# GUKAN SENTHIL K (RA2211003050148) B.TECH CSE - C

III - YEAR

# Observation

**Objective:** Create and configure a suitable topology for both LAN and WAN using 10-15 computers, routers, and switches. Simulate the transmission of a message from one network to a computer in another network.

## Procedure:

* **Topology Design:**

- The network topology was successfully created in Cisco Packet Tracer, including both LAN and WAN configurations.

- The LAN was configured with 10-15 computers connected to at least two switches.

* + The WAN setup was achieved by connecting the LAN networks via two routers.

## Network Setup:

* + Devices were added and connected as per the topology design.
  + IP addresses were correctly assigned to all computers within the LAN, ensuring proper communication.
  + Router interfaces were configured with appropriate IP addresses to enable WAN communication between networks.

## LAN Configuration:

* + All computers were connected to switches, and each computer was assigned a unique IP address within the specified subnet.

- Switches were connected to each other to ensure full LAN connectivity.

## WAN Configuration:

* + Routers were successfully connected to each other, and interfaces were configured with correct IP addresses.

- Static routes were set up on the routers, enabling successful communication between the LANs over the WAN.

## Simulation:

* + A message was sent from one computer in one LAN to a computer in another LAN using the simulation mode in Cisco Packet Tracer.
  + The message was transmitted successfully across the network, traveling through switches, routers, and the WAN.
  + The path of the message was observed, and the transmission was verified to be correct with no errors.

## Network Performance:

* + The network operated as expected, with no packet loss or transmission errors observed.
  + The successful message transmission confirmed that the network was properly configured for both LAN and WAN communication.

OUTPUT:



