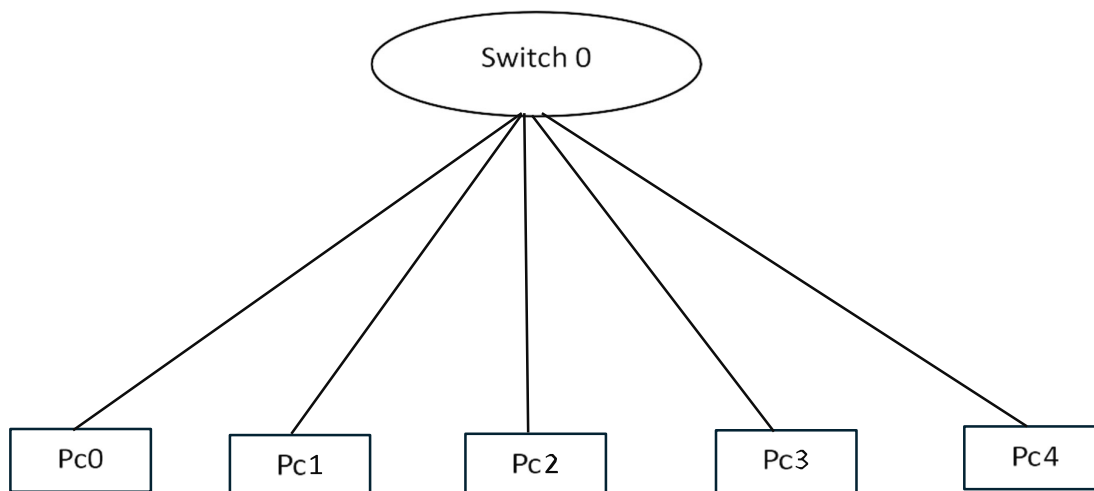


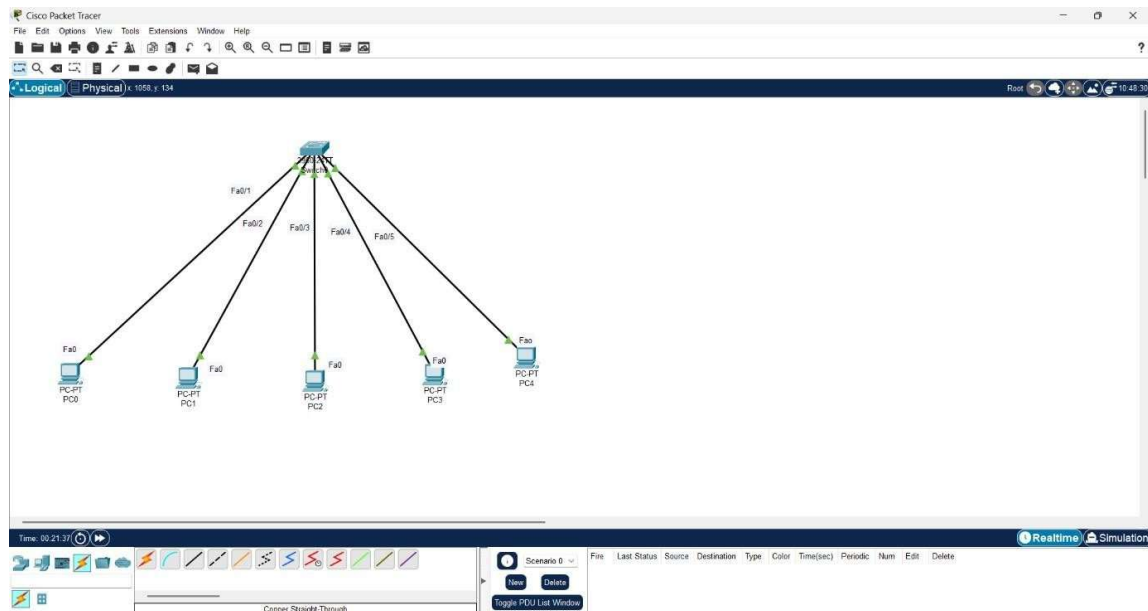
Register No:	99220040500
Name	E.Sai Pradeep
Class/Section	8601-a
Ex.No:	6b
Date of Submission	30.1.2025
Name of the Experiment	Configuration of Address Resolution protocol
Google Drive link of the packet tracer file (give view permission):	https://drive.google.com/drive/folders/1BSpnnIFgKcPZOEtAYbKKGTxntoJp_ouM

