

User Manual

for

Glucose Genie

Version – 1.0

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1. Introduction

Managing diabetes is a constant, day-to-day challenge for millions of people as it requires careful monitoring of nutrient intake to keep blood sugar levels stable. This issue is even more critical for low-income individuals who often face the added burden of limited budgets and reduced access to fresh and nutritious ingredients that support their dietary needs. Because of this, many struggle to create meals that align with their health goals while remaining within their financial means. Our Glucose Genie app will solve this problem by providing an accessible way for users to track their nutritional intake along with the help of recommended meal recipes. By addressing the health and language accessibility challenges that many diabetics face, our app empowers users to take control of their condition in a way that is practical and affordable.

2. System Requirements

- Apple device with iOS 12 or above
- MacBook with Xcode 15.2 and Swift 5.9

3. Installation

a. Installation from GitHub on MacBook

1. Download and install Xcode 15.2 (<https://xcodereleases.com/>)
2. After installation, open Xcode and select 'Clone Git Repository...'
3. Enter the Glucose Genie GitHub repository link into the text field and click 'Clone' (currently <https://github.com/fjcu256/glucose-genie.git>)
4. If successful, Xcode will prompt you to select a branch to download. Select the 'main' branch if not already selected, and click 'Clone'
5. You will then be prompted to choose where to download the project. Navigate to where you want to download the project on your computer, then click 'Clone'
6. After the project finishes downloading, a Finder window will appear opened to the project directory. You should see a 'docs' folder, a 'src' folder, and a README markdown file
7. Reopen Xcode. The project folder should appear on the right. If not, select 'Open Existing Project...' and navigate to where you downloaded the project. You then need to navigate to *src/application/GlucoseGenie*, then open the *GlucoseGenie.xcodeproj* file
8. Once you open the project in Xcode, Xcode should automatically start downloading packages and indexing files. Depending on your MacBook model, this can take some time
9. Wait until XCode says 'GlucoseGenie: Ready' at the top of the window. Once that message appears, there is one more file that needs to be added to the project in order for it to build successfully
10. Download *Secrets.plist* from stakeholders. Move it into *src/application/GlucoseGenie*

11. You can now click the play button or click on *Product > Run* to build the project. You may need to specify an iPhone model to simulate before Xcode can build the project. It is also possible to run the app on an actual iPhone if it is in developer mode and is connected to your MacBook. Depending on your MacBook model, building and running the project can take some time, especially if it is the first time running the project
12. After the project finishes building, an iPhone simulator should start up and automatically open the Glucose Genie app
13. Using your trackpad or mouse, you should now be able to interact and use the app

b. Installation from App Store on Apple Device (currently not accessible)

1. Open the App Store on your iPhone
2. Tap the Search tab
3. Type “Glucose Genie”
4. Locate the app in the results and tap the download button
5. If prompted, authenticate with Face ID, Touch ID, or your Apple ID password
6. Launch the app from the home screen
7. Tap the sign in button
8. Tap the create account button
9. Provide your log in credentials
10. Enjoy Glucose Genie!

4. Interface Overview

Below are a series of screenshots and descriptions to outline the look and features of Glucose Genie.

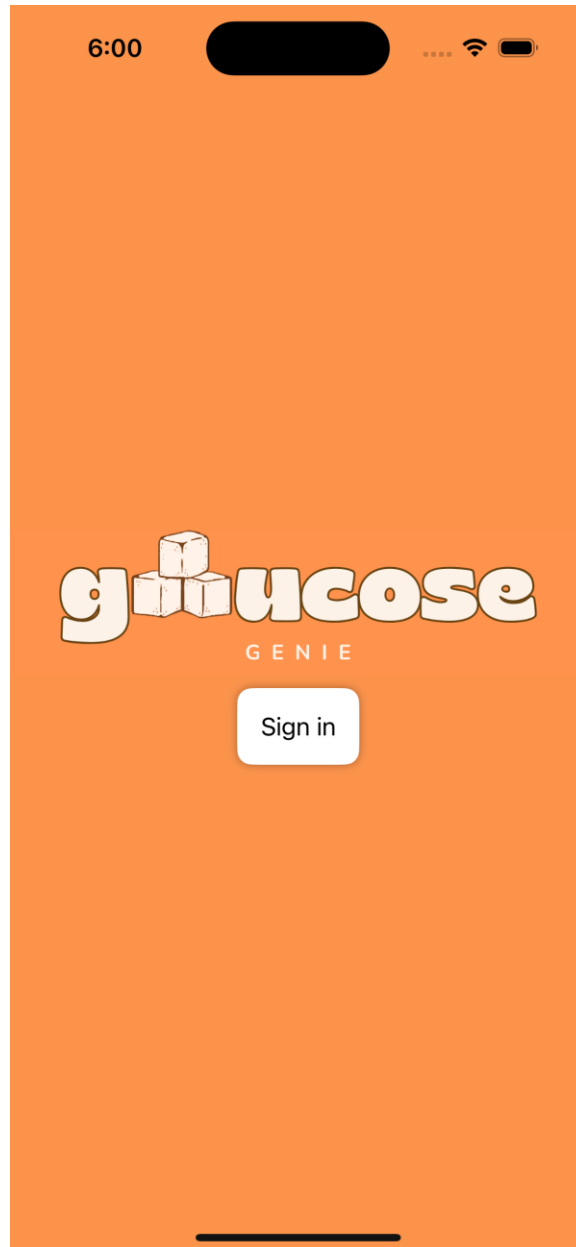


Figure 4.1

Above is the initial sign in screen. Proceed by clicking 'Sign in'.

