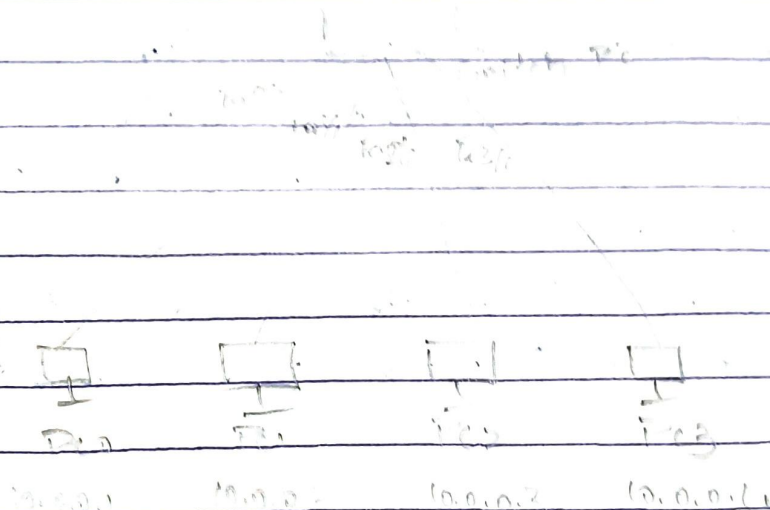Experiment - 17

Objective

to construct a simple LAN & understand the concept & operation of Address Resolution Protocol (ARP)

Topology

Procedure:

→ Place 3 end devices, a server and a switch and connect the PC and the server to the switch using copper straight wires.

→ Use the inspect tool to click on a PC to view the ARP table

→ The same can also be viewed in the command Prompt by using `arp-a`

→ Go to CLI of the switch and do `show mac address`

→ Similarly Obtain ARP table of the server & other end devices

→ Enter the simulation mode & click on capture by selecting PC1 & PC2 for simple `PDU`

Observation

-> Intially, the ARP tables of all end devices are observed to be empty

-> The MAC address table is also found to be empty

-> When the capture button is clicked it is found that ARP is table is updated in PC2 with the IP address of PC1 (10.0.0.2)

-> Once the acknowledgement is obtained the ARP table of PC1 is updated with the IP address of PC2 (10.0.0.3)

-> The event list in the simulation pannel shows the corresponding Protocol used during the communication