



NutriPulse

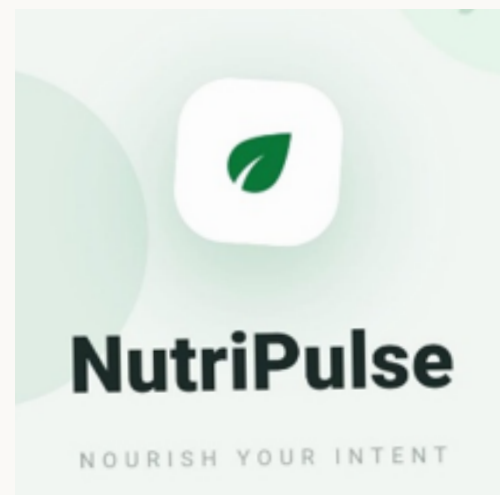


Smart Health & Nutrition Management System

Presented By:

- Ghada Qanaza
- Nora Qanaza

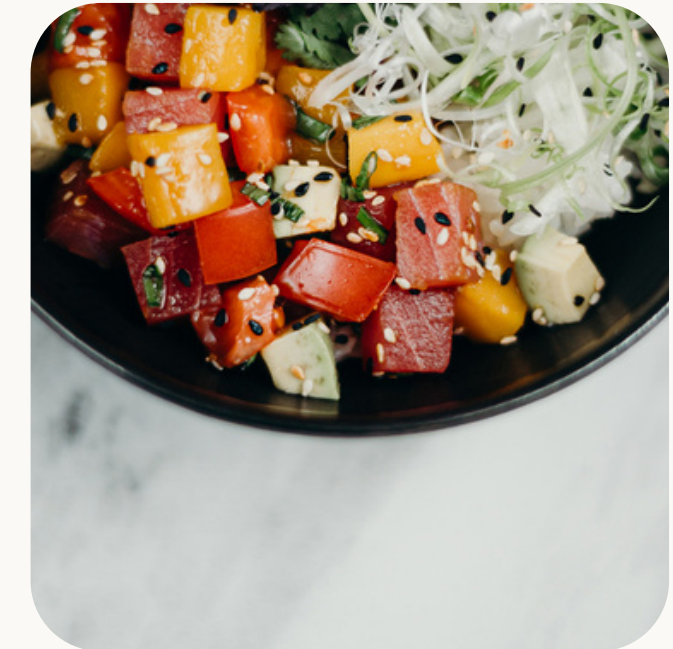
Supervisor : **Dr. Khalid Daoud**



Problem Statement

Many people face challenges in:

- ➔ **Tracking daily calories accurately**
- ➔ **Understanding nutritional values of food**
- ➔ **Monitoring health and lifestyle habits**
- ➔ **Using multiple applications for health management**





NutriPulse

NOURISH YOUR INTENT

Objectives

-  Develop a smart health and nutrition platform
-  Calculate BMR and TDEE automatically
-  Provide AI-based food recognition
-  Generate personalized nutrition plans
-  Monitor health progress and activities
-  Improve nutritional awareness

