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For this assignment, I have created three clients for each part of the homework assignment to test for concurrency where the client will send their requests in a loop until they disconnect with the server by “close” command and because of that, the server will run forever to serve any potential request.

Part 1: Just change the code so that it works concurrently using thread

Part 2: Modified the code to meet with the requirement for a TCP concurrent server. Syntax of the inputs are the same from my previous assignment

Part 3:

- I used Thread for handling each client request and Lock and Condition allow concurrent read (can read if writer_active variable is False, which is no one writing) and exclusive write (if there is no reader – reader_count == 0 and no one else is writing – writer_active = False). For the sake of testing this part, I added time library to slow down the execution of read or write operation to the dictionary to see if they actually blocks each other out.