

Screen Sketches

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Iowa State Nutrition App

Actors and Functionality

User

Refers to ordinary users, the general audience for the application. Users have permission to:

- Change and update their personal information and passwords
- Search for and view nutritional data for food items
- Create and join groups that contain other users with similar food goals
- Create, update, and delete consumption data
- Create, view, and assign themselves food plans

Contributor

Users with additional permissions to add food items to add food items. Contributors have permission to:

- Create new food items
- Update food items
- Delete food items
- Create menus and assign food items to menus

Administrator

Has full permissions to view and modify both user data and the catalog of food items, but is not intended to be used as a user account. Administrators have permission to:

- View, create, and update user information
- View, create, update, and delete food items
- View, create, update, and delete groups
- View, create, update, and delete consumption data

Non-Functional Requirements

- The application must have a consistent UI design on all screens. The button sizes, graphs, and background colors should be cohesive and similar.
- Passwords will not be stored in plaintext and will have cryptographic encryption when inserted into the database.
- The user should not have to wait longer than 0.5 seconds for any UI elements to respond.
- The application must support a minimum of 5 regular users, 3 contributors, and 1 admin at any given time.
- All food items and nutritional data will be stored in gram measurements with user input data converted.
- Imported food menus from ISU will be available at least the day before, provided ISU has published the menu.

Tables and Fields

User

Tracks information for the user's account

- Username (Primary Key) - in the form of an email, cannot be changed
- Password - password, to be hashed
- Profile Picture (Foreign Key -> Images.Image ID)
- First Name
- Last Name
- Height
- Weight
- Current Food Plan (Foreign Key -> Food Plan.id)
- Account Type -> whether the account is a user, contributor, or administrator
- Completed Food plans - List of completed food plans

User Notifications

Tracks notifications sent to user and the user's notification settings

- User (Foreign Key -> User.username)
- Notifications (Foreign Key->Notification.id) - notifications that have been sent to user
- Push Notifications Enabled - boolean if user allows push notifications
- Email Notifications Enabled - boolean if user allows email notifications
- SMS Notifications Enabled - boolean if user allows SMS notifications
- Reminders Enabled - boolean if user wants reminder notifications

Images

Stores profile pictures as BLOB

- Image ID (Primary Key)
- Image Data [BLOB]

Food Item

Tracks nutrition information on individual food items

- Food ID (Primary Key)
- Food Type - Entre, side, drink, etc.
- Nutrition Information
 - Calories
 - Total Fat
 - Sodium

- Carbohydrates
- Protein
- Serving Size

Menus

Menu from ISU with associated location and date.

- Menu ID (Primary Key)
- Location
- Time - Breakfast/lunch/dinner.
- Date

Food Items > Menu

Stores the relationships between food items and menus, connects the two tables

- Menu (Foreign Key -> Menus.Menu ID)
- Food Item (Foreign Key -> Food Item. Food ID)

Consumption

Tracks information related to the consumption of food items by users.

- Time Consumed [Date/Time] - when the food item was consumed
- User (Foreign Key -> User.username) - the user that consumed the food item
- Servings Consumed [Integer]
- Food (Foreign Key -> Food.Food ID)

Food Plan

Contains saved nutrition plans/goals.

- Food Plan ID (Primary Key)
- Daily/Weekly - Indicates whether this goal is to be consumed daily or weekly
- Nutrition Information - goal to consume this amount
 - Calories
 - Total Fat
 - Sodium
 - Carbohydrates
 - Protein
- Badge ID (Foreign key-> Images.ImageID)

Groups

Allows users to group themselves with others who have similar nutrition goals.

