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Interpretation:

In coming up with an idea for this project, we wanted to work on something that could be useful in the future. As a team, we came up with the idea to create a networked code editor application that provided a place for a coding team to upload, edit and save their code files. At the same time, all teammates would be able to edit the file simultaneously. As an added bonus, we decided to incorporated the ability to chat through the instant messenger on the side.

To connect the clients, the application GUI provides an input field for the IP address of the server, and allows multiple users to connect at the same time. The user then selects a username and starts working. The GUI allows the uploading and saving of the code files, and the chat function allows the communication. Each connection between server and client is connected on two sockets which allow the opportunity to update the editor field while maintaining a conversation on the side. In developing this app, multithreading was not only a requirement, but a must in order to keep the smooth running synchrony necessary in an editor such as this. This project went a long way in helping me to understand how networking and multithreading works.

Contributions:

- Created editor window GUI
- Fixed an issue where client text areas were not updating after receiving the broadcast from the server.
    - To test the issue, I had created a new project which then became the team project after the issue was solved.
- Worked with Ryan to solve various code discrepancies and fix bugs as the project progressed.
- Added the chat functionality from the exercises (second socket per client)
- Added synchronized blocks to maintain thread safety
- Helped clean-up various code statements to ensure proper standards