Experiment 1.3

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Subject Name: Computer Networks   **Subject Code: 21CSH-256**

Aim:- Configure and understand working of network devices Hub, Switch, Routers.

S/W Requirement :- Cisco Packet Tracer

Procedure:

1. **Hub:** A hub is a physical layer networking device which is used to connect multiple devices in a network. They are generally used to connect computers in a LAN. A hub has many ports in it. A computer which intends to be connected to the network is plugged in to one of these ports

Method:

1. Bring required devices Hub, PC & wires in the packet tracer software.
2. Assign IP address to each PC.
3. Select source and destination and drop packet from source to destination.
4. Go to Simulation mode and click capture/Play.
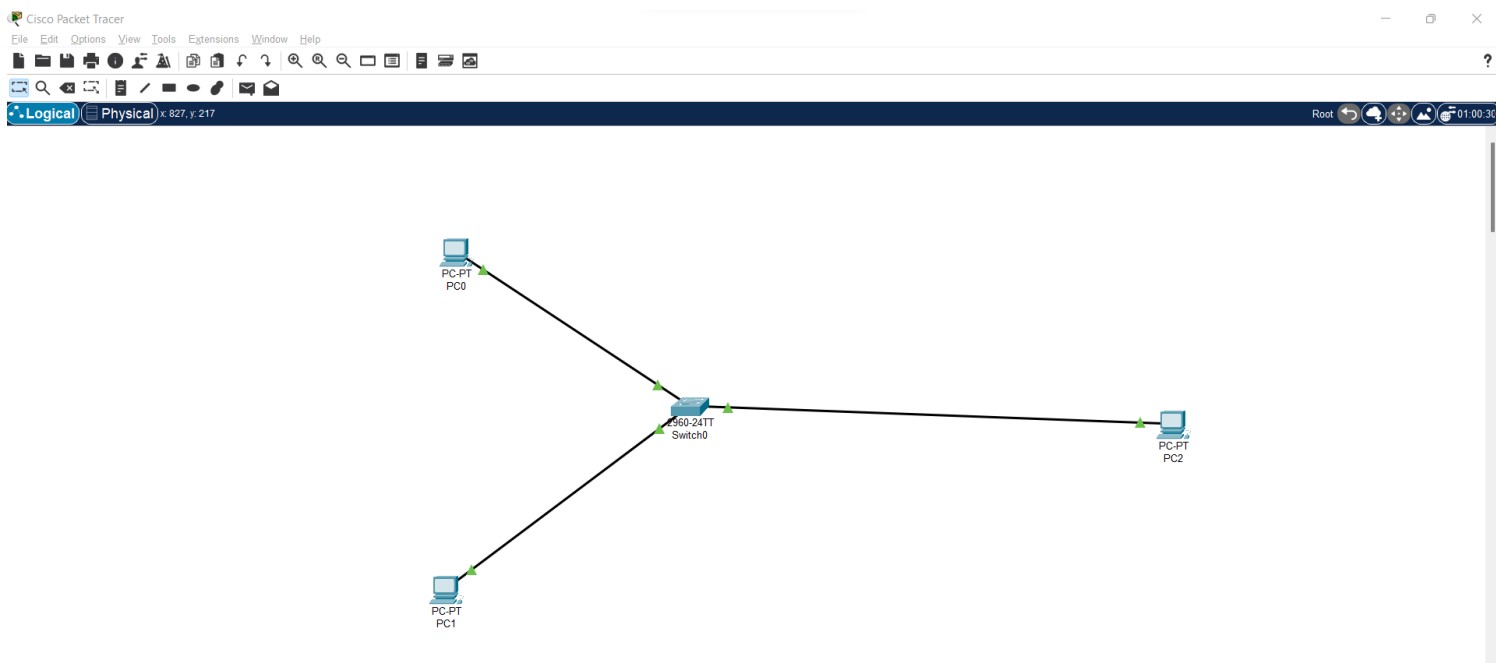5. Simulation will start and packet will only be accepted by destination.

