuration, and enter an 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.

Click on the PDU (message icon) from the common tool bar.

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

PC0	
IP Configuration	
IP Configuration	
O DHIP ⊙ Static	
IP Address	10.1.1.1
Subnet Mask	255.0.0.0
Default Gateway	
DNS Server	

PC1	
IP Configuration	
IP Configuration	
O DHIP ⊙ Static	
IP Address	10.1.1.2
Subnet Mask	25.0.0.0
Default Gateway	
DNS Server	

4) Observe the flow of PDU from source PC to destination PC by selecting the Realtime mode of simulation

5) Repeat step #3 to step #5 for the PCs connected to the switch

6) Observe how HUB and switch are forwarding the PDU and write your observation and conclusion about the behaviors of Switch and HUB.

Result :-

The Packet tracer tool Installation and User Interface are studied.

Student Observation:-

1) From your observation write down the behaviour of Switch and HUB in terms of forwarding the packets received by them.
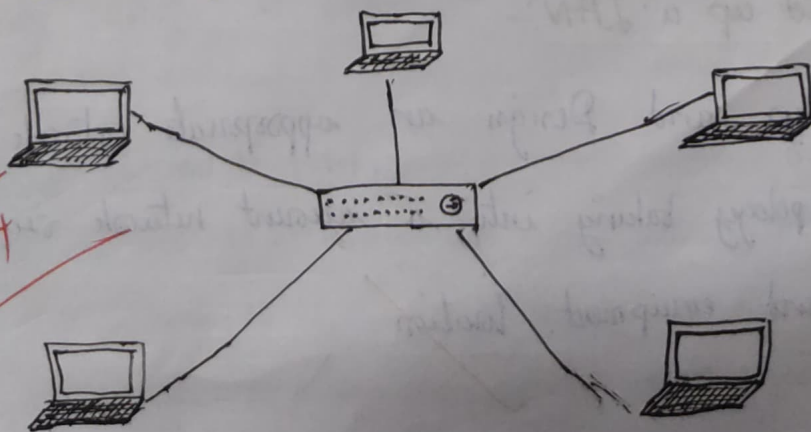
Switch:-

Forwards packets to the specific port based on the destination MAC address, reducing network congestion.

HUB:-

Broadcasts packets to all ports, regardless of the destination, leading to increased network traffic and potential collisions.

2) Find out the network topology implemented in your college and draw and label that topology in your observation book

The network topology implemented in your college is star.

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30/7/24