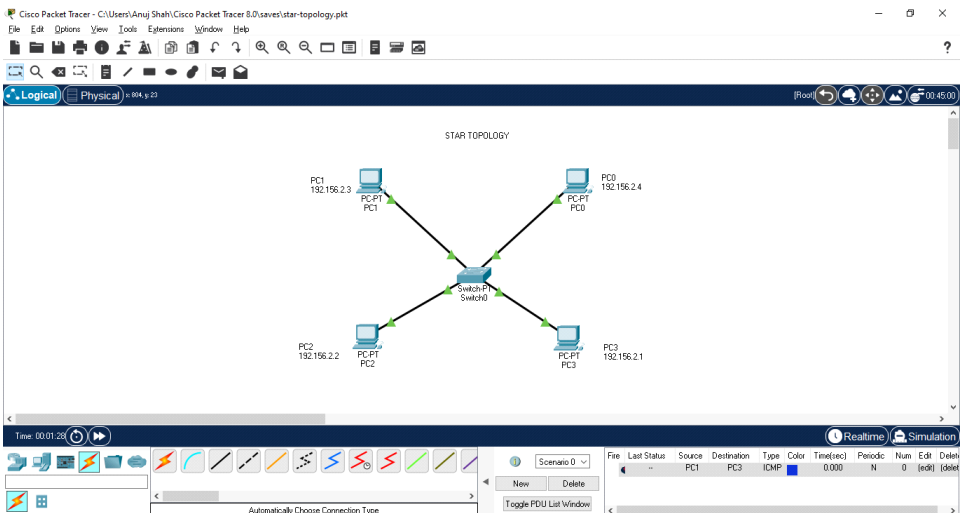
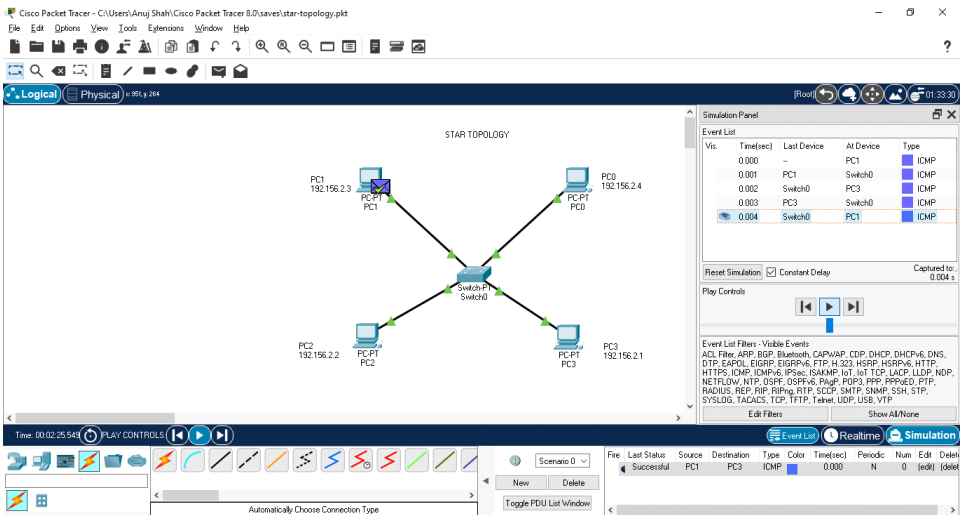
VIT Vidyalankar Institute of Technology
Accredited A+ by NAAC

Department of Electronics and Telecommunication Engineering

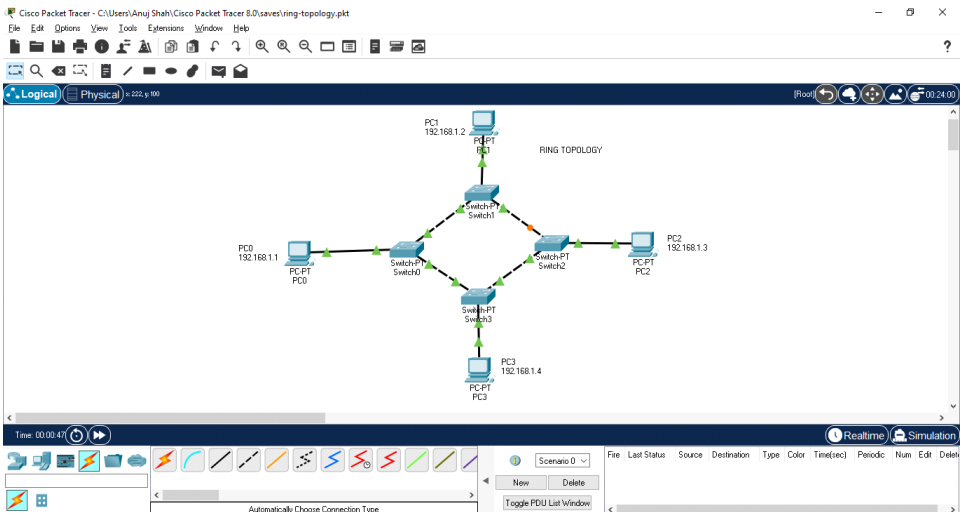
Semester	T.E. Semester VI – EXTC Engineering
Subject	Computer Communication Network (CCN)
Laboratory Teacher:	Prof. Beena R Ballal
Laboratory	MS-Teams online