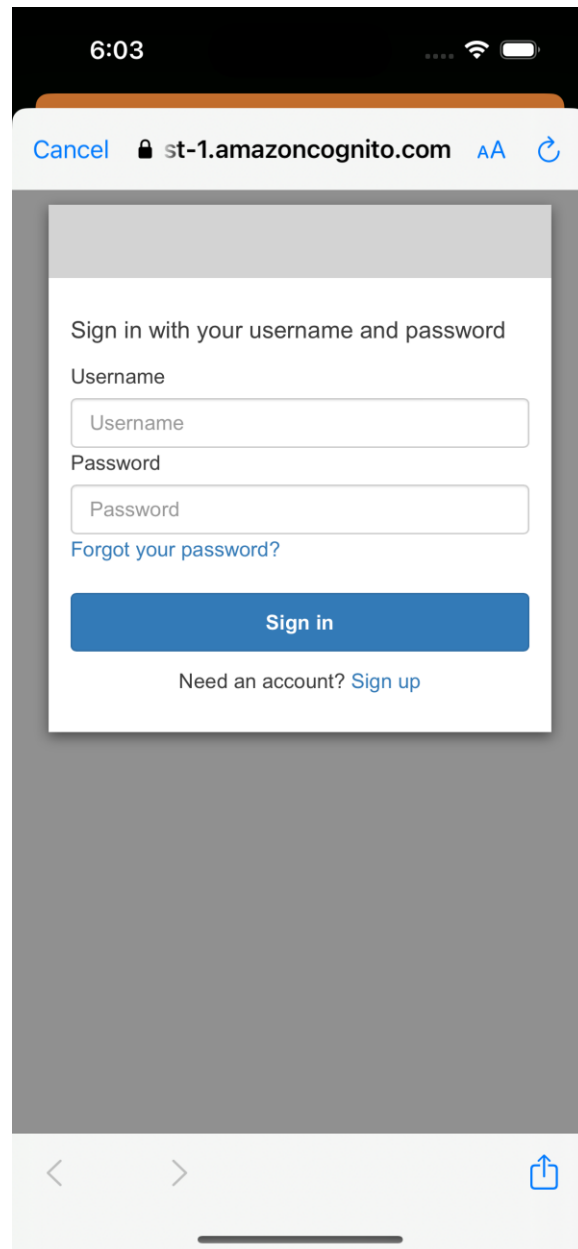


Figure 4.2

You are then taken to the sign-in screen where you can provide your account credentials to log in or tap 'Sign up' at the bottom to create an account.

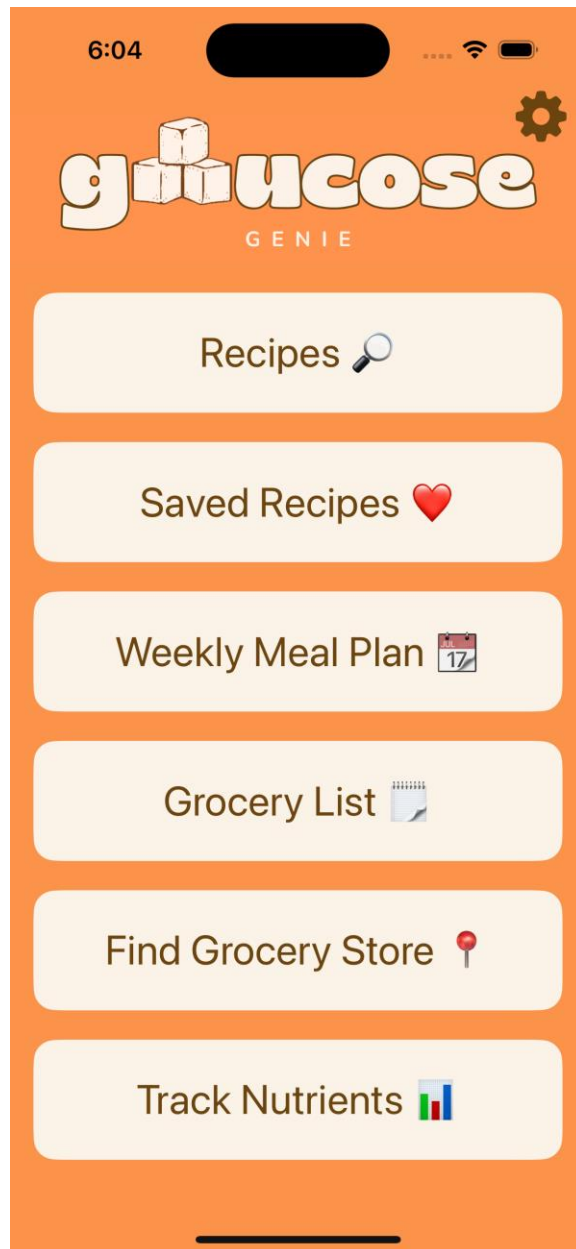


Figure 4.3

This is the main page where you can access all features of the app. Every button here can be tapped to go to a separate page.

