Bansilal Ramnath Agarwal Charitable Trust's

Vishwakarma Institute of Technology, Pune -37

Department Of Artificial Intelligence and Data Science

Lab Manual

COMPUTER NETWORK

AI2003

Class: - SY BTECH Branch: - AIDS

Prepared By: -Anuj Gosavi Year: -2024-25

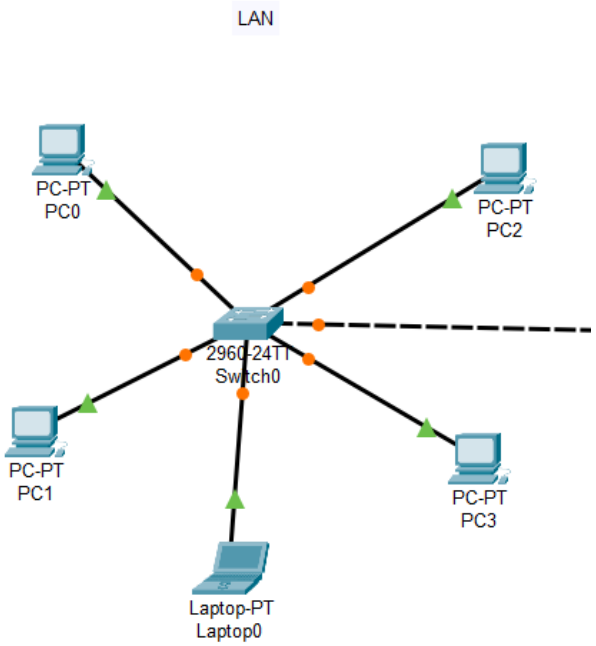
Examinations: - Lab Assessment (Continuous)

Roll No-55 Batch-1

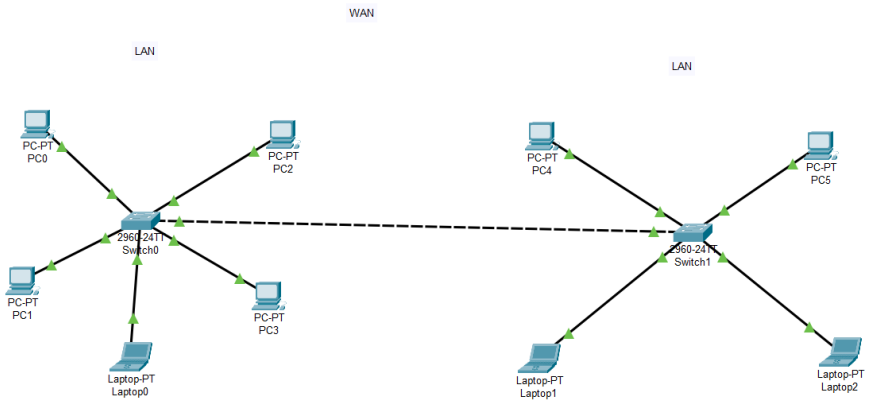
Required H/W and S/W: - Cisco Packet Tracer

To Establish The LAN . WAN And Network Configuration .

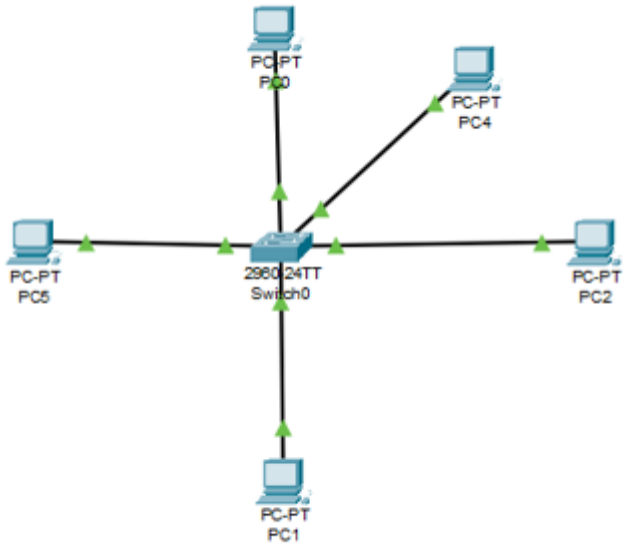
1. **LAN** –A Local Area Network (LAN) is a network that connects computers and devices within a limited area, such as a home, office, or campus, enabling data sharing and communication. It typically uses Ethernet or Wi-Fi for high-speed, secure connectivity.



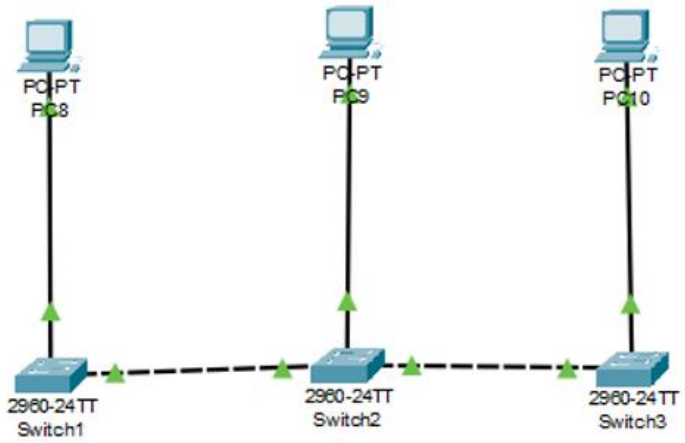
2. **WAN** -A Wide Area Network (WAN) is a large network that connects multiple smaller networks, such as LANs, over vast geographical areas. It facilitates communication and data exchange using technologies like leased lines, satellites, or the internet.



3.**(NetWork Configurations) STAR TOPOLOGY**-A **star topology** is a network configuration where all devices are connected to a central hub or switch. The hub acts as a mediator, managing data transmission and ensuring communication between connected devices, offering simplicity and fault isolation.



4.**BUS TOPOLOGY** -A bus topology is a network configuration where all devices are connected to a single central cable, called a "bus." Data travels along the bus, and each device listens for data addressed to it, making it simple but prone to collisions and cable failures.



5.RING TOPOLOGY-A ring topology is a network configuration where devices are connected in a circular sequence, with each device linked to exactly two others. Data travels in one direction (or both in a dual ring), passing through each device until it reaches its destination, ensuring orderly communication.