Student Name	Anuj Shah	
Roll Number	18104B0024	
Grade and Subject Teacher's Signature		

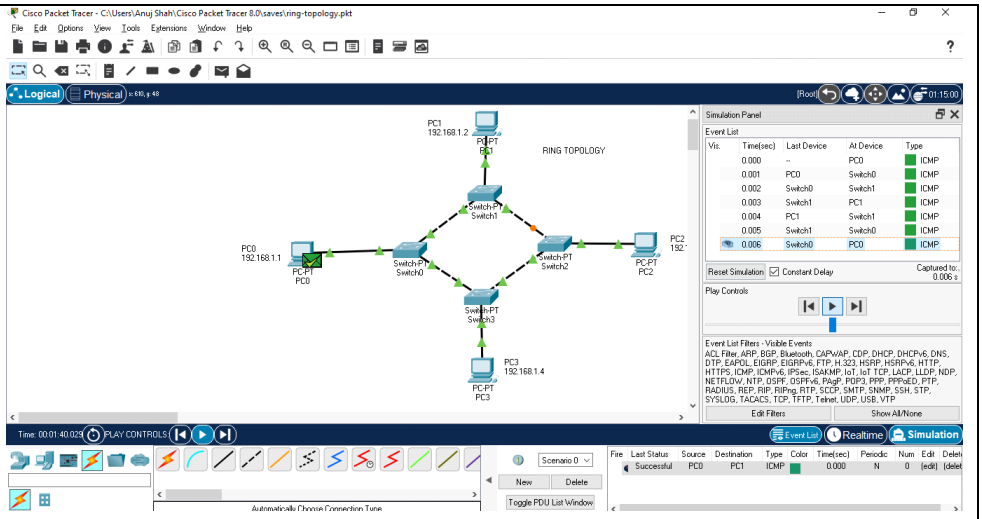
Experiment Number	02	
Experiment Title	To set up Star, Ring, and Bus topology network using CISCO Packet Tracer, and analyze the transmission of packets from source node to destination node	
Aim	To understand configuration of network and packet delivery from source to destination, and in reverse direction. Analyze the acknowledgement of packets.	
Resources / Apparatus Required	Hardware: NA	Software: Cisco Packet Tracer
Theory:		
Procedure :		
Screenshots of the Output(Response)	**BASIC STAR TOPOLOGY WITH END DEVICES CONNECTED WITH THE HELP OF A SWITCH**  **COMMUNICATION ESTABLISHED BETWEEN 2 END DEVICES IN STAR TOPOLOGY**	