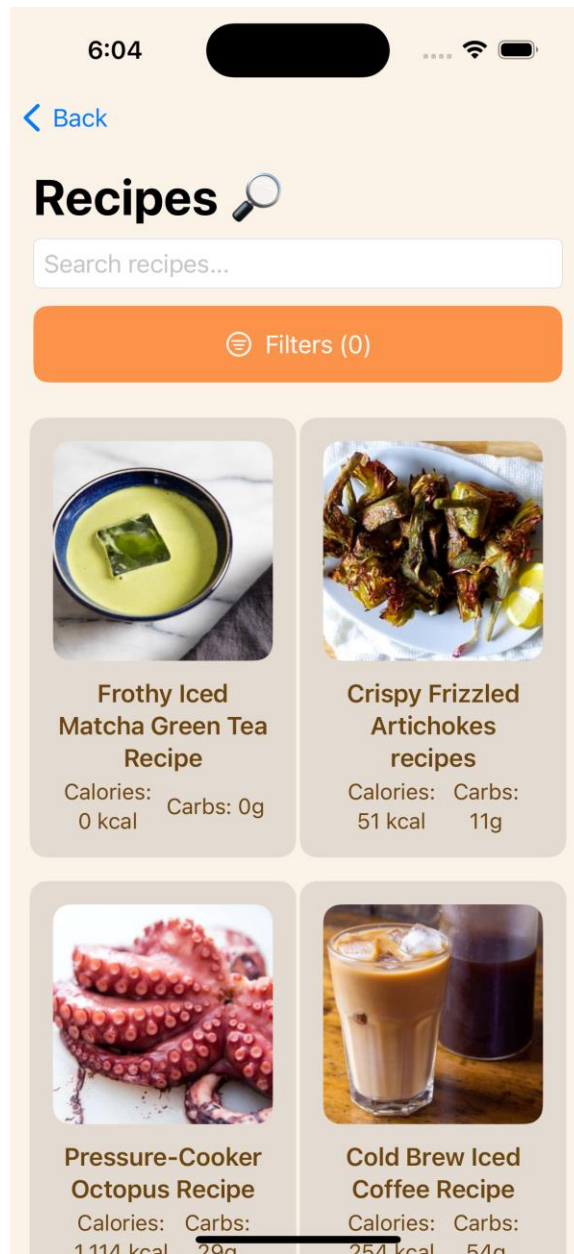


Figure 4.5

From the main page, tapping the “Recipes” page will lead to this screen. Here you can find diabetes-friendly recipes by scrolling down or searching directly.

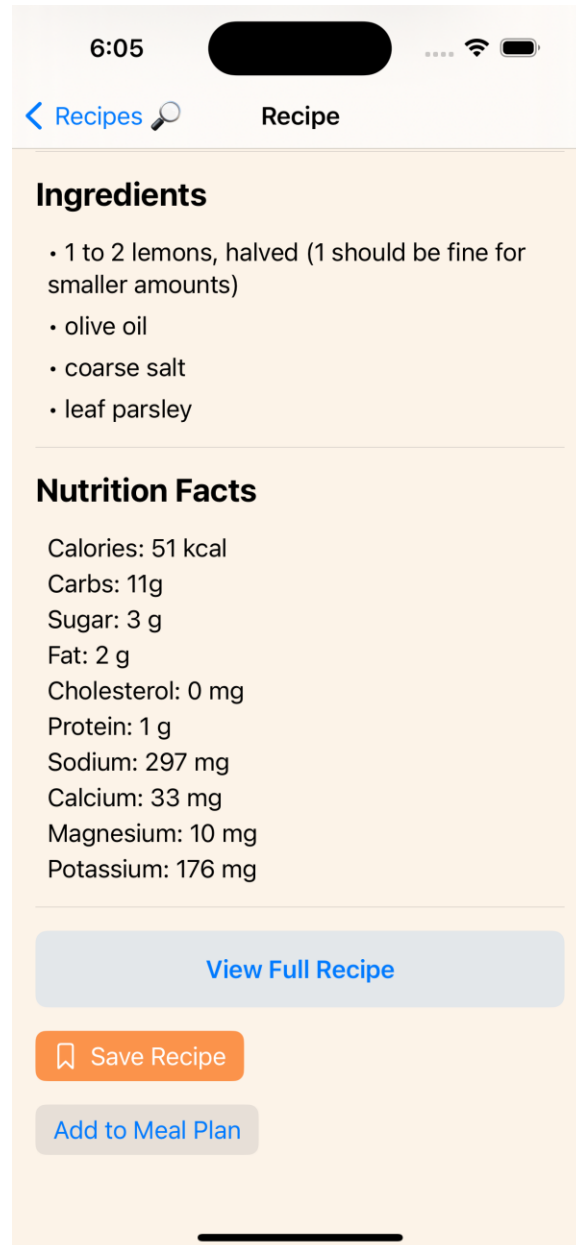


Figure 4.6

From the Recipes page, tapping any recipe will lead to a focused page on that recipe, providing ingredients and nutritional information. You can also tap “View Full Recipe” to be taken to the full recipe instructions. You can also tap “Save Recipe” to save this recipe to your account or tap “Add to Meal Plan” to add it to a specific day and time of your weekly meal plan. We will discuss what this means and how these features are used below.

