

309 Screen Sketches:

LG 114: Petrol Pal

Noah Ross, Alex Brown, Max Mayer-Mader,
Ian Bussan



Use Cases and Actors:

User: They will need to sign up once and then log in every other time. They will need a way to view a map and should have a list of gas stations. They will need a way to update their profile.

Admin: They will need a way to log in, and they will need a way to Edit, add, and remove gas stations.

Gas station owners: They will need to sign up once and then log in every other time. They will need a way to update their store's profile.

Non-Functional Reqs:

Reliability: We should start small and test as we go because it will be difficult to maintain if our code foundation is poor

Scalability: We should ensure the app can handle an increase in users because the heart of our app is based on user rating and feedback.

Usability: To make the app successful, it should be easy to use. If people struggle or have negative experiences with the app, it will not be used.

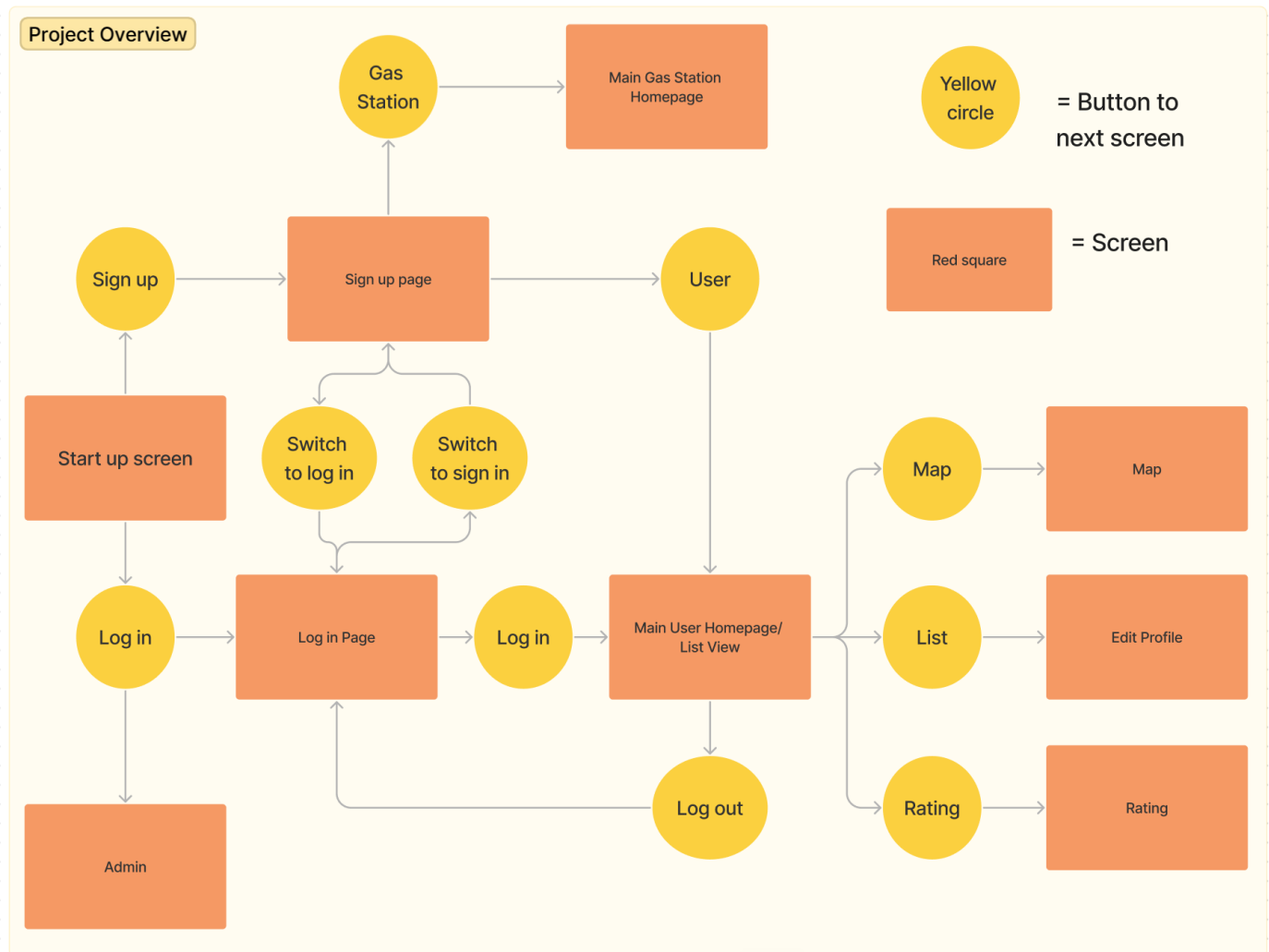
Tables and Fields:

- Gas Station Data:
 - Station Name: Name of the gas station.
 - Station ID: Gas station ID number. **Primary key**
 - Address: Physical address of the gas station. **Foreign key to Geospatial Data**
 - Location Coordinates: Latitude and longitude for mapping and directions. **Foreign key to geospatial data**
 - Contact Information: Phone number, email, website.
 - Operating Hours: Hours of operation for each day of the week.
 - Amenities: Information about services offered (e.g., car wash, convenience store).
- Fuel Price Data:
 - Fuel Type: Different fuel types like regular, premium, diesel, etc. **primary key**
 - Price: Current fuel price for each type.
 - Date and Time: Timestamp for when the price was last updated.
 - Station ID: Link prices to specific gas stations. **Foreign key to gas station data**
- User Data:
 - User ID: User ID number. **Primary key**
 - User Profiles: User registration and login data, including usernames, emails, and passwords.
 - User Preferences: Preferred fuel types, favorite stations, notifications settings.
- User Reviews and Ratings:
 - User ID: User's ID number. **Foreign key from user data**
 - Rating ID: Unique ID for given review. **Primary key**
 - User Ratings: User-generated ratings and reviews for gas stations.
 - Comments: User comments or feedback about their experiences.
 - Timestamp: When the review was posted.
- Historical Price Data:
 - Fuel Price History: Historical fuel prices over time.

- Station ID: Link historical prices to specific gas stations. **Primary key and foreign key to gas station data.**
- Timestamp: When the historical price was recorded.
- Geospatial Data:
 - Geospatial Data ID: ID number for geospatial data. **Primary key**
 - Mapping Data: Geospatial information for mapping and navigation. **Foreign key to API integration data**
 - Distance Calculations: Algorithms to calculate the distance between the user's location and gas stations.
 - User location: user's current location. **Foreign key user location data**
 - Gas station location: gas stations address. **Foreign key to gas station data**
- User Location Data:
 - Current User Location: To provide nearby gas stations. **Primary key**
 - User ID: ID of user. **Foreign key to user data**
 - Location History: Store user location history for personalized recommendations.
- API Integration Data:
 - API Data ID: ID number for API Integration Data. **Primary key**
 - Integration with Fuel Price APIs: Connect to external APIs that provide real-time fuel price data.
 - Integration with Mapping and Navigation APIs: Integration with services like Google Maps for directions.
- Administrative Data:
 - Admin ID: ID number for admins. **Primary key**
 - Admin Accounts: Accounts for app administrators to manage data and users.
 - Reported Issues: A system for users to report issues with gas stations
 - Analytics data ID: ID number to get the aggregate user data for insights and improvements. **Foreign key to Data Logs and Analytics**
 - Security logs:
- Data Logs and Analytics:
 - Log ID: ID number for log. **Primary key.**
 - App Usage Logs: Log user interactions and app usage for analytics.
 - Analytics Data: Aggregate user data for insights and improvements.

- Legal and Compliance Data:
 - Legal Data ID: ID number for legal and compliance data. **Primary key**
 - Terms of Service and Privacy Policy: Legal documents for user agreements and data privacy compliance.
 - User Consent Data: Records of user consent for data usage.
- Images and Media:
 - Media ID: ID number for media or image. **Primary key**
 - Station Photos: Images of gas stations for user reference.
 - User-Generated Media: User-submitted images and reviews.
- Security Data:
 - Security Data ID: ID number for security data. **Primary key**
 - Security Logs: Logs of security-related events and activities for auditing.
 - Security Measures: Information on app security measures, encryption, etc.
- Backup and Recovery Data:
 - Backup ID: ID number for backup data. **Primary key**
 - Backup Data: Regularly back up critical data for recovery purposes.

