\* Aim:

To design and implement a simple local Asea Network using Cisco packet traces, and to study the concept of the Address Resolution Protocol (ARP) for Communication between devices on the same network.

\* Problem Statement:

In a LAN environment, devices communicate using IP addresses, but actual data delivery is based on MAC addresses. The ARP protocol is Responsible for mapping IP addresses. The problem is to design a comple LAN in cisco packet Tracer, configure PC's and demonstrate ARP operation by generating ARP requests and replies.

Scope of the Solution:

- · Demonstrates LAN design using Cisco Packet Tracer.
- · Explains how ARP works in resolving IP-to MAC mapping.
- · Provides hands on plactice with Pc configuration and switch connectivity.
  - Helps understand network trouble shooting using ARP tables and simulation tools.

Using Cisco packet Tracer simulation, packet flow and ARP Requests/Replies can be visualized.

Required Components to develop the Solution

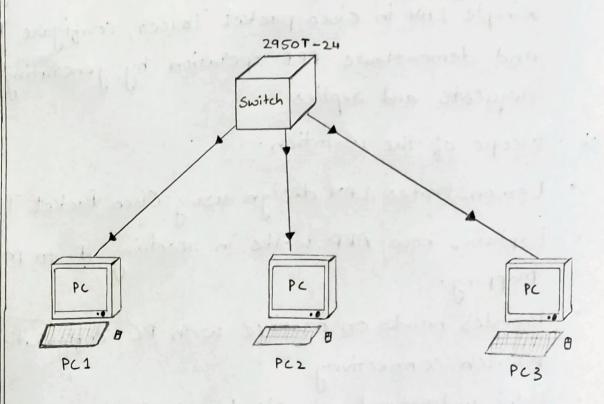
Software

Cisco Packet Traces

Hoadware (simulated inside Packet Tracer)
2 or more Pc's (to act as end devices in LAN)
1 switch (8-port switch)

Straight - through LAN cables

Simulated Circuit



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