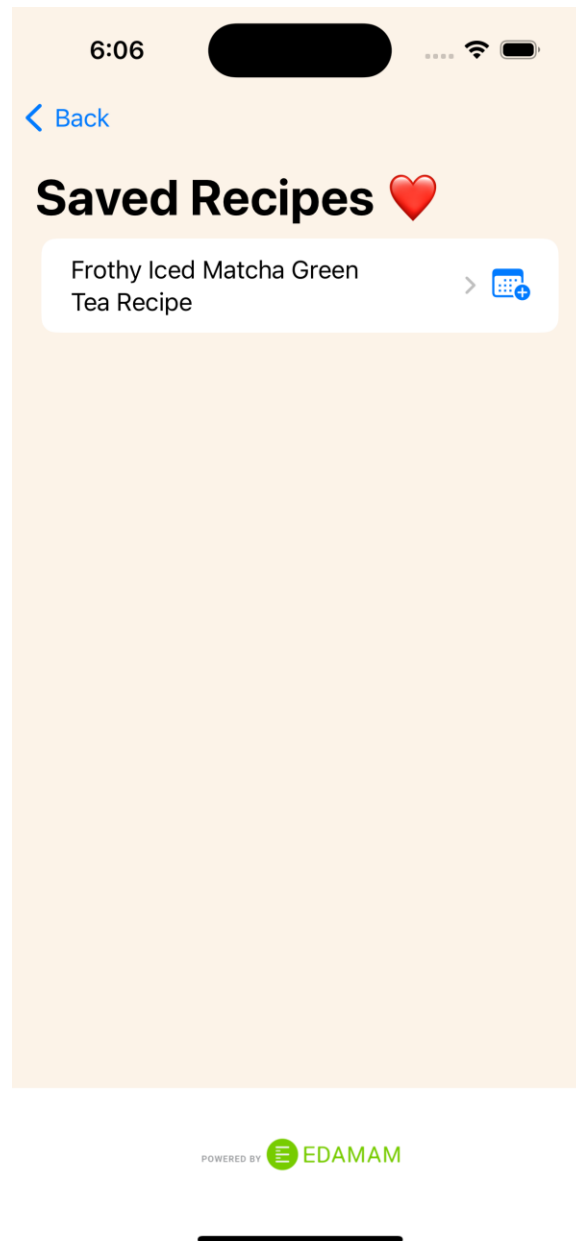


Figure 4.7

Above is the Saved Recipes page. Tapping “Save Recipe” on any focused recipe page adds the recipe to this page. Tapping on a saved recipe from this page opens up the detailed recipe view and also allows you to unsave the recipe or select a day and time to add the recipe to your “Weekly Meal Plan”.

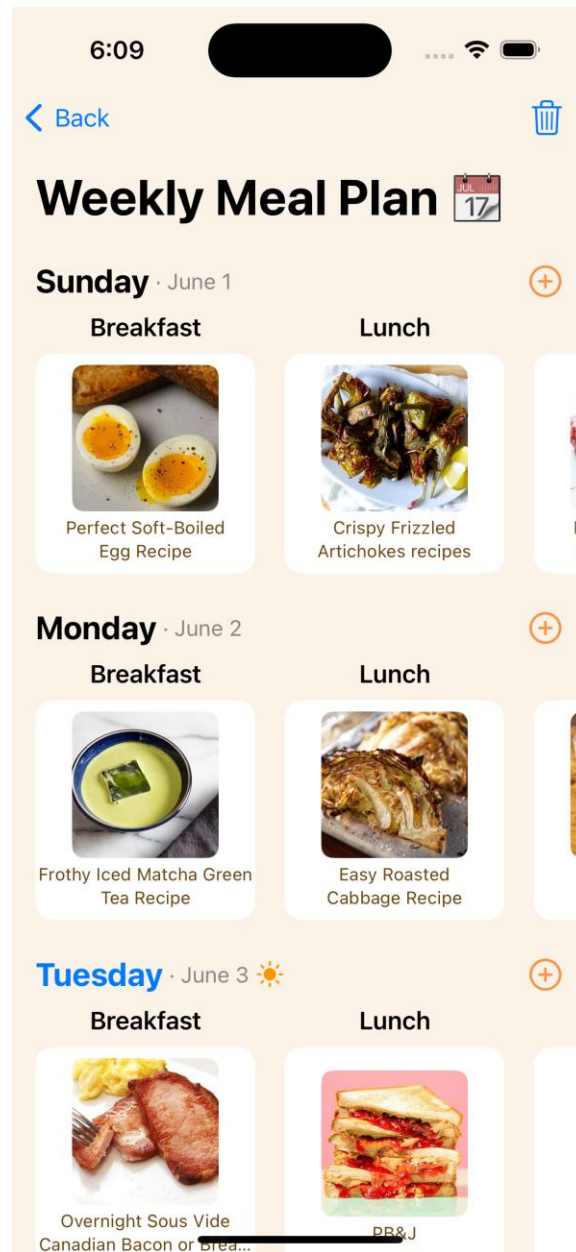


Figure 4.8

This is the Weekly Meal Plan page where you can plan recipes across your entire week. Tap the plus button on any scheduled meal slot to add any recipe. You can also tap the plus button across any day of the week where you can follow a flow of adding a recipe to each meal time of that day automatically instead of one by one. The trash icon at the top right can clear your full meal plan. If you would like to remove an individual recipe from a specific day and time, hold down on the image and you will get the option to remove the

selected recipe. Your meal plan resets automatically every Sunday. Note: To plan recipes from your saved recipes, go to the Saved Recipes page, tap a recipe, then scroll down and tap “Add to Meal Plan”.