Flowchart/Screen Flow:



Noah Ross Screen 1: Sign up Screen

Sign up Page:

Username:

Password:

First name:

Last Name:

Email:

User or Station:

Username must be 8 characters minimum

Password must be 8 characters minimum

First name must be 20 characters maximum

Last name must be 20 characters maximum

Must pick from User or gas station

Buttons take user to respective pages assuming conditions are met

Noah Ross Screen 2: Log In Screen

Log in Page:

Logo here

Username:

Password:

Log In

Sign Up Instead

A valid username and password combo is necessary for Login to work

Buttons take user to respective pages assuming conditions are met

Noah Ross Screen 3: Start-Up Screen

Start Up Screen:



Logo here

Log In

Sign Up

Buttons take user to respective pages

Noah Ross Screen 4: Gas Station main page

Main Gas station page:

Gas Station Name

Type

Gas Station name

Price (87) :

Type

Gas Price (87 Octane)

Address:

Type

Address

Overview:

General overview message from the gas station company

Overview

Picture:

Upload

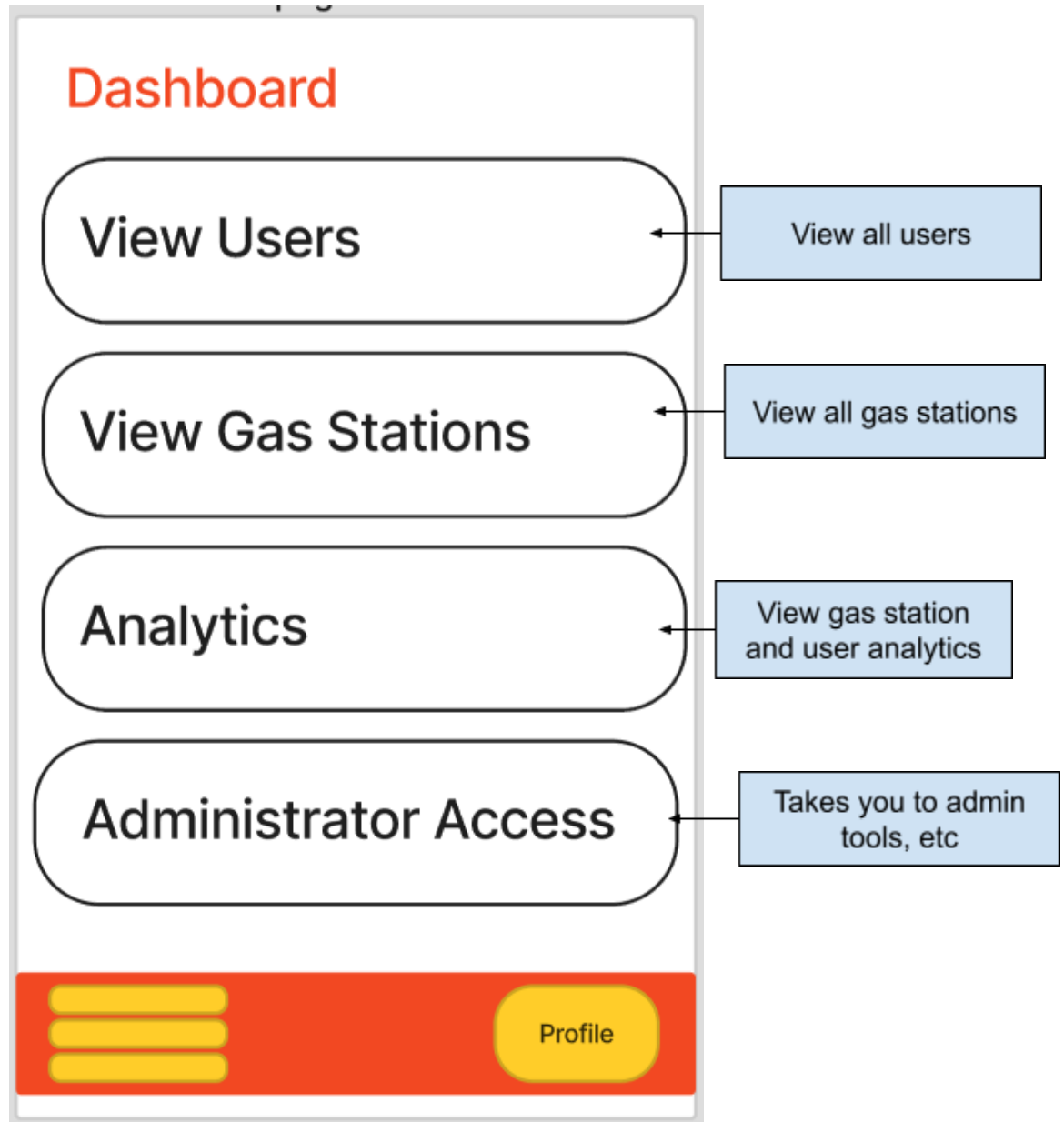