- Group ID (Primary Key)
- Goal (Foreign Key -> Food Plan.Food Plan ID)

Group Members

Used to link user IDs to groups

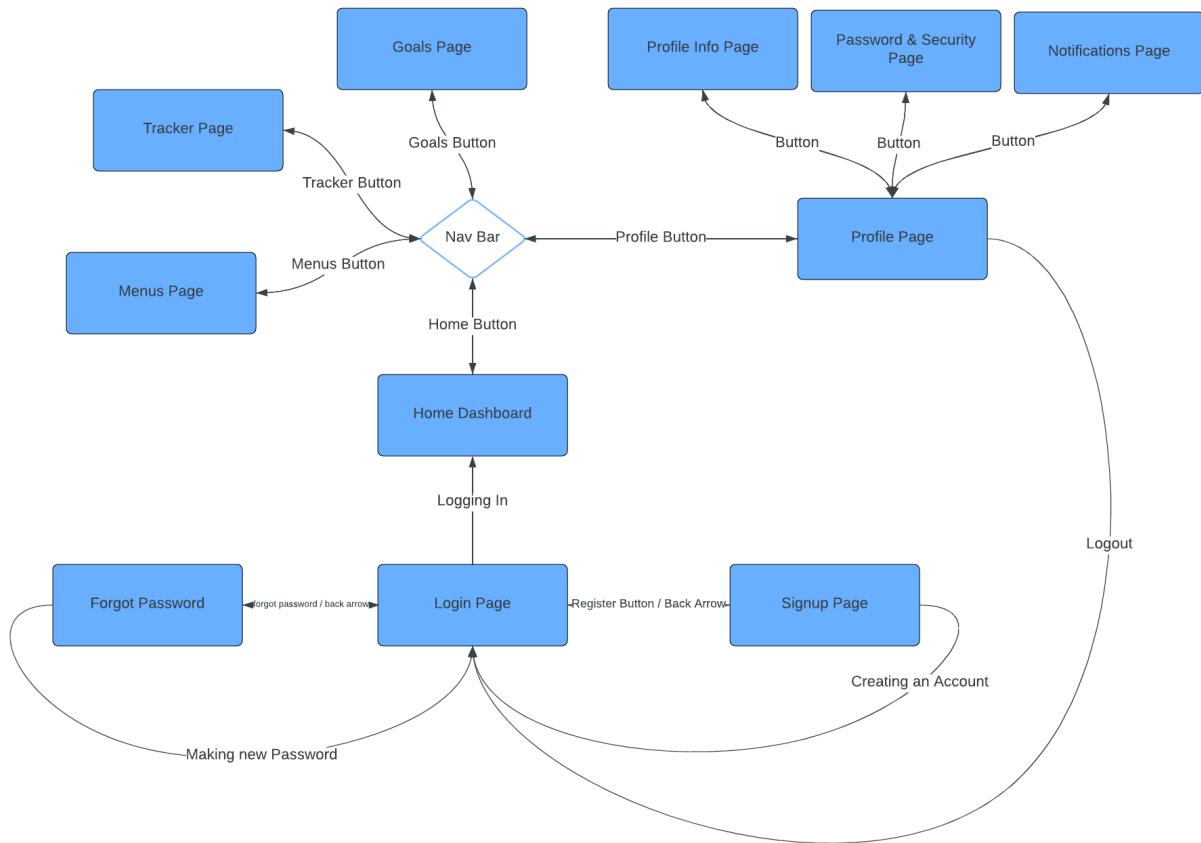
- Group ID (Foreign Key -> Groups.Group ID)
- User (Foreign Key->Users.username)
- Join Date [Date/Time] - the date the user joined the group

Notifications

Table of available notifications and their requirements to be sent.

- Notification ID (Primary Key)
- Name
- Message
- Requirements - conditions for notification to be sent

