Tegan Lamoureux

CS300 Term Project

Final Report

I believe the the structure of my program was the reason for the errors found in the delivered product. As I'd never programmed with sockets before, I was not used to multithreading and concurrency, and the issues shows are related to those.

For structure, my program had two sections, a client UI (running on it's own thread) and a server, which spawned a new handler for each client that connected. On the user side, when the the user performs an action, this sets a global flag that the action is waiting to be performed. Then, in the main operating loop, this is taken care of, and the flag reset. On the server side, a similar approach is used, where an incoming message flags an action to be performed, and the action is handled during the main operating loop.

Challenges were numerous, and mainly dealt with the Java language and socket communication. This was the first large project I'd ever done in Java, and as such, much of the time was spent learning the language as I went. As for sockets, I continually ran into issues of concurrency and errors in communication. I was unable to correct for this, and as a result, ended up with quite unreliable operation of the client program. The UI was a relative success, though, and I was able to write that in a functional way.