Picture

Confirm changes

Max's Screens: Map

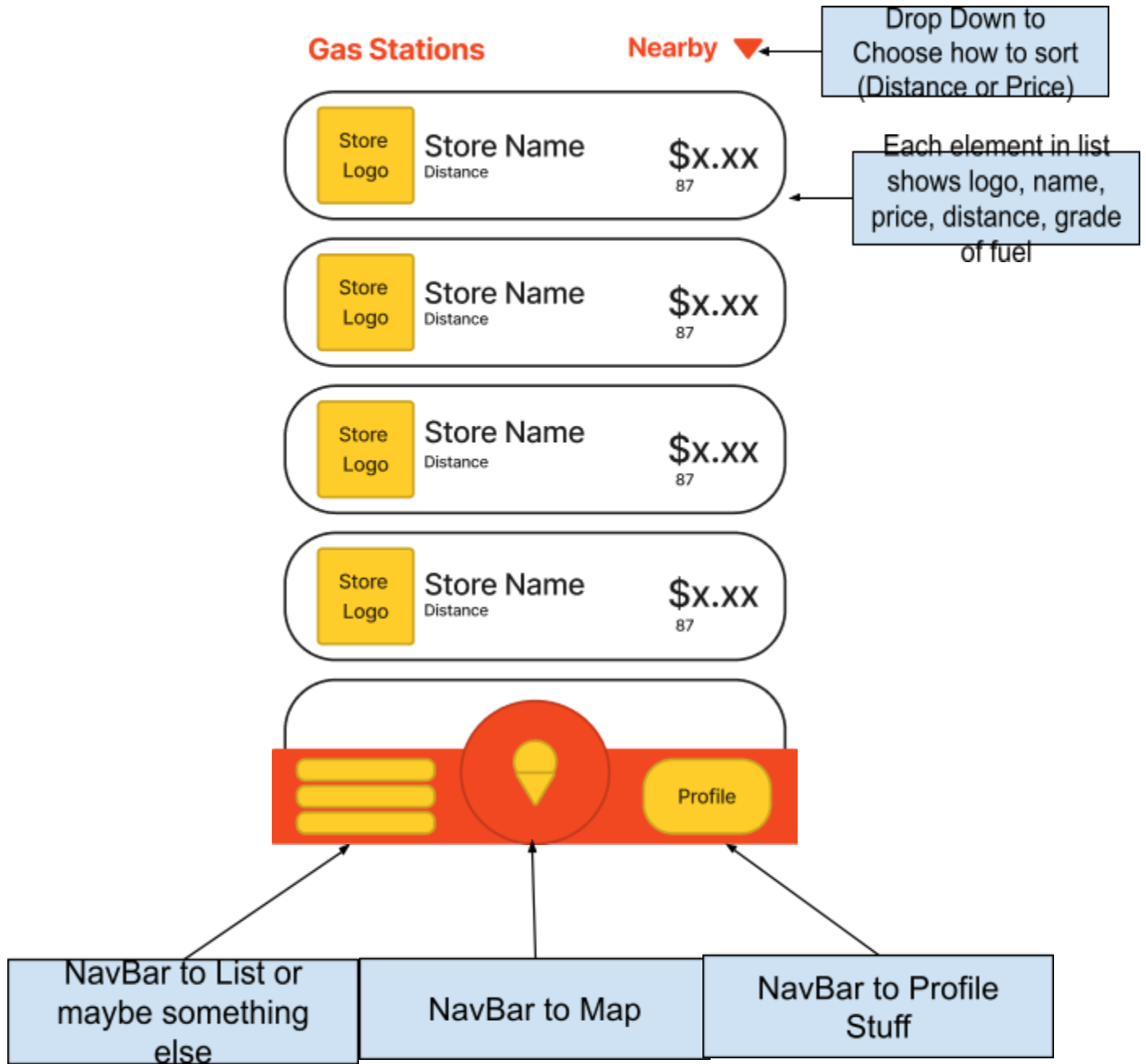


Admin Page



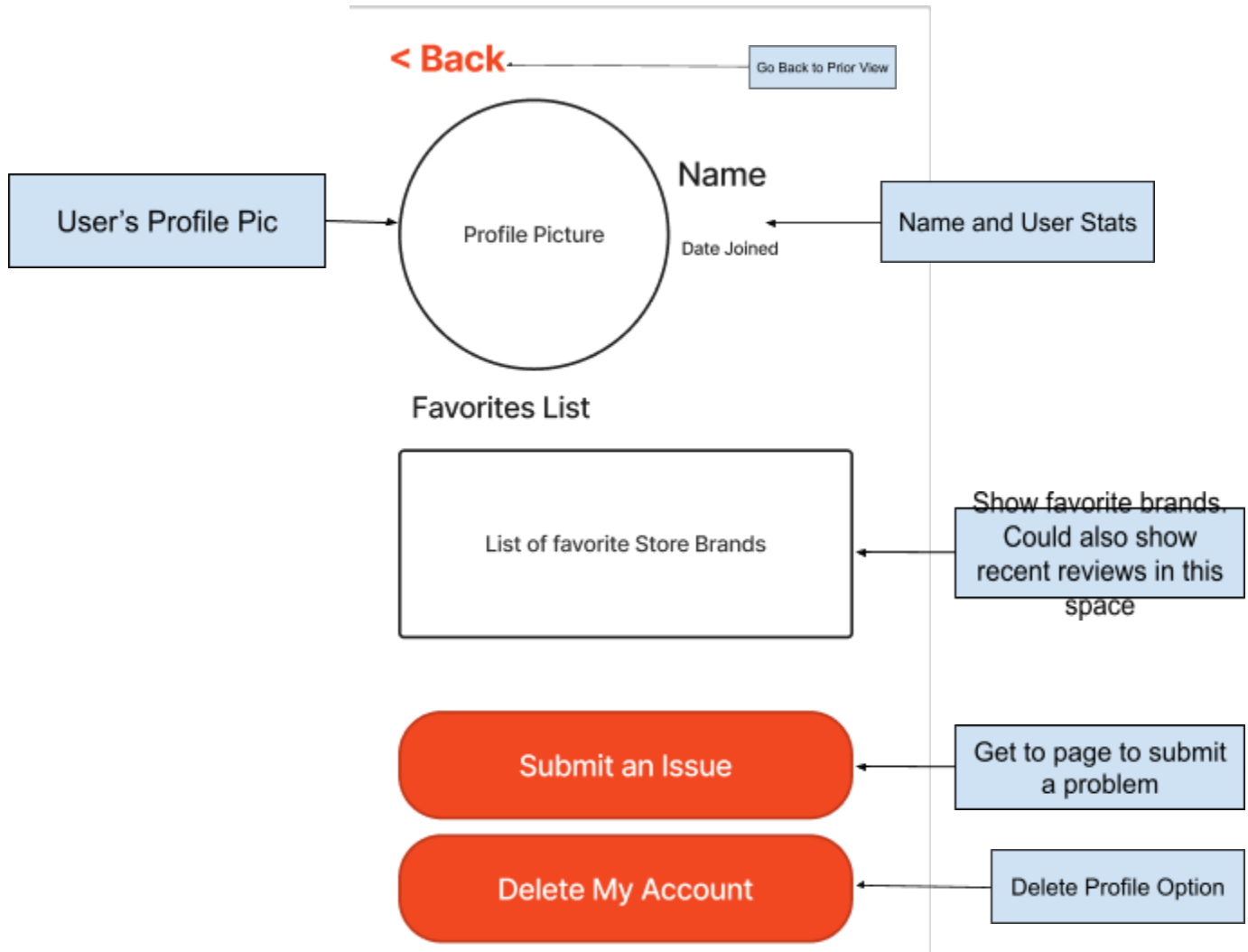
This is our admin screen. It is intended to be a dashboard allowing admins to navigate easily between what they need. Admins can view all users and all gas stations. They can view analytics and see which gas stations are popular and how many people are online. There is a also a button that will take the admin to admin tools allowing them to make edits like changing passwords or usernames.

