

Yappers : A Chat Web Application by Julian Mata, Shan Rafique, and Brandon Raboy

Introduction

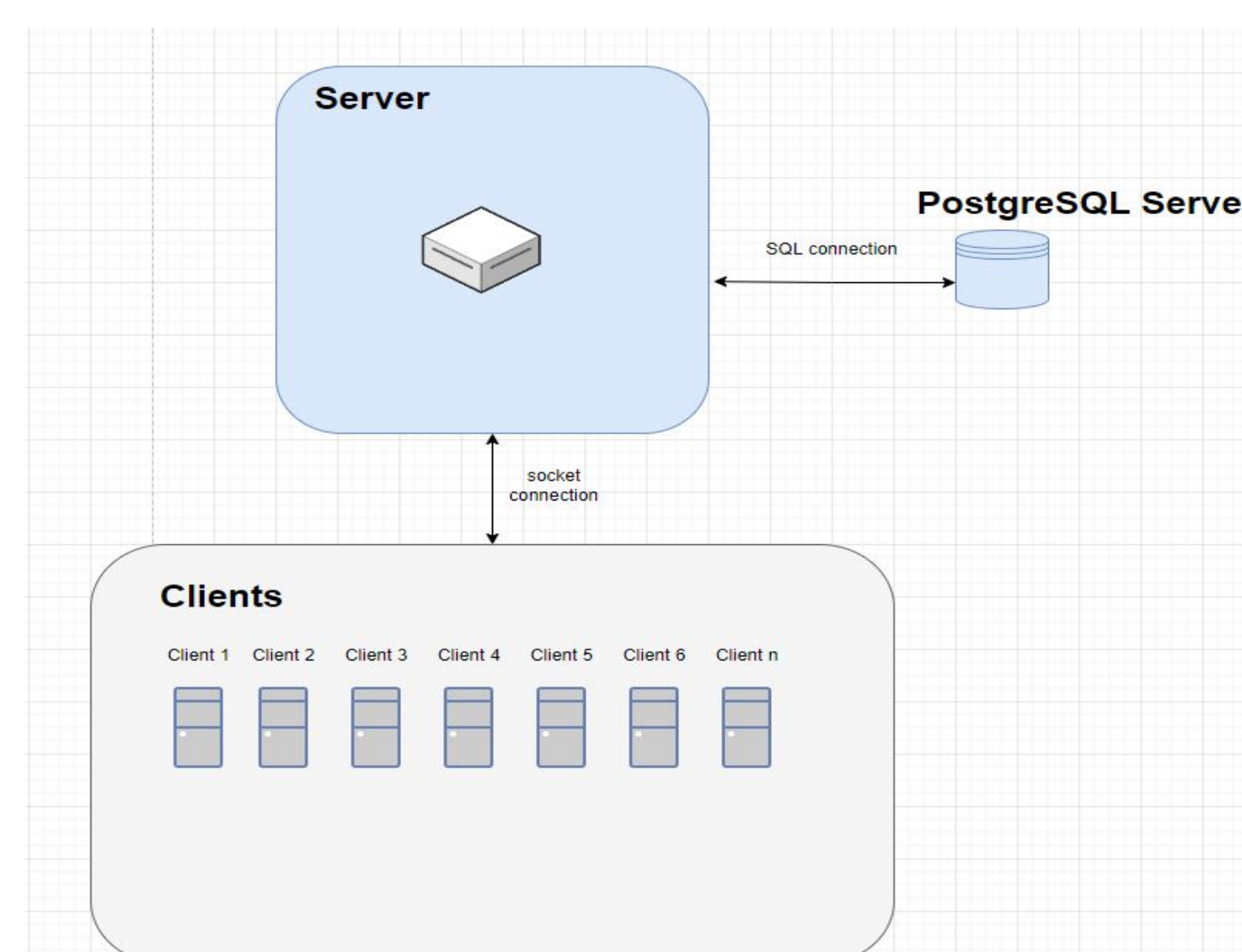
Yappers was created to give users the ability to communicate with others through a web interface. With a simple login and main page, users can intuitively navigate the application with ease.

Implementation - The Server

The server is a computer that runs a program that allows a client to connect. In Yapper's case, websockets are used to route messages, log messages, and save account details. Each time a client connects to the server, a new websocket is created and when the client disconnects from the server, the socket is removed. The software used for creating the server is python with the help of fastAPI. The server runs on a Linux machine to ensure stability, security, and flexibility.

