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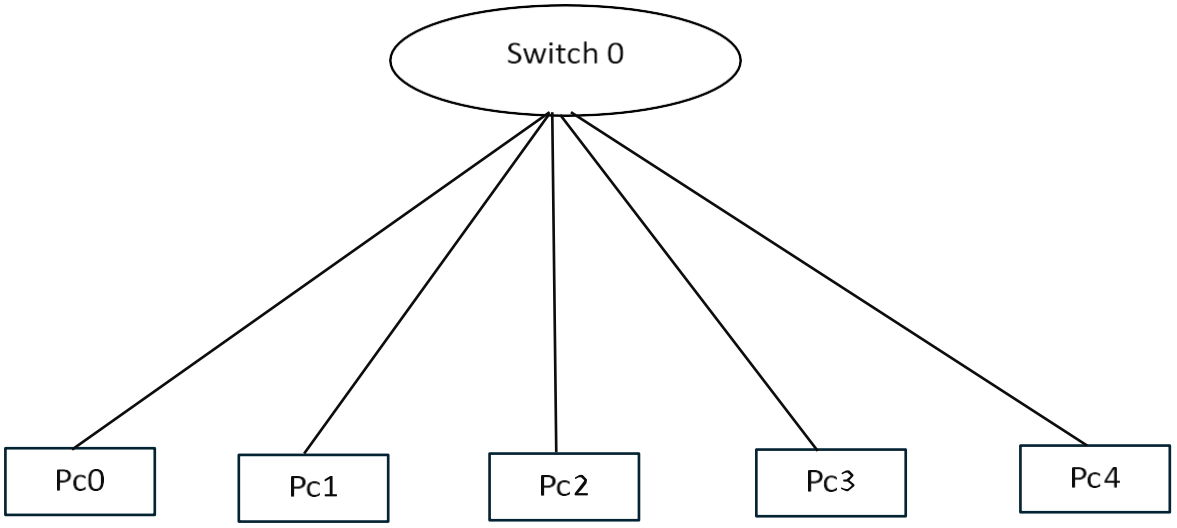
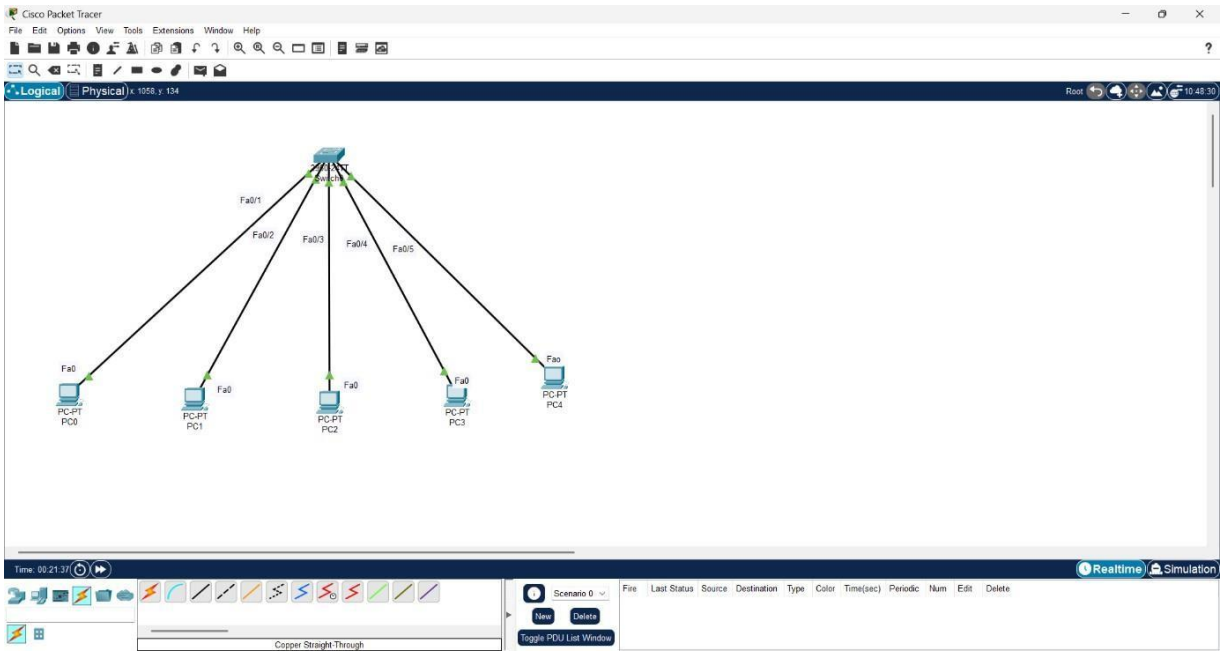
Name	**G. MADHU**
Class/Section	**8501A/S06**
Ex.No:	**6b**
Date of Submission	**30.1.2025**
Name of the Experiment	**Configuration of Address Resolution protocol**
Google Drive link of the packet tracer file (give view permission):	https://drive.google.com/drive/folders/1qRZNHIJyUL4HAPtKCM4XxSOtXhSHyt4J