Alex's Screens: List



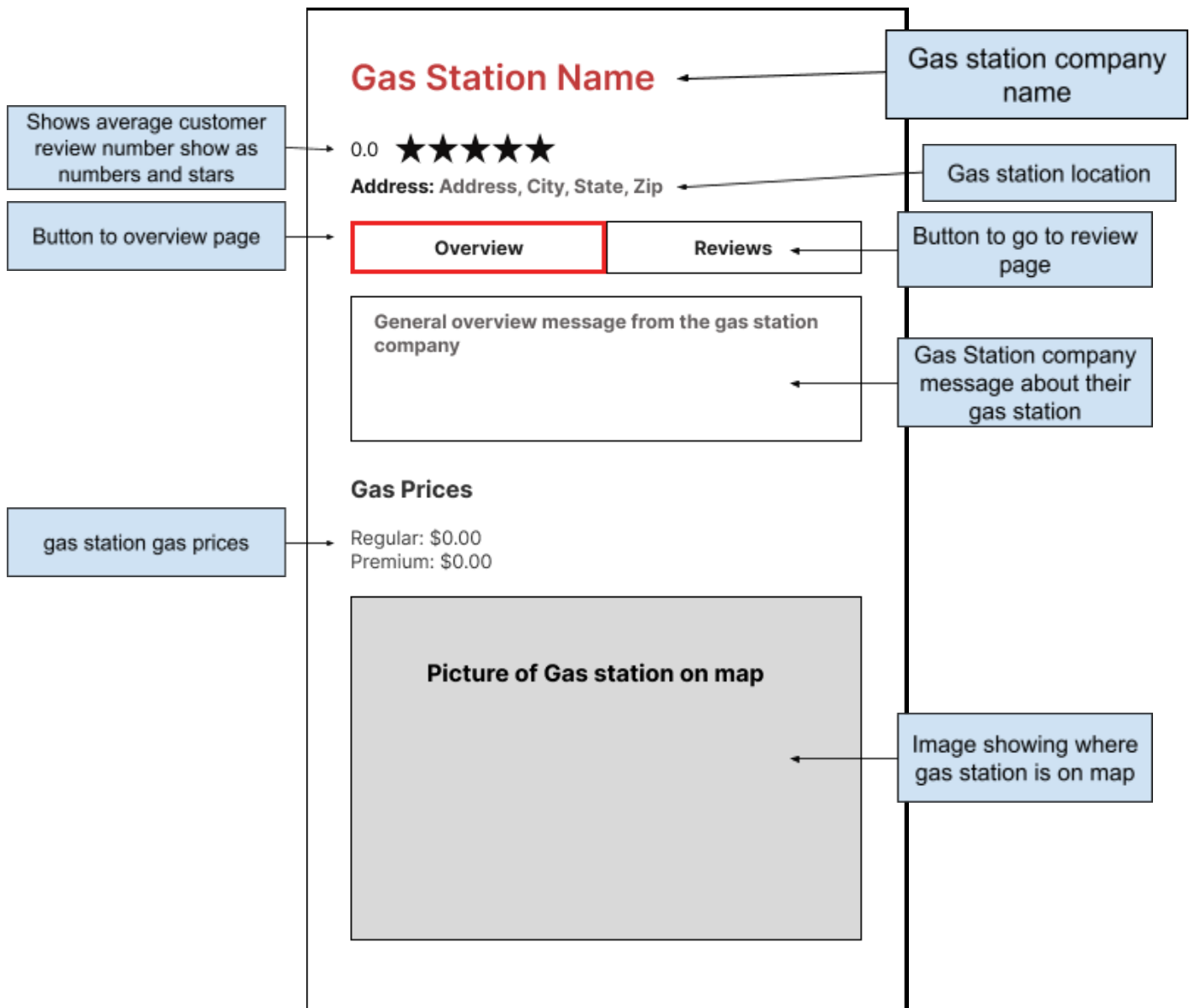
This will be the main page once a user is signed into the app. From here they can navigate to the map view or go to their profile settings. This screen will ask the server for all of the nearby stations and show their stats.

