Worksheet :- 2.1

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Aim:- Implement different network topologies like Star, Bus with the help of packet tracer.

Objective: - To simulate Star, Bus Topology.

Software Requirements:- Packet Tracer or NS2.

Hardware Requirements:-

- **Processor** – Any suitable Processor e.g. Celeron
- **Main Memory** - 128 MB RAM
- **Hard Disk** – minimum 20 GB IDE Hard Disk
- **Removable Drives**–1.44 MB Floppy Disk Drive–52X IDE CD-ROM Drive
- **PS/2 HCL** Keyboard and Mouse

Method: -

BUS TOPOLOGY:

- First, open the cisco packet tracer desktop and select the devices
- Then, create a network topology
- Use an Automatic connecting cable to connect the devices with others.

- **Configure the PCs (hosts) with IPv4 address and Subnet Mask**

- To assign an IP address in PC0, click on PC0.
- Then, go to desktop and then IP configuration and there you will IPv4 configuration.
- Fill IPv4 address and subnet mask.

- **Verify the connection by pinging the IP address of any host in PC0.**

- Use the ping command to verify the connection.
- As we can see we are getting replies from a targeted node on both PCs. o
- Hence the connection is verified.

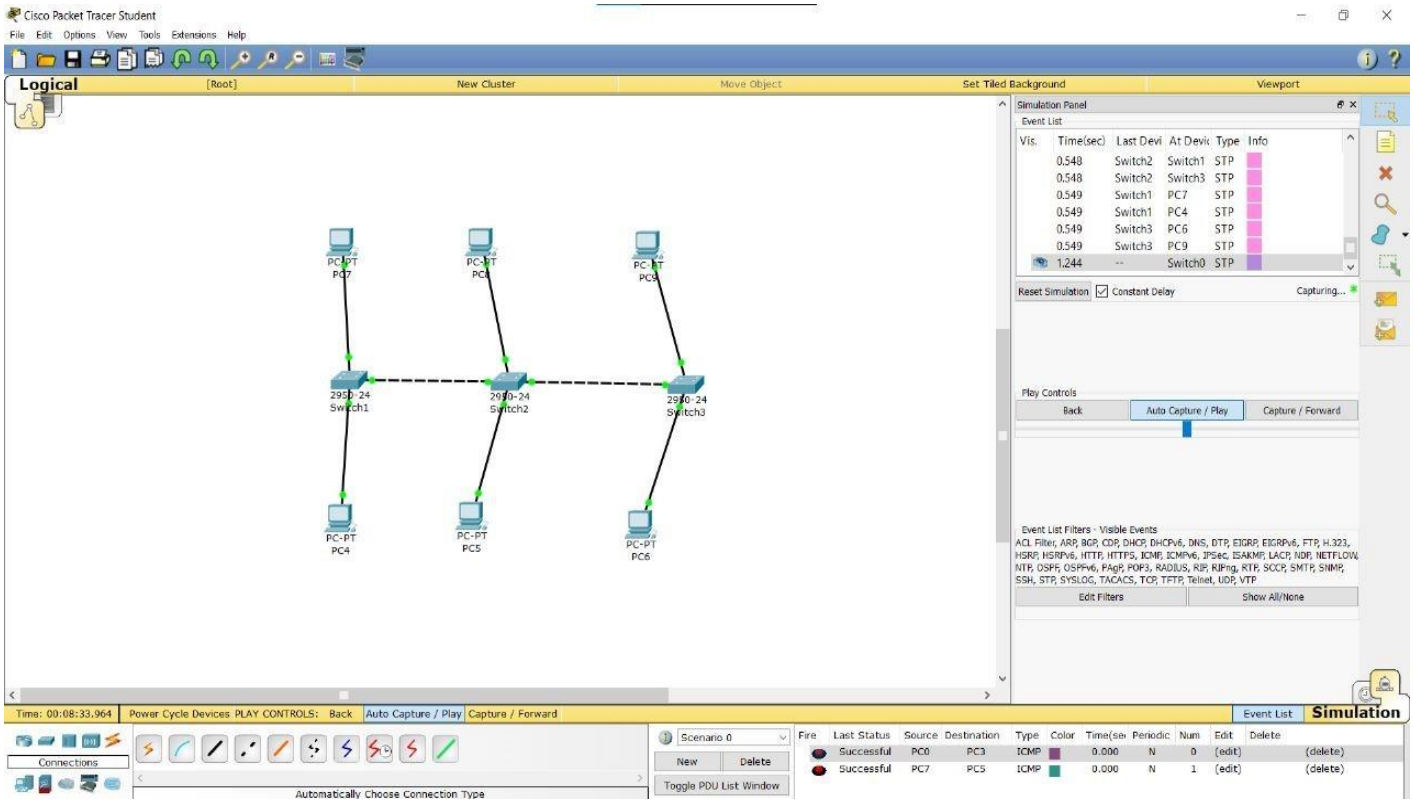
```
Cisco Packet Tracer PC Command Line 1.0
C:\>ipconfig 192.168.0.1 255.255.255.0
C:\>ping 192.168.0.3

Pinging 192.168.0.3 with 32 bytes of data:

Reply from 192.168.0.3: bytes=32 time=16ms TTL=128
Reply from 192.168.0.3: bytes=32 time=8ms TTL=128
Reply from 192.168.0.3: bytes=32 time=8ms TTL=128
Reply from 192.168.0.3: bytes=32 time=8ms TTL=128

Ping statistics for 192.168.0.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 8ms, Maximum = 16ms, Average = 10ms
```

