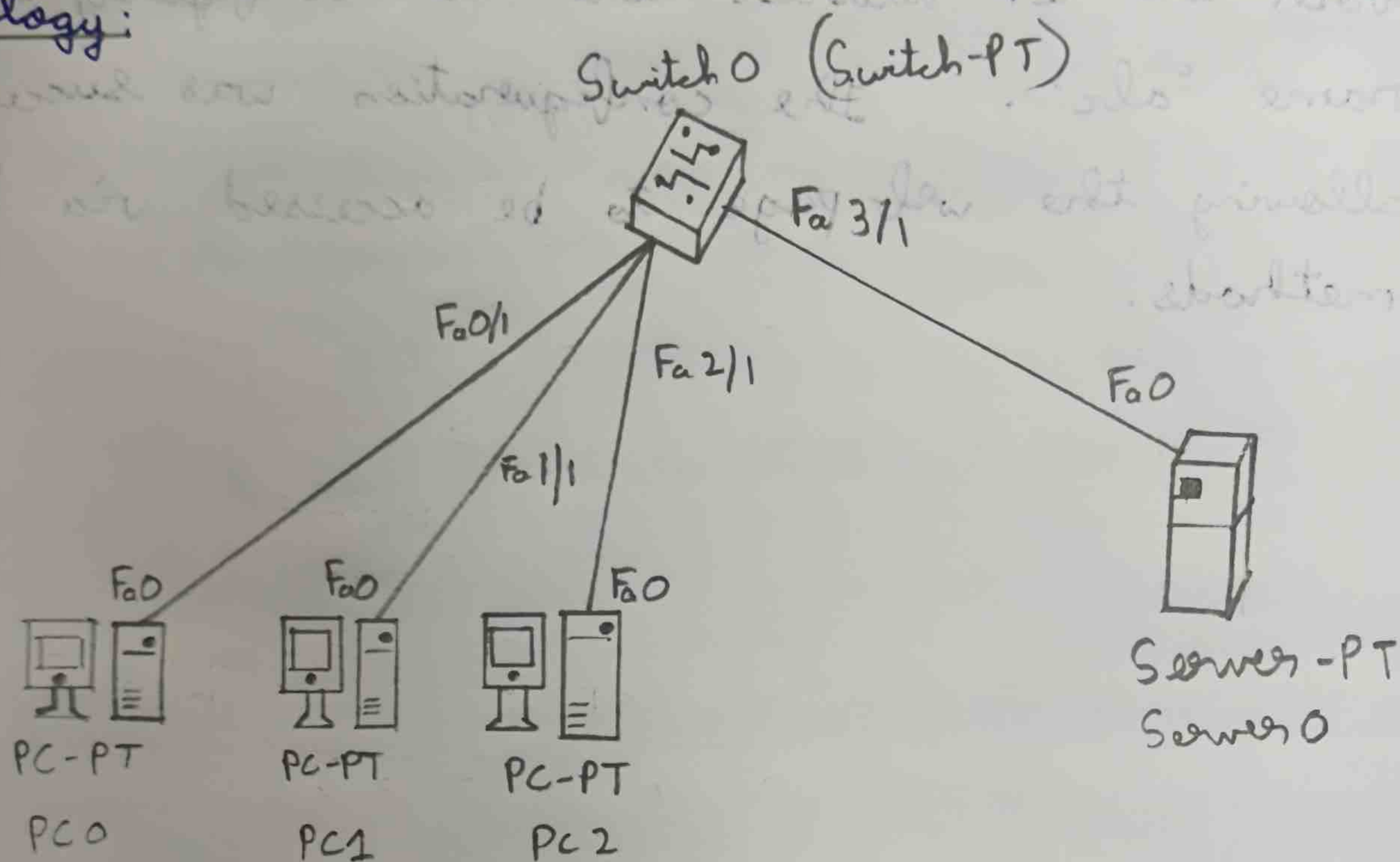


Exp 9: To construct simple LAN and understand the concept and operation of Address Resolution Protocol (ARP)

Aim: Demonstrate the working of ARP for communication within a LAN

Topology:



Configuration:

PC0:

IP: 10.0.0.20

Interface Fa0 connected to switch 0

PC1:

IP: 10.0.0.30

Interface Fa0 connected to switch 0

PC3:

IP: 10.0.0.40

Interface Fa0 connected to switch 0

Server0:

IP: 10.0.0.50

Interface Fa0 connected to switch 0

Switch 0:

Interface Fa0/1 connected to PC0

Interface Fa1/1 connected to PC1

Interface Fa2/1 connected to PC2

Interface Fa3/1 connected to Server0

Procedure:

