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CSCI379 Programming Assignment 1

I picked TCP over UDP because of TCP's reliable data transfer mechanism. Although this program does a small job and simply transfers a relatively small amount of data (text) over the established TCP connection, reliable data transfer is needed since the code's job is to transform a sentence (or many!) precisely. Lost packets would ruin the functionality of the program as the client would see that the returned statement has unexpected results. UDP provides no congestion does not guarantee the transmission of the bits to the destination. As the amount of text increases, the probability of packet loss increases as well, so this program benefits more from using TCP, as it is solely text based.

My protocol is stateful, since the client explicitly connects to the server with its IP address and port number. Similarly, as a part of the TCP protocol, the server obtains this same information about the client.

My server program can connect to multiple clients simultaneously. With the line `connectionSocket, addr = serverSocket.accept()`, the server creates a new socket with the client, allowing the first socket to stay open for additional incoming connection requests from other clients that are able to occur simultaneously.