

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. 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 to 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 the HUB.

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

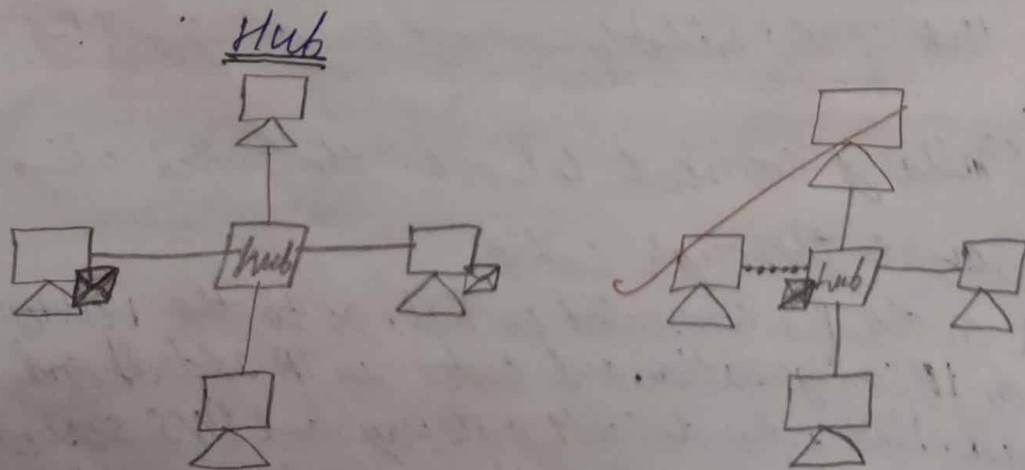
5. Repeat step #3 to step #5 for the PCs connected
to the switch.

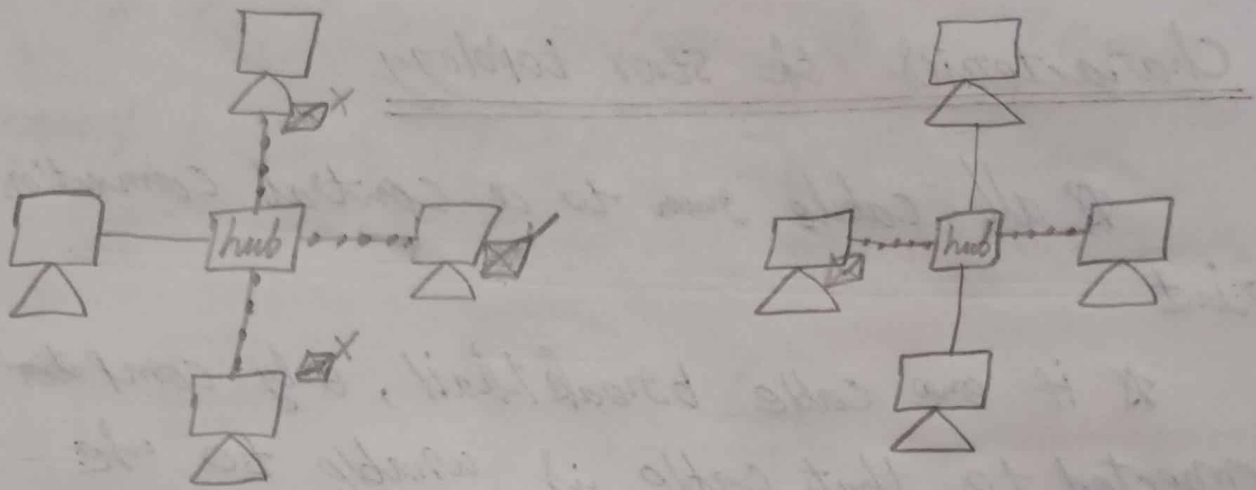
6. Observe how HUB and switch are forwarding the
PDU and write your observation and conclusion
about the behavior of switch and HUB.

Student observation:

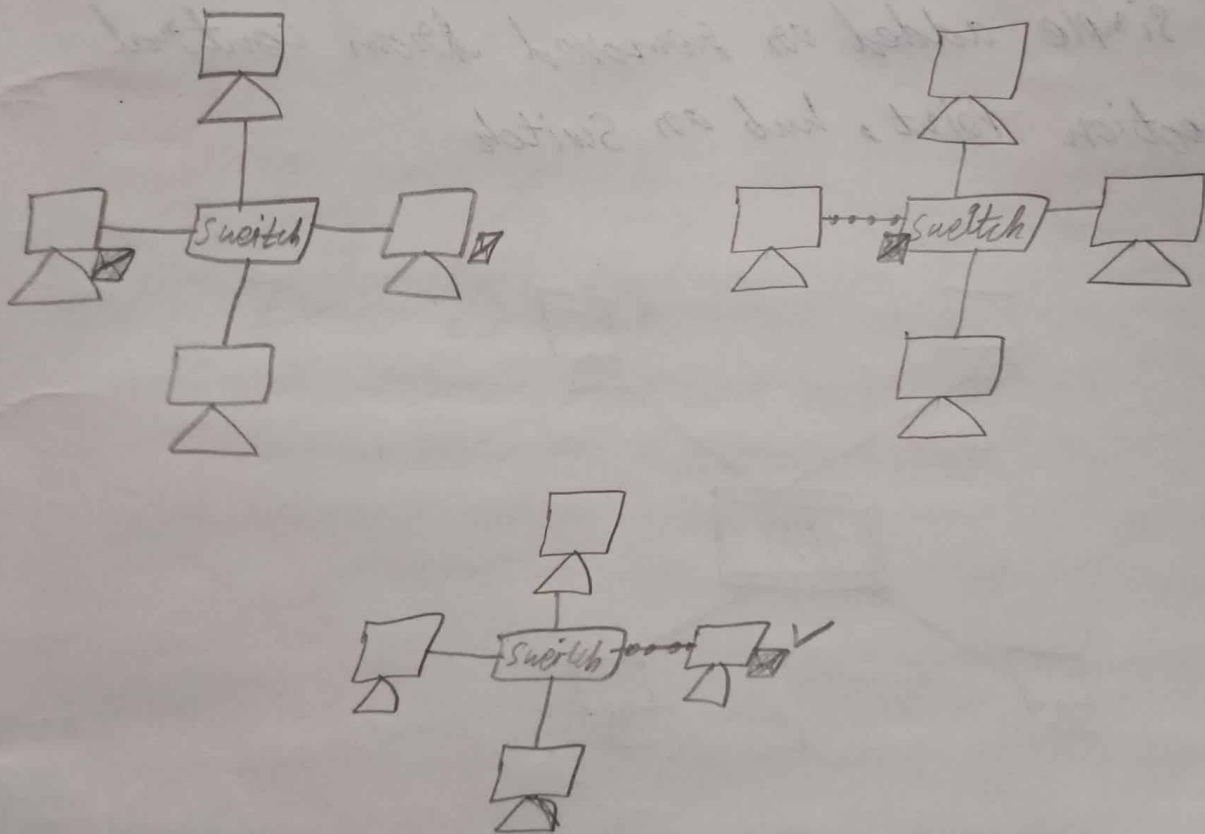
a. From your observation write down the behavior of switch
and HUB in terms of forwarding the packets
received by them.

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





Switch



- Network topology implemented in your college

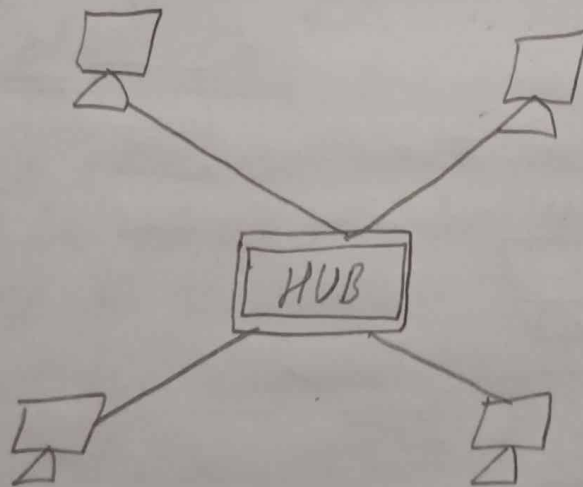
Topology implemented in our college is
Star topology & hybrid topology

Characteristics of star topology

• all cable run to a central connection point

• if one cable break/hail, only computer connected to that cable is unable to use the network

• As network grows or changes, computers are simple added or removed from central connection point, hub or switch

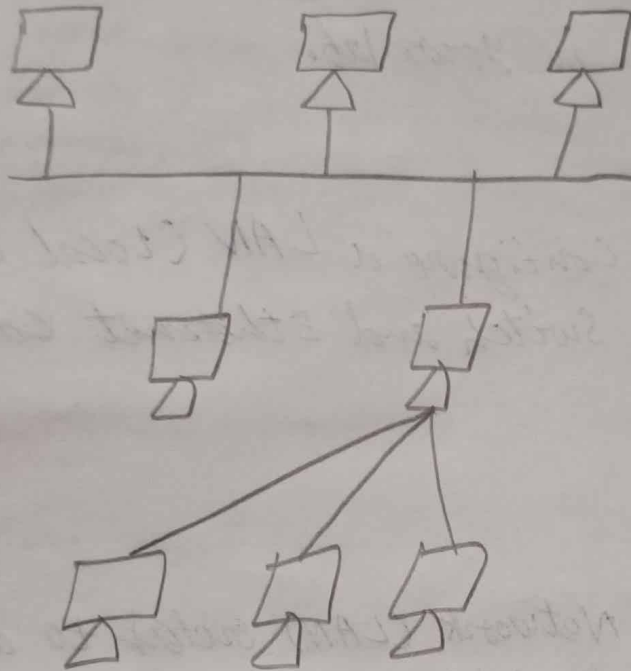


Characteristics of hybrid topology

• hybrid topology is combination of more than one topology

• hybrid makes use of standard such as wifi & ethernet

The hybrid topology has different
branches & each at its unique design



Result:

~~I~~ ²⁴ ~~30~~ That successfully studied the packet
tracer tool and analysed the behaviour
of network