SIMULATION RESULT :-



B) STAR Topology:

Steps Implementing Star Topology using Cisco Packet Tracer:

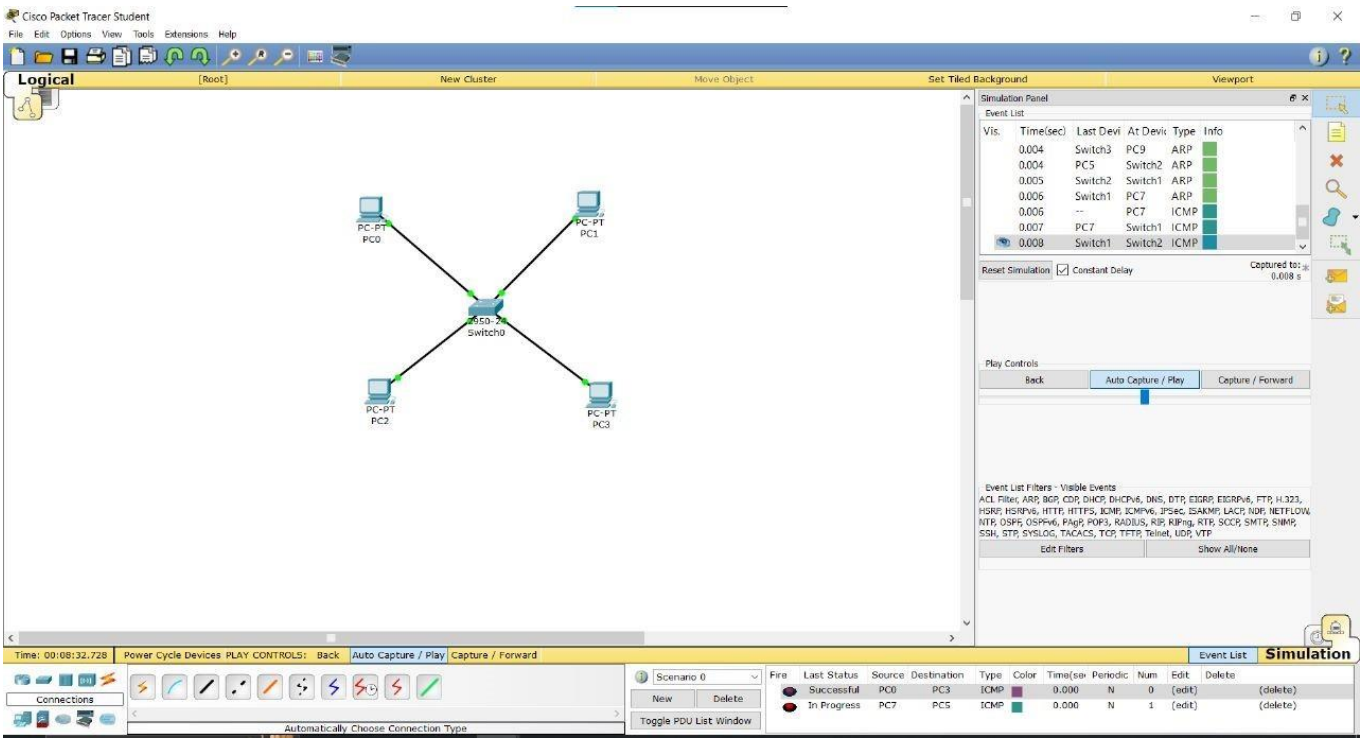
Step 1: We have taken a switch and linked it to six end devices.