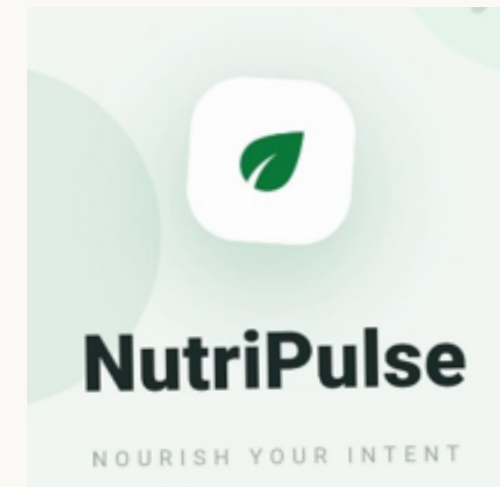


NutriPulse

NOURISH YOUR INTENT



System Architecture



User

Flutter Mobile App

ASP.NET Core API

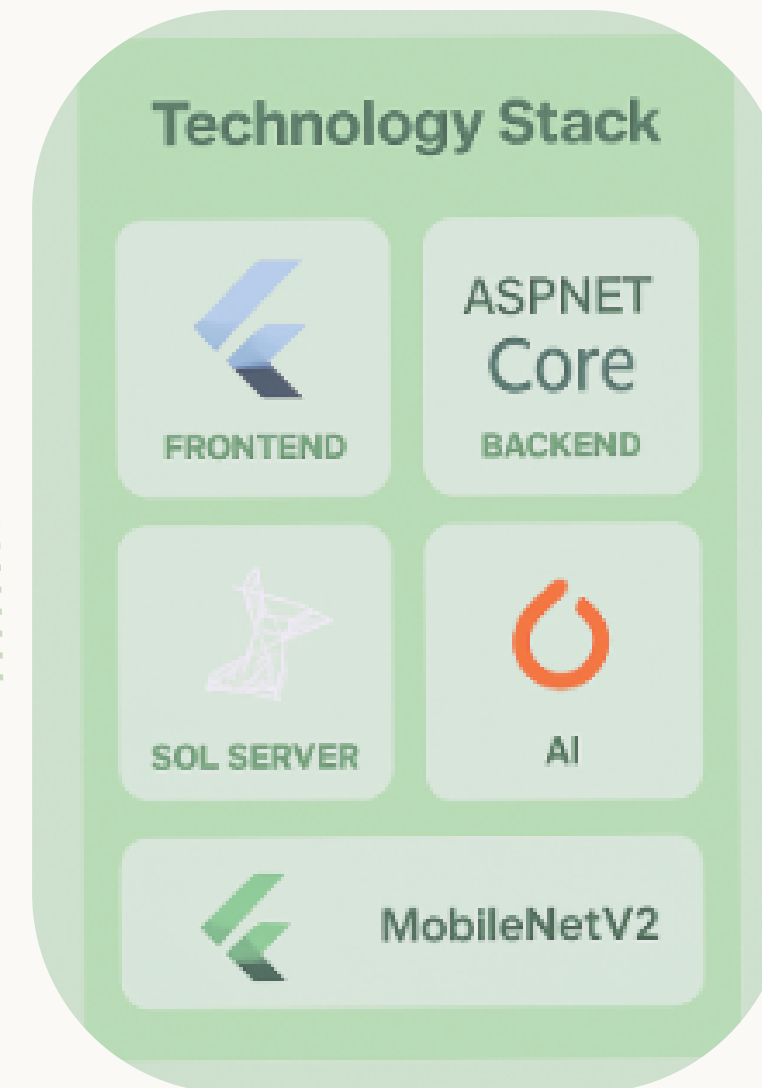
SQL Server
Database

AI Model
MobileNetV2

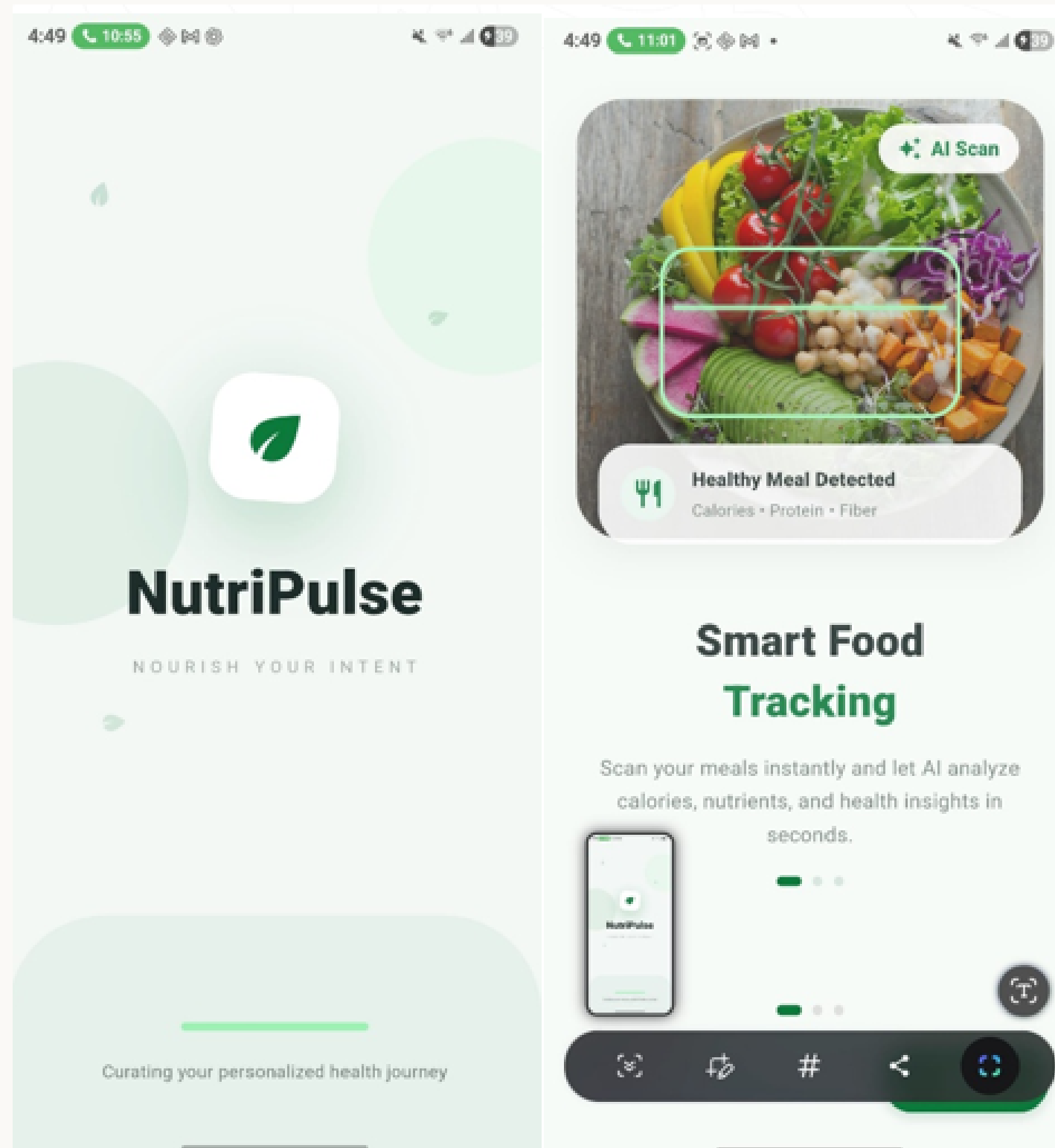


Technology Stack

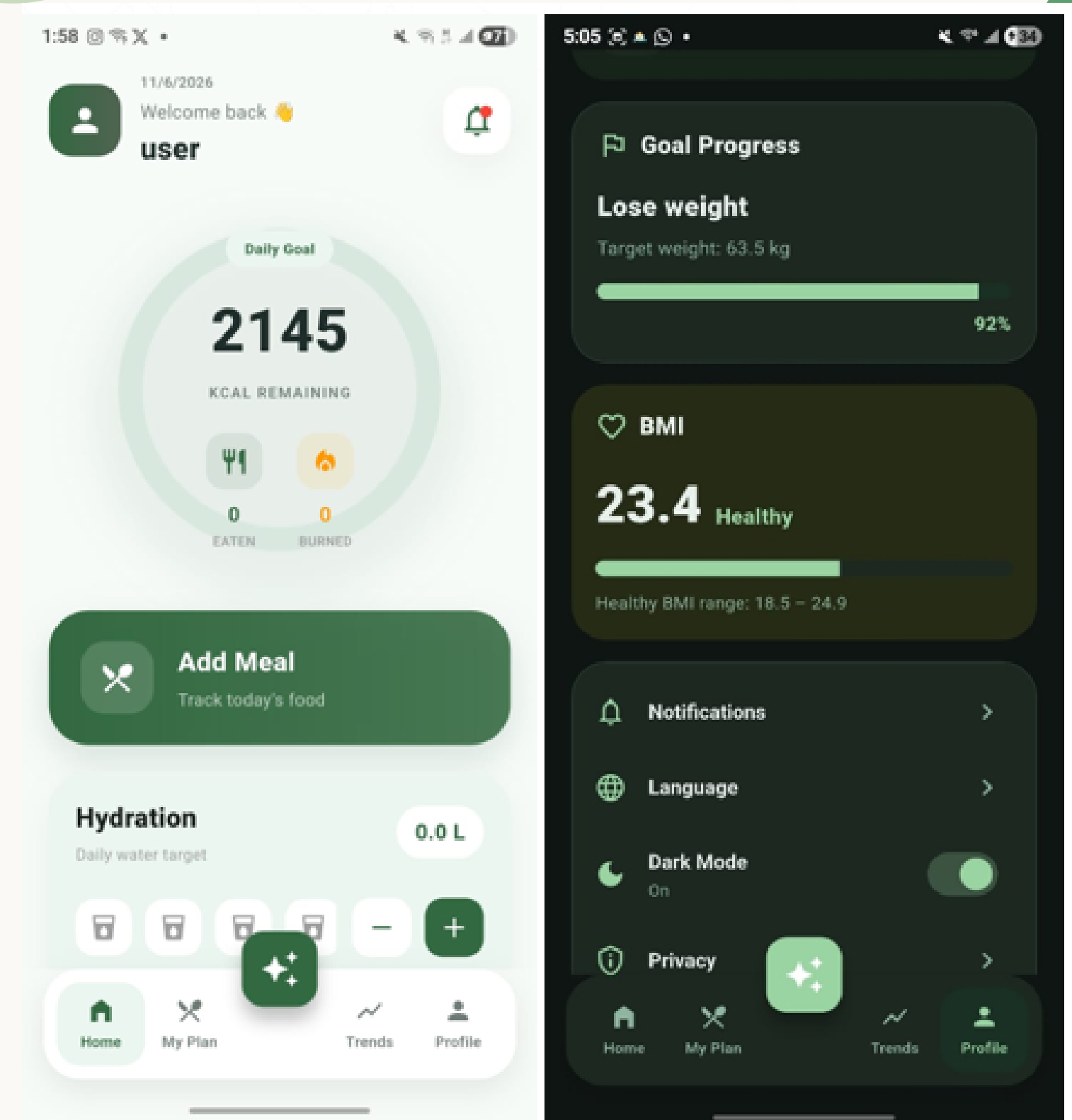
Flutter
React.js
ASP.NET Core Web API
SQL Server
Ai _keggle
MobileNetV2
Git & GitHub



User Interface & Authentication



Cross-Platform Features



User Interface & Authentication

The image displays four mobile app screens for the NutriPulse application, illustrating the user interface and authentication process. The screens are arranged horizontally, showing the flow from account creation to login and password recovery.

Screen 1: Create Account

The screen shows the "Create Account" form with the following fields and options:

- Full Name:** Ghada_Montasr
- Email Address:** ghadarolam@gmail.com
- Age:** 24
- Health Profile - Optional:** Providing your health details lets us auto-assign the best dietary plan for you.
- Gender:** Female
- Weight (KG):** 64

Screen 2: Profile

The screen shows the user's profile information with the following fields and options:

- Gender:** Female
- Weight (KG):** 64
- Height (CM):** 175
- Goal:** Weight Loss
- Password:** user@123456
- Confirm Password:** (masked)
- Terms of Service:** I agree to the Terms of Service and Privacy Policy

Screen 3: Welcome Back

The screen shows the "Welcome Back" login screen with the following fields and options:

- Email:** ghadarolam@gmail.com
- Password:** user@123456
- Forgot Password?** (link)
- Login** (button)
- Don't have an account? Sign Up** (link)

