

1. Implement a simple ARP server and client using Python TCP socket programming. Assume ARP server maintains a simple database as follows.

IP Address	MAC Address
10.20.30.40	AB:12:34:2:DE
1.23.34.35	1A:AE:23:56:7F
10.45.67.78	12:45:59:ab:cd:67
21.76.34.56	1:34:7:ef:bc:d2
11.43.45.56	12:23:56:24:ab:e2
10.5.67.234	1:e:34:56:34:32
12.34.62.3	54:e2:f4:d4:fd:e1
23.6.5.98	21:38:23:12:ab:4
11.34.45.67	11:23:45:34:11:2e

Testcase1

Input from client

Client says: 10.5.67.234

Output from server to client

Server says: MAC is 1:e:34:56:34:32

Testcase2

Input from client

Client says: 11.34.45.67

Output from server to client

Server says: MAC is 11:23:45:34:11:2e

Testcase3

nput from client

Client says: 11.22.44.55

Output from server to client

Server says: sorry MAC is not found!!!

2. Implement a simple DNS server and client using Python TCP socket programming. Assume that DNS server maintains a simple database as follows.

Domain name	IP Address
www.google.com	10.20.30.40
www.gmail.com	1.23.34.35
www.linkedin.com	10.45.67.78
www.youtube.com	21.76.34.56
www.vit.ac.in	11.43.45.56
www.india.gov.in	10.5.67.234
www.researchgate.in	12.34.62.3
www.yahoo.com	23.6.5.98
www.facebook.com	11.34.45.67

Testcase1

Input from client

Client says: www.vit.ac.in

Output from server to client

Server says: IP is 11.43.45.56

Testcase2

Input from client

Client says: google.com

Output from server to :

Server says: IP is 10.20.30.40

Testcase3

Input from client

Client says: facebook

Output from server to client

Server says: IP is 11.34.45.67

Testcase4

Input from client

Client says: linkedin

Output from server to client

Server says: sorry IP is not found!!!