1. **Device Requirements:**
   1. Switch 0
   2. PC0
   3. PC1
   4. PC2
   5. PC3
   6. Pc4
   7. Wires

2. **Network Diagram for your experiment (draw the diagram either hand drawing/ms paint or any other drawing tools)**



3. Network Diagram (Packet Tracer diagram before configuration):



4. Configuration details:

Device Name	Interface Name	IP Address	Subnet mask
PC0	Fa0/1	192.168.10.1	255.255.255.0
PC1	Fa0/2	192.168.10.2	255.255.255.0
PC2	Fa0/3	192.168.10.3	255.255.255.0
PC3	Fa0/4	192.168.10.4	255.255.255.0
Pc4	Fa0/5	192.168.10.4	255.255.255.0
Switch 0	Fa0/1		

5. Describe step by step configuration steps properly (you may copy the commands used in the configuration tab and paste it.)

Switch 0:

Switch>en

Switch#show mac-address-table

Mac Address Table

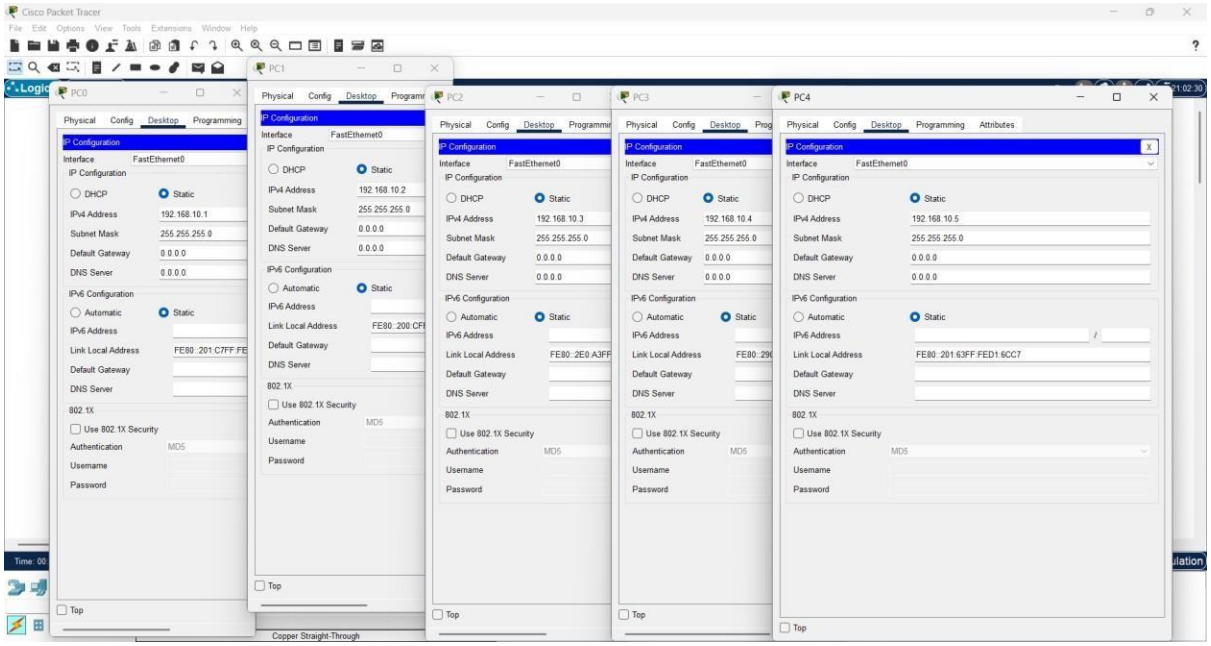
Vlan	Mac Address	Type	Ports
1	0000.0c37.0a29	DYNAMIC	Fa0/2
1	0001.63d1.6cc7	DYNAMIC	Fa0/5
1	0001.c701.c761	DYNAMIC	Fa0/1
1	0090.21b7.19ca	DYNAMIC	Fa0/4
1	00e0.a3e8.0a59	DYNAMIC	Fa0/3