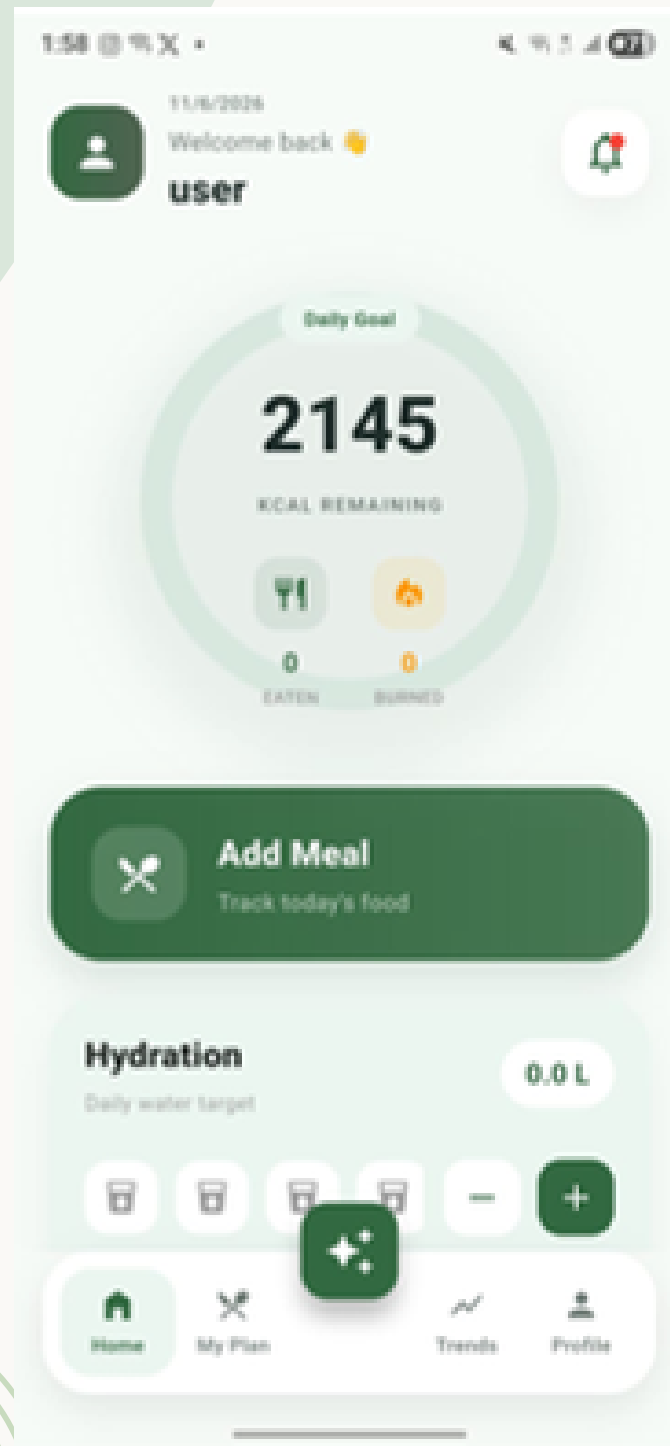
Screen 4: Forgot Password?

The screen shows the "Forgot Password?" screen with the following fields and options:

- Email Address:** example@email.com
- Send Reset Link** (button)
- Remember your password? Log In** (link)



Home Dashboard



4:54 11/6/2026 Welcome back Ghada_Montaser

Daily Goal

2145
KCAL REMAINING

EATEN 0 **BURNED** 0

Log a Meal

Meal Name: Grilled Chicken Salad

Add Ingredients

Chicken Breast (cc) 30

Cancel Save Meal

4:55 11/6/2026 Welcome back Ghada_Montaser

Log a Meal

Meal Name: Grilled Chicken Salad

Add Ingredients

Cheddar Cheese 10

Ingredients (1)

Chicken Breast (cooked)
30g - 9.3g protein - 0.0g carbs

Protein 9.3 g
Carbs 0.0 g
Estimated calories 37 kcal

Cancel Save Meal

4:57 11/6/2026 Welcome back Ghada_Montaser

Log a Meal

Add Ingredients

Search ingredient

Ingredients (4)

Chicken Breast (cooked)
30g - 9.3g protein - 0.0g carbs

Cheddar Cheese
10g - 2.5g protein - 0.1g carbs

Tomato
10g - 0.1g protein - 0.4g carbs

BBQ Sauce
2g - 0.0g protein - 0.0g carbs

Protein 11.9 g
Carbs 1.3 g
Estimated calories 53 kcal

Cancel Save Meal



Home Dashboard



NutriPulse

NOURISH YOUR INTENT

4:58 [status icons]

Protein 11%
14g / 120g

Edit Meal [X]

Meal Name
Fatoush Salad

Ingredients

[Search] Lemonade 10 [+]

Ingredients (2)

- White Bread
20g - 1.8g protein - 9.8g carbs
- Lemonade
10g - 0.0g protein - 1.0g carbs

