BeerPal Final Report

Abstract

BeerPal is a beer rating and sharing application that aims to connect people like a modern social media platform. We aim to allow users to view a list of beers and rate each beer. Users will also be able to add people as friends, recommend beers with their friends, and view the ratings of other users. While many of these social networking features did not end up in the final product, we are pleased with our application's progress and implementation thus far.

Introduction

As it stands, there are few applications with the same idea as ours. We believe that by developing this application, we stand to fill a niche that went previously unfilled. While rating beers and posting those reviews is not a novel idea, our vision was to lean more towards the social aspect of enjoying beer. Reading reviews online is informative, but very impersonal. By introducing features such as adding friends and recommendations, we aimed to engage users by bringing back the personal feeling of enjoying beers with your friends.

Application Description

Email Login

When the user first opens the application, they are prompted with a selection of login types, provided by Firebase Authentication. We intended to include the choice between logging in with Google SSO and simple email, but currently only normal email logins are functional. When a user selects the email button, they are then brought to the email login activity. If a user has not made an account before, they will have to use the sign up button to submit their username and password. If they have an existing account with the given email address, the system will enforce that they use the login button instead.

Home Page/Main Beer Display

Upon a successful login, the user is greeted by the Main Menu, which immediately loads the Home Page fragment. The Main Menu is responsible for holding the side drawer navigation system. The Home fragment plays host to a RecyclerView, which is populated by beer data stored on Firebase Firestore. The beer data is loaded into a card display to improve the look and feel of the page. The user is also provided with a search bar, to filter the list of beers to match their query. The user may scroll through the list of beers, and may click on one to launch the Details activity.

Beer Details

If the user selects a beer from the RecyclerView, the Details activity is launched. From here, a user can see the beer's data in more detail, including a larger picture display. Reviews from other users are shown in a bottom panel, and can be scrolled through. The back button returns the user to the Home fragment.

Wishlist

In this fragment, a user may view all beers that they have added to their wishlist. In a similar fashion to the Home display, beer data is loaded in from Firebase, but only if a specific user has added a specific beer to their wishlist. The Details activity may also be accessed from here simply by clicking on a card.

What I've Tried

This fragment is where a user may see the beers that they have given ratings to. A list of all user's ratings are kept on Firebase. If the currently logged in user has rated a specific beer, it will be shown here.

Profile Page

A user may view and edit their personal profile here. Their username and profile picture are displayed, as well as a short "bio". If the user selects the Edit Profile button, they are brought to the Edit Profile activity. The user is provided with fields to enter in their preferred username, bio, and favorite beer type. Upon clicking submit, the data provided is uploaded to Firebase and shown in the UI.

Limitations

Bugs

While our application is mostly bug-free, there are some small issues that could be addressed. The What I've Tried Page does not load properly unless you fully restart the application each time you run. Further, the profile picture in the Profile page does not load consistently. Finally, the search bar has a few issues with searching properly and integrating with the Details page.

Unfinished Tasks

We left a handful of tasks unfinished in our final submission. The Google SSO login was not finished. We also intended to include an activity for new users where they would set up their profile information, but this was not included in the final product. Further, the Profile page was intended to play host to where you would see your friends and favorite beers. Finally, Wishlist and What I've Tried were not fully finished. Wishlist is not integrated with Firebase, and What I've Tried should have its own custom card display.

Post-Proposal Changes

We severely underestimated the difficulty of adding social interaction to our application. As a result, we concluded that fully implementing the social network features (i.e. adding people as friends, recommendations, etc.) were out of scope for this final project submission.

Implemented Concepts

Navigation

For people to get around our application we added a couple of navigation elements to allow the user to move around. We have a side navigation to access every page we have created in the application.

Fragments

Fragments were used to display elements in the UI. Much of the pages we had created uses fragments to display contents of our application

Firebase

We implemented Firebase Firestore, Storage, and Authentication which are all separate entities in Firebase. Firebase Firestore was used to store collections such as beer info, ratings/reviews,

user info, and the user wish list. Firebase Storage was used to hold each user's profile picture. Firebase Authentication was used for user authentication through our app since it is more secure than simply storing a user's email and password as plain text in Firestore.