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

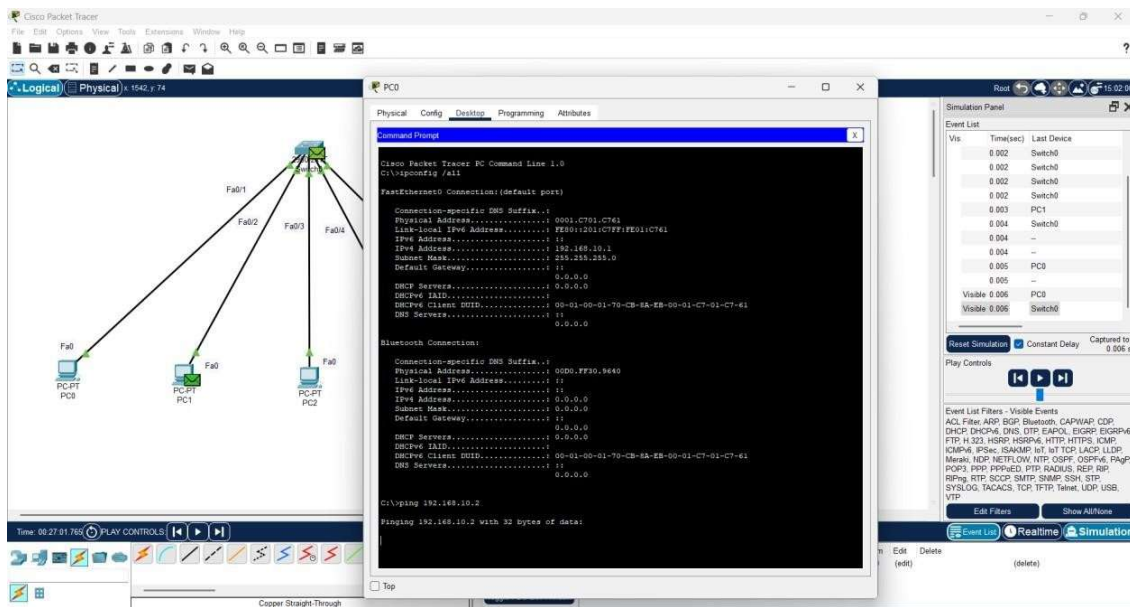
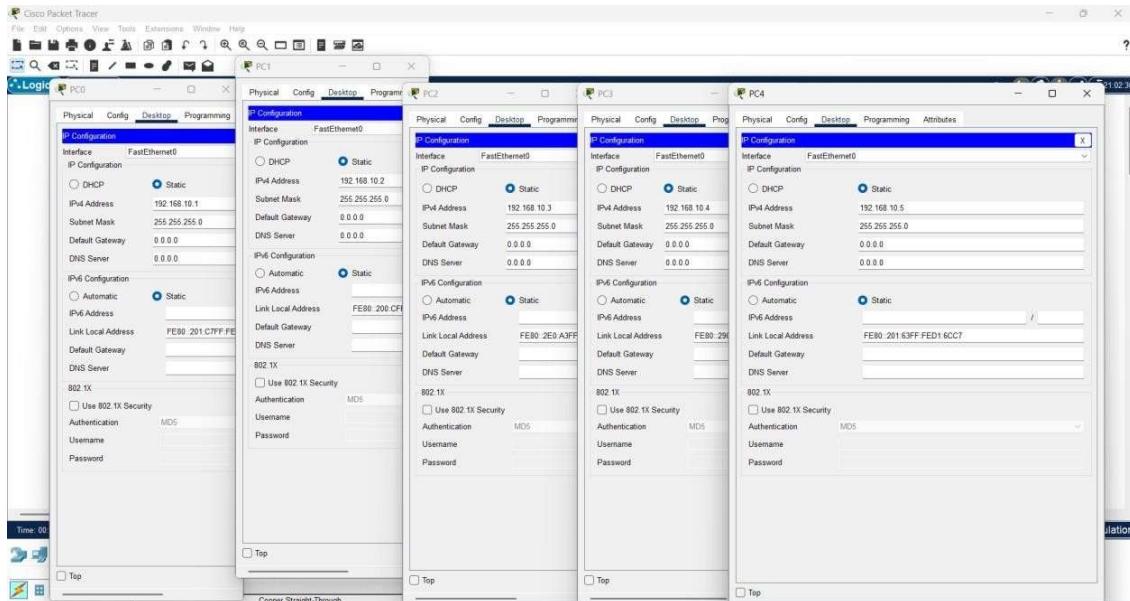
Switch#show mac-address-table

