

Problem

The BreazeHome web application gives home buyers, home sellers, and real estate agents a platform to sell and buy homes. However, there was no way for users of BreazeHome to communicate in a timely or convenient fashion with other specific users that may be involved with a potential transaction.

Solution

- Implement an agent search page that allows clients to search, paginate, and chat with agents easily.
- Display an online status indicator in the chat box for user availability.
- Create a chat conversation list to keep track of other users.
- Maintain record of unread messages.

Current System

- Chat button was on every webpage, only accessed by registered users. When toggled, chat room will display.
- There was no one-to-one personal chat conversations.
- Chat room was currently a lobby for everyone.
- There was no users of type agent.

Figure 1 (Right): Unread Messages

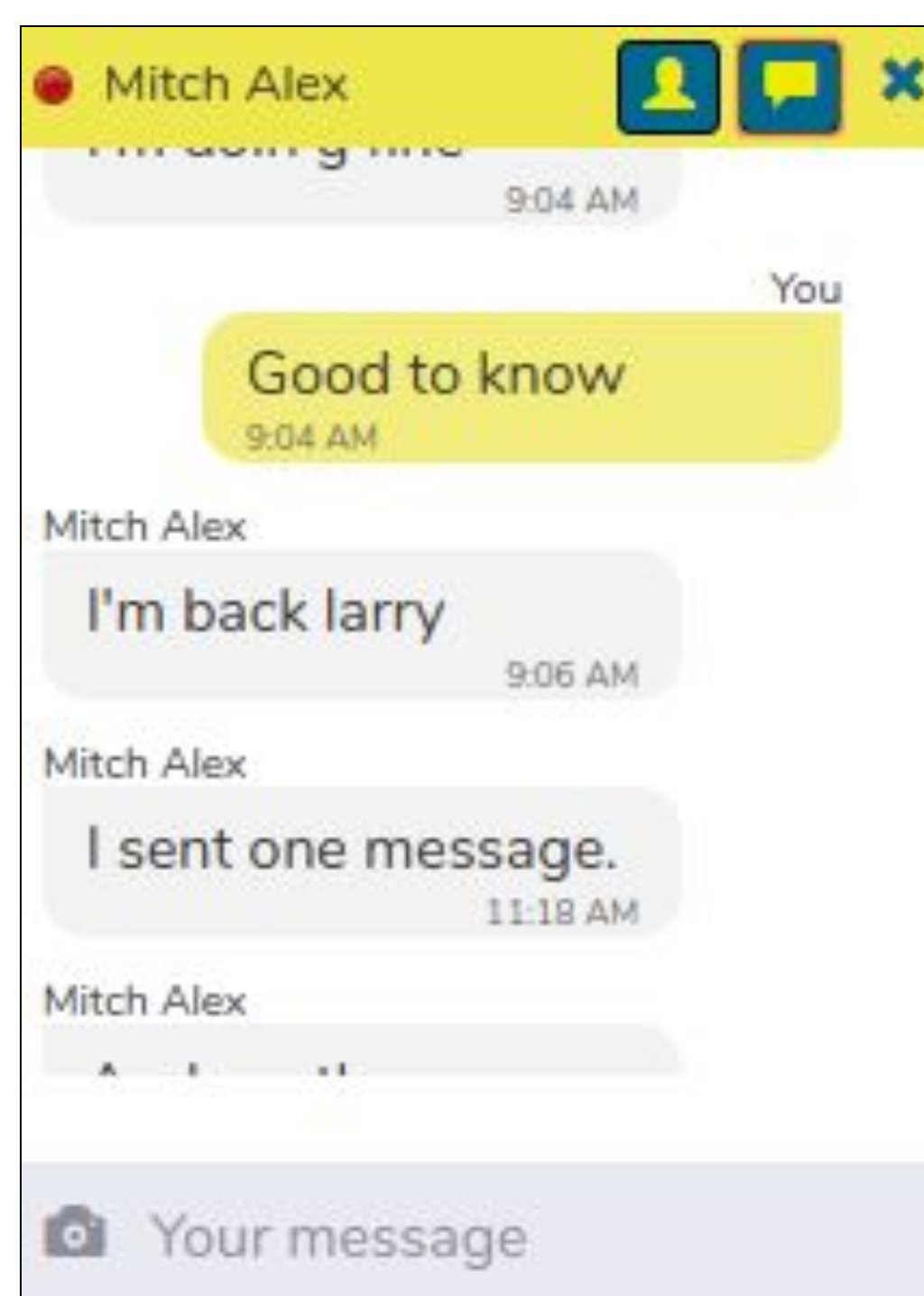


Figure 3: Chat Log

Screenshots

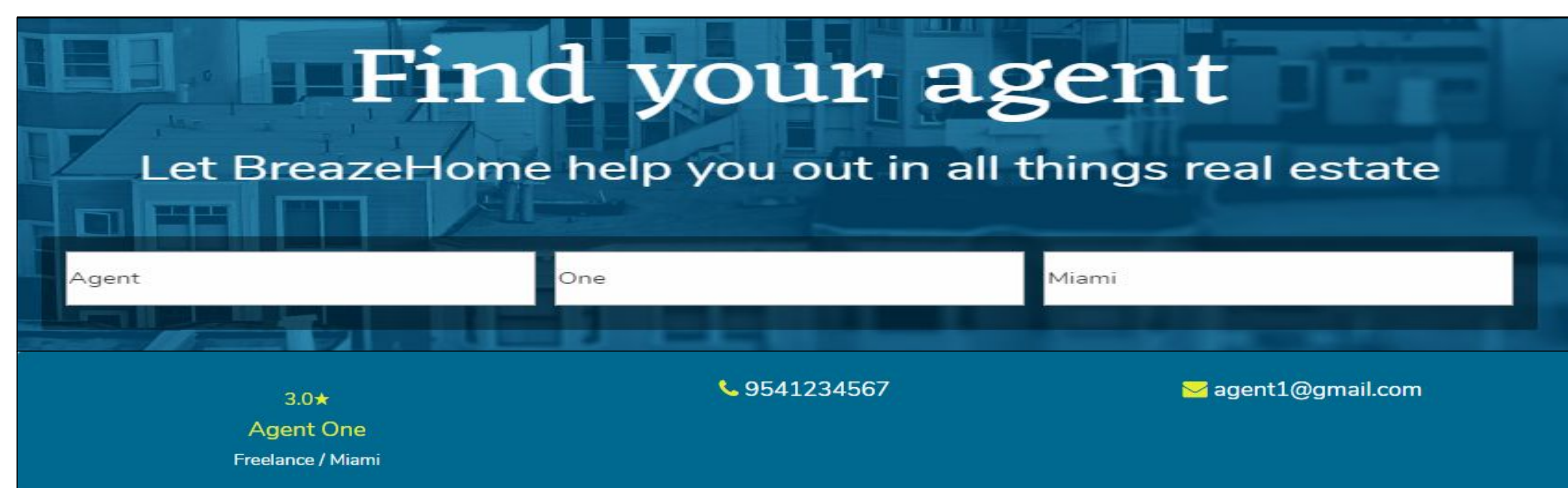


Figure 5 (Top): Agent Search



Figure 6: Pagination



Figure 2 (Left): Read Messages



Figure 4: Chat Conversations

System Design and Implementation

Front-End: AngularJS, NodeJS, HTML, Bootstrap, SASS

Back-End: Django REST, Python, Phoenix, Elixir

Database: PostgreSQL

Operating System: Ubuntu Linux

Version Control: Git

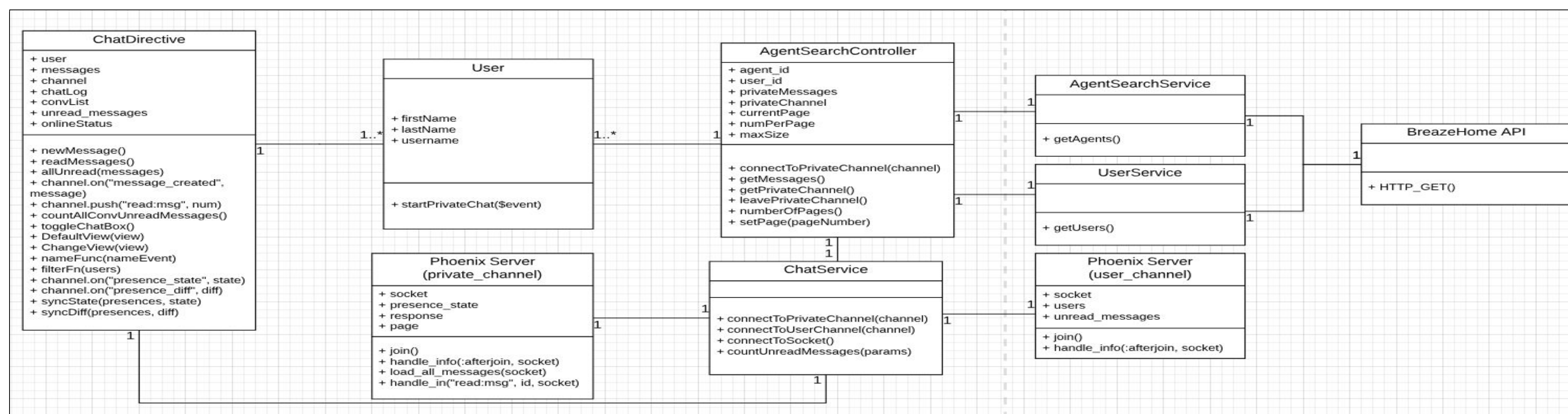


Requirements/Verification

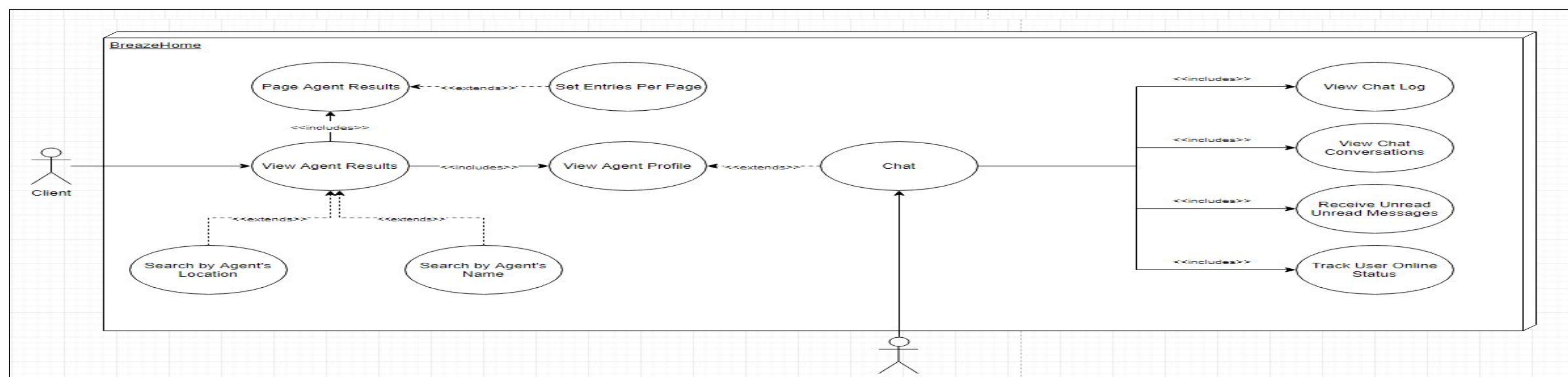
- Create a webpage to display a list of all agents.
- Webpage must include input boxes to filter agent's name and location.
- Webpage must include pagination and an input box to set entries.
- Track and display unread message notification on chat button.
- Track the user's online presence.
- Toggle button to navigate between chat log and chat conversations.
- Chat conversations when clicked should direct to user's private chat.

These requirements were verified using automated system tests, which were conducted through a Selenium webdriver.

Object Design



Class Diagram



Use Case Diagram

Summary

- Clients are able to seek for agents, using the search bar and pagination features.
- Clients are able to have a private conversation with agents.
- Clients/Agents are able to keep track of conversations and unread messages.
- Clients/Agents are able to see each others online status.