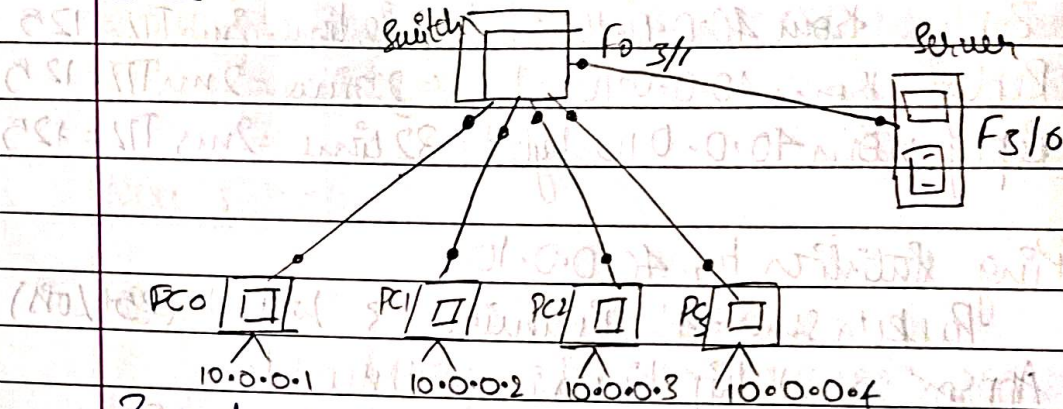


Lab 8

3/8/23

Aim: To construct simple LAN & understand the concept and operation of Address Resolution Protocol (ARP)

ARP:-Procedure:-

- i) Create a topology of 4 PC's & a server
- ii) Set IP address to all of them.
- iii) Connect the PC's through a switch.
- iv) Use the inspect tool to click on a PC to see the ARP table.
- v) Command in CLI for the same is `arp -a`
- vi) Initially ARP table will be empty.
  - > Use the capture button in the simulation panel to go step by step so that the changes in ARP can be clearly noted.
  - > Go to the search button in the panel to get ARP tables of all the end devices.
  - > Observe the switch as well the nodes update the ARP table as & when a new communication starts

Ping output:-

```

PC > arp -a
= PC > ping 10.0.0.2
PC > ping 10.0.0.3
PC > ping 10.0.0.4
  
```



Internet address	Physical address	Type
10.0.0.2	000d.bd15.3a18	dynamic
10.0.0.3	00e0.0fb7.b7e8	dynamic
10.0.0.4	00d0.bc57.aa38	dynamic

### Observation:-

5  
17  
15 We observe the changes when we capture every time when we do in all the PC's. ARP tables will have values empty at the starting & values will be formed whenever we ping each PC in the ping.

now in switch(1):

switch > show mac address table

Mac Address Table			
Vlan	Mac Address	Type	Port
1	0000.19613.7660	Dynamic	Fa 1/1
1	0001.9796.1267	Dynamic	Fa 2/1
1	0090.2b73.c004	Dynamic	Fa 0/1
1	00e0.a349.91b4	Dynamic	Fa 3/1