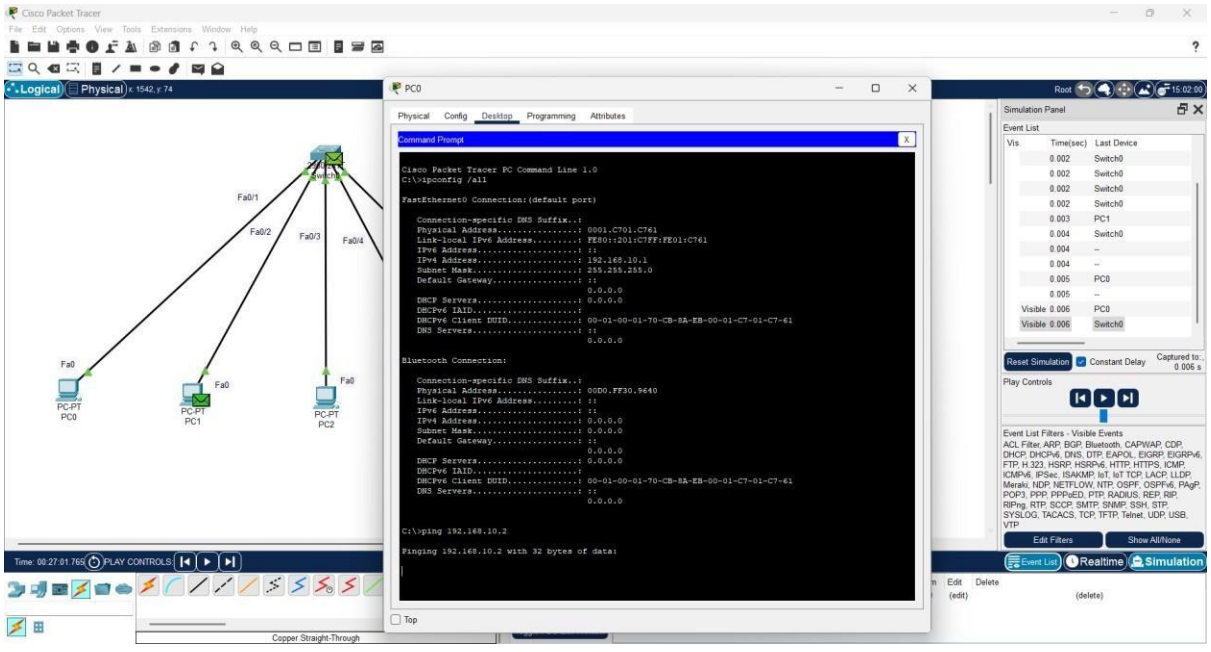
Switch#show mac-address-table

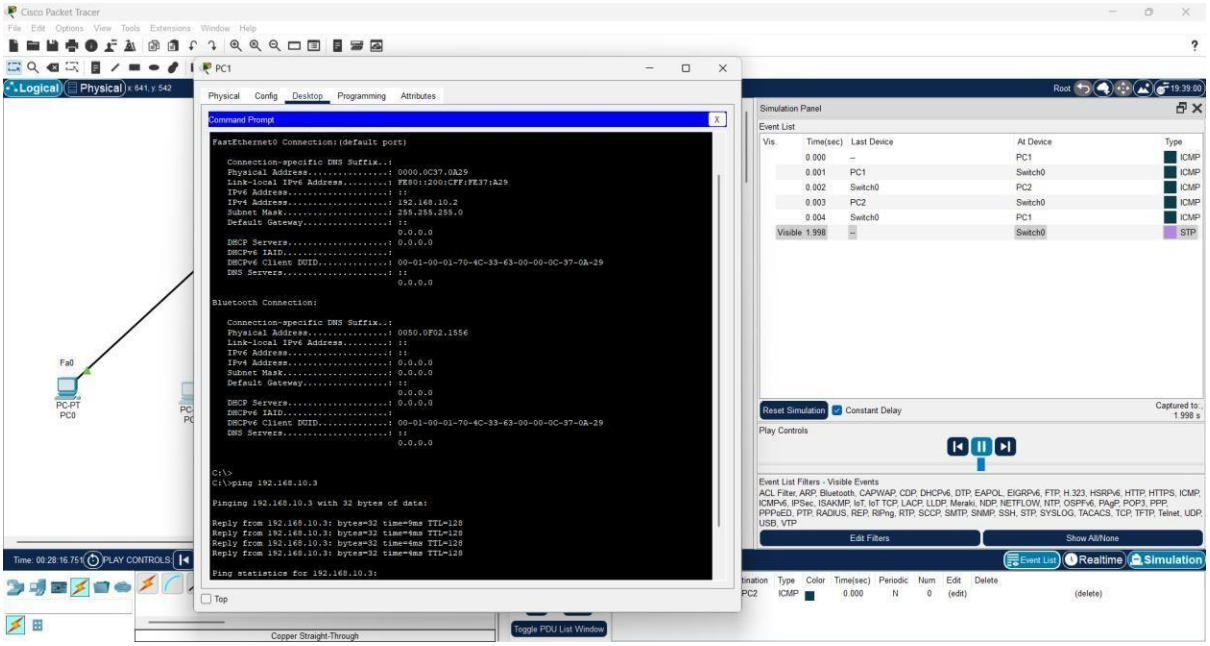
Mac Address Table

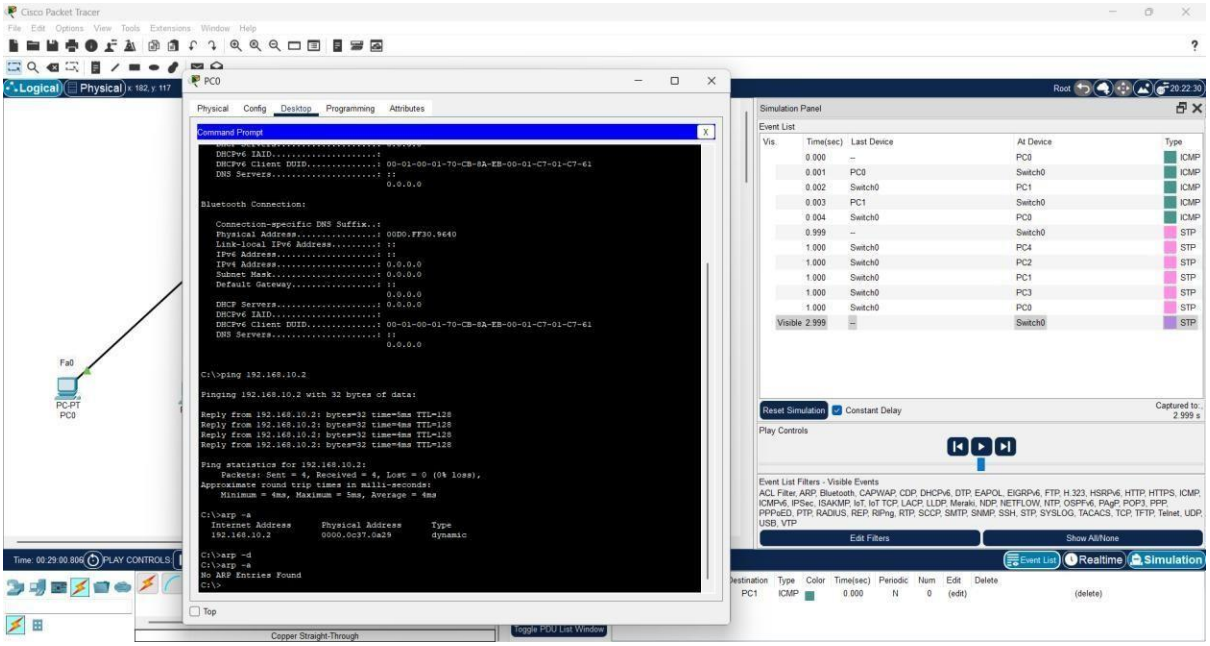
Vlan	Mac Address	Type	Ports
1	0000.0c37.0a29	DYNAMIC	Fa0/2 1 0001.63d1.6cc7 DYNAMIC Fa0/5
1	0001.c701.c761	DYNAMIC	Fa0/1
1	0090.21b7.19ca	DYNAMIC	Fa0/4