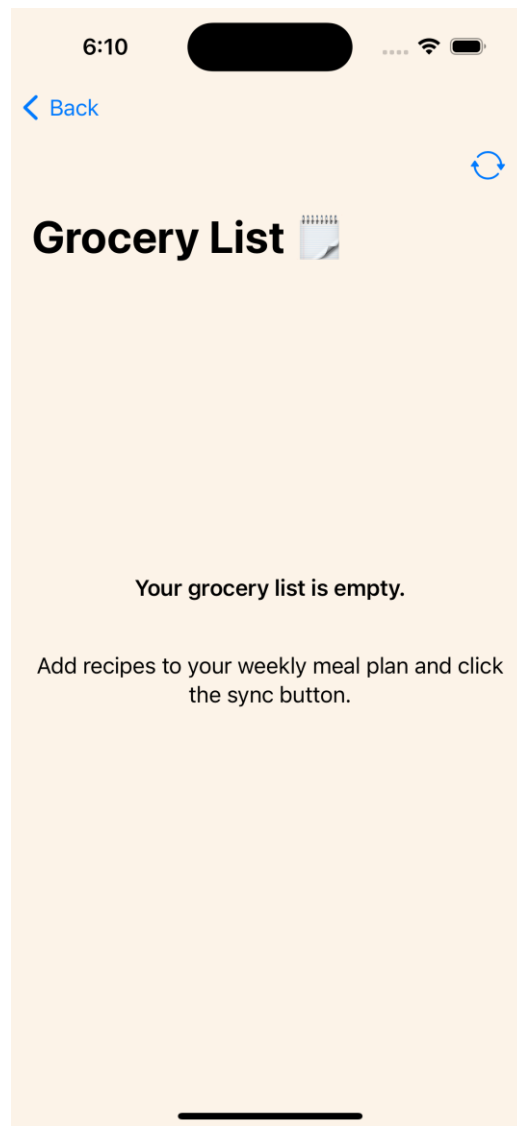


Figure 4.9

Above is the Grocery List page, visited from the main page. You can press the sync button at the top right to sync your grocery list with your weekly meal plan. This populates the grocery list with the ingredients necessary to make the meals in your weekly meal plan.

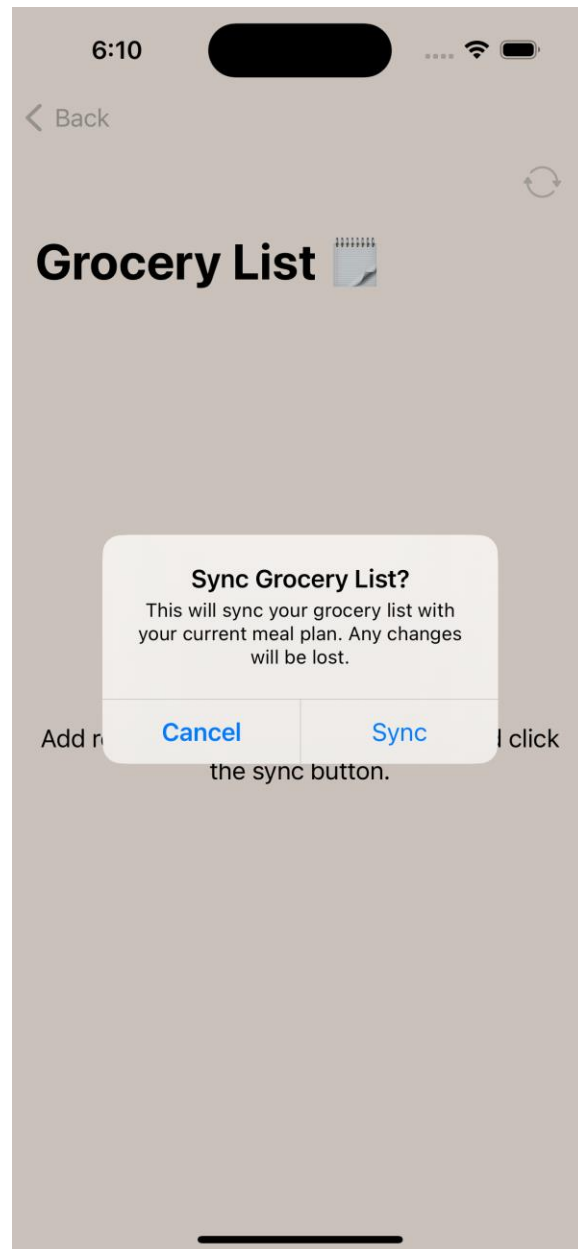


Figure 4.10

Here is the confirmation screen from the sync button.

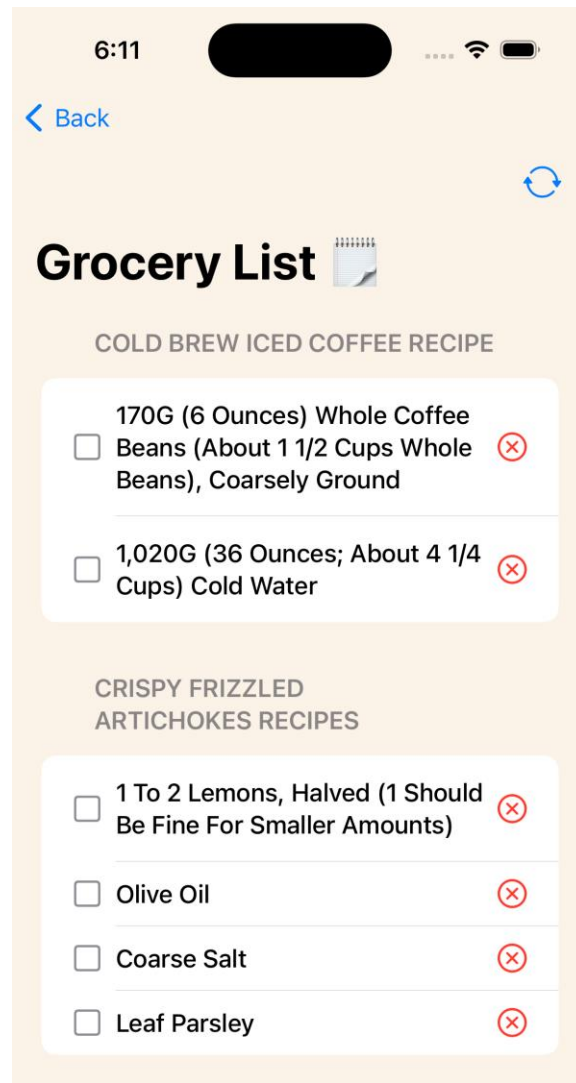


Figure 4.11

This is how the Grocery List page appears after syncing. You can see two recipes from the meal plan were added to the grocery list. By scrolling down, you can view other recipes synced from the meal plan. Each ingredient has a checkbox and a delete button so you can mark off which ingredients you have or remove an ingredient from your list entirely.

