# CP12: <Chat> WorseThanDiscordApp

We are going to make a chat client program. I will run the server on my PC.

**Step 1: Create a new Java Project and Design an interface.**You need the following things:

* Server Hostname
* Server Port
* Your Username
* Connect/Disconnect Button
* Multi Line textbox for the incoming text
* Single line textbox to type your message in
* Send button

## Network Protocol

The purpose of a Protocol is to agree on a series of commands/syntax so that different people’s programs can interact properly. HTTP is an example of a protocol, for transferring files from a webserver to a browser. I defined the chat protocol, when I wrote the server for the class. Your client needs to match the syntax that the server is expecting, otherwise you won’t get any messages from your classmates. Please watch carefully for spaces, colons, and brackets, etc!

The protocol has 4-letter, capitalized command names, for simplicity.

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| --- | --- |
| You can send | At this time |
| **JOIN**: username | After opening the socket |
| **SPEK**: message | After you have been **WELC**omed to the channel, but not yet **PART**ed or been **KICK**ed |
| **PART**: message | When you are done and are ready to close the socket. |

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| You will receive | When this happens |
| **WELC**: comma,delimited,usernames | You are **WELC**omed to the channel.  You are told the *other* *users* that are currently active in the channel. |
| **FAIL**: reason | Your join **FAIL**s and you are rejected from the channel |
| **SPOK**: message | The server acknowledges your message, and it is **SPOK**en to the rest of the channel |
| **MESG**: <username> message | Someone else sent a **SPE**a**K** command. |
| **ENTR**: username | Someone else **ENT**e**R**s the channel |
| **LEAV**: <username> message | Someone else **LEAV**es the channel  (**PART**, Socket goes dead… IOException, network glitch, etc.) |
| **GBYE:** message | You have **PART**ed and the server is saying **G**ood**BYE**. |
| **PUNT:** <username> message | Someone else got **KICK**ed out |
| **KICK**: reason | You got **KICK**ed out |