

Capstone II Final Presentation

Blog Post

Summer - 2024

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Current System and Proposed System

- The rationale for the creation of the Blog Post application was users to easily communicate with one another across multiple platforms in a seamless and efficient manner.
- The creation of this application primarily served as a proof of concept to implement on other platforms, and in the future embed into other application functionality.
- We were unable to fully implement all the planned functionality for the project due to time constraints.
- The foundations of this application was developed during the Summer 2024 semester and included the following features:
 - Cross Platform Support
 - User Authentication and Account Creation
 - User Profile Creation
 - Communication Channels where two or more users can communicate with each other.



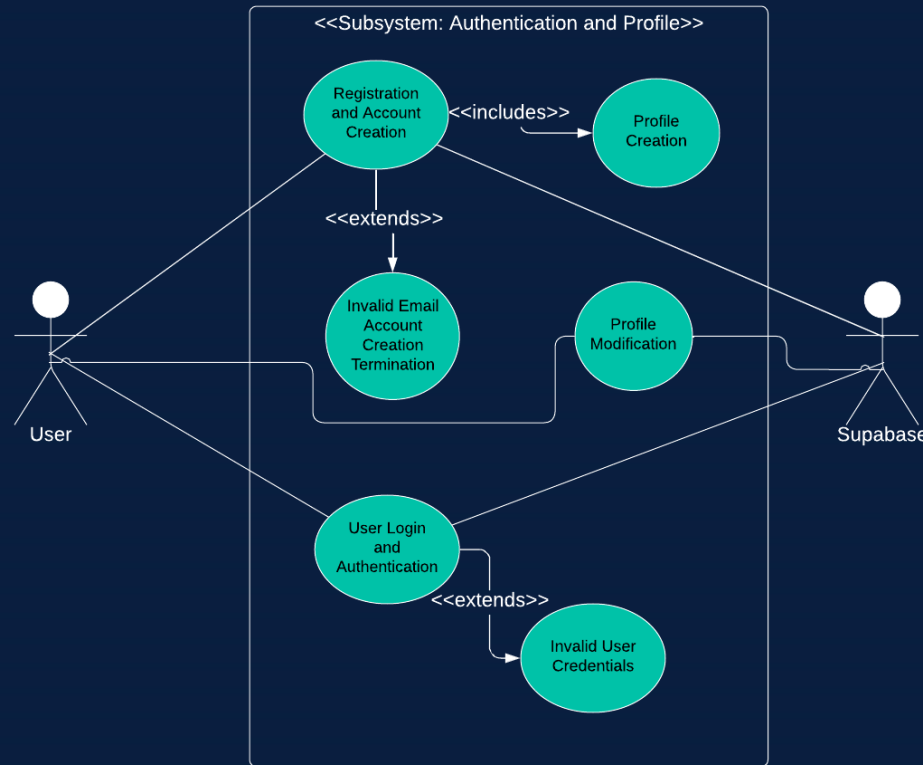


User Stories:

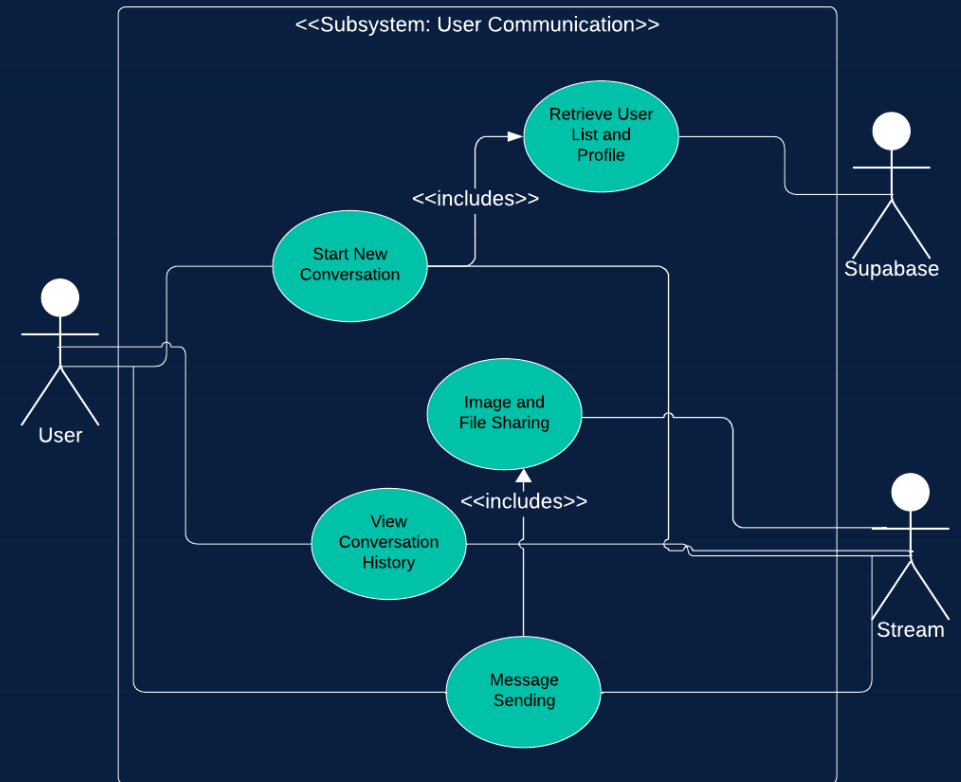
- As a user I like a simple interface that is easy to follow.
- As a social user I like to be able to post about my life and contact my friends
- As a user I want to familiarize myself with other users interests to get to know them better
- As a user I like an accessible interface that can adapt to my needs
- As a user I want to create my own account, so I do not need to associate my name to everything posted.
- As a user I like securely authenticated into an account, so the website is secure.
- As a user, I would like to delete or modify posts in case I made a mistake before posting it.
- As a user I like to be able to bookmark posts so I can save them for later use in case I need them.
- As a user I like to edit a profile so others can see who I am like
- As a user I like a consistent interface so that I am not confused when navigating the platform
- As a user I would like the ability for a more customizable interface so that I can have the platform look the way I want



System Design: Use Cases



Use Cases for Profile Creation, Authentication, and User Creation

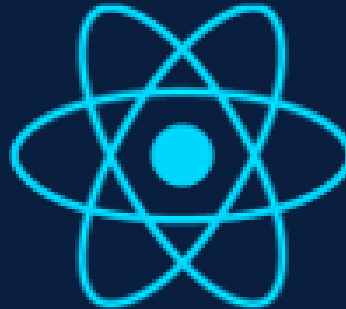


Use Cases for User Communication



System Design: Technologies Used

- The front end was implemented utilizing React Native with the support of Expo Go. React Native also helped implement cross platform support needed for the application. The user interface for the application was implemented atop the Streams platform which facilitated the text channels between users.
- The back end was developed utilizing Supabase. Supabase served as a conduit for managing user databases, account creation, authentication, and profile creation. Supabase provides the scalability and accessibility to support a vast number of users, which is essential in further development of the application.





Communication with Users via Text Channels

User List and Selection

- A user can select users who they want to communicate with using a simple menu interface.
- Users can also view the history of their conversations and select users from a Chat menu consisting of recent conversations to enter the conversation again.