RecyclerView

RecyclerView is implemented throughout the application, to contain the card views that hold the beer data.

Permissions

We needed to use permissions to handle loading the pictures into each beer card. We are currently storing a URL inside each beer's Firebase data to represent these pictures, so we needed the Internet permission to access and load this URL.

Repository Pattern

In order to access the Firebase database, we wanted to implement the repository pattern. We found this useful to maintain a source of truth when accessing our database.

Unit Testing

We implemented a few unit tests to test our custom data types such as the Review class and RateReview classes.

Member Contributions

Daniel Pierce	- Profile Fragment - Edit Profile Activity - Established connection to Firebase Cloud Storage
Andrew Kuo	- Established connection to Firebase

|	Firestore & Authentication - Email Activity - Navigation
David Lau	- What I've Tried Activity - Edit Profile Activity
Brandon Holder	- Home fragment - RecyclerView and Card work - Details Page
Abdikhalid Abdirahman	- Wishlist Fragment - Repository Pattern

Conclusion

Even though our group did not complete all the features we wanted, we succeeded in creating a quick and good-looking app that we were able to show off at the CSUSM Software Showcase. BeerPal is an app that we can all say we are proud of and worked together as a team to complete.

References

- [RecyclerView](#)
- [Navigation](#)
- [Firebase](#)
- [Fragments](#)
- [Permissions](#)
- [Repository Pattern](#)
- [Unit Testing](#)