6. Output Diagram (Minimum 3 screenshot):






Cisco Packet Tracer
PC1
Physical
Config
Desktop
Programming
Attributes
Command Prompt
FastEthernet0 Connection:(default port)
Connection-specific DNS Suffix..:
Physical Address.....: 0000.0C37.0A29
Link-local IPv6 Address.....: FE80::200:CFF:FE37:A29
IPv6 Address.....: ::
IPv4 Address.....: 192.168.10.2
Subnet Mask.....: 255.255.255.0
Default Gateway.....: ::
0.0.0.0
DHCP Servers.....: 0.0.0.0
DHCPv6 IAID.....:
DHCPv6 Client DUID.....: 00-01-00-01-70-4C-33-63-00-00-0C-37-0A-29
DNS Servers.....: ::
0.0.0.0
Bluetooth Connection:
Connection-specific DNS Suffix..:
Physical Address.....: 0050.0F02.1556
Link-local IPv6 Address.....: ::
IPv6 Address.....: ::
IPv4 Address.....: 0.0.0.0
Subnet Mask.....: 0.0.0.0
Default Gateway.....: ::
0.0.0.0
DHCP Servers.....: 0.0.0.0
DHCPv6 IAID.....:
DHCPv6 Client DUID.....: 00-01-00-01-70-4C-33-63-00-00-0C-37-0A-29
DNS Servers.....: ::
0.0.0.0
C:\>
C:\>ping 192.168.10.3
Pinging 192.168.10.3 with 32 bytes of data:
Reply from 192.168.10.3: bytes=32 time=9ms TTL=128
Reply from 192.168.10.3: bytes=32 time=4ms TTL=128
Reply from 192.168.10.3: bytes=32 time=4ms TTL=128
Reply from 192.168.10.3: bytes=32 time=4ms TTL=128
Ping statistics for 192.168.10.3:
Top
Fa0
PC-PT
PC0
Copper Straight-Through
Toggle PDU List Window
Simulation Panel
Event List
Vis.
Time(sec)
Last Device
At Device
Type
0.000 -- PC1 Switch0 ICMP
0.001 PC1 Switch0 ICMP
0.002 Switch0 PC2 ICMP
0.003 PC2 Switch0 ICMP
0.004 Switch0 PC1 ICMP
Visible 1.998 -- Switch0 STP
Reset Simulation
Constant Delay
Captured to: 1.998 s
Play Controls
Event List Filters - Visible Events
ACL Filter, ARP, Bluetooth, CAPWAP, CDP, DHCPv6, DTP, EAPOL, EIGRPv6, FTP, H.323, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPSec, ISAKMP, IoT, IoT TCP, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPFv6, PAgP, POP3, PPP, PPPoED, PTP, RADIUS, REP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP
Edit Filters
Show All/None
Event List
Realtime
Simulation
Type Color Time(sec) Periodic Num Edit Delete
PC2 ICMP 0.000 N 0 (edit) (delete)


