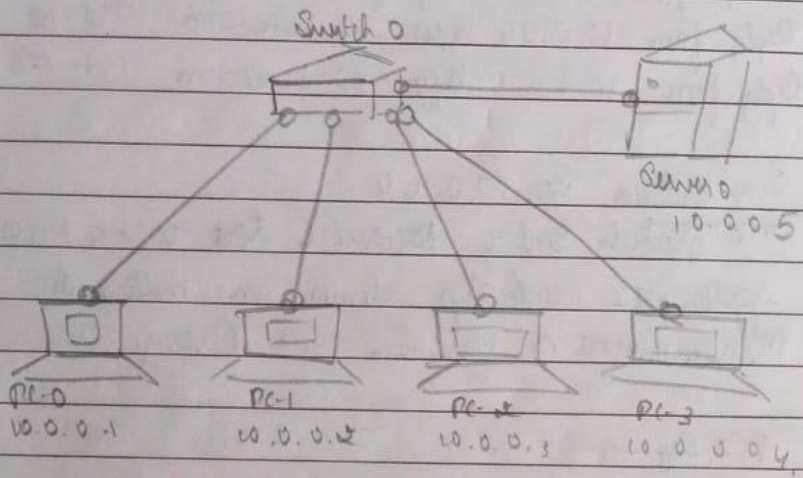
**CN LAB-8**

**OBSERVATION**

Date __/__/__
Page _____

3/08/23 Construct simple LAN and understand the concept and operation of Address Resolution Protocol

Topology:




Procedure:

1) Create a topology of 4 PCs and a server
2) IP addresses assigned to all
3) Connect them through a switch
4) Use the inspect tool to click on a PC to see the ARP table
5) Command the CLI for the same arp -a
6) Initially ARP table is empty
7) Also in CLI of switch, the command - show mac address - table can be given on every transaction to see how the switch learns from transaction and build the address - table

Date
Page

Output

PC > ping 10.0.0.4

Pinging 10.0.0.4 with 32 bytes of data

Reply from 10.0.0.4 bytes=32 time=0ms TTL=128

Reply from 10.0.0.4 bytes=32 time=0ms TTL=128

Reply from 10.0.0.4 bytes=32 time=0ms TTL=128

Reply from 10.0.0.4 bytes=32 time=0ms TTL=128

Ping statistics for 10.0.0.4

Packets: Sent=4 Received=4 Lost=0 (0% loss)

Approximate round trip times in milli seconds

Minimum=0ms Maximum=0ms Average=0ms

PC> arp -a

Internet address Physical address Type Type

10.0.0.4 0060.8f00.3e4d dynamic

Observation:

- When we ping PC and server the address of servers is known as to PC & vice versa.
- When we ping between other 2 PCs simultaneously the address of each other are known
- Every time a host request a MAC address in order to send a packet to another host in the LAN, it checks its ARP cache first if the IP to MAC address have already exists. If the translation does not perform ARP

# TOPOLOGY & OUTPUT