Step 2: Link every device with the switch.

Step 3: Provide the IP address to each device.

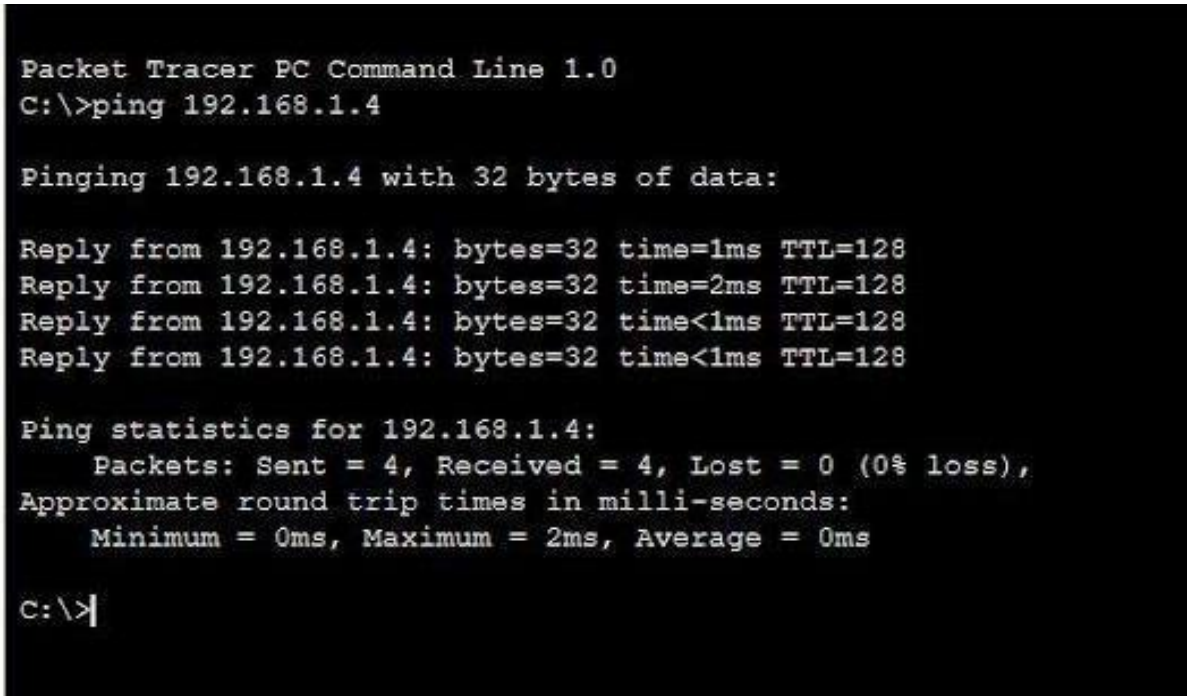
Step 4: Transfer message from one device to another and check the Table for Validation.

SIMULATION RESULT:-



- Now to check whether the connections are correct or not try to ping any device and the image below is doing the same.
    - To do ping one terminal of one device and run the following command:

"Ping 192.168.2.8"



RESULT:-

Simulated Star and Bus Network topologies.