Mac Address Table

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

0001.63d1.6cc7	DYNAMIC	Fa0/5
----------------	---------	-------

6. Output Diagram (Minimum 3 screenshot):



Command Prompt

```

FastEthernet0 Connection: (default port)
Connection-specific DNS Suffix...:
Physical Address...: 0000.0C37.0A25
Link-local IPv6 Address...: FE80::1202:CFE27:A25
IPv6 Address...:
IPv6 Address...: 192.168.10.2
Subnet Mask...: 255.255.255.0
Default Gateway...:
DHCP Servers...:
DHCPv6 IAID...:
DHCPv6 Client IDID...: 00-01-00-01-70-4C-33-63-00-00-0C-37-0A-25
DNS Servers...:

Bluetooth Connection:
Connection-specific DNS Suffix...:
Physical Address...: 0050.0F02.1556
Link-local IPv6 Address...:
IPv6 Address...:
IPv6 Address...: 0.0.0.0
Subnet Mask...: 0.0.0.0
Default Gateway...:
DHCP Servers...:
DHCPv6 IAID...:
DHCPv6 Client IDID...: 00-01-00-01-70-4C-33-63-00-00-0C-37-0A-25
DNS Servers...:

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=ms TTL=128
Reply from 192.168.10.3: bytes=32 time=ms TTL=128
Reply from 192.168.10.3: bytes=32 time=ms TTL=128
Reply from 192.168.10.3: bytes=32 time=ms TTL=128

Ping statistics for 192.168.10.3:
    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          0000.0C37.0A25        dynamic
C:\>

```

Simulation Panel

Vis.	Time(sec)	Last Device	All Device	Type
0.000	-	PC1	Switch0	ICMP
0.001	PC1	Switch0	PC2	ICMP
0.002	Switch0	PC2	Switch0	ICMP
0.003	PC2	Switch0	PC1	ICMP
0.004	Switch0	PC1	Switch0	STP
Visible 1.998	-	Switch0		

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, iet, iet TCP, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPFv6, PAg, POP3, PPP, PPPoE, PTP, RADIUS, REP, RHPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Station Type Color Time(sec) Periodic Num Edit Delete

PC2 ICMP 0.000 N 0 (edit) (delete)

Command Prompt

```

FastEthernet0 Connection: (default port)
Connection-specific DNS Suffix...:
Physical Address...: 0000.0C37.0A25
Link-local IPv6 Address...: FE80::1202:CFE27:A25
IPv6 Address...:
IPv6 Address...: 192.168.10.2
Subnet Mask...: 255.255.255.0
Default Gateway...:
DHCP Servers...:
DHCPv6 IAID...:
DHCPv6 Client IDID...: 00-01-00-01-70-4C-33-63-00-00-0C-37-0A-25
DNS Servers...:

Bluetooth Connection:
Connection-specific DNS Suffix...:
Physical Address...: 0050.0F02.1556
Link-local IPv6 Address...:
IPv6 Address...:
IPv6 Address...: 0.0.0.0
Subnet Mask...: 0.0.0.0
Default Gateway...:
DHCP Servers...:
DHCPv6 IAID...:
DHCPv6 Client IDID...: 00-01-00-01-70-4C-33-63-00-00-0C-37-0A-25
DNS Servers...:

C:\>
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=ms TTL=128
Reply from 192.168.10.2: bytes=32 time=ms TTL=128
Reply from 192.168.10.2: bytes=32 time=ms TTL=128
Reply from 192.168.10.2: bytes=32 time=ms 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          0000.0C37.0A25        dynamic
C:\>

```

Simulation Panel

Vis.	Time(sec)	Last Device	All Device	Type
0.000	-	PC0	Switch0	ICMP
0.001	PC0	Switch0	PC1	ICMP
0.002	Switch0	PC1	Switch0	ICMP
0.003	PC1	Switch0	PC0	ICMP
0.004	Switch0	PC0	Switch0	STP
0.999	-	Switch0	PC2	STP
1.000	Switch0	PC2	Switch0	STP
1.000	Switch0	PC1	Switch0	STP
1.000	Switch0	PC3	Switch0	STP
1.000	Switch0	PC0	Switch0	STP
Visible 2.999	-	Switch0		

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, iet, iet TCP, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPFv6, PAg, POP3, PPP, PPPoE, PTP, RADIUS, REP, RHPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Station 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/1BSpnnIFgKcPZOEtAYbKKGTxntoJp_ouM

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