

Date: 24/7/25

Exp. No : 3

AIM: To study the Packet Tracer tool  
Installation and User Interface Overview

a) To understand environment of CISCO PACKET TRACER to design simple network

### INTRODUCTION:

A simulator, as the name suggests, simulates network devices and its environment.

1. It allows you to model complex systems without the need for dedicated equipment
2. It helps to practice network configuration
3. It is available for both Windows and Linux
4. Protocols in Packet Tracer are coded to work and behave the same way as they would on a real hardware.

### INSTALLING PACKET TRACER:

CISCO PACKET TRACER was successfully installed and the UI was studied.

b) Analyse the behaviour of network devices using CISCO PACKET TRACER simulator

1. From the network component box, click and drag drop the below components

- a. 4 Generic PCs and 1 hub
- b. 4 Generic PCs and 1 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.
- 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.

click on PDU from the common tool bar

- a) Drag and drop it on one of the 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

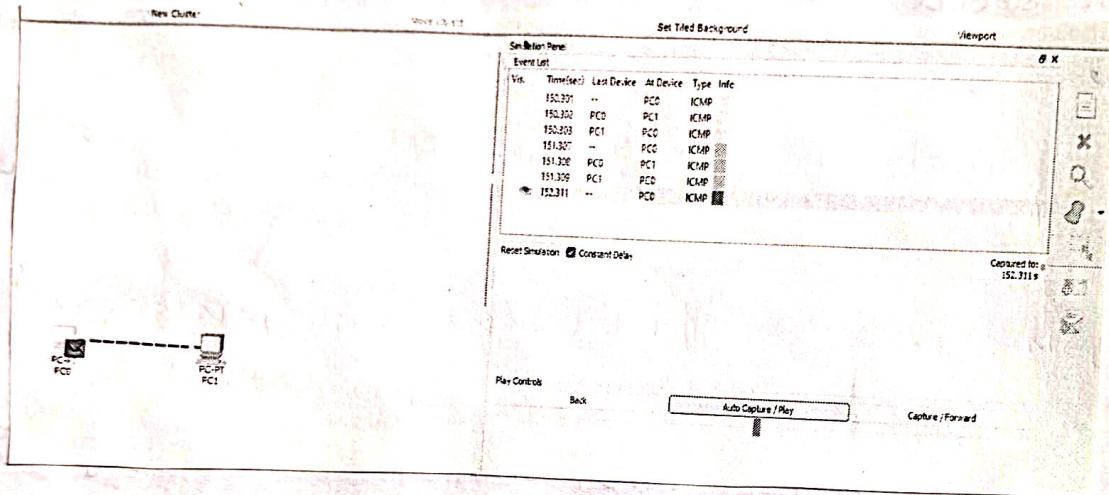
5. Repeat steps 3 to step 5 for the PCs connected to the switch



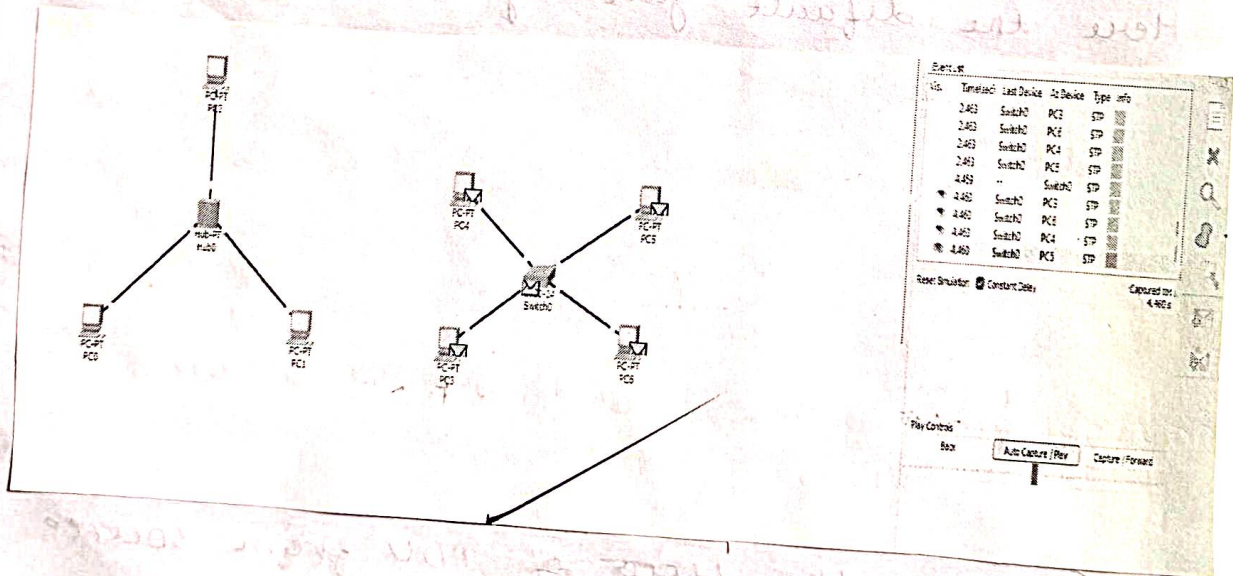
6. Observe how HUB and switch are forwarding the PDU.

Outputs:

Computer Network 1:

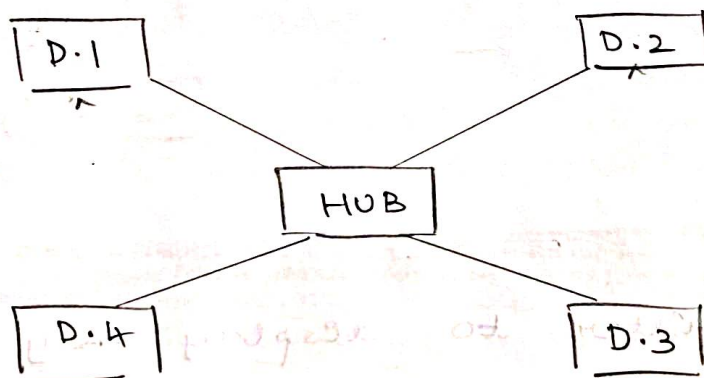


Computer Network 2:



## Student Observation

1. From your observation write down the behaviour of switch and hub in terms of forwarding the packets received by them
  - The hub broadcasts packets to all connected PC's causing unnecessary traffic. The switch forwards packets only to the destination PC.
2. Find out the network topology implemented in your college and draw
  - star Topology where each device is connected to central switch or hub.



### RESULT:

Successfully implemented, simulated and analysed packet forwarding behaviour of switch and hub using Cisco Packet Tracer.

4/3/18