

## Lab 8 - TCP Messenger Client

In this lab you need to build a TCP based messenger client application with the following functionality:

1. **c <server ip>**

Connect to the remote server on the given ip.

2. **o <peer ip>:<peer port>**

Open a session with a peer in the given ip and port. Opening a new session will automatically close any previously active/opened sessions. The application will communicate on one open session only.

3. **s <message>**

Sends a message to the remote peer on the open session.

4. **cs**

Closes an opened session.

5. **d**

Disconnect from server.

6. **x**

Exit

Any incoming message will be printed on the console.

The communication protocol with the server is defined in the TCPMessengerProtocol.h file and it is as follows:

All messages are of the format: command (4 byte int) and optionally data follows (in the format: data length (4 byte int) and the data ).

The available commands are:

- CLOSE\_SESSION\_WITH\_PEER - No data follows
- OPEN\_SESSION\_WITH\_PEER ["ip:port" as string]
- EXIT - No data follows (disconnect)
- SEND\_MSG\_TO\_PEER [length - int][msg - string]
- SESSION\_REFUSED - No data follows
- SESSION\_ESTABLISHED - No data follows

To assist you in performing the lab you should use the code provided in “Lab8TCPMessengerClient.zip”.

The zip also contains an exe program of the lab solution and a server executable so you can test your client against the server and also run the given client to see the desired behaviour.

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Each pair of students need to submit a single zip file of the complete eclipse workspace. The submitted file must be named in the following format:

lab8\_<student 1 id>\_<student 2 id>.zip

All code must be well written and commented and any warning in the code should be avoided.