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pal readme

So basically this is how my program works:
untar the tgz
go into the uncompressed directory
and run
"make all"
which will compile and create two executables

First is the chatserver executable

to run the chat server, run command
./chatserver
which will start up the server
the server will print out its domain name, and the
port its located at

in order to connect to the server client side, do t
his:
./chatclient <domain name> <portno> <username>

the chat client WILL NOT RUN without all three argu
ments

The server creates a thread everytime a new person
connects, allowing for multible connections

Now, upon start up, the chat server initializes the
chat room and initializes its mutex.
This mutex is locked upon account creation, deleti
on, access, chat broadcast and chat history sendin
g
This mutex basically ensures that only one thread
changes anything related to the chatroom at a time
.

Now, if a client tries to connect with a taken use
rname, or the chat room is full, the server will n
ot allow chatroom entry

and will instead prompt that client to re enter a username until either that name is freed, client chooses a different name or room opens up in chat.

Also, every account has its own mutex
Say you have three people, A, B, C

A starts private session with B
this causes Bs mutex to be locked
C tries to start private session with B
but cannot due to a failed trylock and gets a "B is busy try again later" message
now whenever A types, their chat is send only to B
but when B types they stay in normal chat(B hasnt entered a private session)
The account mutexes ensure that only one person can privately talk to you at a time
Also, when A exits without ending the session the program should unlock Bs mutex, allowing B to be targeted by another private session

Account deletion causes all account mutexes held by that client to be unlocked, allowing them to be free to be targeted by whoever

Furthermore, if B exits suddenly, while A is in a private session, A will be sent a message from server informing them of B's departure
If B was A's only private target, A will default to public chat