Cisco Packet Tracer
PC0
Physical
Config
Desktop
Programming
Attributes
Command Prompt
DHCPv6 IAID.....:
DHCPv6 Client DUID.....: 00-01-00-01-70-CB-8A-E8-00-01-C7-01-C7-61
DNS Servers.....: ::
0.0.0.0
Bluetooth Connection:
Connection-specific DNS Suffix..:
Physical Address.....: 00D0.FF30.9640
Link-local IPv6 Address.....: ::
IPv6 Address.....: ::
IPv4 Address.....: 0.0.0.0
Subnet Mask.....: 0.0.0.0
Default Gateway.....: ::
0.0.0.0
DHCP Servers.....: 0.0.0.0
DHCPv6 IAID.....:
DHCPv6 Client DUID.....: 00-01-00-01-70-CB-8A-E8-00-01-C7-01-C7-61
DNS Servers.....: ::
0.0.0.0
C:\>ping 192.168.10.2
Pinging 192.168.10.2 with 32 bytes of data:
Reply from 192.168.10.2: bytes=32 time=4ms TTL=128
Reply from 192.168.10.2: bytes=32 time=4ms TTL=128
Reply from 192.168.10.2: bytes=32 time=4ms TTL=128
Reply from 192.168.10.2: bytes=32 time=4ms TTL=128
Ping statistics for 192.168.10.2:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 4ms, Maximum = 5ms, Average = 4ms
C:\>arp -a
Internet Address Physical Address Type
192.168.10.2 0000.0c37.0a29 dynamic
C:\>arp -d
C:\>arp -a
No ARP Entries Found
C:\>
Top
Fa0
PC-PT
PC0
Copper Straight-Through
Toggle PDU List Window
Simulation Panel
Event List
Vis.
Time(sec)
Last Device
At Device
Type
0.000 -- PC0 ICMP
0.001 PC0 Switch0 ICMP
0.002 Switch0 PC1 ICMP
0.003 PC1 Switch0 ICMP
0.004 Switch0 PC0 ICMP
0.999 -- Switch0 STP
1.000 Switch0 PC4 STP
1.000 Switch0 PC2 STP
1.000 Switch0 PC1 STP
1.000 Switch0 PC3 STP
1.000 Switch0 PC0 STP
Visible 2.999 -- Switch0 STP
Reset Simulation
Constant Delay
Captured to: 2.999 s
Play Controls
Event List Filters - Visible Events
ACL Filter, ARP, Bluetooth, CAPWAP, CDP, DHCPv6, DTP, EAPOL, EIGRPv6, FTP, H.323, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPSec, ISAKMP, IoT, IoT TCP, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPFv6, PAgP, POP3, PPP, PPPoED, PTP, RADIUS, REP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP
Edit Filters
Show All/None
Event List
Realtime
Simulation
Type Color Time(sec) Periodic Num Edit Delete
PC1 ICMP 0.000 N 0 (edit) (delete)

Google Drive link of the packet tracer file (give view permission): Link:

https://drive.google.com/drive/folders/1xeF6Ry-JXDk6vymw93v_nc14-oGuO2qA?usp=sharing

CONCLUSION (provide conclusion about this experiment):

Configuring the Address Resolution Protocol (ARP) is crucial for efficient network communication by mapping IP addresses to MAC addresses. This ensures seamless packet delivery within a local network. Proper ARP configuration enhances network performance, reduces latency, and prevents connectivity issues.

Rubrics for Experiment Assessment:

Rubrics	Good	Normal	Poor	Marks
Creation of Topology (4)	Created the topology, Identify the proper devices and making the connections **(4)**	Created the topology, Identify the proper devices, making the connections But missing some features **(3)**	Created wrong topology, Failed to Identify the proper devices and making connections **(1)**	
Verify the connectivity (4)	Verified the connectivity in all the levels **(4)**	Verified the connectivity at some levels (only some nodes) **(2)**	Verified the connectivity is not done. **(1)**	
Timely Completion (2)	Completed the lab before the allotted time **(2)**	Completed the lab after the deadline **(1)**	Did not submitted before grading **(0)**	
			Total	

Result: Thus, the Design a Configuration of Adress Resolution Protocol has been done successfully