Conversation

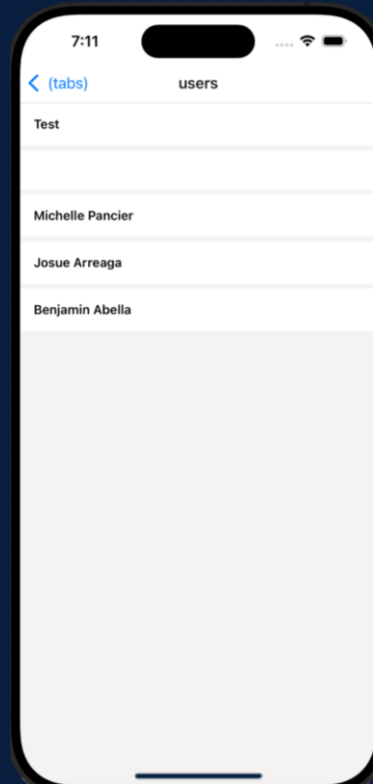
- Users can communicate to one another and receive each other's messages instantaneously.
- Users can communicate to another user utilizing texts and other mediums
- Communication supports flexible file sharing via sending images, GIFs, and documents.
- Users can bookmark messages they want to save for later.
- Users can react to messages using a variety of reaction symbols.



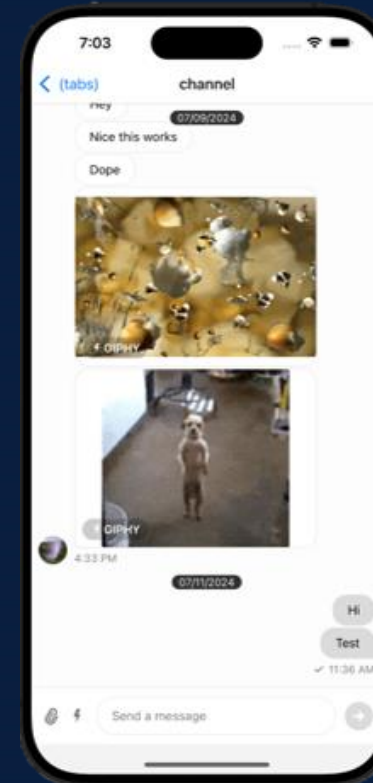
Chat Channel System



Depicts
bookmarking and
reaction functionality



Selecting a user
to engage with.



Depicts file sharing
and text sharing



Conversation
History

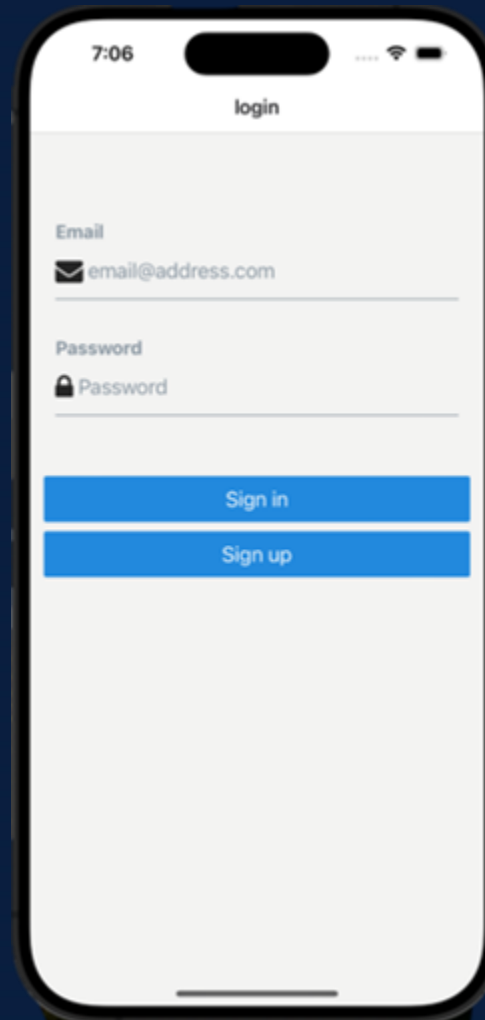
Profile and Edit Profile Page



Users are able to navigate to their profile page by selecting the profile icon at the right of the navigation bar.

Once at the profile page, users can edit their profile by adding their name, username, and other demographic information such as their website. The email listed is the one associated with their account. Users can also upload an image to serve as their profile image.

