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## TCP Chat Room Report

### Project Description

Simple TCP chat room that utilizes multiple rooms and keeps track of clients to make sure client messages are sent only to clients in the same room. Allows for .txt file uploads and displays in respective chat rooms. Includes a rename button that renames the user and allows previous name to be used by a new client.

### Project Future

I enjoyed this project since it allowed me to learn how to use threading, how TCP connections are handled, and how to implement a tkinter GUI. As the main menu shows, I would like to implement a password manager for this application to further secure the rooms. I would also like to implement GUI themes to allow the client to choose the color of the interface. Also, there is still some debugging to be done. Some of the buttons do not lead back into previous menus. I believe that this may have to do with arrangements of the threads. I would also like to add more GUI labels, such as user counters for each of the rooms so that a connecting user knows if a room is already full.

### Changes

My flags are not named variables, but instead messages shown in the terminal, such as JOIN\_REJECT\_FLAG being replaced with either "Requested name is valid" or "Requested name is invalid". Small changes include "a" not opening a .txt file prompt, but rather /a to avoid accidental calls. Also, note that closing out of a room does not return to a previous menu, but rather closes the client's connection. I tried to implement this, but could not figure out how to loop back to the handle thread effectively in *server.py*. I also attempted to read files from folders for the coolfile1.txt attachment, but every implementation that I tried from tutorials were unsuccessful.

Please see demo video below

<https://www.youtube.com/watch?v=IIVE LDd4>