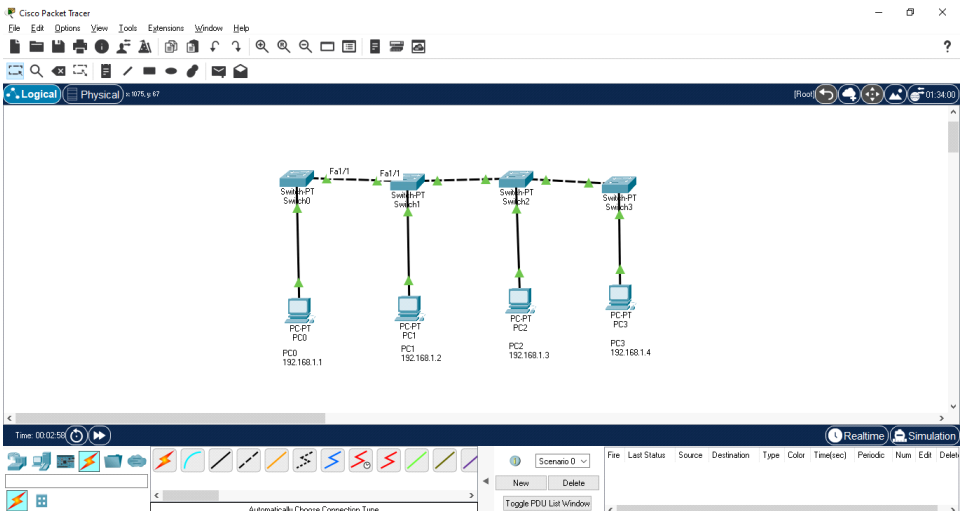
BASIC RING TOPOLOGY WITH END DEVICES CONNECTED WITH THE HELP OF SWITCHES



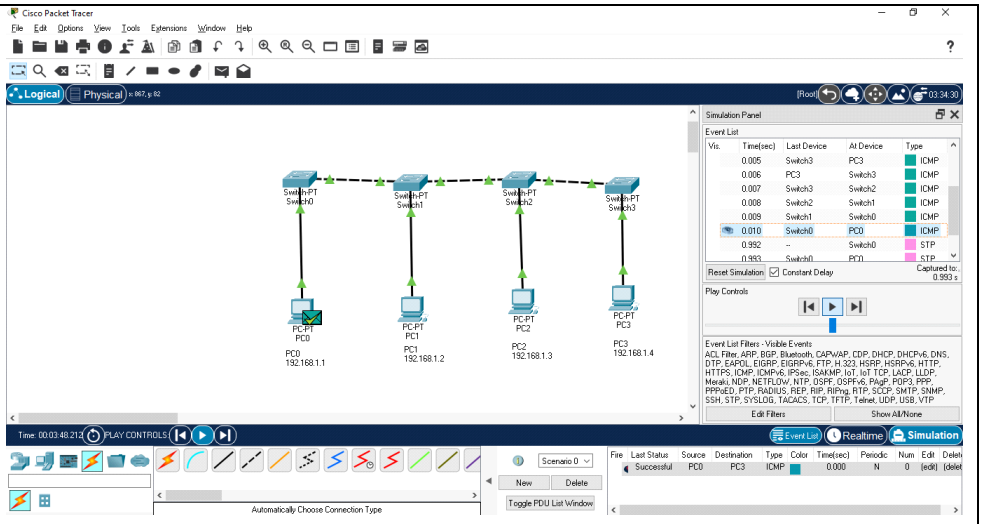
COMMUNICATION ESTABLISHED BETWEEN 2 END DEVICES IN RING TOPOLOGY



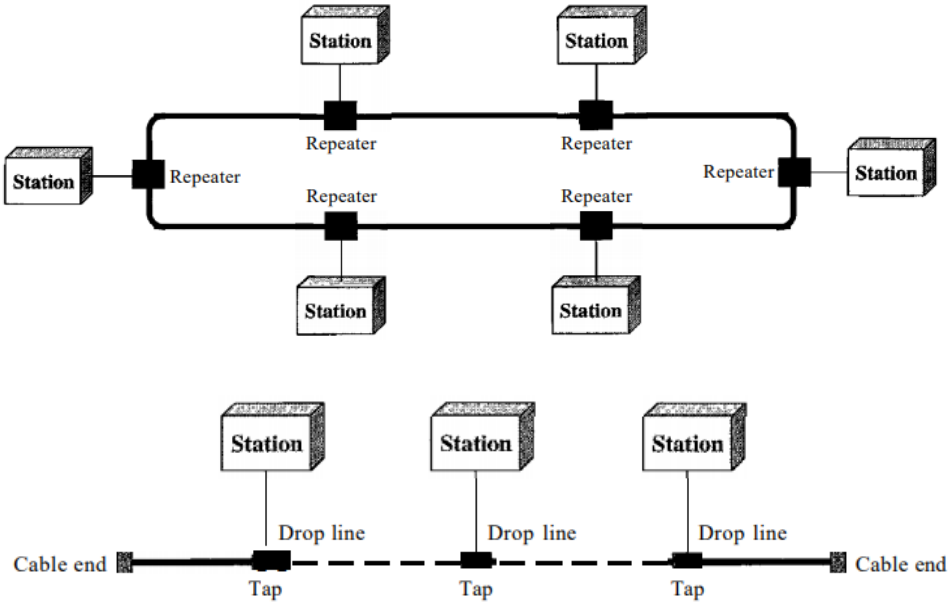
BASIC BUS TOPOLOGY WITH END DEVICES CONNECTED WITH THE HELP OF SWITCHES



COMMUNICATION ESTABLISHED BETWEEN 2 END DEVICES IN BUS TOPOLOGY

	
Conclusion:	In this experiment, we downloaded, installed and used Cisco Packet Tracer. We implemented the topologies learned in theory in real life.
Post Lab Questions:	1. Define computer network. 2. Explain Star topology 3. Draw Ring and Bus topology 4. What are the various advantages and disadvantages of Ring topology? **Computer network** A network is a set of devices (often referred to as nodes) connected by communication links. A node can be a computer, printer or any other device capable of sending and/or receiving data generated by other nodes on the network. Most networks use distributed processing, in which a task is distributed among multiple computers. Instead of one single large machine being responsible for all aspects of a process, separate computers (usually a personal computer or workstation) handle a subset. Source: "Data Communication and Networking" by Behrouz Forouzan, Chapter 1.2 (Introduction, Networks) **Star topology** In a star topology, eachdevice has a dedicated point-to-point link to a central controller, usually called a hub. The devices are not directly linked to one another. The hub acts as an exchange: if one device wants to send data to another, it sends the data to the controller, which then relays the data to the other connected device. Source: "Data Communication and Networking" by Behrouz Forouzan, Chapter 1.2 (Introduction, Networks)

Ring and Bus topology



Source: "Data Communication and Networking" by Behrouz Forouzan, Chapter 1.2 (Introduction, Networks)

Pros and Cons of Ring topology

Pros:

- A ring is relatively easy to install and configure.
- Fault isolation is simplified.

Cons:

- Unidirectional traffic can be a disadvantage.
- The need for higher-speed LANs has made this topology less popular.

Source: "Data Communication and Networking" by Behrouz Forouzan, Chapter 1.2 (Introduction, Networks)