Appendix
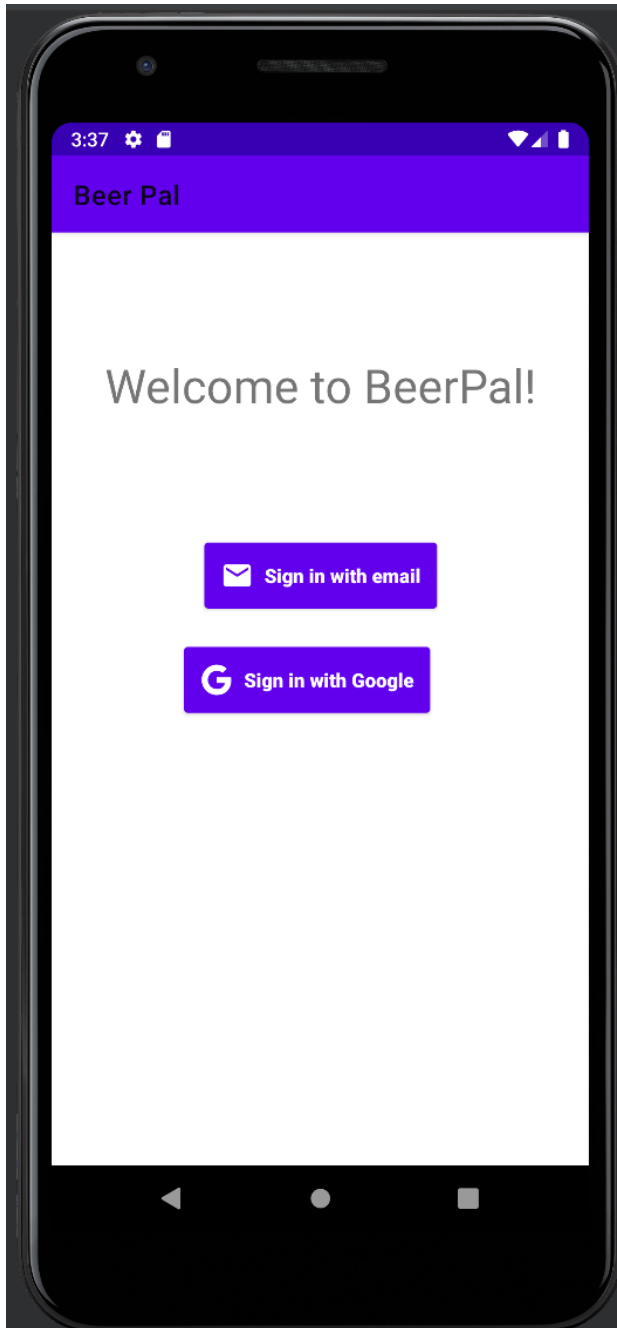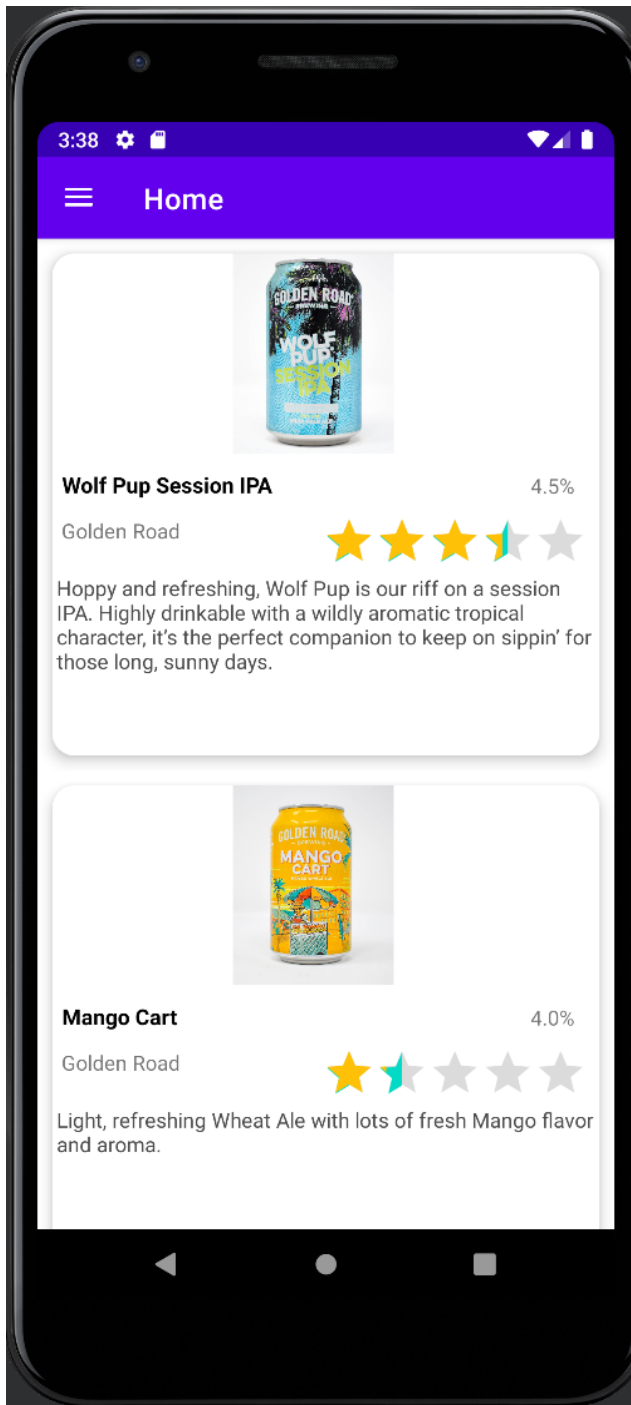
3:38

