

Task 0 Specification

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1 Application overview

The application is a messaging system where registered users can create an account, exchange text messages and make groups.

A registered user can initiate a chat with another user, create a new group chat (of which he becomes the admin) and send messages to the chats he belongs to, as well as receiving messages from those chats. He can also leave a group.

A group admin can add and remove new users to the group. He cannot assign his powers to another user in the group and if he leaves the group, the latter is deleted.

Everytime a user views a chat, all the latest messages from the chat are fetched from the server and shown to the user.

2 Actors

Anonymous user, registered user, group admin and a time-based event.

3 Functional specifications

An **anonymous user** must be able to register in order to become a *registered user*.

A **registered user** must be able to:

- Send a message to a chat
- Read chat messages
- Create a private chat
- Create a group chat

A **group admin** must be able to:

- Add users to the group
- Remove users from the group

The **time-based event** updates the user interface on regular intervals to show new received messages from the current chat, if any.

4 Software Architecture

The proposed software architecture is a classic three-layer architecture:

1. database (MySQL)
2. server back-end (Java + Spring)
3. user web app (ReactJS)