
Subject: Learn2IRC!

Posted by [reborn](#) on Wed, 17 Feb 2010 12:55:29 GMT

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I've been trying to connect to an IRC server programitically instead of using an IRC client like mIRC.

I'm not a big fan of IRC, namely because I dont understand it very much, but I've made progress (albeit slowly)...

The following code is a thread that I was trying to make connect to an IRC server...

It gets to "//Gets to here fine with no problems....

" with no issues, however, as you can see, I am truely confused by the protocol and ping/pong especially.

I'm not sure when to expect the ping/pong, so I was just checking for it all the time, I will obviously make the continous ping/pong requests seperate, this thread was just to connect as a proof of concept to build on really...

I'm pretty sure after seeing the server ping me like this: "PING : randomjunk" that I need to respond with "PONG : randomjunk", which is why the pong looks so weird, I am tokenising the ping request to get that randomjunk part and slap it on the end of my pong response...

All the code after, like trying to join channels/set name etc etc make the irc server send me a message about not being registered, until the ping request times out. I am assuming that to be registered, I have to properly respond to ping, and this is where all my issues lay...

Here, is my code, if anyone can help, then I would appreciate it (or just has a working example of connecting, or some detailed information about how the steps the irc is looking for me to do to connect properly). Don't be too mean about the code, it really was just a test to connect...

```
DWORD WINAPI MainThread( LPVOID lpParam ){
```

```
char buf1[1200];  
char nick[] = "rebot";  
char text1[4096];  
int n;
```

```
WORD wsver=MAKEWORD(2, 0);
```

```
int nret=WSAStartup(wsver, &wsaData);  
if(nret != 0){  
printf("Startup failed, error code: %d\n",WSAGetLastError());  
WSACleanup();  
return false;
```

```

}

printf("Init success\n");
SOCKET kSock=socket(AF_INET, SOCK_STREAM, 0);

if(kSock == INVALID_SOCKET){
printf("Socket init failed");
return false;
}

printf("Socket initialized\n");

sockaddr_in sin;

sin.sin_port=htons(6668);

sin.sin_addr.s_addr=inet_addr("85.25.143.169");

sin.sin_family=AF_INET;

if(connect(kSock,(sockaddr*)&sin, sizeof(sin)) == SOCKET_ERROR){
printf("Startup failed, error code: %d\n",WSAGetLastError());
WSACleanup();
return false;
}
printf("Connection successful!\n\n");

//Gets to here fine with no problems....

n = recv(kSock, buf1, 1200, 0);
if ( n > 0 ) {
printf(">>Server: %s\n",buf1);
if (strstr(buf1,"PING")){
printf("I got a ping, cool!\n");
char* myStringPtr = buf1;
myStringPtr+=6;
char * pch;
pch = strtok (myStringPtr," =\n");
std::vector<std::string> str_Vector;
while (pch != NULL){
std::string strData = pch;
str_Vector.push_back(strData);
pch = strtok (NULL, " =\n");
}
sprintf(text1,"PONG :%s\r\n",str_Vector.at(0).c_str());
send(kSock, text1, sizeof(text1), 0);
}

```

```

    printf(">>Client: %s\n",text1);
}
}
else {
    printf(">>Server: No Data\n");
}

```

```

sprintf(text1, "NICK rebot\r\n");
send(kSock, text1, strlen(text1), 0);
printf(">>Client: %s\n",text1);

```

```

n = recv(kSock, buf1, 1200, 0);
if ( n > 0 ) {
    printf(">>Server: %s\n",buf1);
    if (strstr(buf1,"PING")){
        printf("I got a ping, cool!\n");
        char* myStringPtr = buf1;
        myStringPtr+=6;
        char * pch;
        pch = strtok (myStringPtr, " =\n");
        std::vector<std::string> str_Vector;
        while (pch != NULL){
            std::string strData = pch;
            str_Vector.push_back(strData);
            pch = strtok (NULL, " =\n");
        }
        sprintf(text1,"PONG :%s\r\n",str_Vector.at(0).c_str());
        send(kSock, text1, sizeof(text1), 0);
        printf(">>Client: %s\n",text1);
    }
}
else {
    printf(">>Server: No Data\n");
}

```

```

/*
// ping and pong continuous, will be moved to own thread
while (1) {
n = recv(kSock, buf1, 1200, 0);
if ( n > 0 ) {
    printf(">>Server: %s\n",buf1);
    if (strstr(buf1,"PING")){
        printf("I got a ping, cool!\n");
        char* myStringPtr = buf1;

