

Inter-User Chat System for Pathlete's Social Network

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Problem

A social media platform relies on user to user communication. Pathlete is one such platform, thusly needing a communication network. In order for coaches to recruit and for athletes to be recruited a chat system needs to exist. We would also need to design this in the context of the current Pathele system.

Some initial requirements of the system were:

- One on one and group chats
- Ability to add and remove users
- Work with popular technologies

Solution

The purpose of the chat system is to connect coaches and players interested in talking with each other.

- Connecting coaches and players, and giving them a means of conversation.
- Allow for each party to find and communicate with each other easily and effectively.
- Have group functionality, so a group of athletes and related coaches can talk to each other.
- Extensible enough to use a variety of technologies.

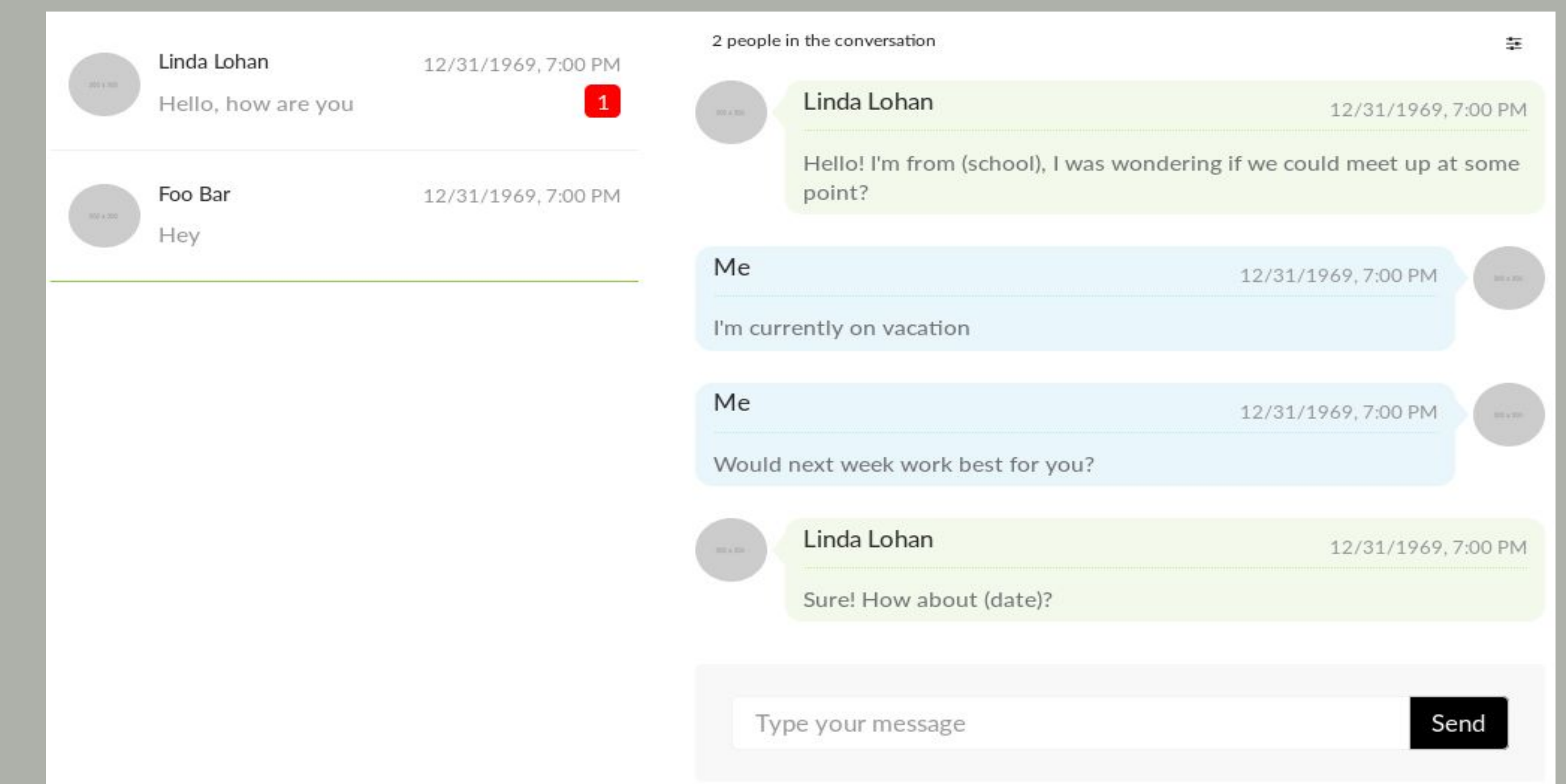
Frontend Implementation

- Angular for chat templating.
- Web sockets for communication.
- Created a generic socket interface for future socket usage unrelated to the chat system

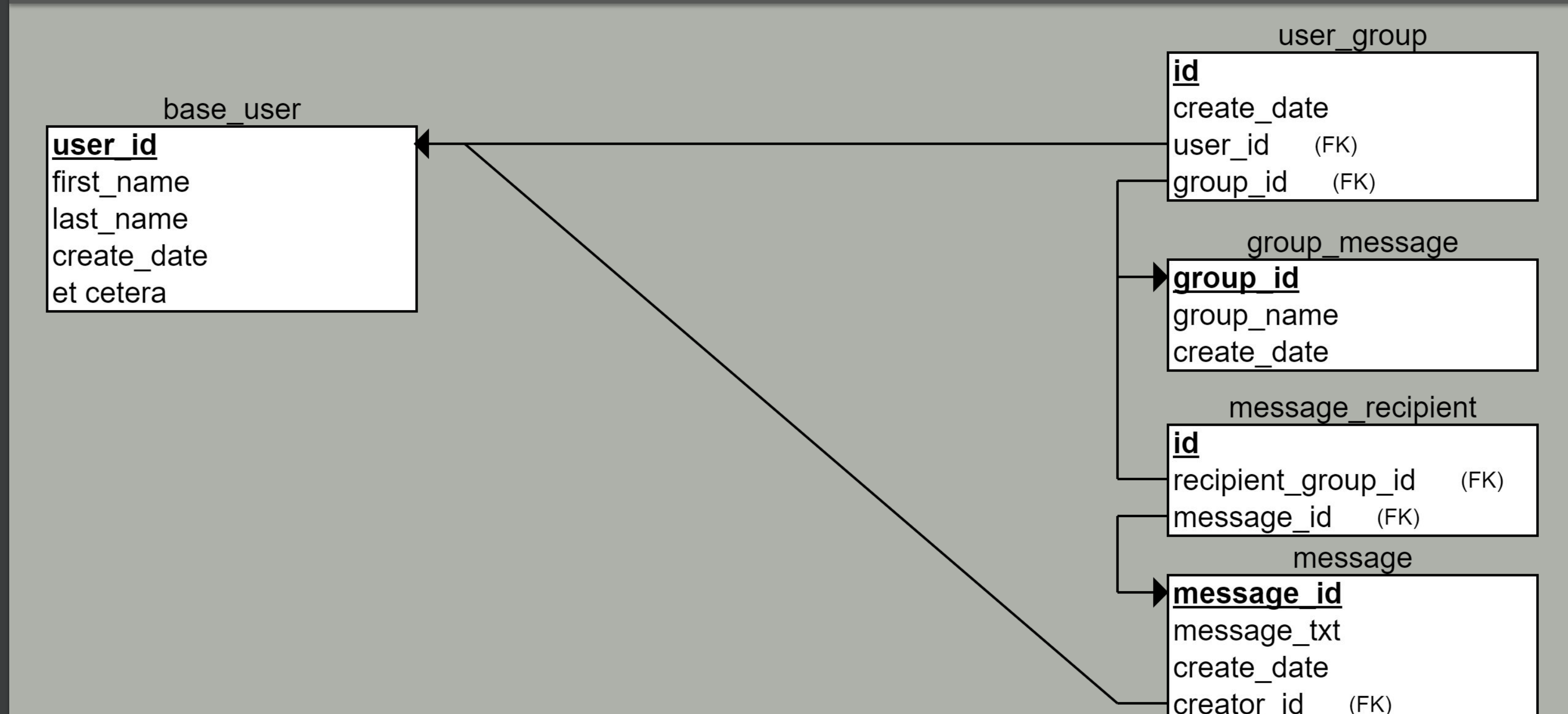
Backend Implementation

- Persistent, group based design to allow for a uniform architecture between one on one. conversations and group conversations.
- Posgresql for storing data.
- Implement extra chat functionality, such as previews, unread messages, and adding users to the group.
- Generic classes for chat communication independent of transport.
- Created specific classes for socket connections to communicate with chat classes.
- User tokens are passed from the client to the server to verify authenticity and parse user information from requests.

