Ex No: 3

Date: 30/07/2024

Experiments on CISCO PACKET TRACER (Simulation tool)

Aim:

To study the Packet tracer tool Installation and User Interface overview

Steps:

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) Selece 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 to hub, go to the Desktop tab, click on IP configuration and enter an IP address and subnet mask. There the default gateway and DNS server information is not needed of those 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 the HUB.

4) Observe the flow of PDU from source Pc to destination Pc by selecting the Real time mode of simulation.

5) Repeat Step #3 to Step #5 for the Pcs connected to the switch.

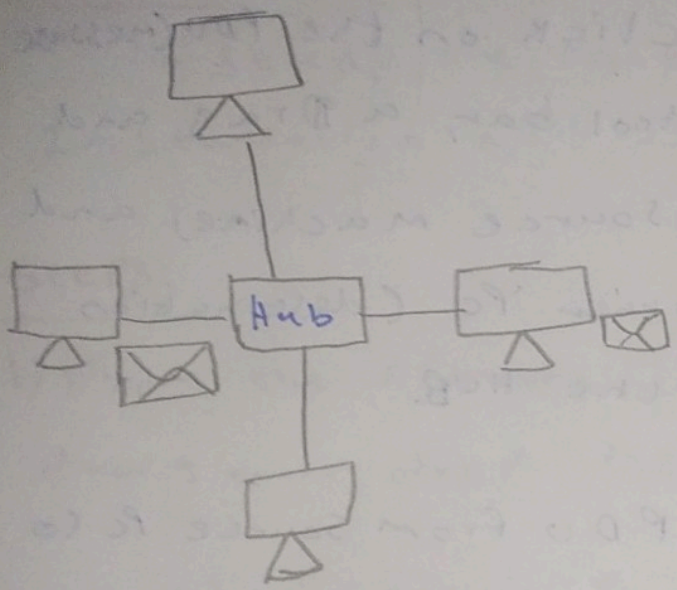
6) observe how HUB and Switch are forwarding the PDU and write your observation and conclusion about the behavioser of Switch and HUB.

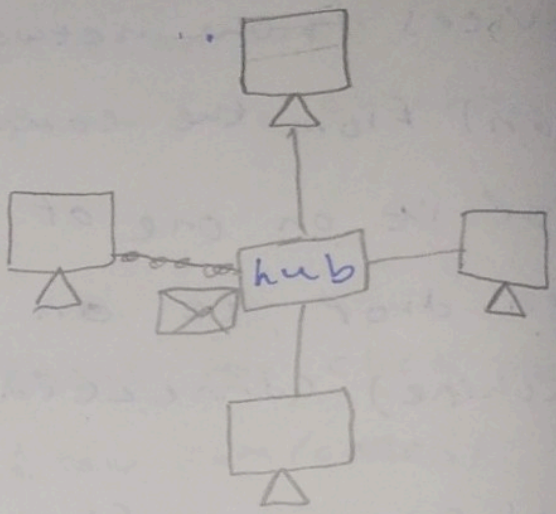
Student Observation:

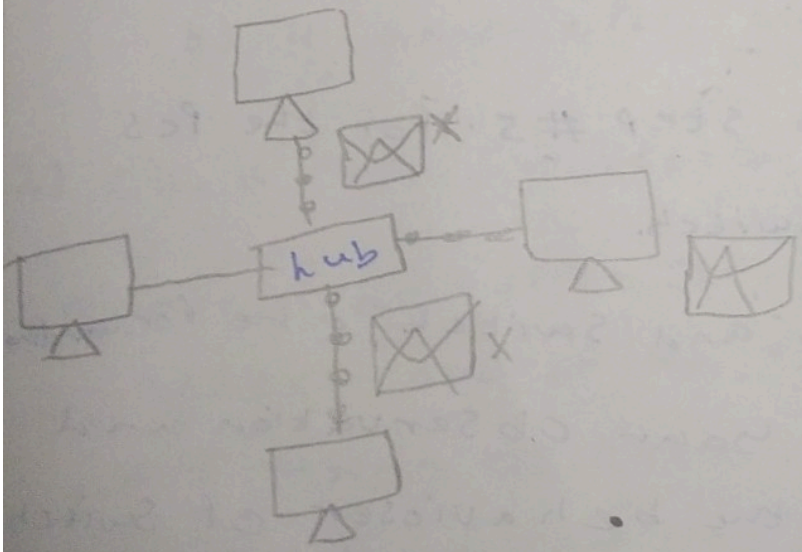
a) from your Observation write down the behaviour of switch and HUB in terms of forwarding the packets received by them