1. In PC0's ~~config terminal~~ cmd prompt

PC> arp -a

No ARP entries found

2. Click the 'Q' icon in the right side menu and click PC0. ARP table with no entries opens

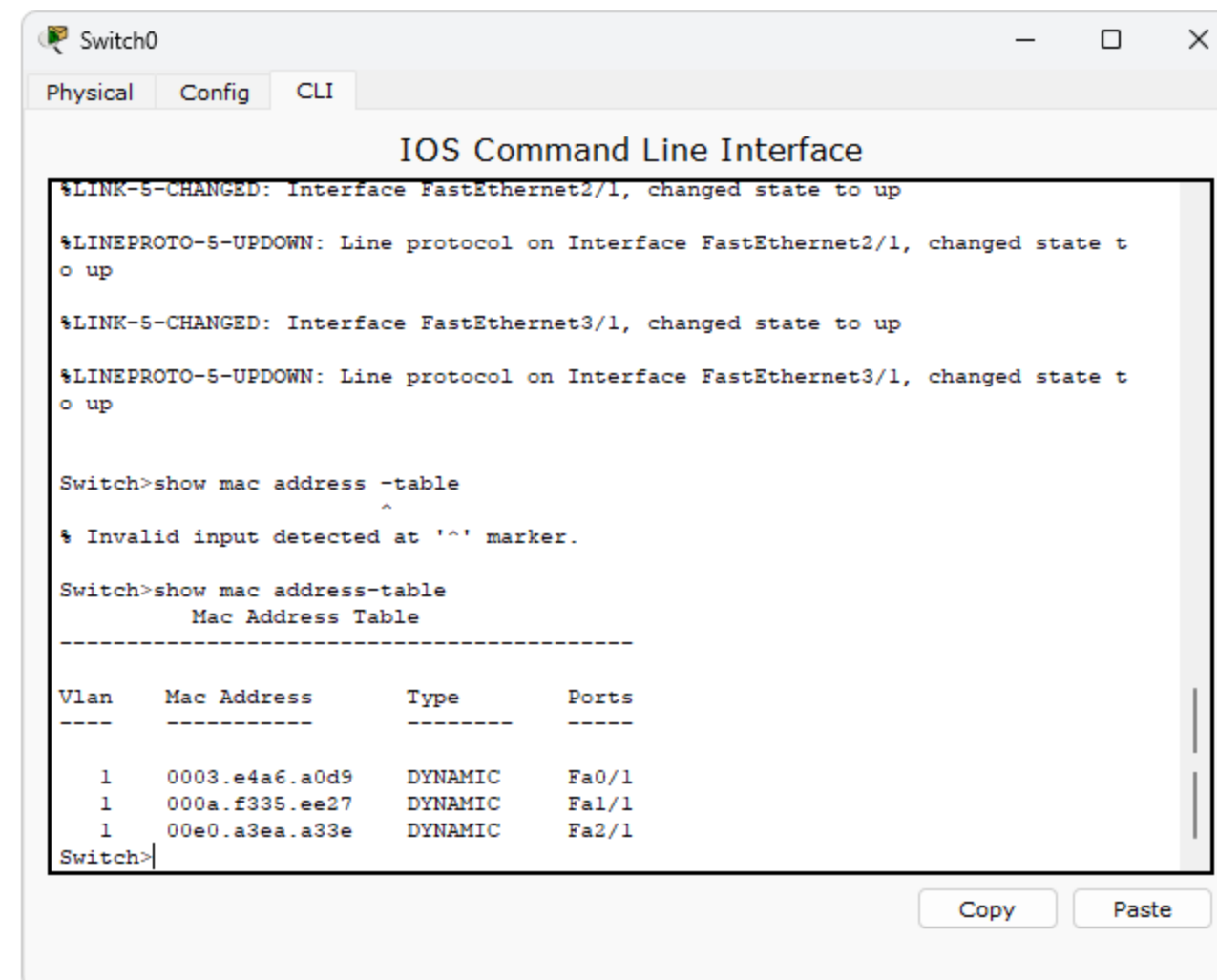
Do the same for PC1 and PC2

3. Send a PDU from PC0 to PC2. On successful completion, ARP was called and the respective MAC addresses entries are entered into the ARP table.

Do the same for PC0 and PC1. ARP entries for the respective devices are entered into the ARP tables.

Observation:

In this experiment the ARP tables on PC0, PC1, PC2 were initially empty. After sending a PDU from PC0 to PC2, ARP was triggered and the corresponding MAC addresses were added to the ARP table. The same was repeated from PC0 to PC1 resulting in successful population of ARP tables with the appropriate MAC addresses.

[illegible]