```

```
myStringPtr+=6;
char * pch;
pch = strtok (myStringPtr," =\n");
std::vector<std::string> str_Vector;
while (pch != NULL){
std::string strData = pch;
str_Vector.push_back(strData);
pch = strtok (NULL, " =\n");
}
sprintf(text1,"PONG :%s\n",str_Vector.at(0).c_str());
send(kSock, text1, sizeof(text1), 0);
printf(">>Client: %s\n",text1);
}
}
else {
printf(">>Server: No Data\n");
}*/
return 1;
}
```

Subject: Re: Learn2IRC!
Posted by [Sladewill](#) on Wed, 17 Feb 2010 15:15:44 GMT
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Is this for renegade because looping is not a good way to do it, it will freeze the console. Use Timer events to check and pong

Subject: Re: Learn2IRC!
Posted by [reborn](#) on Wed, 17 Feb 2010 15:21:29 GMT
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This has it's own thread.

Subject: Re: Learn2IRC!
Posted by [Sir Kane](#) on Wed, 17 Feb 2010 17:56:59 GMT
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Must be because you're using std::.

Subject: Re: Learn2IRC!

Posted by [Gen_Blacky](#) on Wed, 17 Feb 2010 18:09:47 GMT

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Sir Kane wrote on Wed, 17 February 2010 11:56Must be because you're using std::.

lol

Subject: Re: Learn2IRC!

Posted by [reborn](#) on Wed, 17 Feb 2010 21:06:00 GMT

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Sir Kane wrote on Wed, 17 February 2010 12:56Must be because you're using std::.

Come on man... You've clearly read it, you're better than I am, can't you just help?

Subject: Re: Learn2IRC!

Posted by [raven](#) on Wed, 17 Feb 2010 22:13:00 GMT

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In order to "register" your connection with the server you have to send the following data in addition to ping response:

NICK nickname

USER username 0 0 :real name of client

then you will be allowed to issue raw IRC commands such as join and privmsg

Subject: Re: Learn2IRC!

Posted by [reborn](#) on Wed, 17 Feb 2010 22:24:35 GMT

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raven wrote on Wed, 17 February 2010 17:13In order to "register" your connection with the server you have to send the following data in addition to ping response:

NICK nickname

USER username 0 0 :real name of client

then you will be allowed to issue raw IRC commands such as join and privmsg

Thanks raven

Where did you pick that knowledge up?

Subject: Re: Learn2IRC!

Posted by [raven](#) on Wed, 17 Feb 2010 22:28:26 GMT

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5 years of admining of an IRC server and development of many PHP and C++ IRC bots for starters

google was my friend

Subject: Re: Learn2IRC!

Posted by [Omar007](#) on Wed, 17 Feb 2010 22:41:59 GMT

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LOL reborn we are working on the same thing, walking into the same problem!!

I already had ravens idea but it has already lost connection when it enters the loop.

This is what i did. I put it in 1 statement. That should work right?

```
memset(sendData, 0, 255);
sprintf(sendData, "NICK %s\r\nUSER %s 0 0 :OTROSSB\r\n", nick, nick);
Sock.SendData(sendData, strlen(sendData));
```

Also it doesnt show in the channel (rarely it does)

And does it also crashes your FDS on 'quit'??

EDIT: Oh and i think my message parser is OK too but i cant test that when it loses connection xD
Reborn, i would use a hostname instead of static IP if you want more 'normal' users to use it easily

And sorry for sort of hijacking your topic but i have the same problem xD

Subject: Re: Learn2IRC!

Posted by [Sir Kane](#) on Thu, 18 Feb 2010 07:00:14 GMT

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```
int len;
if ((len = sprintf(sendData, "NICK %s\r\nUSER %s 0 0 :OTROSSB\r\n", nick, nick)) != -1)
Sock.SendData(sendData, len);
```

Subject: Re: Learn2IRC!

Posted by [reborn](#) on Thu, 18 Feb 2010 09:12:42 GMT

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Omar007 wrote on Wed, 17 February 2010 17:41LOL reborn we are working on the same thing,

walking into the same problem!!

I already had ravens idea but it has already lost connection when it enters the loop.

This is what i did. I put it in 1 statement. That should work right?

```
memset(sendData, 0, 255);  
sprintf(sendData, "NICK %s\r\nUSER %s 0 0 :OTROSSB\r\n", nick, nick);  
Sock.SendData(sendData, strlen(sendData));
```

Also it doesnt show in the channel (rarely it does)

And does it also crashes your FDS on 'quit'??

EDIT: Oh and i think my message parser is OK too but i cant test that when it loses connection xD
Reborn, i would use a hostname instead of static IP if you want more 'normal' users to use it
easily

And sorry for sort of hijacking your topic but i have the same problem xD

When I've done mine, I will show you.