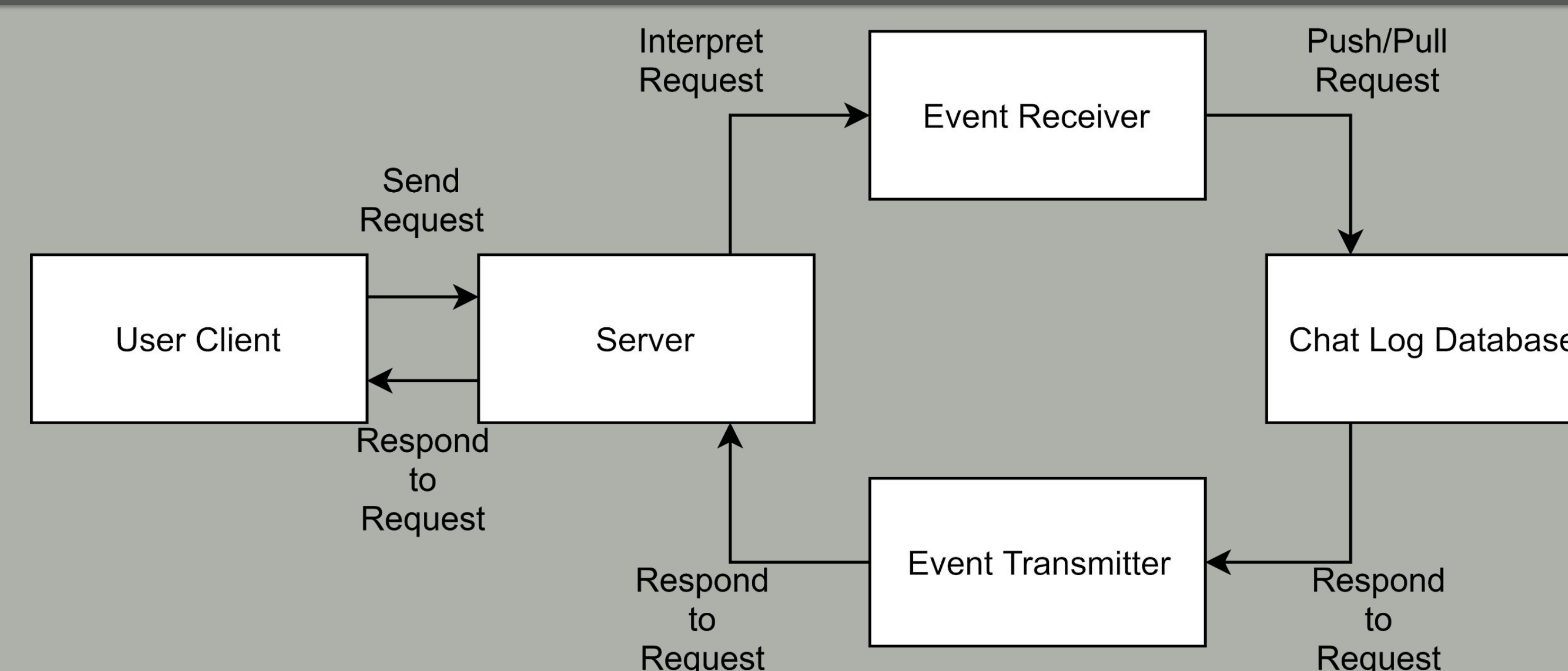
User Interface



Chat Database Schema



Architecture



Future Work

- Unread messages
- Notifications
- Naming chats
- Redis for publishing updates to groups.