

CSE4300 Operating Systems

Group Project Proposal

Abhilash Bhabad, Michael Ivain

### **Multithreaded Chat Server**

For this project, we propose to create a multithreaded chat server on a local machine using sockets in python. A socket, in networking terminologies, serves as an intermediate connecting the application layer to the transport layer in the TCP/IP protocol suite. These network sockets are present on the client-side and the server-side. We will be utilizing the socket library in python. Each user is assigned an IP address as well as a username of choice. Using sockets, we will be able to implement a chat room functionality to allow users to communicate with each other through these sockets.

To take this idea further, we will try to implement the functionality of several chat room users at once. We may also try to add the functionality of kicking a user for a user with an admin role. We also may try to implement a function where a user can privately message another client, not allowing other users to see the private message. On top of all this, we hope to be able to implement a graphical user interface (GUI) to the solution to go further than just a command line app. We may also try to explore ways to deploy this solution past our local network, if our time frame allows us.

To accomplish this project, we will need to do thorough research on the python socket library, especially if we are implementing multiple users. We will also need to do research on how to implement a GUI on top of our code,