EXPERIMENTS ON CISCO PACKET TRACER
(SIMULATION TOOL)

AIM :

To study the Packet tracker tool installation & User Interface overview

a) To Understand environment of CISCO PACKET TRACKER to design simple network

- **INTRODUCTION :**

A simulator, simulates network devices & its environments. Packet tracker is an exciting network design, simulation & modelling tool.

→ It allows to model complex network devices
→ It is available for both Linux & windows
→ Protocols in Packet tracker are coded to work & behave in the same way as they would on real hardware

- **INSTALLING PACKET TRACKER :**

To download packet tracker, go to https:// www. netacad.com & log in with your cisco Networking Academy credentials.

WINDOWS :

The setup comes in a single file named Packettracker _setup6.0.1.exe. open this file to begin the setup wizard, accept the license agreement, choose a location, start the installation.

LINUX :

Linux users with an Ubuntu/Debian distribution

should download the file for Ubuntu, & those using Fedora / CentOS must download the file for Fedora.

```
chmod +x PacketTracker601_i386_installer-rpm.bin
./PacketTracker601_i386_installer-rpm.bin
```

- **USER INTERFACE OVERVIEW:**

The layout of Packet Tracker is divided into several components.

1) MENU BAR:

This is a common menu found in all software applications. It is used to save, open, print.

2) MAIN TOOLBAR:

It provides short cut icons to menu options that are commonly accessed, such as open, save, zoom, undo, redo

3) LOGICAL / PHYSICAL WORKSPACE TABS:

Allows you to toggle between logical & physical work areas.

4) WORKSPACE:

Area where topologies are created

5) COMMON TOOL BAR:

provides controls for manipulating topologies, such as select, move layout, delete, inspect, and add simple / complex PDU.

6) NETWORK COMPONENT BOX:

This component contains all of the network & end devices available with Packet tracer.

→ Area 7a: Device type selection box

→ Area 7b: Device specific selection box

7) **USER CREATED PACKET BOX:**
Users can create highly-customized packets to test their topology from this area.
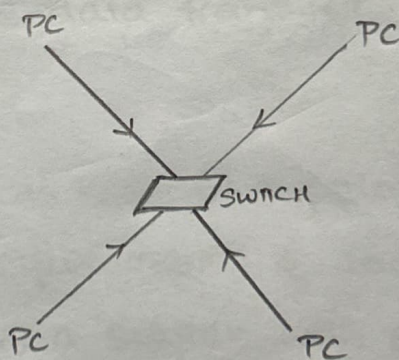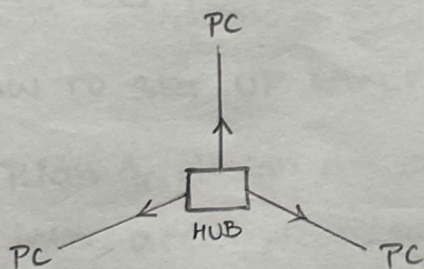
b) Analyse the behaviour of network devices using CISCO PACKET TRACKER simulator.

→ From the network component box, click & drag and drop the below components:

    a. 4 Generic PCs & one HUB.

    b. 4 Generic PCs & one Switch

→ click on connections

    *. click on Copper straight -Through cable

    *. Select one of the PC & connect it to HUB using the cable

    *. Similarly connect 4 Pcs.

→ click on Pcs connected to hub, go to the Desktop tab, click on IP configuration, & enter an IP address.

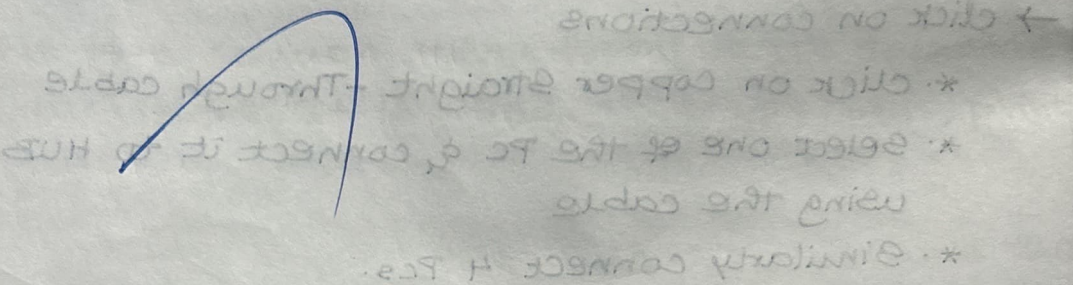→ Observe the flow of PDU from source PC to destination PC

→ Observe how HUB & switch are forwarding the PDU & write your observation & conclusion about the behaviours of switch & HUB.

STUDENT OBSERVATION:

1. Write down the behaviour of Switch & HUB in terms of forwarding the packets received by them.

   HUB: Forwards incoming packets to all ports, causing unnecessary traffic.

   SWITCH: Forwards packets only to the destination port using its MAC address table, reducing collisions.

RESULT:

The Packet Tracer tool installation & User Interface Overview have been studied successfully.