SERVER SIDE

```
// Program_Server side
#include <stdio.h>
#include <stdlib.h>
#include <unistd.h>
#include <string.h>
#include <sys/types.h>
#include <sys/socket.h>
#include <arpa/inet.h>
#include <netinet/in.h>
#include <time.h>
int main()
{
        struct sockaddr_in cin,caddr;
        struct tm* ptr;
        time_t t;
        char buf[32],c,echobuf[32];
        int cid,n,i,byrc,b,len,pno;
        printf("\n Enter the port number : ");
        scanf("%d",&pno);
        cid=socket(AF_INET,SOCK_DGRAM,0);
        if(cid==-1)
        {
                printf("\n Error in creating socket !!! \n");
                return 0;
        }
        cin.sin_family=AF_INET;
        cin.sin_port=htons(pno);
        cin.sin_addr.s_addr=htons(INADDR_ANY);
        n=sizeof(cin);
        caddr.sin_family=AF_INET;
        caddr.sin_addr.s_addr=htons(INADDR_ANY);
        if(bind(cid,(struct sockaddr *)&cin,n)<0)
        {
                printf("\n Binding Falied !!! \n");
                return 0;
        }
        b=sizeof(caddr);
        printf("\n Server Started ...\n");
        do
        {
                strncpy(echobuf," ",32);
                if((byrc=recvfrom(cid,echobuf,31,0,(struct sockaddr *)&caddr,&b))<=0)
                {
                        printf("\n Error in receiving request !!!\n");
                        return 0;
                }
                if(strcmp(echobuf,"e")==0)
                {
                        printf("\n Server Stopped ...\n");
                        break;
                }
                printf("\n Request Received ...\n");
                printf("\n Sending Time to Client ...\n");
                t=time(NULL);
                ptr=localtime(&t);
                strftime (buf,sizeof(buf),"%I:%M%p",ptr);
                sendto(cid,buf,strlen(buf),0,(struct sockaddr *)&caddr,sizeof(caddr));
        }while(1);
        close(cid);
}
//End of the program
```