Implementation - The Client

The client in our case is the web browser where the user can interact with the program and send messages. We used Javascript to utilize HTTP methods, such as get and post, to interact with the server. It also allowed us to display the information rapidly as soon as others sent messages or show a new community if one was created.

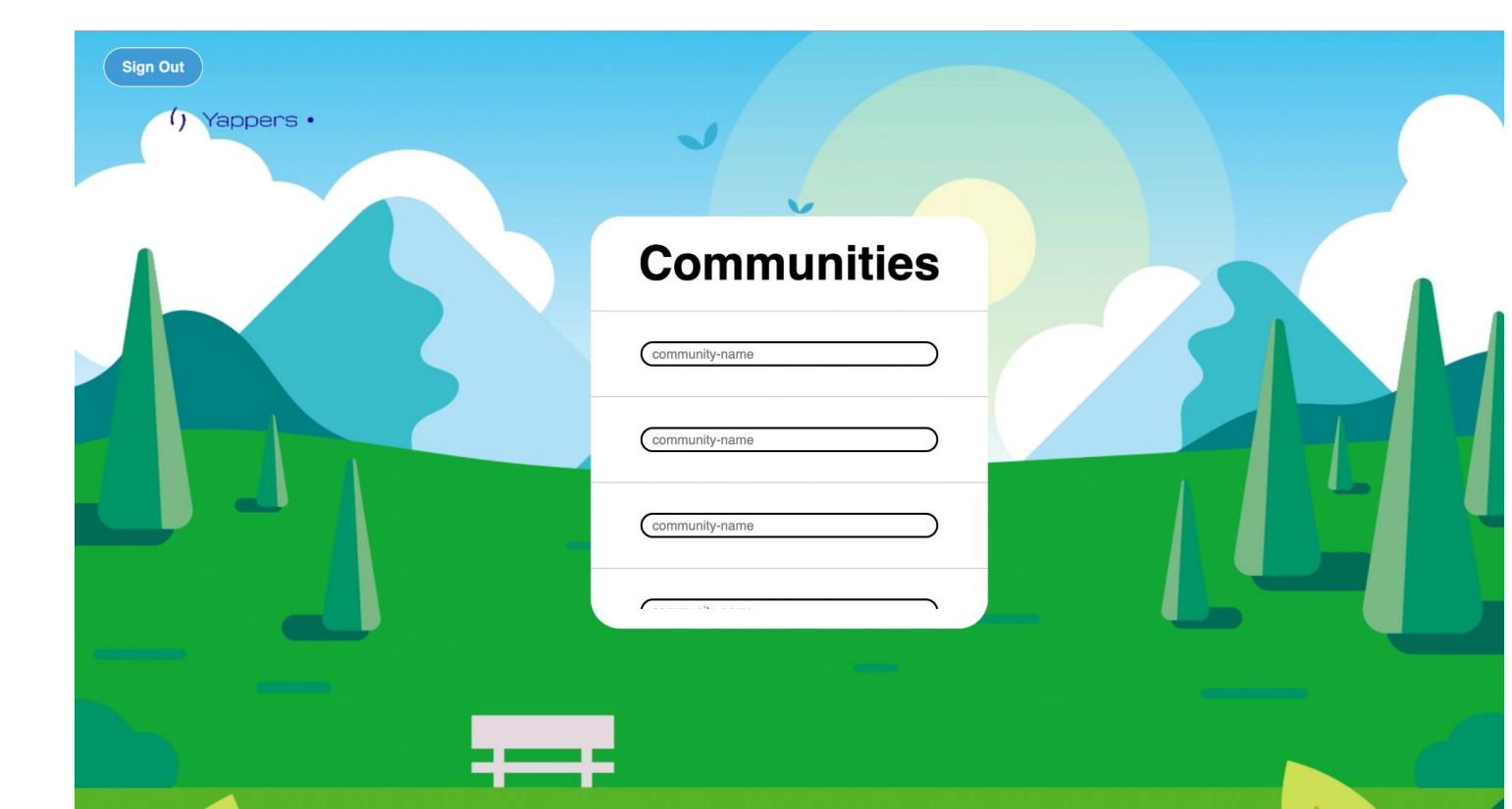
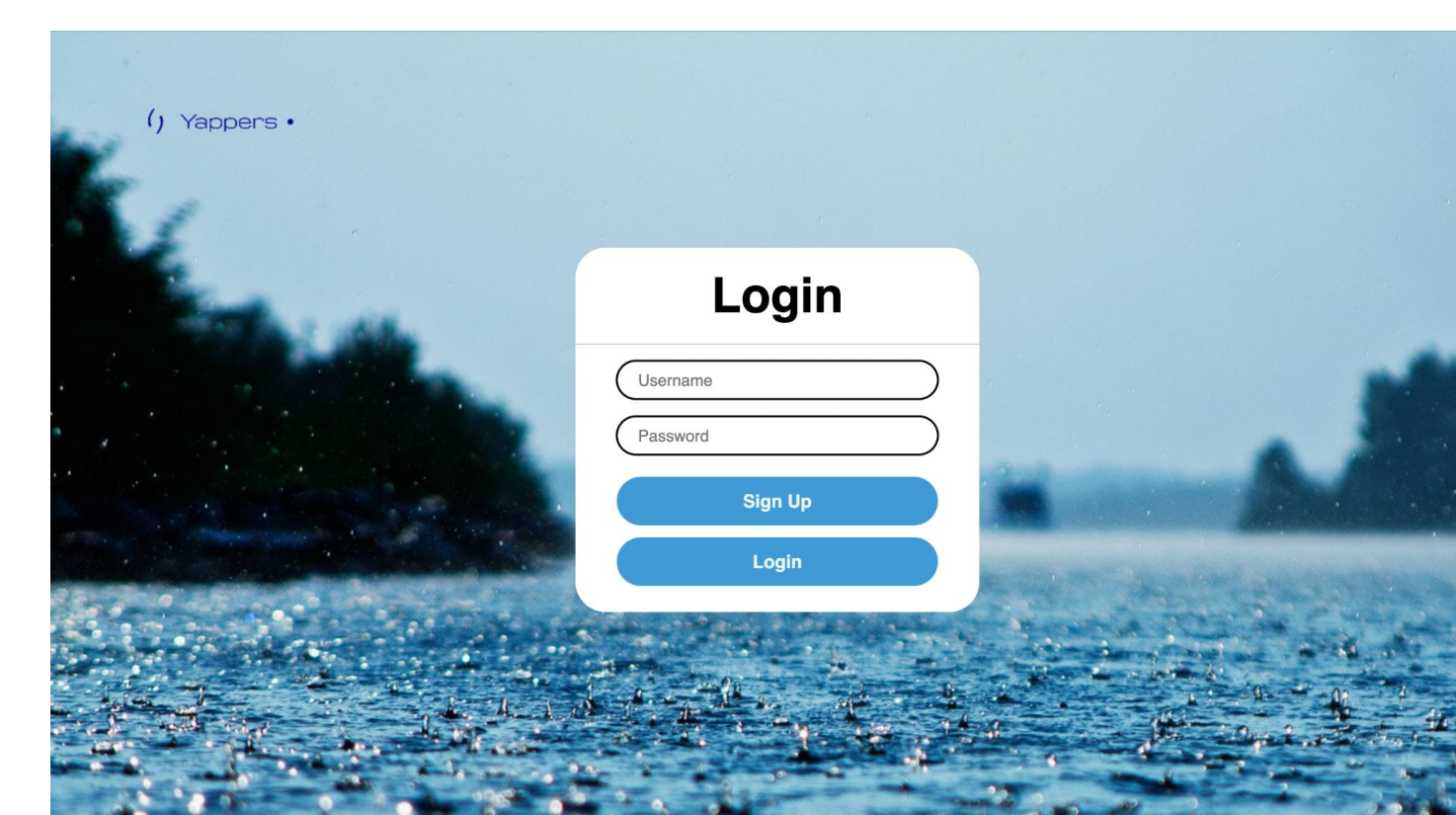


Implementation - The Database

A database called PostgreSQL Server was used to store all the information the server receives like login credentials and message logs. To enable interactions between Python and the server, the python library, psycopg, was used. As a database adapter, it ensures thread safety, in which several threads can be active at the same time, hence enabling users to communicate with each other in real-time.

Implementation - User Interface

The user interface consists of the login screen and the main page which was created using HTML, CSS, and Javascript. The login screen will validate the user so the user can proceed to the main page. On the main page, the user is greeted by a simple 'Community' sidebar (on the left) which consists of all the communities the user is in. There is also a message bar (on the right) which can be used to message the selected community.



Conclusion

Yappers is an efficient way to connect with others through the use of a simple UI, fast server-client connection, and database stability.