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Lab Report 5: Subnet masking and Hub

# Objectives:

* Understand the concept and purpose of subnet masking.
* Learnt about the function and use of a hub in a network.
* Perform basic configuration settings for network devices.

# Learning:

## Subnet masking:

Subnet masks are used to divide an IP address into a network and host portion. This helps in efficiently managing IP addresses and improving network security by segmenting larger networks into smaller, manageable subnets. Example: A subnet mask of 255.255.255.0 allows for 256 IP addresses within a network, where 254 are usable for devices.

## IP addresses:

A hub is a basic networking device that connects multiple Ethernet devices, making them act as a single network segment. It operates at the physical layer of the OSI model and broadcasts data to all devices connected to its ports. Hubs are simple and inexpensive but can lead to network congestion due to their broadcasting nature.