Computer Networks Experiment 10

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Register number- RA1911030010094

Code- arp.c #include<sys/types.h>

#include<sys/socket.h> #include<net/if_arp.h>

#include<sys/ioctl.h>

#include<stdio.h>

#include<string.h>

#include<unistd.h

#include<math.h>

#include<complex.h>

#include<arpa/inet.h>

#include<netinet/in.h>

#include<netinet/if_ether.h>

#include<net/ethernet.h>

#include<stdlib.h>

int main() {

struct sockaddr_in sin={0};

struct arpreq myarp={{0}};

unsigned char *ptr;
int sd;

sin.sin_family=AF_INET; printf("Enter IP address: ");

char ip[20];
scanf("%s", ip);

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if(inet_pton(AF_INET,ip,&sin.sin_addr)==0) {

printf("IP address Entered '%s' is not valid \n",ip);

exit(0);

 }

memcpy(&myarp.arp_pa,&sin,sizeof(myarp.arp_pa));

strcpy(myarp.arp_dev,"echo");

sd=socket(AF_INET,SOCK_DGRAM,0);
printf("\nSend ARP request\n");

if(ioctl(sd,SIOCGARP,&myarp)==1)

{
printf("No Entry in ARP cache for '%s'\n",ip); exit(0);

}
ptr=&myarp.arp_pa.sa_data[0];
printf("Received ARP Reply\n”);


printf("\nMAC Address for '%s' : ",ip); printf(“%p:%p:%p:%p:%p:

%p\n",ptr,(ptr+1),(ptr+2),(ptr+3),(ptr+4),(ptr+5)); return 0;

}
```