Screen Flow Diagram



Screen Sketches

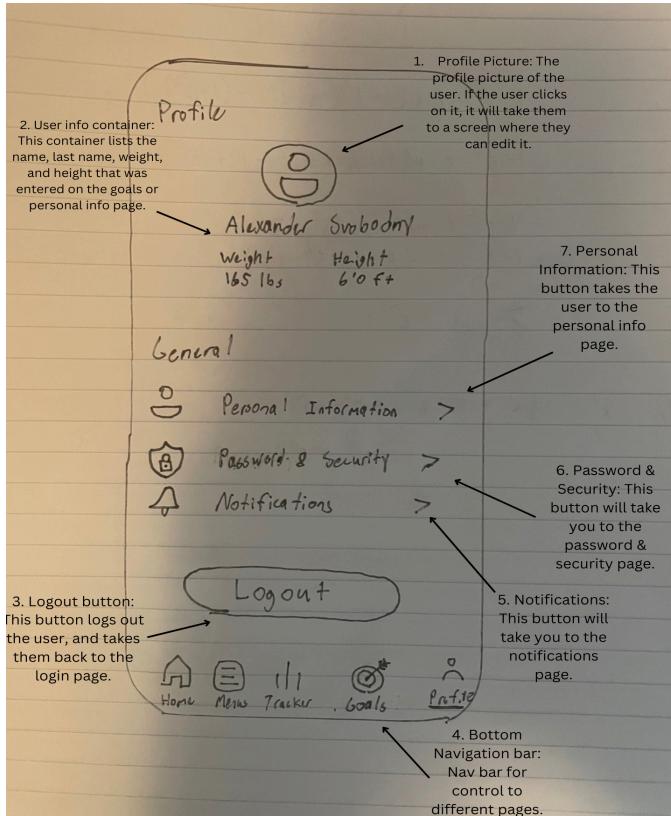


Figure 1: Profile Page

This screen displays the user's profile as well as gives them access to submenus from which they can modify their personal information. They cannot modify their personal information from this page.

A profile picture (1) and a user information container (2) display user information. The user can then navigate to a page to change their personal information (7), change their password (6) or change their notification settings (5). The user can also log out of the application via the logout button (3). Icons on the navigation bar at the bottom (4) allow the user to access the functionalities they are permitted. For a normal user, this is the menu, a nutrition tracker, goals, and their profile.

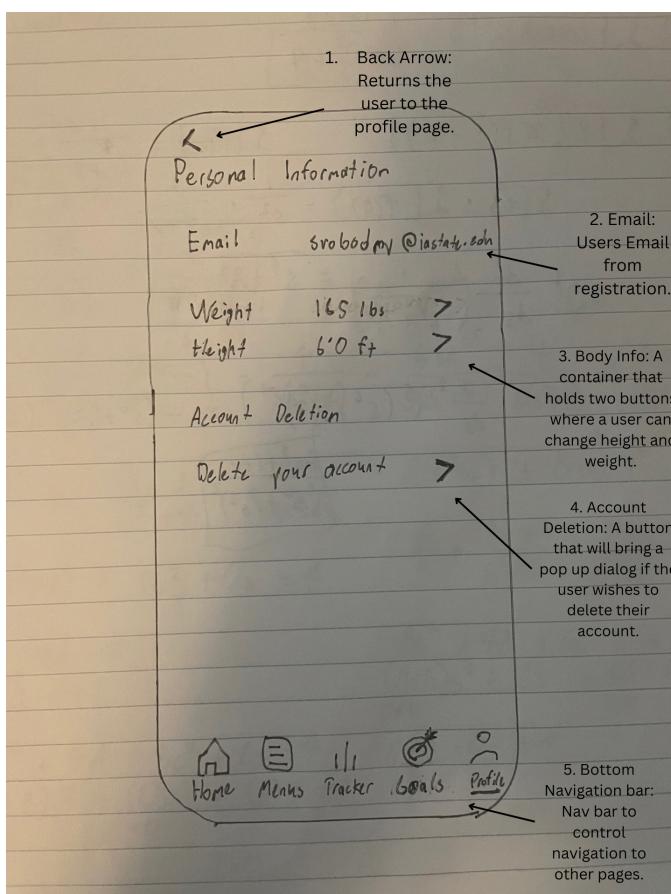


Figure 2: Personal Information

This page allows the user to view and modify their personal information (including height and weight) and delete their account.