Alex's Screens: Profile



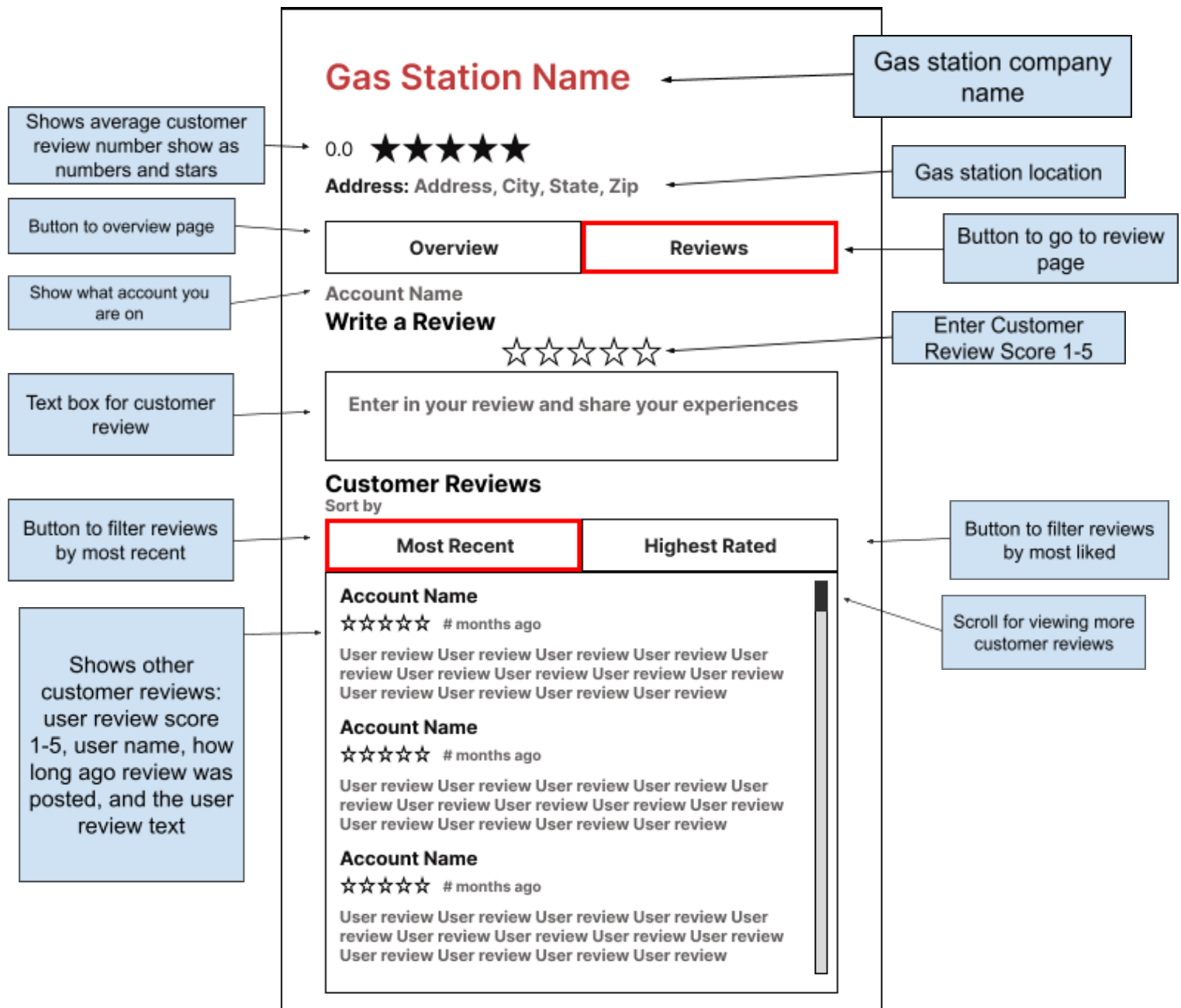
This page is just for settings type things. It could also be rolled into a profile view for other people to see a users rating profile.

Ian's Screen 1: Gas Station Overview Page



The Overview Page is for the customer to view general information about a specific gas station: gas station name, location, average review, and gas prices. This page is accessed through the navigation bar or by clicking on a gas station on the map. In addition, this page leads to the review page by clicking on the reviews button.

Ian's Screen 2: Gas Station Review Page



This page allows the customer to view reviews about a specific gas station. This allows customers to create their own reviews about a gas station. Also allows users to see other reviews and information related to other customer reviews.