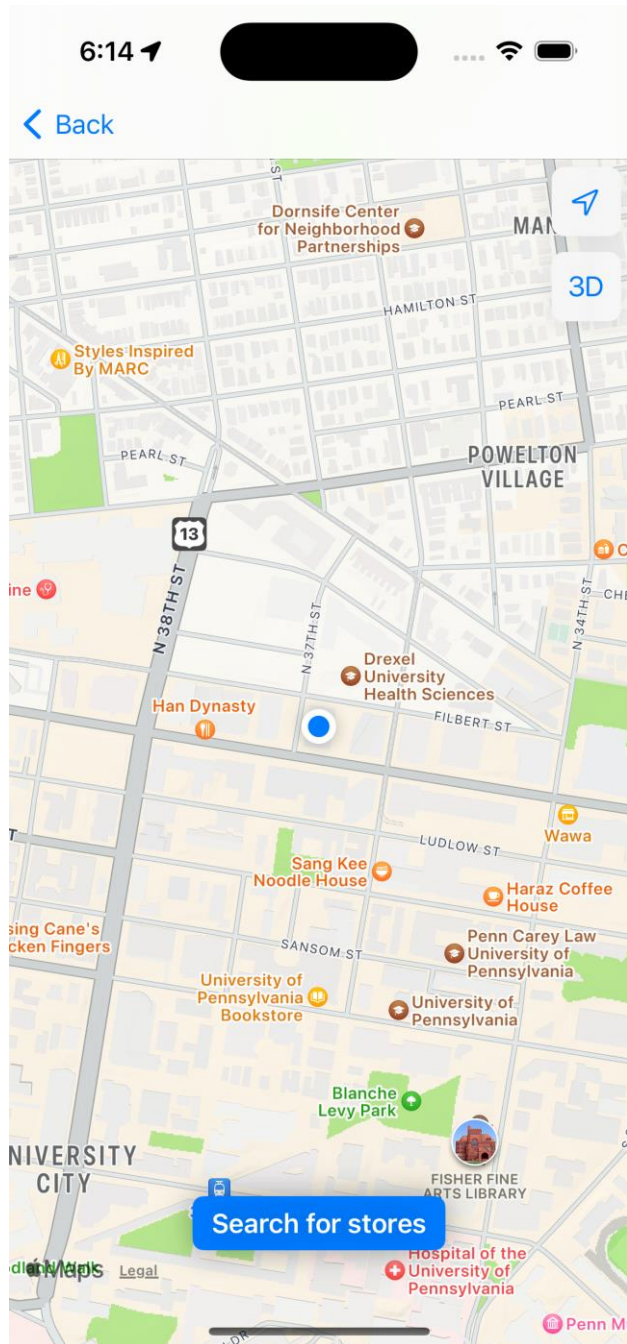


Figure 4.12

Above is the Grocery Map page where the user can provide their device location and find nearby grocery stores that may provide ingredients for their recipes.

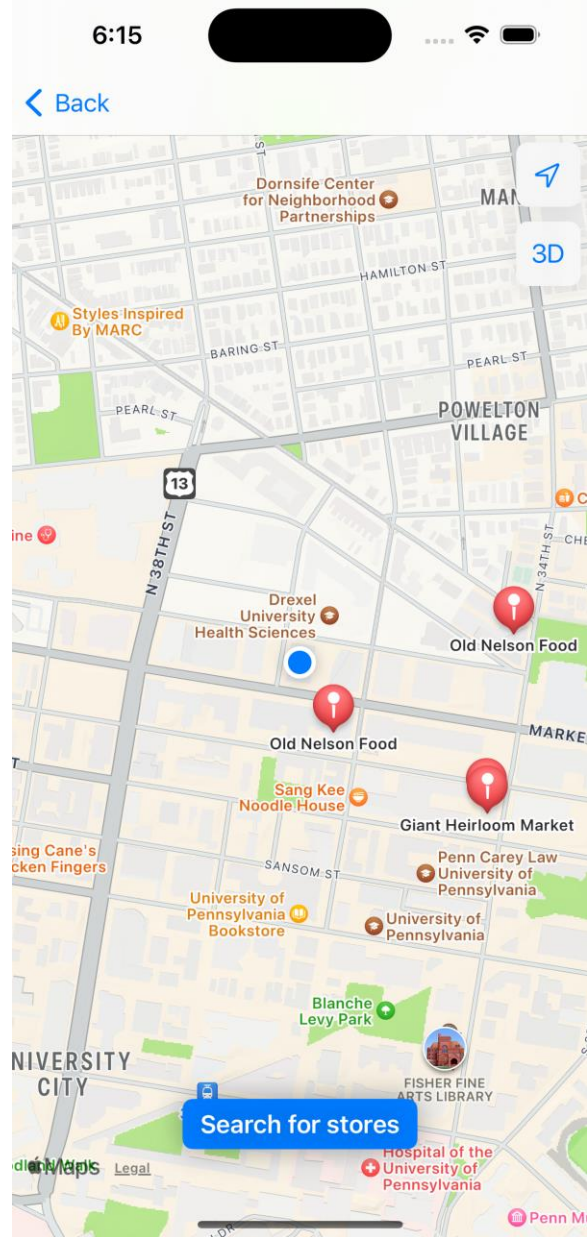


Figure 4.13

Tap the 'Search for stores' button at the bottom to initiate a search for nearby stores. Red markers for stores will appear. In the image above, you can see a few Old Nelsons and a Giant Heirloom appeared.

