**ADDRESS RESOLUTION PROTOCOL**

**SERVER:**

#include<stdio.h>

#include<sys/types.h>

#include<sys/shm.h>

#include<string.h>

main()

{

int shmid,a,i;

char \*ptr,\*shmptr;

shmid=shmget(3000,10,IPC\_CREAT|0666);

shmptr=shmat(shmid,NULL,0);

ptr=shmptr;

for(i=0;i<3;i++)

{

puts("Enter the name:");

scanf("%s",ptr);

a=strlen(ptr);

printf("String length:%d",a);

ptr[a]=' ';

puts("Enter ip:");

ptr=ptr+a+1;

scanf("%s",ptr);

ptr[a]='\n';

ptr=ptr+a+1;

}

ptr[strlen(ptr)]='\0';

printf("\nARP table at serverside is=\n%s",shmptr);

shmdt(shmptr);

}

**CLIENT:**

#include<stdio.h>

#include<string.h>

#include<sys/types.h>

#include<sys/shm.h>

main()

{

int shmid,a;

char \*ptr,\*shmptr;

char ptr2[51],ip[12],mac[26];

shmid=shmget(3000,10,0666);

shmptr=shmat(shmid,NULL,0);

puts("The ARPtable is:");

printf("%s",shmptr);

printf("\n1.ARP\n2.RARP\n3.EXIT\n");

scanf("%d",&a);

switch(a)

{

case 1:

puts("Enter ip address:");

scanf("%s",ip);

ptr=strstr(shmptr,ip);

ptr-=8;

sscanf(ptr,"%s%\*s",ptr2);

printf("mac addr is:%s",ptr2);

break;

case 2:

puts("Enter mac addr");

scanf("%s",mac);

ptr=strstr(shmptr,mac);

sscanf(ptr,"%\*s%s",ptr2);

printf("%s",ptr2);

break;

case 3:

exit(1);

}

}

**OUTPUT:(server)**

[211716205024@Putty ~]$ vi arpserver.c

[211716205024@Putty ~]$ gcc arpserver.c

[211716205024@Putty ~]$ ./a.out

Enter the name:

system

String length:6Enter ip:

12.4.5.8

**OUTPUT:(client)**

[211716205024@Putty ~]$ vi arpclient.c

[211716205024@Putty ~]$ gcc arpclient.c

[211716205024@Putty ~]$ gcc arpclient.c

The ARPtable is:

system 12.4.5.8

0

1.ARP

2.RARP

3.EXIT

1

Enter ip address:

12.4.5.8

mac addr is:system

[211716205024@Putty ~]$ gcc arpclient.c

[211716205024@Putty ~]$ ./a.out

The ARPtable is:

system 12.4.5.8

0

1.ARP

2.RARP

3.EXIT

2

Enter mac addr

System