Date: 4/08/25

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PRACTICAL - 3

PACKET TRACER TOOL INSTALLATION AND USER INTERFACE OVERVIEW.

AIM:-

To study the Packet tracer tool Installation and User Interface Overview.

INTRODUCTION:-

A simulator, as the name suggests, simulates network devices and its environment. Packet Tracer is an existing network design, simulation and modelling tool.

1. It allows you to model complex systems without the need for dedicated equipment.

2. It helps you to practice your network configuration and trouble shooting skills via computer or an Android or iOS based mobile device.

3. It is available for both the Linux and Windows desktop environment

4. Protocols in Packet Tracer are coded to work and behave in the same way as they would on real hardware.

Analyse the behaviour of network devices using CISCO PACKET TRACER simulator

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 cabel. The link LED should glow in green, indicating that at 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
go to the Desktop tab, click on IP
Configuration, and enter an IP
address and subnet mask.

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

a. Drag and drop it on one of PC
and then drop it on another PC
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 behaviors of switch and HUB.

STUDENT OBSERVATION :-

(a) From your obs write down the behavior of Switch and HUB in terms of forwarding the packets received by them.

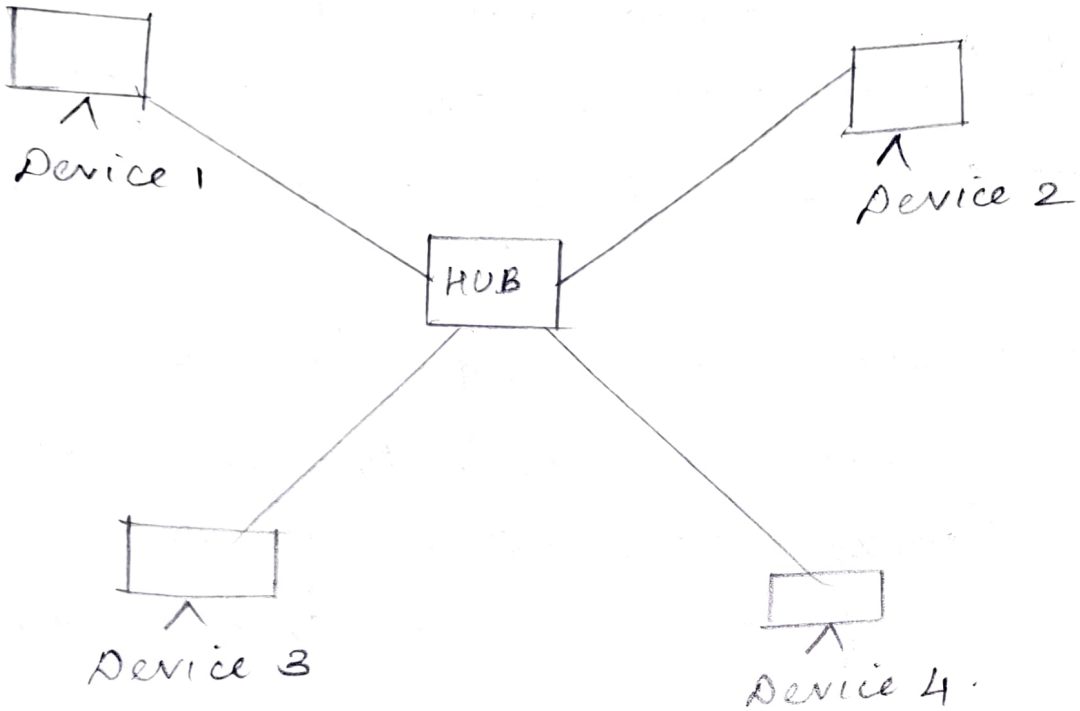
HUB :-

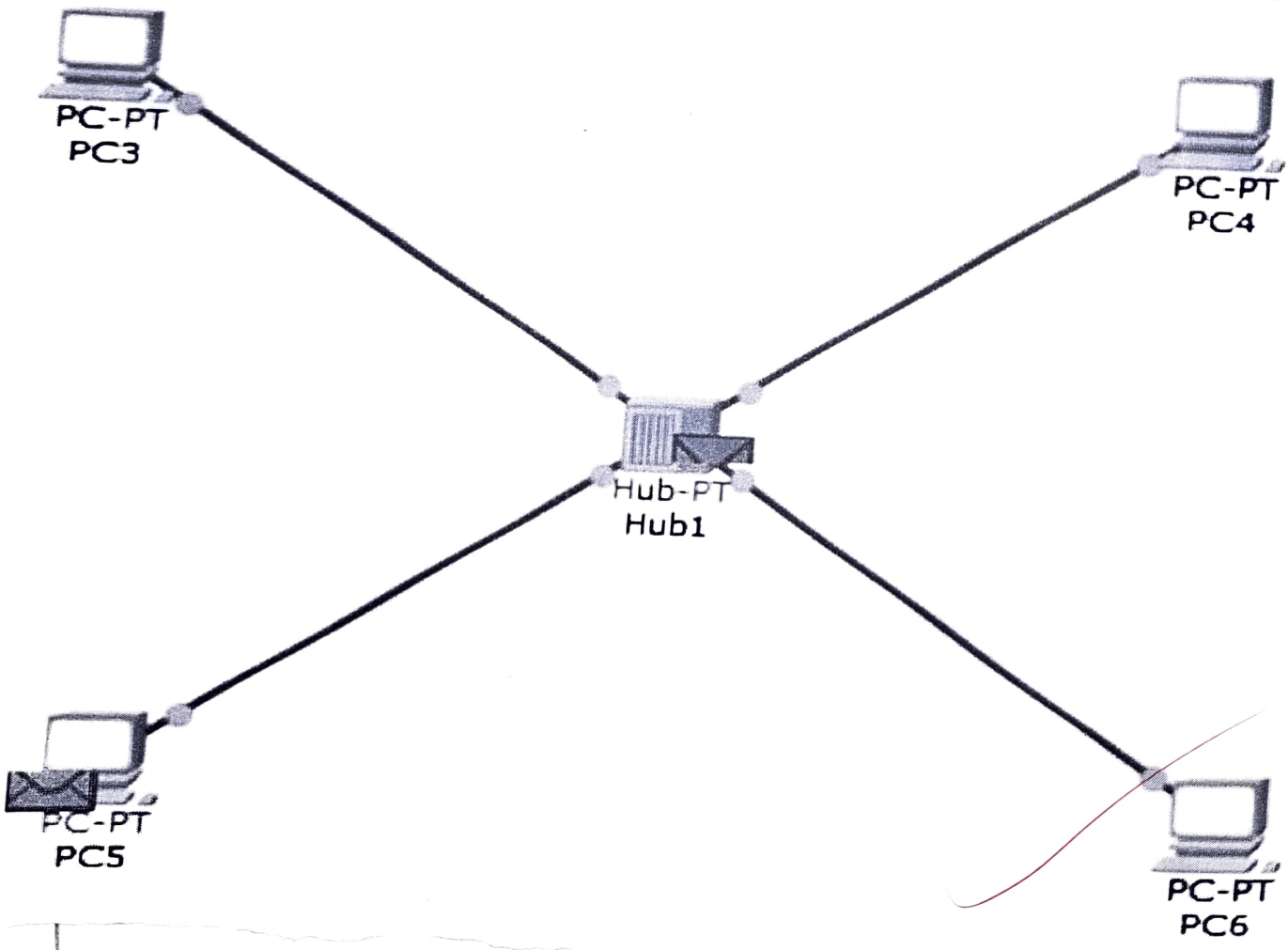
It is a basic networking device that broadcasts all the packets it receives to all devices connected to it, regardless of the destination address.