```
Sir Kane wrote on Thu, 18 February 2010 02:00: int len;  
if ((len = sprintf(sendData, "NICK %s\r\nUSER %s 0 0 :OTROSSB\r\n", nick, nick)) != -1)  
Sock.SendData(sendData, len);
```

Thank you, that's kind.

After the tips in this thread, I am finally getting somewhere...

Subject: Re: Learn2IRC!

Posted by [reborn](#) on Thu, 18 Feb 2010 11:49:25 GMT

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Ok, so I got a little further... Basically the IRC server sends a shit tonne of information when you choose your nick (see screenshot below). However, after choosing my nick and receiving all the crap from the server, I try to join a channel, I send the command, and try to receive the response, but it doesn't actually respond, and I don't join the channel.

```
DWORD WINAPI MainThread( LPVOID lpParam ){
```

```
char buf1[4096];
```

```

char nick[] = "rebot";
char text1[4096];
int n;

WORD wsver=MAKEWORD(2, 0);

int nret=WSAStartup(wsver, &wsaData);
if(nret != 0){
    printf("Startup failed, error code: %d\n",WSAGetLastError());
    WSACleanup();
    return false;
}

printf("Init success\n");
SOCKET kSock=socket(AF_INET, SOCK_STREAM, 0);

if(kSock == INVALID_SOCKET){
    printf("Socket init failed");
    return false;
}

printf("Socket initialized\n");

sockaddr_in sin;

sin.sin_port=htons(6668);

sin.sin_addr.s_addr=inet_addr("85.25.143.169");

sin.sin_family=AF_INET;

if(connect(kSock,(sockaddr*)&sin, sizeof(sin)) == SOCKET_ERROR){
    printf("Startup failed, error code: %d\n",WSAGetLastError());
    WSACleanup();
    return false;
}
printf("Connection successful!\n\n");

n = recv(kSock, buf1, 4096, 0);
if ( n > 0 ) {
    printf(">>Server: %s\n",buf1);
}
else {
    printf(">>Server: No Data\n");
}

```



```
sprintf(text1, "NICK rebot2\r\nUSER rebot2 0 0 :rebot2\r\n");
send(kSock, text1, strlen(text1), 0);
printf(">>Client: %s\n",text1);
```

```
n = recv(kSock, buf1, 4096, 0);
if ( n > 0 ) {
printf(">>Server: %s\n",buf1);
if (strstr(buf1,"PING")){
printf("I got a ping, cool!\n");
char* myStringPtr = buf1;
myStringPtr+=6;
char * pch;
pch = strtok (myStringPtr," =\n");
std::vector<std::string> str_Vector;
while (pch != NULL){
std::string strData = pch;
str_Vector.push_back(strData);
pch = strtok (NULL, " =\n");
}
sprintf(text1,"PONG :%s\r\n",str_Vector.at(0).c_str());
send(kSock, text1, sizeof(text1), 0);
printf(">>Client: %s\n",text1);
}
}
else {
printf(">>Server: No Data\n");
}
```

```
n = recv(kSock, buf1, 4096, 0);
if ( n > 0 ) {
printf(">>Server: %s\n",buf1);
}
else {
printf(">>Server: No Data\n");
}
```

```
n = recv(kSock, buf1, 4096, 0);
if ( n > 0 ) {
printf(">>Server: %s\n",buf1);
}
else {
printf(">>Server: No Data\n");
}
```

```
n = recv(kSock, buf1, 4096, 0);
```

```
if ( n > 0 ) {
    printf(">>Server: %s\n",buf1);
}
else {
    printf(">>Server: No Data\n");
}
```

```
n = recv(kSock, buf1, 4096, 0);
if ( n > 0 ) {
    printf(">>Server: %s\n",buf1);
}
else {
    printf(">>Server: No Data\n");
}
```

```
sprintf(text1,"JOIN #lobby\r\n");
send(kSock, text1, sizeof(text1), 0);
printf(">>Client: %s\n",text1);
n = recv(kSock, buf1, 4096, 0);
if ( n > 0 ) {
    printf(">>Server: %s\n",buf1);
}
else {
    printf(">>Server: No Data\n");
}
```

```
/*
sprintf(text1,"PRIVMSG #lobby :Test Message\r\n");
send(kSock,text1,sizeof(text1),0);
printf(">>Client: %s\n",text1);
```

```
n = recv(kSock, buf1, 4096, 0);
if ( n > 0 ) {
    printf(">>Server: %s\n",buf1);
}
else {
    printf(">>Server: No Data\n");
}
```

```
*/
/*
// ping and pong, will obviously be moved...
```

```
while (1) {
recv( kSock,buf,255,0);
if (strstr(buf,"PING")) {
printf("Server sent PING\n");
send(kSock,"PONG :\r\n",128,0);
printf("Replying with PONG\n");
}
else{
printf(">>Server: %s\n",buf);
}
}
*/
return 1;
}
```

Subject: Re: Learn2IRC!
Posted by [Omar007](#) on Thu, 18 Feb 2010 12:37:42 GMT
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That is indeed alot of data xD

It is weird, your channel join code looks OK and mine joins the channel (now and then). There is only 1 channel join command and we both wrote it the same (well beside that you only end it with '\n' and i have '\r\n' would that matter?) it should be right

Also why not use a loop for the input check?? Writing the code 4 times seems pretty useless :V
And what if there is even more input??

