MAYANK SINHA

RA1911003010386 G1

WEEK-10: ARP IMPLEMENTATION USING UDP

Aim: To study ARP IMPLEMENTATION USING UDP.

Code:

```
#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);
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;
}
```

Output:-