

## System description

The system consists of a server side and a client side. The communication between clients and the server is possible using sockets.

On the server-side, there is a server and a client handler. The server, alternatively all client handlers, has access to read message history and a list of all clients.

The server listens for TCP connection and creates a client handler object for each client connected. The client interacts directly with the client handler. The client handler handles all requests from its assigned client using JSON as the format of communication information. It should be able to handle all requests as assigning username and sending errors or messages. Whenever the client handler receives a message, it should call some sort of broadcast function send to all connected clients and should save it in the message history.

On the client side, there is the client and the message receiver (and parser). All clients can send and receive messages at the same time. The client handles user input, as well as setting up the TCP connection and starting up the message receiver. The message receiver continuously listens to the client handler for new messages, and sends any received message to the parser.

The parser parses the message and acts accordingly. This is mainly printing things to the user in the right format.