A back arrow (1) is present at the top of the page to allow the user to return to the profile page. Their email/username (2) is displayed near the top of the page but cannot be changed. Body Information (3) displays both the weight and height which can be changed via separate buttons. Under the heading "Account Deletion", there is a button labeled "Delete your account" (4) that triggers a pop-up dialogue confirming that the user wants to delete their account. If the user selects yes, the user's account is deleted.

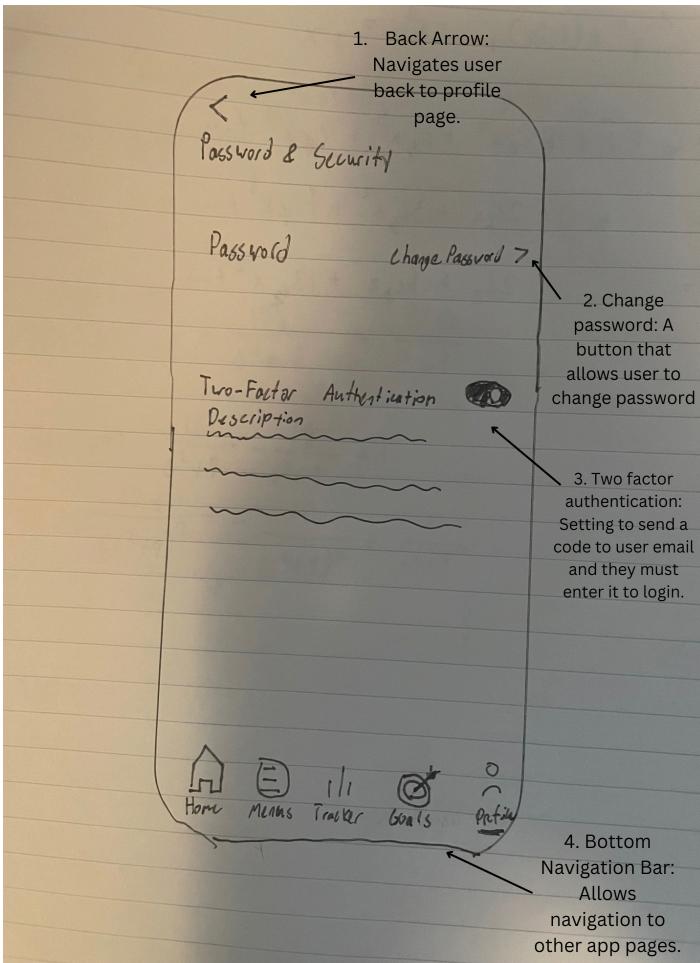


Figure 3: Password and Security

This page is accessible from the Profile page. The page allows users to change their current password and enable two-factor authentication (if we implement the feature).

The back arrow (1) allows the user to return to the Profile page. Change password (2) allows the user to change their password. The toggle (3) allows the user to enable two-factor authentication. The navigation bar (4) allows the user to navigate to one of the 5 main pages.