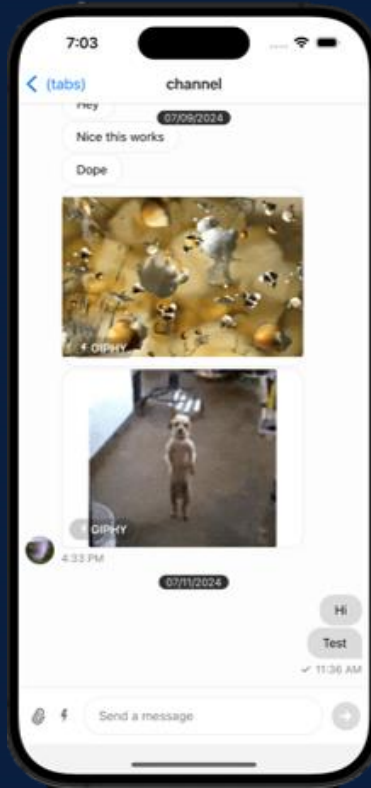
Authentication



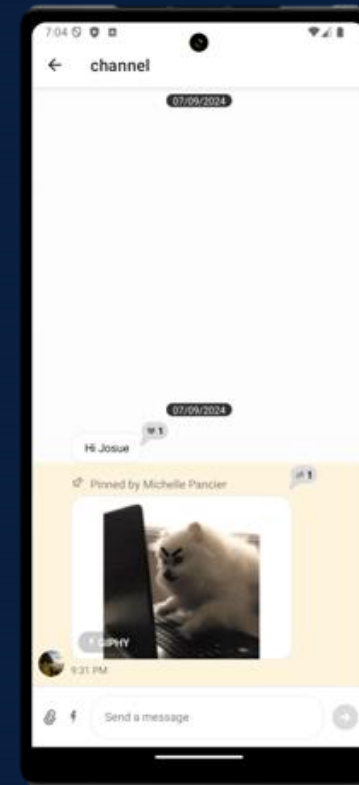
Users are able to create an account and register by typing in an email, password, and clicking sign up. When a user registers, a notification will appear saying the account has been created.

Users can utilize the same screen to sign in utilizing the email and password they had provided. Once logged in, users will be launched into their chat history.

Cross Platform Support



Application running efficiently atop iOS platform. Depicts communication across multiple users across a text channel. Supports image functionality.



Application running on Android platform. Depicts communication across multiple users across a text channel where users are highlighting messages of interest.

Application can run on latest versions of both iOS and Android, supporting iOS 17 and Android 14 .



Conclusion

The development of the Blog Post application serves to enhance the user experience in communicating with other users and fostering connections. Currently users are able to:

- Register an account and log-in to the platform
- Modify their profile page and information with various fields
- Create text channels with any user of their choosing
- Communicate with other users via communication channels with support for multiple file types
- React and bookmark messages of note

This first iteration of the implementation of the Blog Post application can serve as a foundation for others trying to embed messaging functionality across other platforms. As the functionality of the application becomes more robust and nuanced, users can form connections with others sharing their interests. It can also be employed in a smaller scale to facilitate easier communication between a group of users.





Shortcomings

- Due to difficulties in receiving news feeds, the functionality of users receiving news information could not be realized as intended. Users could communicate to each other about news information, but it could not be placed within its own feed.
- As a result of performance issues and a lacking test user base, a recommendation engine could not be realized. Users can view a user's profile to gauge their interests at the moment.
- The level of customizability that was originally planned for the interface needed to be cut down due to time constraints. Future implementations will attempt to allow a greater degree of customization that can coincide with customization settings existing on the user's device.
- The notification system is limited, in that users are only informed of new messages on the platform itself. Realizing a customizable push notification system would be prudent in future iterations of the application.





Wishlist

- When sharing images, users can place a spoiler or warning feature for sensitive content they can share with users.
- A robust recommendation algorithm that takes information from a user's profile and recommends to users who to chat with
- Increasing cross platform support to include web applications and installable software, including potential to implement embedded version of application
- Greater customizability within authentication and account creation, as users can use multiple accounts from 3rd party websites to log-in to the platform, alongside more secure log-in functionality such as MFA.