Output-
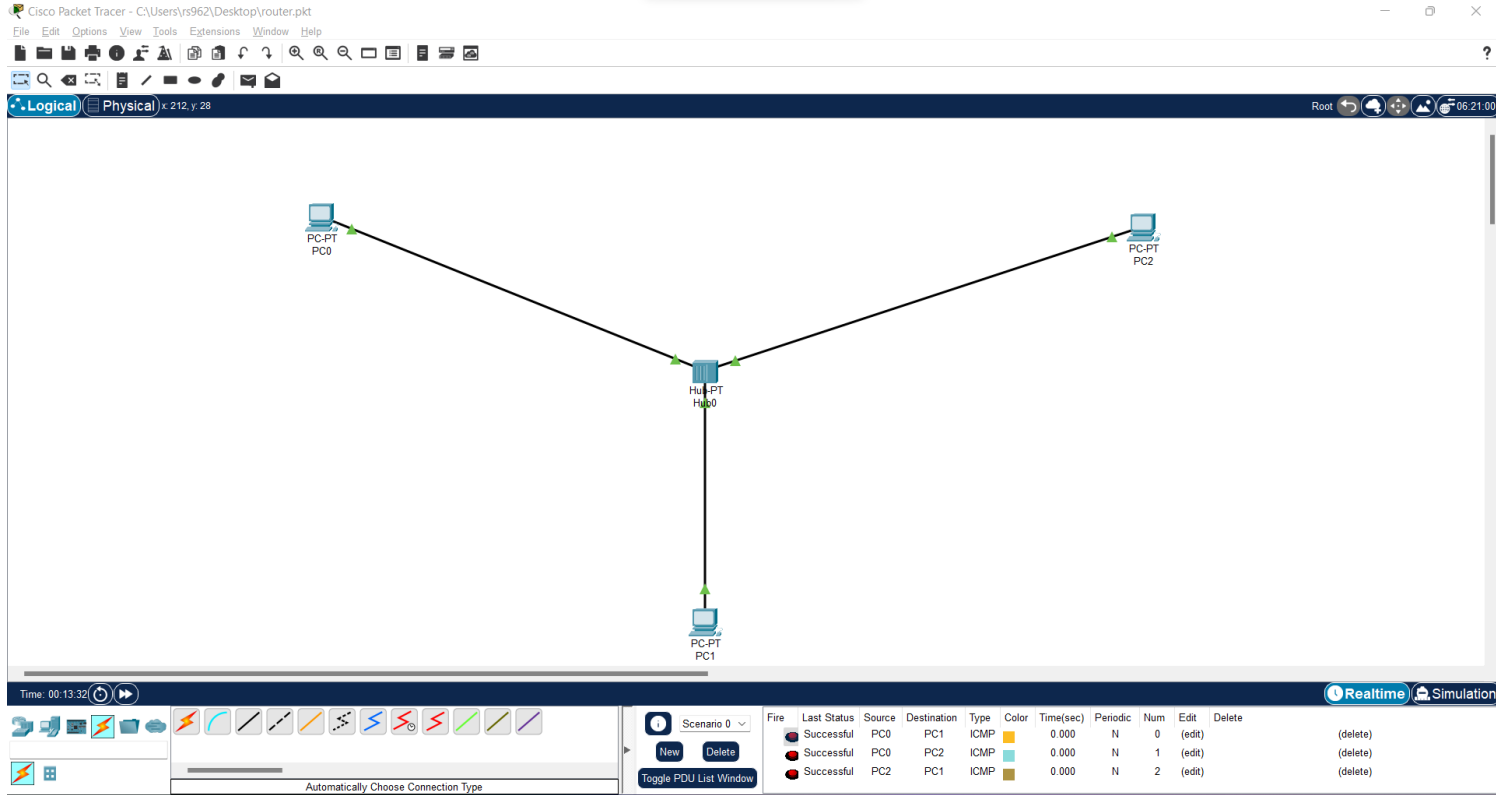
2. **Switch:** Switches refer to the networking devices that operate at an OSI model's layer or data link layer. They establish connections between networked devices and employ packet switching to transmit, receive, or forward data packets or frames over the network.

Method:

1. Attach required devices Switch, PC and wires in the packet tracer software.
2. Assign IP address to each pc.
3. Select source and destination and drop packet from source to destination
4. Go to Simulation mode and click capture/Play.
5. Simulation will start and packet will only be accepted by destination.

