# **Applied Industrial Internet of Things: Configuration of Address Resolution Protocol (ARP)**

## **Aim**

To construct a simple Local Area Network (LAN) using Cisco Packet Tracer and understand the concept and operation of the Address Resolution Protocol (ARP). The project demonstrates how ARP resolves IP addresses to MAC addresses within a LAN, enabling communication between devices.

## **Results**

* Successfully created a LAN topology with 3 PCs connected through an 8-port switch.
* Configured IP addressing for each PC within the same subnet.
* Verified connectivity between PCs using the ping command.
* Observed ARP request and reply packets during communication between devices.
* Demonstrated how ARP maps IP addresses to corresponding MAC addresses, essential for data transmission at the data link layer.
* Gained practical understanding of ARP's role in network communication and troubleshooting.