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# Experiment:7

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**Branch:** BE CSE **Section/Group:** 22BCS\_IOT-627-B

**Semester:** 5th **Date of Performance:** 17-9-24

**Subject Name:** COMPUTER NETWORKS **Subject Code:** 22CSH-312

1. **Aim:** Connect the computers in Local Area Network by setting IP Address, Subnet mask & Default gateway
2. **Requirements (Hardware/Software): S/W Requirement*: -*** Cisco Packet Tracer. **H/W Requirement*: -***
   * Routers
   * PC-System
   * Switches

# Procedure:

* + Create network topology by adding a router, a switch, and multiple PCs.
  + Connect the PCs to the switch and the switch to the router using cables.
  + Assign IP addresses and subnet masks to the PCs (e.g., 192.168.0.2, 192.168 0.3) with the subnet mask 255.255.255.0.
  + Assign a static IP (192.168.0.1) and subnet mask (255.255.255.0) to the router's interface.
  + Configure DHCP on the router to assign IP addresses automatically to other devices on the network.
  + Enable NAT on the router for Internet access by configuring the public- facing interface to connect to the Internet.
  + Ping between PCs to ensure they can communicate with each other on the LAN.
  + Simulate Internet access by creating a cloud connection and pinging an external network from the PCs.

# Output:

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# Learning Outcomes:

1. Understand how to set up a Local Area Network (LAN)
2. To configure IP addresses and subnet masks in a network.
3. Gain experience in enabling Internet sharing and configuring Network Address Translation (NAT).
4. Verify network connectivity by using the ping command to test communication between devices