Output-

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
●	Successful	PC0	PC2	ICMP	▮	0.000	N	0	(edit)	(delete)
●	Successful	PC0	PC1	ICMP	▮	0.000	N	1	(edit)	(delete)
●	Successful	PC1	PC2	ICMP	▮	0.000	N	2	(edit)	(delete)

3. **Router:** Routers are networking devices operating at layer 3 or a network layer of the OSI model. They are responsible for receiving, analysing, and forwarding data packets among the connected computer networks.

Method:

1. Attach required devices to switch and then switch to router in the packet tracer software.
2. Assign IP address to all pc but a group of pc should have a common range of IP.
3. Assign Default Gateway to devices and select port (Fastethernet0/0 and Fastethernet0/1) to router and then provide IP address to the port of router.
4. Select source and destination and drop packet from source to destination.
5. Go to Simulation mode and click capture/Play.
6. Simulation will start and packet will only be accepted by destination.

Output-
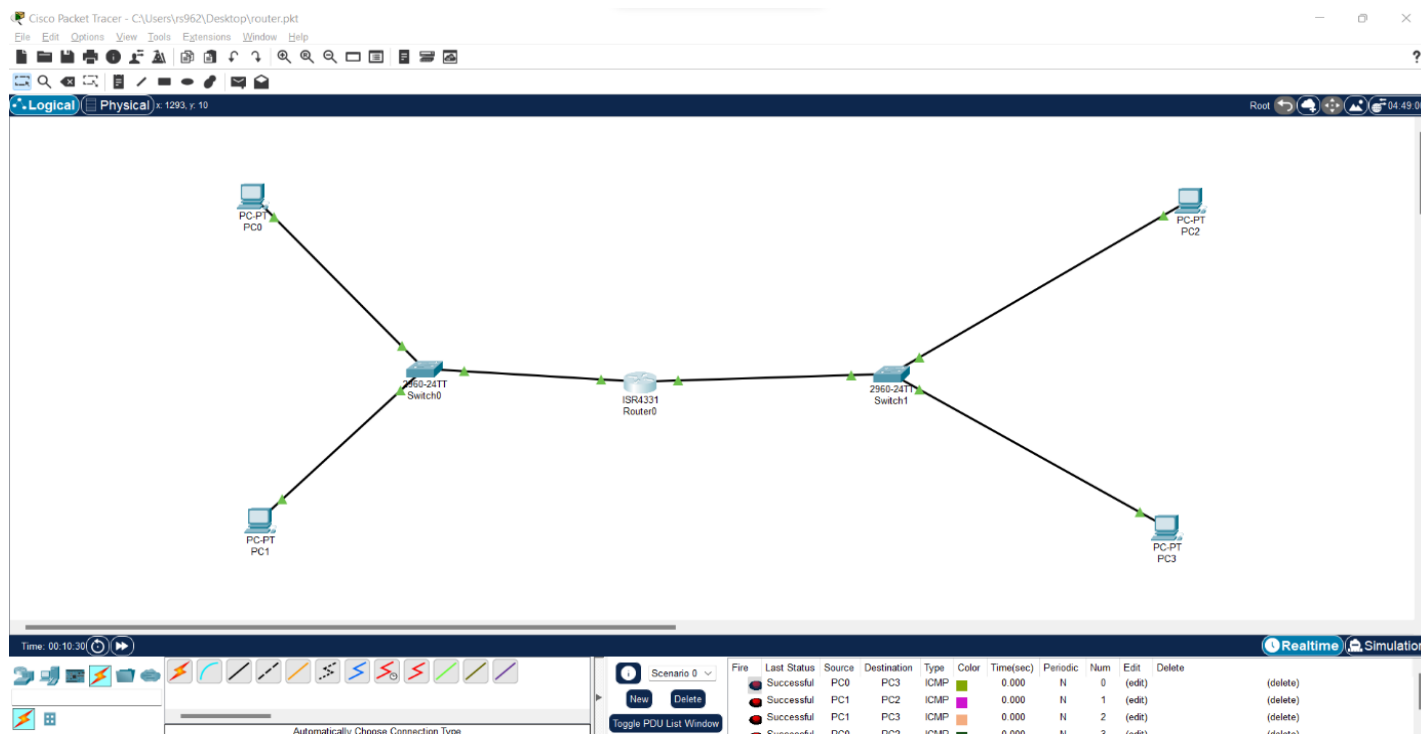
RESULT: We learnt how connection in hub, switch and router is done and how it work.