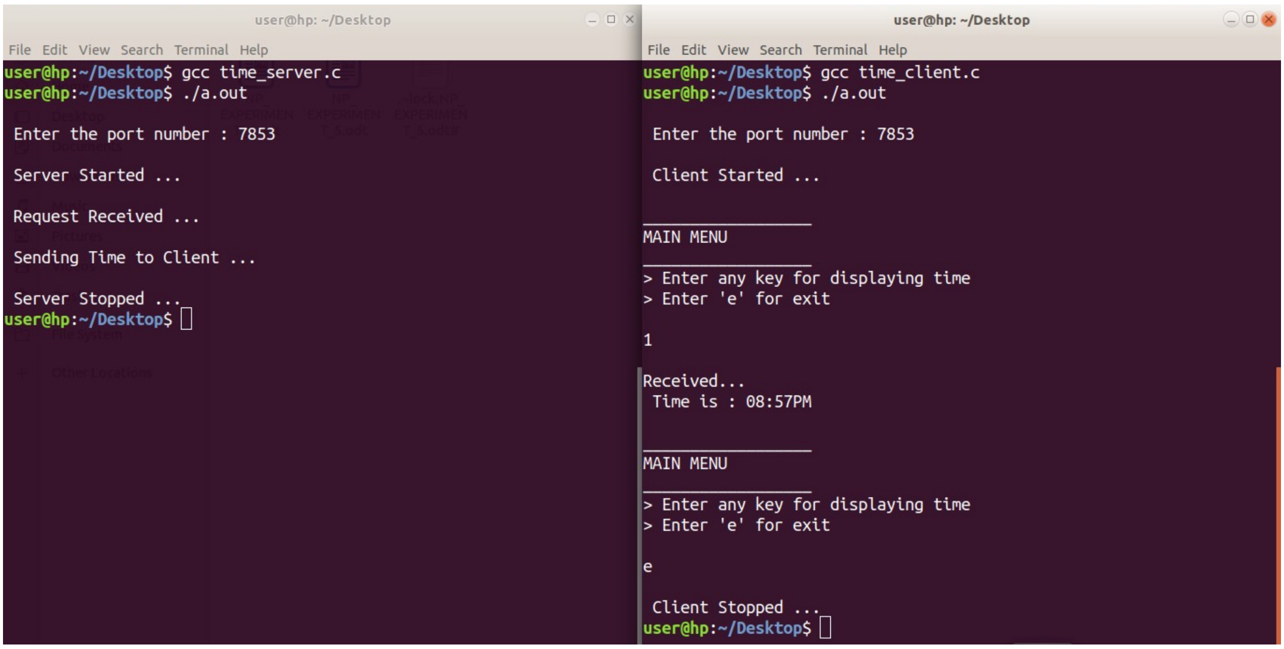
CLIENT SIDE

```
// Program_Client side
#include <stdio.h>
#include <stdlib.h>
#include <unistd.h>
#include <string.h>
#include <sys/types.h>
#include <sys/socket.h>
#include <arpa/inet.h>
#include <netinet/in.h>
int main()
{
        struct sockaddr_in cin,saddr,sin;
        char buf[32],c,echobuf[32];
        int cid,n,i,byrc,s,m,pno;
        printf("\n Enter the port number : ");
        scanf("%d",&pno);
        cid=socket(AF_INET,SOCK_DGRAM,0);
        if(cid==-1)
        {
                printf("\n Error in creating socket !!! \n");
                return 0;
        }
        saddr.sin_family=AF_INET;
        saddr.sin_port=htons(pno);
        saddr.sin_addr.s_addr=htons(INADDR_ANY);
        cin.sin_family=AF_INET;
        cin.sin_port=htons(pno+1);
        cin.sin_addr.s_addr=htons(INADDR_ANY);
        if(bind(cid,(struct sockaddr *)&cin,sizeof(cin))<0)
        {
                printf("\n Binding Falied !!! \n");
                return 0;
        }
        n=sizeof(saddr);
        printf("\n Client Started ...\n");
        do
```

```
	{
		strncpy(buf," ",32);
		printf("\n___________________\nMAIN MENU\n___________________\n> Enter any key for displaying time\n> Enter 'e' for exit\n\n");
		scanf("%s",buf);
		s=sendto(cid,buf,30,0,(struct sockaddr *)&saddr,sizeof(saddr));
		if(s<0)
			printf("\n Sending Failed !!! \n");
		if(strcmp(buf,"e")==0)
		{
			printf("\n Client Stopped ...\n");
			break;
		}
		m=sizeof(sin);
		strncpy(echobuf," ",32);
		if((byrc=recvfrom(cid,echobuf,31,0,(struct sockaddr *)&saddr,&m))<=0)
		{
			printf("\n Error in Receiving !!! \n");
			return 0;
		}
		printf("\nReceived...\n Time is : %s\n",echobuf);

	}while(1);
	close(cid);
}
//End of the program
```

OUTPUT



user@hp: ~/Desktop
File Edit View Search Terminal Help

```
user@hp:~/Desktop$ gcc time_server.c
user@hp:~/Desktop$ ./a.out

 Enter the port number : 7853

 Server Started ...

 Request Received ...

 Sending Time to Client ...

 Server Stopped ...
user@hp:~/Desktop$ 
```

user@hp: ~/Desktop
File Edit View Search Terminal Help

```
user@hp:~/Desktop$ gcc time_client.c
user@hp:~/Desktop$ ./a.out

 Enter the port number : 7853

 Client Started ...

___________________
MAIN MENU
___________________
> Enter any key for displaying time
> Enter 'e' for exit

1

Received...
 Time is : 08:57PM

___________________
MAIN MENU
___________________
> Enter any key for displaying time
> Enter 'e' for exit

e

 Client Stopped ...
user@hp:~/Desktop$ 
```