AIM: To construct simple LAN and understand the concept and operation of Address Resolution protocol (ARP)
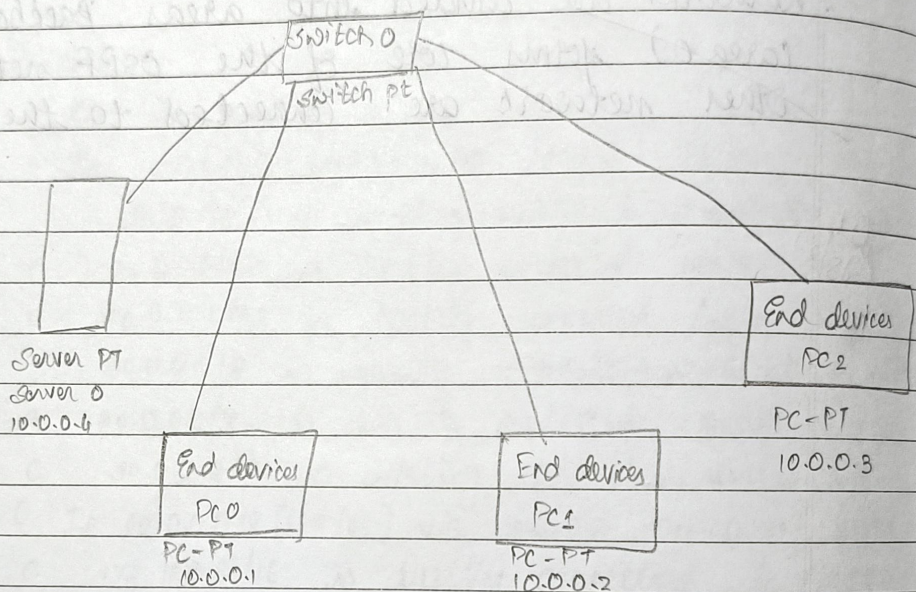
TOPOLOGY:

Switch 0

Switch PT

Server PT
Server 0
10.0.0.4

End devices
PC 0
PC-PT
10.0.0.1

End devices
PC 1
PC-PT
10.0.0.2

End devices
PC 2
PC-PT
10.0.0.3

PROCEDURE:

→ Create a topology of 4 PC's and a server

→ Assign IP address to all.

•) Connect them through a switch

→ Use the inspect tool to click on a PC to see the ARP table (command in command prompt - a)

•→ Initially the arp table is empty.

→ In CLI of switch → show mac address table can be given on every transaction to see

how the of switch learns from transactions and build the address table.
∴ Use the capture button to see the process step by step.

Result :

PC> arp - a

Internet Address	Physical Address	Type
10.0.0.2	000d.bd15. 3a18	dynamic
10.0.0.3	00e0 . 8fb7. b7e8	dynamic
10.0.0.4	00d0 . bc97. 2a38	dynamic

Mac Table for Switch 0

VLAN	Mac Address	Port
1	0005.5EDA . 1C25	FastEthernet 0/1
1	000D. BD15 . 3A18	FastEthernet 2/1
1	00D0. BC57. AA38	FastEthernet 1/1
1	00E0.8FB7. B7E8	FastEthernet 3/1

OBSERVATION

∘ ARP is a protocol that uses the IP address to find out the physical address/ MAC address.