Home

Wolf Pup Session IPA   4.5%

Golden Road   ★★★⯪☆

Hoppy and refreshing, Wolf Pup is our riff on a session IPA. Highly drinkable with a wildly aromatic tropical character, it's the perfect companion to keep on sippin' for those long, sunny days.
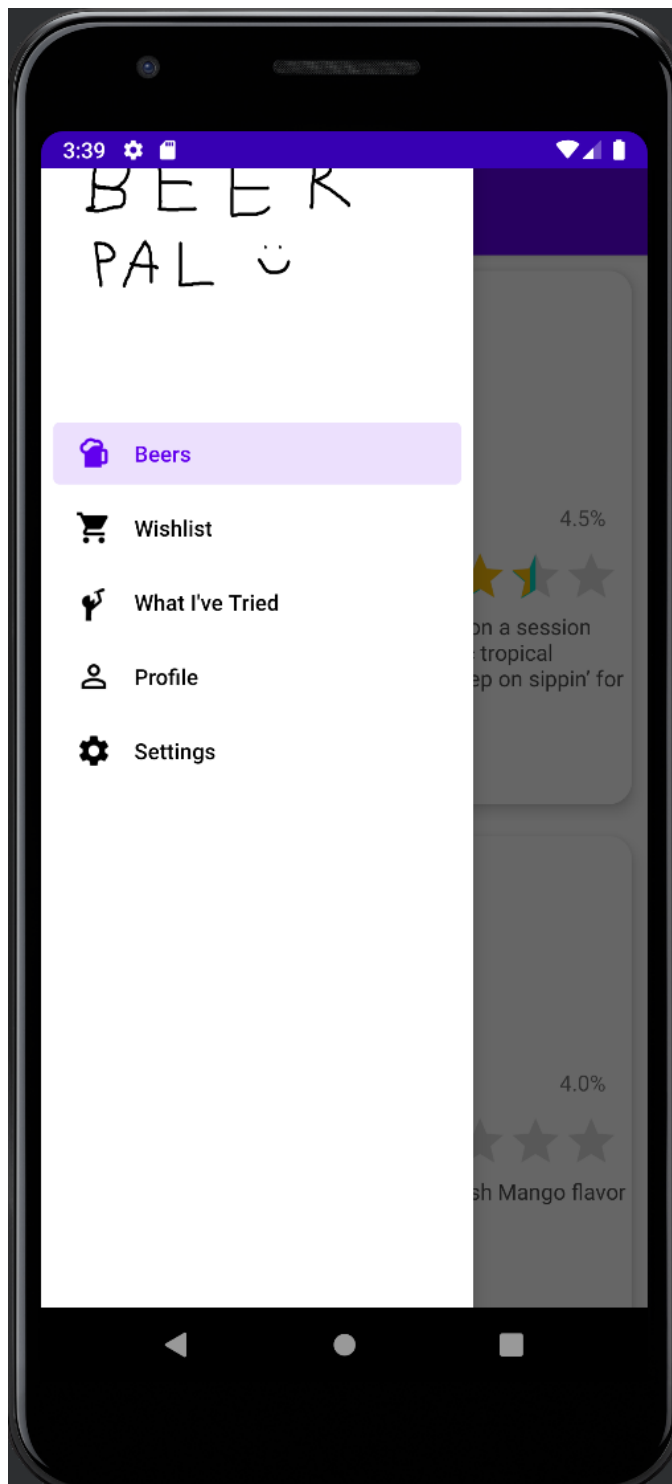
Mango Cart   4.0%

Golden Road   ★⯪☆☆☆

Light, refreshing Wheat Ale with lots of fresh Mango flavor and aroma.

BEER
PAL ☺

🍺 Beers

🛒 Wishlist

🎙 What I've Tried

👤 Profile

⚙ Settings

4.5%

⭐⭐⯪☆

on a session
tropical
ep on sippin' for

4.0%

☆⭐⭐

sh Mango flavor

Wishlist

Kilroy   5.3%

Little Miss Brewing   ★ ★ ★ ★ ★

A full bodied, easy drinking Irish Red Ale. It is malt forward
and slightly roasted with just a splash of nuttiness.

**Peanut Butter Milk
Stout**   5.3%

Belching Beaver Brewery   ★ ★ ★ ★ ⯪

With cascading aromas of buttery peanuts and dark
chocolate, this milk stout is highly coveted by all beer
drinkers.

3:43

Username
Hello World!

BIO
Big fan of IPAs! Hello World!

Amber Ale

SAVE CHANGES

CANCEL