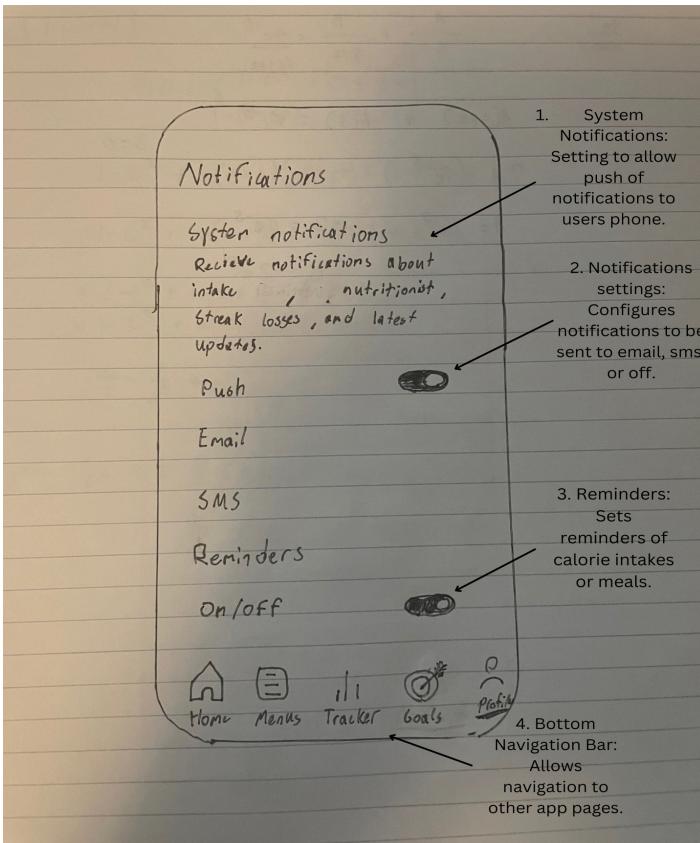


Figure 4: Notification Settings

This page is accessible from the profile page. It allows the user to select what type of notifications they would like to receive.

The system notifications text (1) tells the user the different types of notifications. Notification settings (2) is a set of toggles giving permissions for push, email, and SMS notifications. Reminders toggle (3) allows the user to allow reminders. The navigation bar (4) allows the user to navigate to one of the 5 main pages.

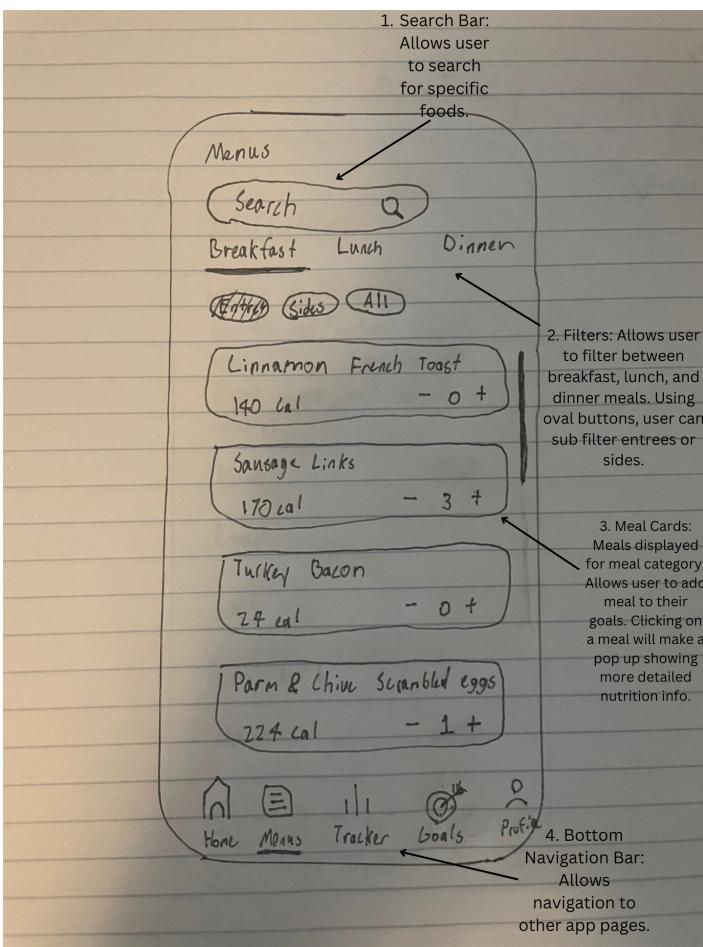


Figure 5: Menus

This page is accessible from the bottom navigation bar. This page is where the user can add or remove foods that they have eaten that day. Each food is sorted by a meal category, breakfast, lunch and dinner. They can also be sub-filtered by entree or side (2). If the user is looking for a specific food, they can use the search bar at the top (1). Each food card (3), has its listed calories and a + and - to either add or remove to their tracked meals. If the user wishes to see more detailed nutritional information, all they need to do is click on the card and a popup will appear with more info.