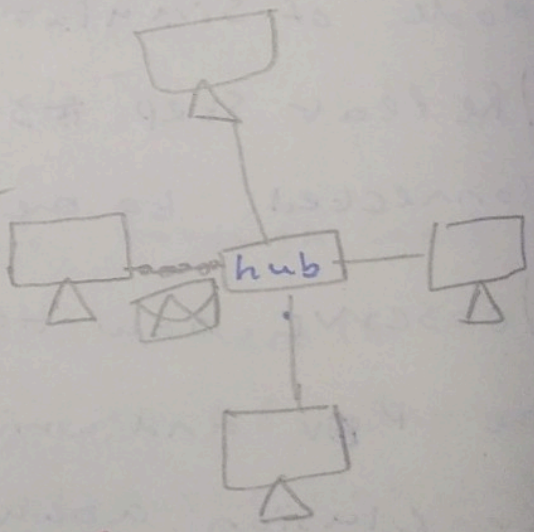
b) Find out the network topology implemented in your college and draw and label that topology in your observation book.

Hub:

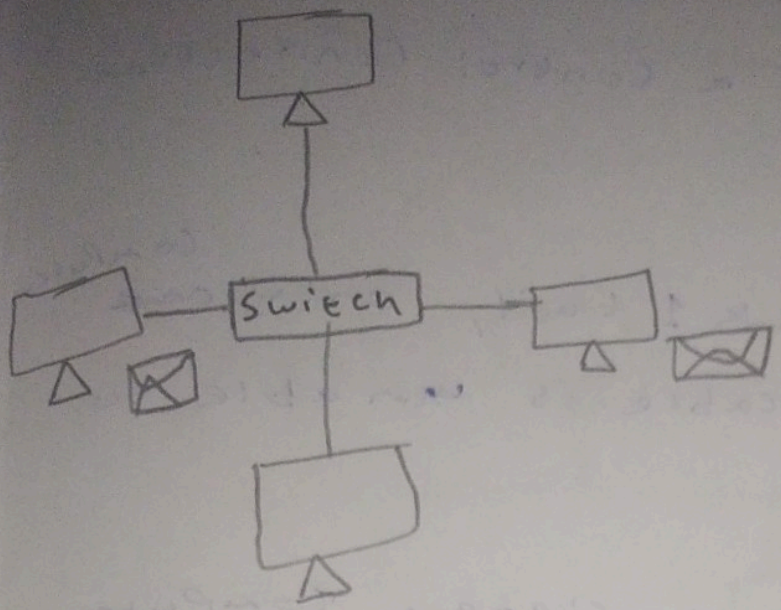


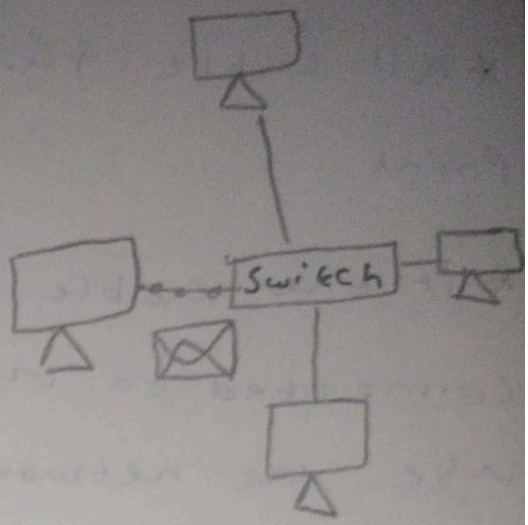


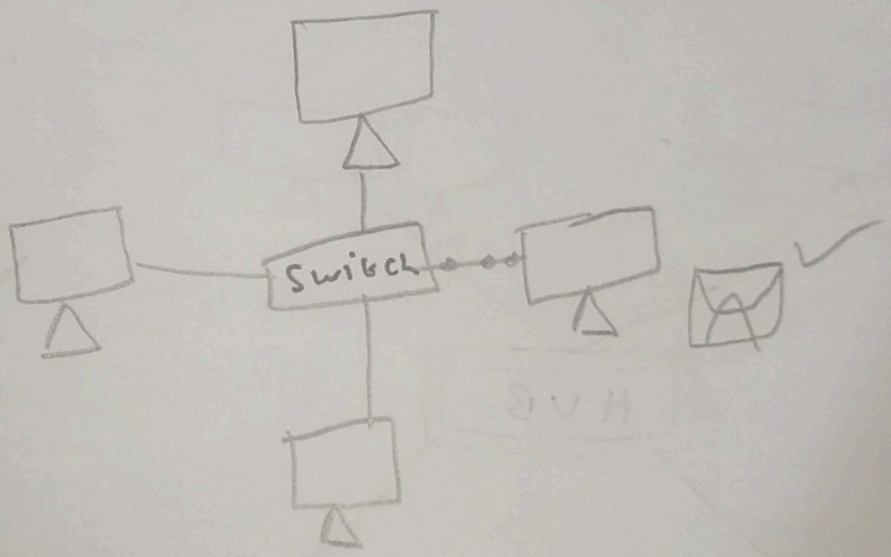




Switch





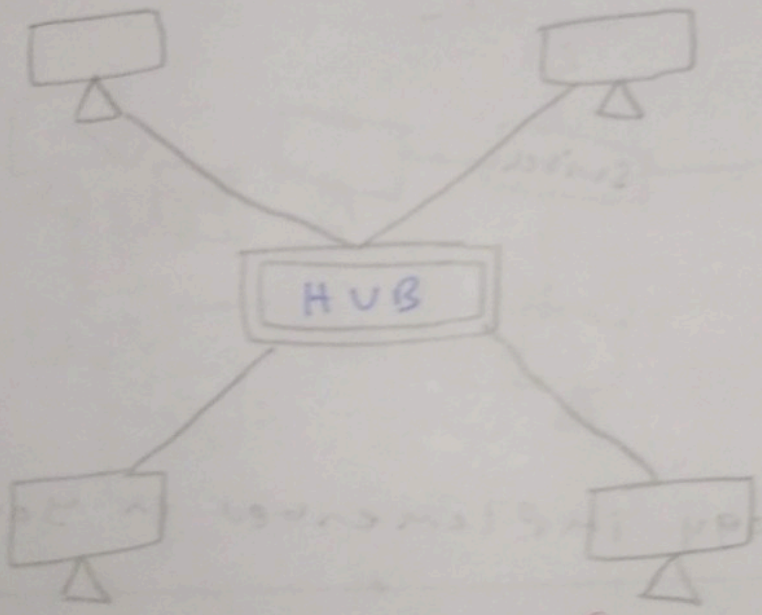


Network topology implemented in your college

Topology implemented in one college is Star topology & hybrid topology.

Characterics of star topology

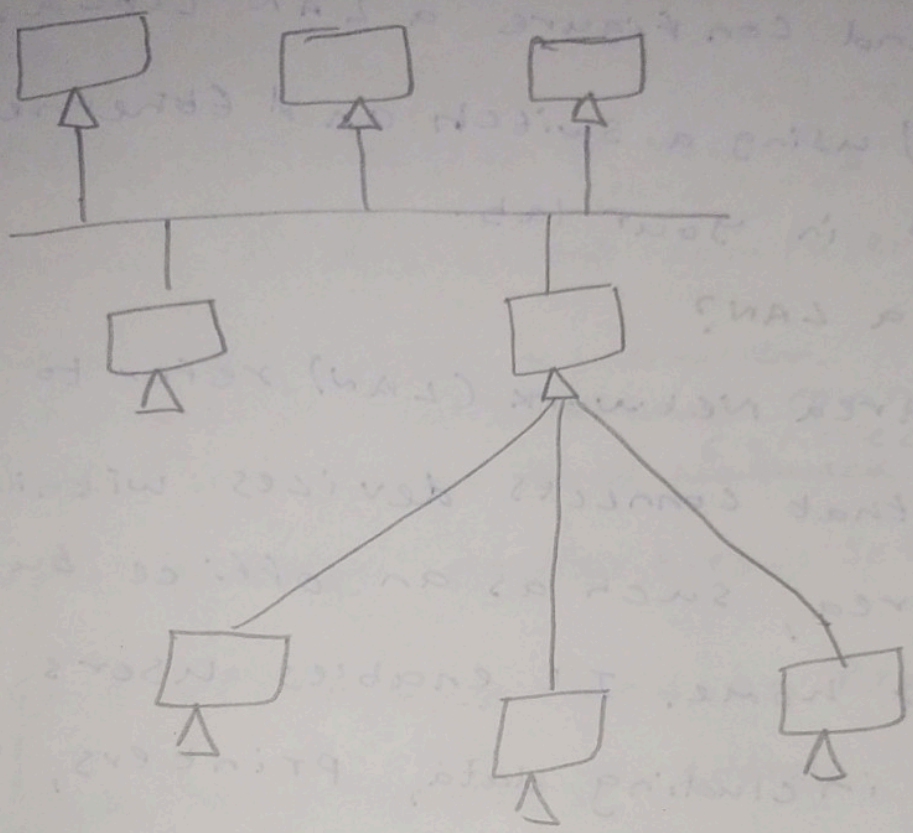
* all cable run to a control connection Point
* if one cable break 1 tail, only computer connected to that cable is unable to use the network
* As network grows or changes, computers are simple added or removed from control connection point, hub or switch.



Characteristics of hybrid topology

* hybrid topology is combination of more than one topology.
* hybrid makes use of standard such as wifi & ethernet

* The hybrid topology has different forms each as its unique design.



Result:

Thus successfully studied the Packet tracer tool and analysed the behaviour of network.

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