

Chat app

A small application which using JavaFX for a GUI chat application.

Description of the project.

This chat application enables users to communicate with each other by sending messages and stickers, create groups for communication for more than two people, and also view information about users that he provided.

This messaging app supports every platform across desktop computers (macOS, Windows and Linux).

Used technologies:

- The project is done using the **GUI**. People just use the mouse to directly manipulate the interface.
- The project was developed using the **Maven** framework.
- Data about users, groups and messages will be stored in the **database**.
- Chat application is implemented using **client-server architecture**. This type of architecture has one or more client computers connected to a central server.
- **Custom protocol based on JSON**.
- This chat app is **Multi-threaded chat Application**:

Allow to process client's requests in parallel independently of each other.

A server listens for connection requests from clients across the network. Clients know how to connect to the server via the port number. The client sends a message, the message is sent to the server using OutputStream in java.

- Server side programming:
 1. The server runs an infinite loop to keep accepting incoming requests.
 2. When a request comes, it assigns a new thread to handle the communication part.
 3. The sever also stores the client id (indexing connected clients) into array, to keep a track of connected devices.
- Client side:
 1. The client connects to the server.
 2. Sends his data (mail and password), in response receives a token that identifies him on the network.