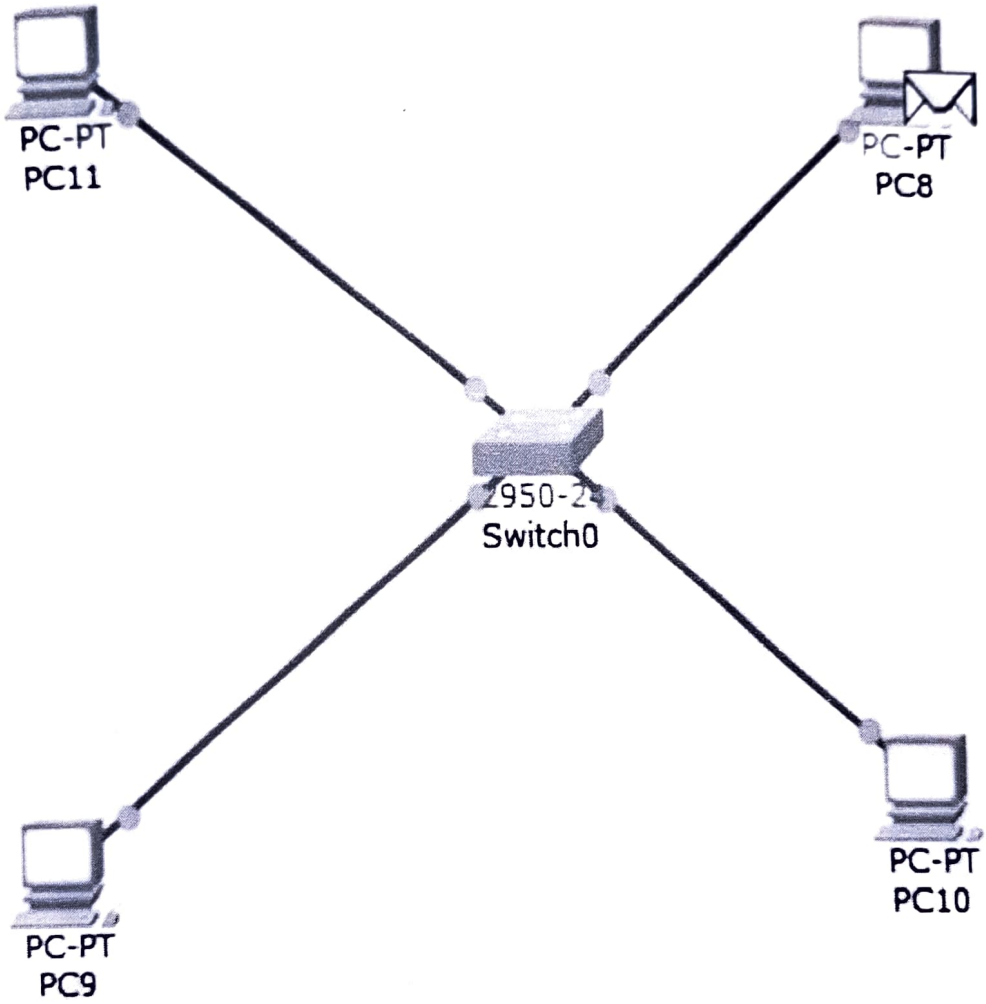
SWITCH :-

A switch is an intelligent device that learns the MAC addresses of devices connected to each of its ports. When it receives a packet, it forwards it only to the port where the destination device is connected.

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


Device 1
Device 2
HUB
Device 3
Device 4


PC-PT
PC3
PC-PT
PC4
Hub-PT
Hub1
PC-PT
PC5
PC-PT
PC6



RESULT:-

Successfully simulated and analyzed packet forwarding behaviour of HUB & switch using cisco packet tracer.