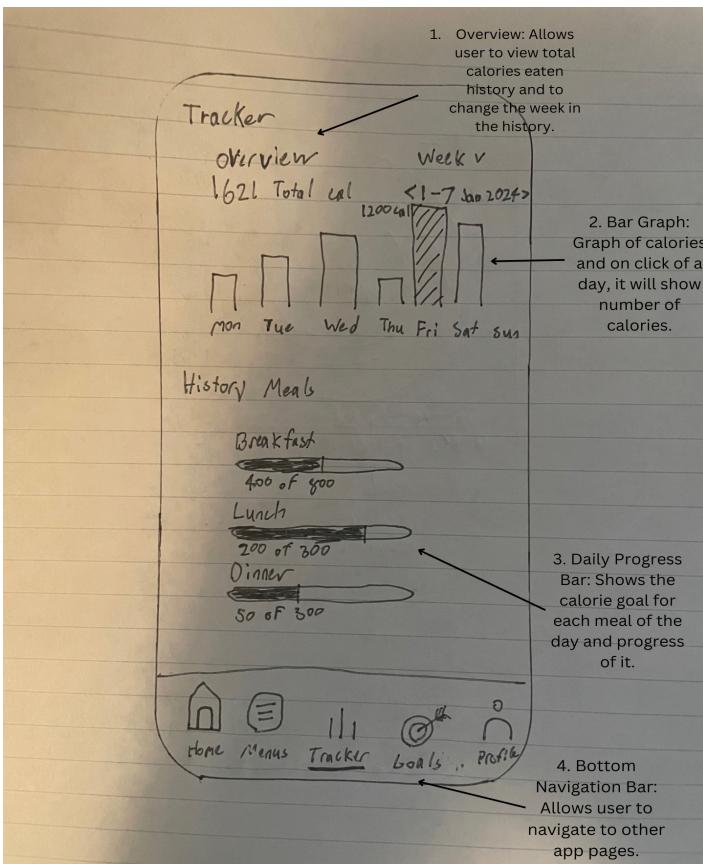


Figure 6:

This page is accessible from the navigation bar after account signup or login. It allows users to have an in-depth view of their caloric or nutritional intake of any given week, as well as caloric intake of any given meal.

The overview (1) allows the user to see their caloric intake on any given day, in any given week. The bar graph (2) shows the user how close they were to their goal intake on each day in a given week. The daily progress bar (3) shows the user for breakfast, lunch, and dinner, how much they should eat, and how close they are to their goal. Lastly, the navigation bar (4), can be used on this page to navigate to any of the 5 main pages in the app, by the user.

