**Server:**

#include<stdio.h>

#include<string.h>

#include<netinet/in.h>

#include<arpa/inet.h>

#include<sys/types.h>

#include<sys/socket.h>

#include<unistd.h>

#include<pthread.h>

#include<termios.h>

#include<stdlib.h>

struct sockaddr\_in ser,cli;

void \*recv\_thread(void \*arg);

void \*send\_thread(void \*arg);

pthread\_t sample\_t;

int sfd,cfd,temp=0;

int main()

{

int len,num;

pthread\_t snd,rcv;

sfd=socket(AF\_INET,SOCK\_STREAM,0);

ser.sin\_family=AF\_INET;

inet\_aton("10.10.99.90",&(ser.sin\_addr));

ser.sin\_port=htons(8760);

num=bind(sfd,(struct sockaddr\*)&ser,sizeof(ser));

printf("Chatroom Ready!\n");

num=listen(sfd,1);

len=sizeof(cli);

cfd=accept(sfd,(struct sockaddr\*)&cli,&len);

printf("Client Joined!\n");

pthread\_create(&snd,NULL,send\_thread,NULL);

pthread\_create(&rcv,NULL,recv\_thread,NULL);

pthread\_join(snd,NULL);

return 0;

}

void \*send\_thread(void \*arg)

{

char str[200];

while(1)

{

fgets(str,200,stdin);

if(strcmp(str,"!DISCONNECT")==10)

{

pthread\_cancel(sample\_t);

close(sfd);

exit(0);

}

else

{

write(cfd,(void \*)str,sizeof(str));

}

}

}

void \*recv\_thread(void \*arg)

{

int n;

char str[200];

sample\_t=pthread\_self();

while(1)

{

n=read(cfd,(void \*)str,sizeof(str));

if(n>0)

{

if(strcmp(str,"!DISCONNECT")==10)

{

printf("Client Left!\n");

}

else

{

printf("Client : %s",str);

}

fflush(stdout);

}

}

}

**Client:**

#include<stdio.h>

#include<string.h>

#include<netinet/in.h>

#include<arpa/inet.h>

#include<sys/types.h>

#include<sys/socket.h>

#include<unistd.h>

#include<pthread.h>

#include<termios.h>

#include<stdlib.h>

void \*recv\_thread(void \*a);

void \*send\_thread(void \*a);

int cfd;

pthread\_t sample\_t;

int main()

{

struct sockaddr\_in cl,ser;

int n;

pthread\_t snd,rcv;

cfd=socket(AF\_INET,SOCK\_STREAM,0);

memset(&cl,0,sizeof(cl));

memset(&ser,0,sizeof(ser));

cl.sin\_family=AF\_INET;

inet\_aton("10.10.107.189",&(cl.sin\_addr));

cl.sin\_port=htons(8760);

ser.sin\_family=AF\_INET;

inet\_aton("10.10.107.189",&(ser.sin\_addr));

ser.sin\_port=htons(8760);

if(connect(cfd,(struct sockaddr \*)&ser,sizeof(ser))<0)

{

printf("Unable to establish connection!\n");

exit(0);

}

pthread\_create(&snd,NULL,send\_thread,NULL);

pthread\_create(&rcv,NULL,recv\_thread,NULL);

pthread\_join(snd,NULL);

return 0;

}

void \*send\_thread(void \*a)

{

char str[200];

while(1)

{

fgets(str,200,stdin);

write(cfd,(void \*)str,sizeof(str));

if(strcmp(str,"!DISCONNECT")==10)

{

pthread\_cancel(sample\_t);

close(cfd);

exit(0);

}

}

}

void \*recv\_thread(void \*a)

{

int n;

char str[200];

sample\_t=pthread\_self();

while(1)

{

n=read(cfd,(void \*)str,sizeof(str));

if(n>0)

{

printf("Server : %s",str);

fflush(stdout);

}

}

}