

Lab Exercise

- **Make a *chatting room* using `poll()`**
 - The clients should insert the user's **username**
 - The client should be under an infinite loop with **conditional exit** ("quit")
 - When a client sends a message, **the server receives the message and sends it to the other clients**
 - When a client joins or leaves the chatting room, server sends a message with the number of current clients to other clients
 - Check if the POLLIN bit of revents is set for a specific fd to check if there is input (i.e., `fd_struct.revents & POLLIN`)
 - **Hint: `poll()` is needed on both the client and the server.**
 - **Timeout is not needed**
 - » e.g., `poll(fds, nfds, -1);`

Lab Exercise

■ Running example

```
bash ~/s/2/w/w13
spl on ● SPL in 2023f/week13/w13 via C v12.3.0-gcc
└─ ./client localhost 1398
Enter your username: AzureDiamond
Cthon98: hey, if you type in your pw, it will show as stars
Cthon98: ***** see!
hunter2
doesnt look like stars to me
... has joined the chat.
Cthon98: AzureDiamond: *****
Cthon98: thats what I see
oh, really?
... has left the chat.
Cthon98: Absolutely
Cthon98: See, when YOU type hunter2, it shows to us as ****
****
thats neat, I didnt know chatting programs did that
Cthon98: yep, no matter how many times you type hunter2, it
will show to us as *****
awesome!
wait, how do you know my pw?
Cthon98: er, I just copy pasted YOUR *****'s and it appear
s to YOU as hunter2 cause its
Cthon98: your pw
oh, ok.
quit
Bye!

spl on ● SPL in 2023f/week13/w13 via C v12.3.0-gcc took 2m36s
└─
```

```
bash ~/s/2/w/w13
└─ ./client localhost 1398
Enter your username: ...
Cthon98: AzureDiamond: *****
Cthon98: thats what I see
AzureDiamond: oh, really?
quit
Bye!
```

```
bash ~/s/2/w/w13
spl on ● SPL in 2023f/week13/w13 via C v12.3.0-gcc
└─ ./server 1398
Cthon98 has joined the chat. 1 active user.
AzureDiamond has joined the chat. 2 active use's.
got 50 bytes from Cthon98.
got 14 bytes from Cthon98.
got 7 bytes from AzureDiamond.
got 28 bytes from AzureDiamond.
... has joined the chat. 3 active users.
got 21 bytes from Cthon98.
got 16 bytes from Cthon98.
got 11 bytes from AzureDiamond.
... has left the chat. 2 active users.
got 10 bytes from Cthon98.
got 53 bytes from Cthon98.
got 51 bytes from AzureDiamond.
got 77 bytes from Cthon98.
got 8 bytes from AzureDiamond.
got 28 bytes from AzureDiamond.
got 79 bytes from Cthon98.
got 7 bytes from Cthon98.
got 7 bytes from AzureDiamond.
AzureDiamond has left the chat. 1 active user.
Cthon98 has left the chat. 0 active users.
```

```
bash ~/s/2/w/w13
spl on ● SPL in 2023f/week13/w13 via C v12.3.0-gcc
└─ ./client localhost 1398
Enter your username: Cthon98
AzureDiamond has joined the chat.
hey, if you type in your pw, it will show as stars
***** see!
AzureDiamond: hunter2
AzureDiamond: doesnt look like stars to me
... has joined the chat.
AzureDiamond: *****
thats what I see
AzureDiamond: oh, really?
... has left the chat.
Absolutely
See, when YOU type hunter2, it shows to us as *****
AzureDiamond: thats neat, I didnt know chatting programs did
that
```

Exercise Submission

- **Submit your source code and Makefile**
 - The **make** command should generate a **w13** executable.
 - via iCampus
 - Bundle **source code** and **Makefile** with tar command
 - » *tar.gz* format
 - \$ tar cvzf [student_id].tar.gz week13**
 - We'll grade your submission with **make**
 - » If compilation fails, your points for this exercise will be zero