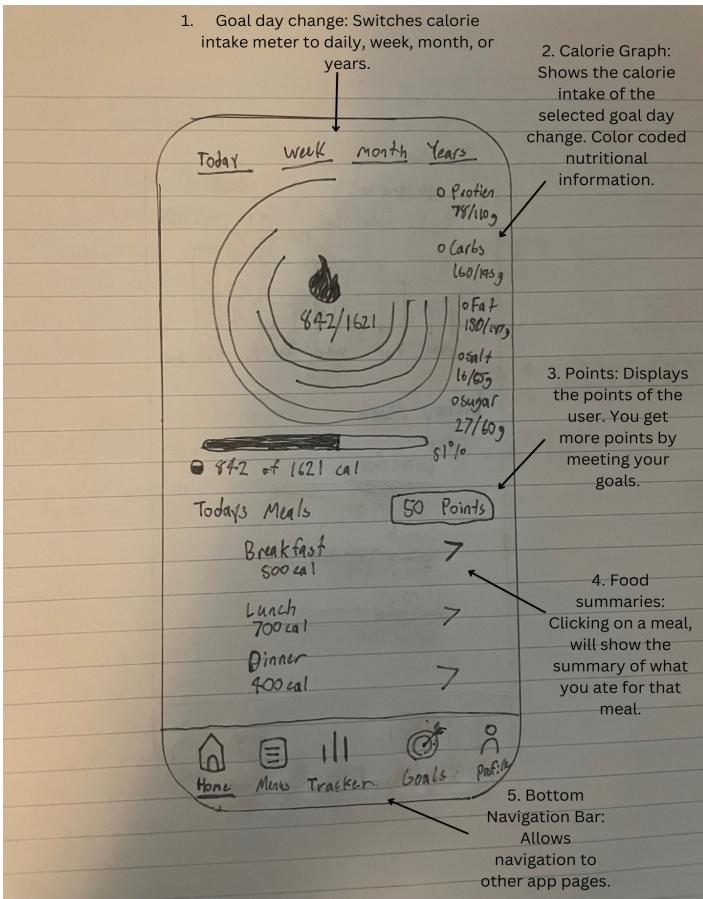


Figure 7: Home Dashboard

This page can be accessed through the bottom navigation bar (5) and the user will also be navigated to this page when they log in. At the top of the page, there is a date filter (1). This allows the user to control the big circular graph at the top of the page and sort nutritional info by date. On the right side of the graph there is a list of detailed nutritional information the user has eaten in that day\week\month\or years. Each one is color coded and displayed on the graph. At the center of the graph is the amount of calories the user has consumed, along with another progress bar at the bottom for better perspective on reaching their goal. At the bottom of the page is the meal summary (4). The user may click on a meal and see the meals they have eaten for the day. In the middle of the screen is the amount of points the user has received (3), these points are gained from meeting your daily calorie intake goal .

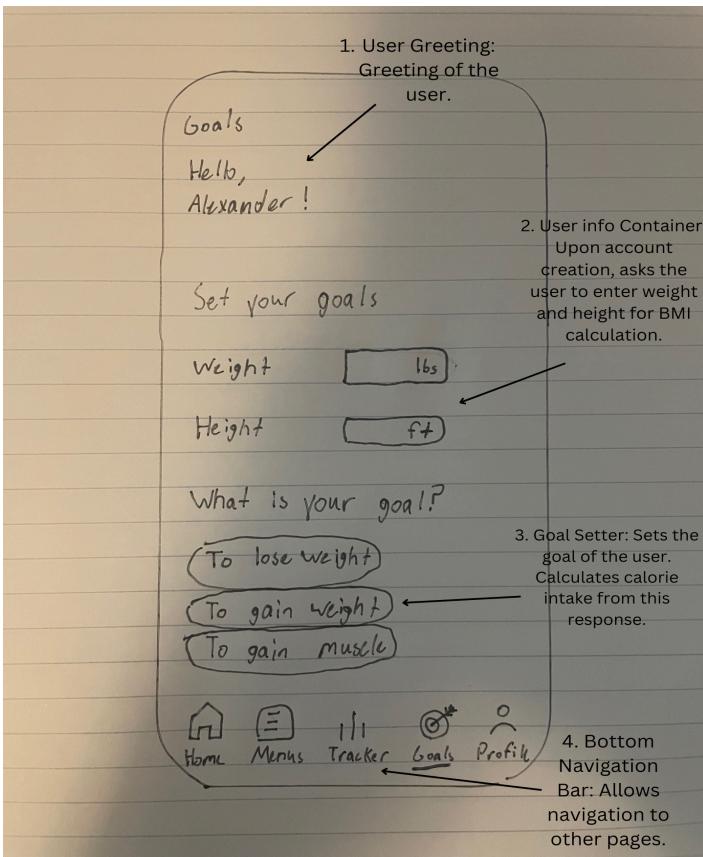


Figure 8:

This page will be accessible from the first time a user signs up. The main purpose of the page is to personalize the app for the user, depending on what their needs are, i.e. gaining weight, losing weight, strictly gaining muscle, etc. If the user is unsure, the app will also give suggestions based on the user's BMI.

Upon the first login the user is greeted with their name (1) and asked to set their height and weight (2), so that the app can calculate the BMI of the user. The user will then be asked to set a goal (3) and depending on their selection the app will calculate the suggested caloric intake for the user. Lastly, the navigation bar (4), can be used on this page to navigate to any of the 5 main pages in the app, by the user.