```
IE:
while(1)
{
if(recv(kSock, buf1, 4096, 0) <= 0)
{
printf(">>Server: No Data\n");
break;
}
printf(">>Server: %s\n", receiveData);
}
```

Subject: Re: Learn2IRC!
Posted by [reborn](#) on Thu, 18 Feb 2010 13:59:45 GMT

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Thanks for the input, I appreciate that... I had no intention of leaving it like though, lol... I just want it to join the chan and and send a message, then I will start breaking it down to seperate functions etc etc.

I do end my JOIN with \r\n though, not sure what you mean by that?

Thank you.

Subject: Re: Learn2IRC!

Posted by [Omar007](#) on Thu, 18 Feb 2010 14:10:18 GMT

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reborn wrote on Thu, 18 February 2010 14:59 Thanks for the input, I appreciate that... I had no intention of leaving it like though, lol... I just want it to join the chan and and send a message, then I will start breaking it down to seperate functions etc etc.

I do end my JOIN with \r\n though, not sure what you mean by that?

Thank you.

np

And yea you did indeed. I think i just read over it, my fault xD

Subject: Re: Learn2IRC!

Posted by [Sladewill](#) on Thu, 18 Feb 2010 14:12:20 GMT

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you do know the IRC accepts ":"

so join :#channelname

may work

Subject: Re: Learn2IRC!

Posted by [Omar007](#) on Thu, 18 Feb 2010 14:48:14 GMT

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According to the IRC RFC1459 it doesnt for the command JOIN, unless you use the nick first (see last option in quote).

According to that the join command is written as:

Quote:JOIN #foobar ; join channel #foobar.

JOIN &foo fubar ; join channel &foo using key "fubar".

JOIN #foo,&bar fubar ; join channel #foo using key "fubar"
and &bar using no key.

JOIN #foo,#bar fubar,foobar ; join channel #foo using key "fubar".
and channel #bar using key "foobar".

JOIN #foo,#bar ; join channels #foo and #bar.

:WiZ JOIN #Twilight_zone ; JOIN message from WiZ

I'll update my post if it did work but i doubt it.

EDIT/UPDATE: Doesnt changes aching for me. Reborn??

EDIT2: I just found out that the last option is received by all persons on the channel. It's not a way to join a channel. Using ':' in a JOIN is there for wrong for certain

Subject: Re: Learn2IRC!

Posted by [reborn](#) on Thu, 18 Feb 2010 14:49:49 GMT

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<http://www.irchelp.org/irchelp/rfc/rfc.html>

Great source of help for anyone following...

Subject: Re: Learn2IRC!

Posted by [reborn](#) on Thu, 18 Feb 2010 15:05:00 GMT

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I'm going away for a weekend break, will see if I can get anywhere when I get back.

Subject: Re: Learn2IRC!

Posted by [danpaul88](#) on Thu, 18 Feb 2010 18:03:59 GMT

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You should always wait until you have received the 001 message code before attempting to join any channels. Something I learnt the hard way...

Subject: Re: Learn2IRC!

Posted by [Sladewill](#) on Thu, 18 Feb 2010 18:28:17 GMT

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Reborn you should try using mIRC to connect as a service it will help you to understand the way

IRC works. It helped me a lot when i made a IRC bot in C++ and VB

Subject: Re: Learn2IRC!

Posted by [Omar007](#) on Thu, 18 Feb 2010 21:53:13 GMT

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OMG AWESOMENESS!!!!!!!!!!!!!!!!!!!!!!

IT WORKS MOEHAHAHA

Pretty hard to get it working. Took me 4 days

It now responds to !about command

I really learned alot with this

Oh and DanPaul88: i used 004 message; nick modes message

This should help more people with the message numbers: <http://www.mirc.net/raws/>

And 1 more tip: make sure you check the 'strlen' and not the 'sizeof' when sending data

It will get you (IP) banned on the server :V (luckily only 1 day; n00bstories IRC)

Closing Link: [IP] Z:Lined (Connect flooding, one day gzline)