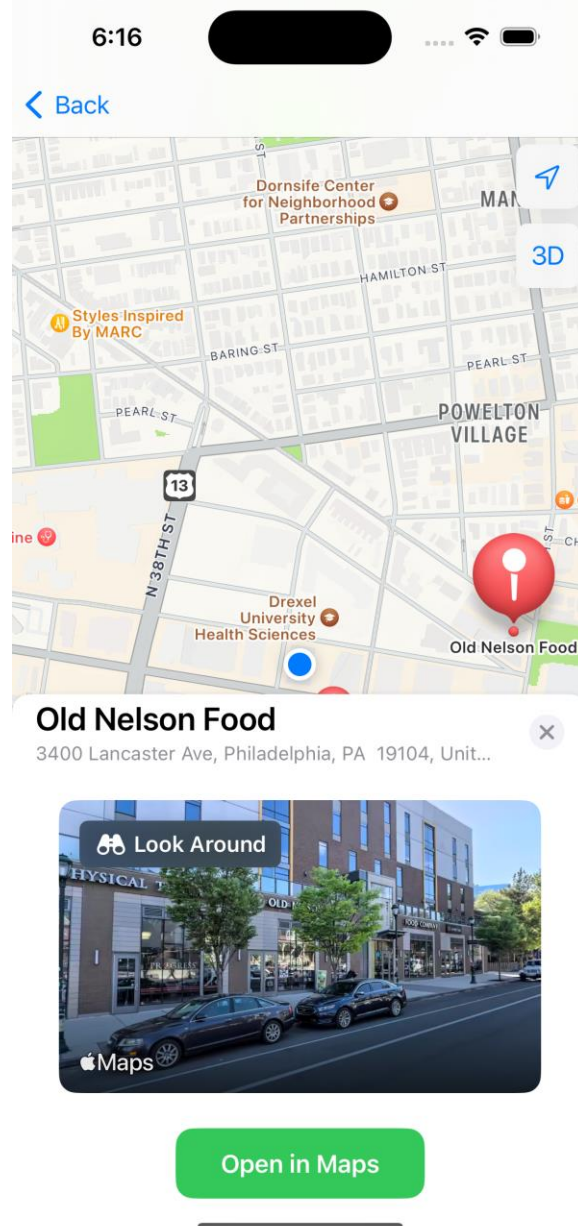


Figure 4.14

Tapping a red marker will make a half-page on that store appear, providing the name and specific address. You can also tap the “Open in Maps” button to open this location in the Apple Maps app or the large “Look Around” button to open a 3D Street View of that store’s location.

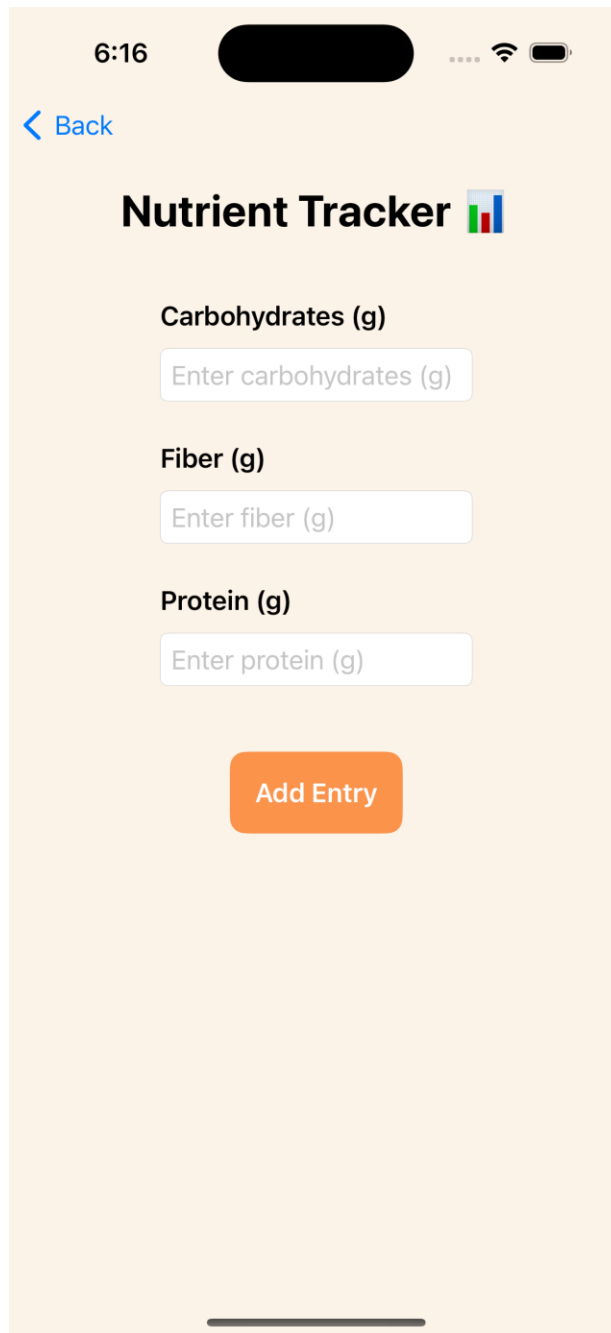
The image shows a mobile application interface for a 'Nutrient Tracker'. At the top, there is a status bar with the time '6:16', a black pill-shaped notch, and icons for cellular signal, Wi-Fi, and battery. Below the status bar is a blue '< Back' link. The main title 'Nutrient Tracker' is displayed in bold black text, followed by a small bar chart icon with three bars of increasing height. The interface contains three input sections: 'Carbohydrates (g)' with a text input field containing the placeholder 'Enter carbohydrates (g)'; 'Fiber (g)' with a text input field containing the placeholder 'Enter fiber (g)'; and 'Protein (g)' with a text input field containing the placeholder 'Enter protein (g)'. At the bottom of these sections is an orange rounded rectangular button with the text 'Add Entry' in white. The entire app interface is set against a light orange background.

