Lab 8

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Question 1: What is the major differences between TCP client and TCP server implementations?

1) The TCP server has 2 sockets, one for listening for incoming connection requests and another for handling what happens once an incoming request is accepted. Once the listening socket gets a connect request, it assigns the 'ClientSocket' to the connection request.

   The TCP client differs in this respect as it only has 1 socket, which is used for connecting and communicating with the server.

2) The TCP client decides and sends the initial buffer, whilst the server listens and recieves it and sends it back with acknowledgement.

3) The TCP client first calls shutdown() once it has sent all it wants to send. The server recieves and sends back data until it recieves word that the client has called shutdown(), once this happens, the server will also (once it is ready, all that it wants to send has been sent) call shutdown() and then closesocket(). Once the client hears back that the server has also called shutdown(), then the client calls closesocket(). In short, the client decides when to close the connection, unless an error occurs.

Question 2: What is the major differences between UDP server and TCP server implementations?

1) The UDP server only has 1 socket, which it uses to to both listen for connection request and establish the connection. The TCP server differs as it has 2 sockets, one used for listening and one used for the connection.

2) The TCP server has error handling for use when a packet recieve has failed. The UDP server has no error handling.

3) The TCP server waits to be told when to close the connection, while the UDP server recieves and sends back until an error occurs and it then shuts down.