Figure 4.15

This is the Nutrient Tracker page. Here you can enter values (in grams) for each nutrient (carbohydrates, fiber, and protein) to keep a log of your nutrition.

8:54

< Back

Nutrient Tracker

Carbohydrates (g)

Fiber (g)

Protein (g)

Add Entry

June 4, 2025

Carbs: 1.0g

Fiber: 2.0g

Protein: 2.0g

June 1, 2025

Carbs: 1.0g

Fiber: 1.0g

Protein: 1.0g

May 21, 2025

Carbs: 12.0g

Figure 4.16

Typing in values and then tapping “Add Entry” will either create or update a log for the current date. If you enter values again, the log values will be increased accordingly for the current date.

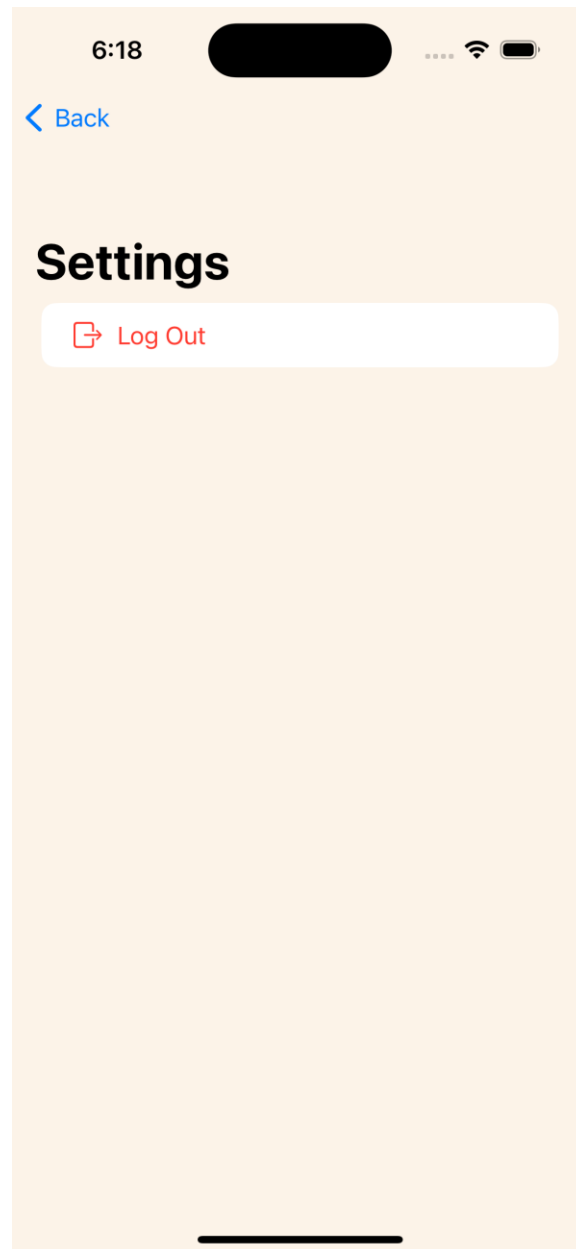


Figure 4.17

Lastly, this is the settings page. You can access this page by tapping the gear icon at the top right of the main page. You can toggle your language settings and log out here. All changes made while logged in will be saved to your account, so there is no need to worry about losing all of your recipes or meal plans.

5. Multilingual Support

- Glucose Genie is designed with diverse communities in mind and is fully available in both English and Spanish. You can effortlessly switch between languages directly from the Settings page. This feature ensures comfortable and inclusive navigation, allowing you to seamlessly track your nutrition and meal planning in your preferred language.

6. Accessible Design

- To provide a user-friendly experience for all, Glucose Genie incorporates accessible design principles. The app utilizes large, clearly visible buttons and high-contrast color schemes for text and interactive elements. These features facilitate easy navigation, making the app especially beneficial for users with visual impairments, limited mobility, or those who prefer a simpler, clearer interface.

7. Offline Functionality

- Recognizing that consistent internet access may not always be available, Glucose Genie enables you to view your saved recipes and your weekly meal plan even when offline. Once recipes are saved or added to your meal plan, you can access them anytime without the need for an internet connection. This ensures continuous and convenient use of the app, regardless of your location or connectivity status.

8. Troubleshooting & FAQ

- Why can't I log in?
 - Make sure you have entered your username and password correctly.
 - Tap "Forgot your password?" to reset your password and log in again.
- Why is my saved information not appearing?

- Go to settings then tap “Log Out”. Then log back in and ensure your information appears.
- Why are no recipes loading?
 - There may be an error in connecting to the recipes. Please ensure you have a secure internet connection, close the app, open it again, and attempt to load recipes again.
- Why is my location not appearing on the Grocery Store finder?
 - There may have been an error in accessing your device’s location. Please ensure location services have been turned on in the Glucose Genie section in the Settings app.