Protein 1.8 g
Carbs 10.8 g
Estimated calories 50 kcal

[Cancel] [Save Changes]

4:59 [status icons]

Edit Meal [X]

Ingredients

[Search] [b] [+]

Ingredients (4)

- White Bread
20g - 1.8g protein - 9.8g carbs
- Lemonade
10g - 0.0g protein - 1.0g carbs
- Lemonade
10g - 0.0g protein - 1.0g carbs
- Tomato
50g - 0.5g protein - 1.8g carbs

Protein 2.3 g
Carbs 13.8 g
Estimated calories 64 kcal

[Cancel] [Save Changes]

5:00 [status icons]

Add Meal
Track today's food

Hydration

Sleep Quality
7h 25m

07:25
HOURS MINUTES

[Cancel] [Save]

Protein focus day

[Home] [My Plan] [Trends] [Profile]

5:00 [status icons]

Add Meal
Track today's food

Steps Today
5000 steps

5000

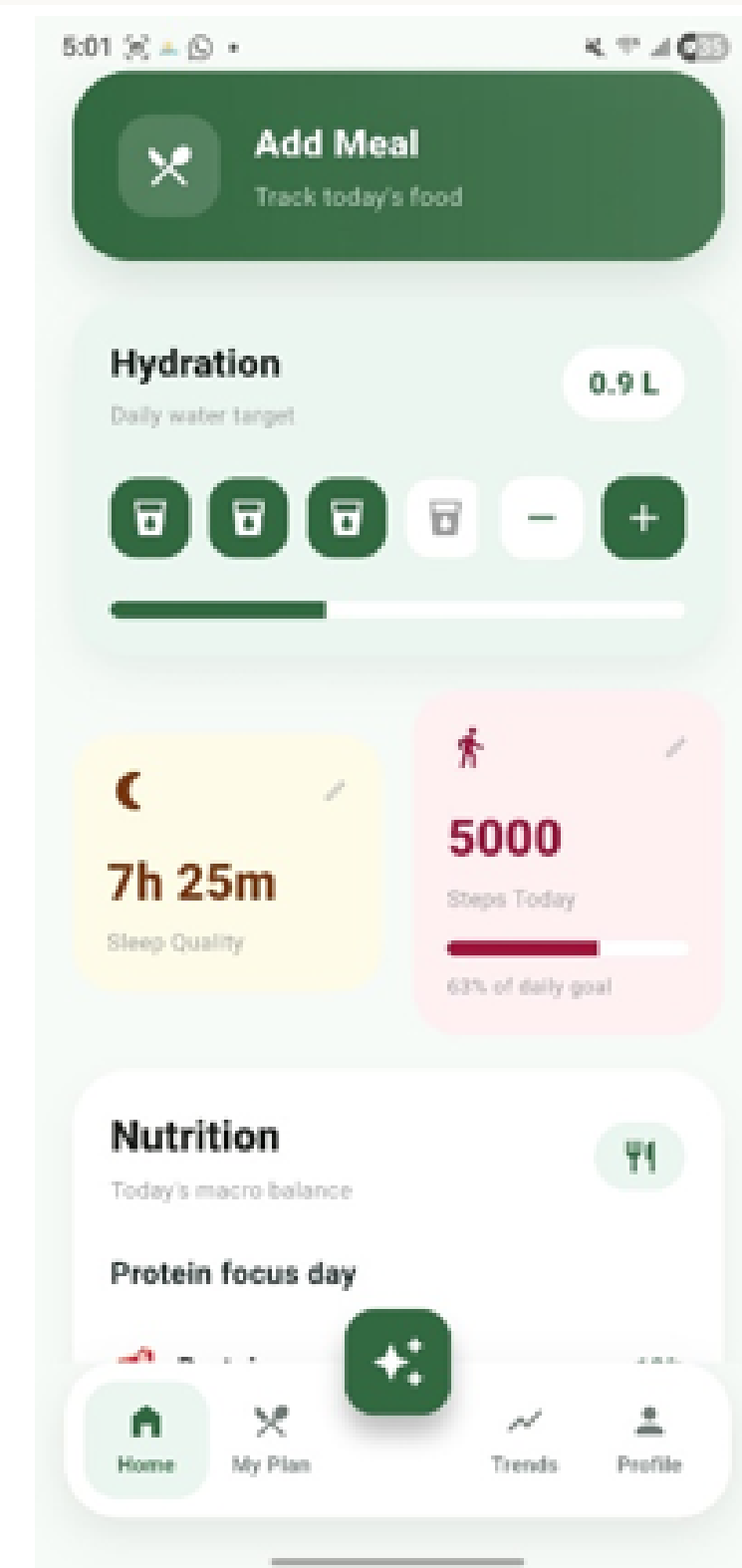
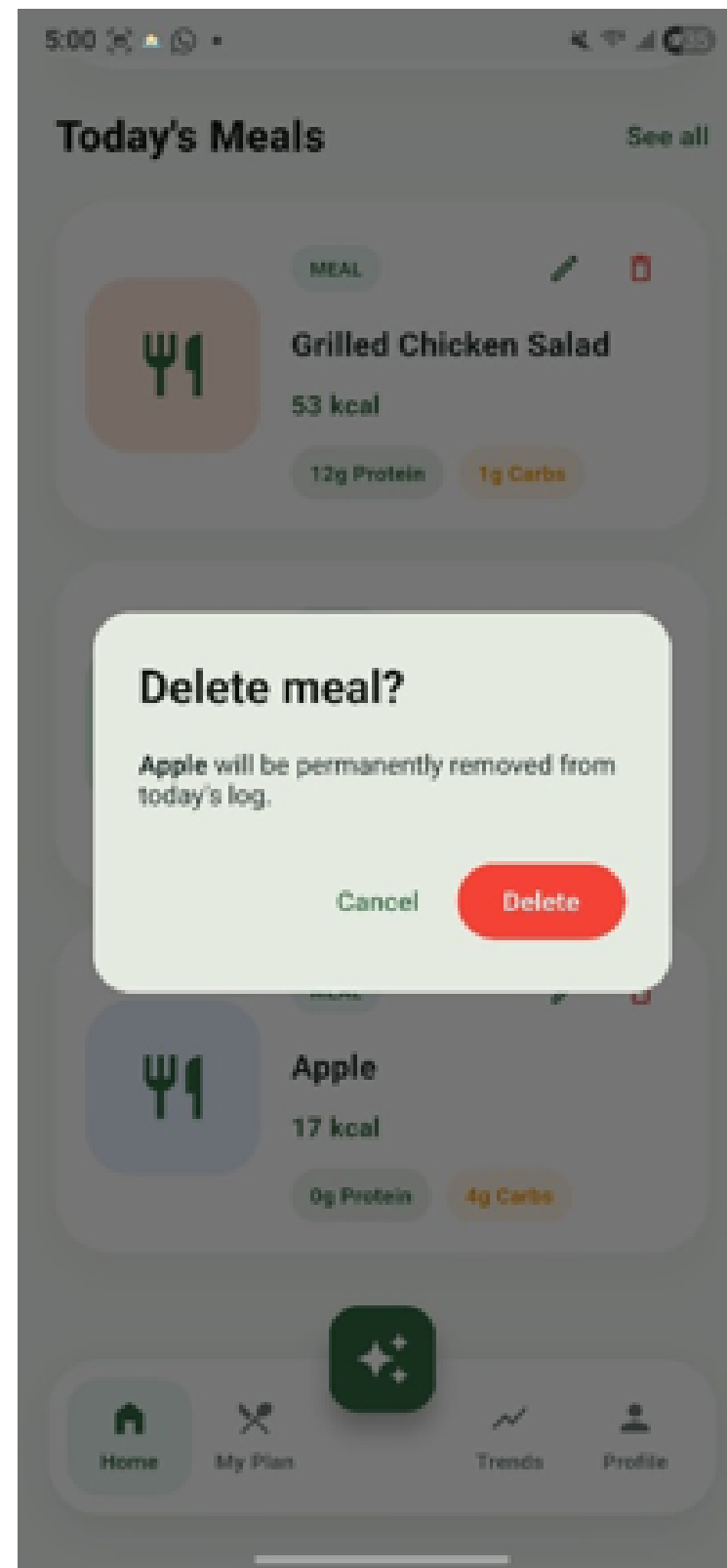
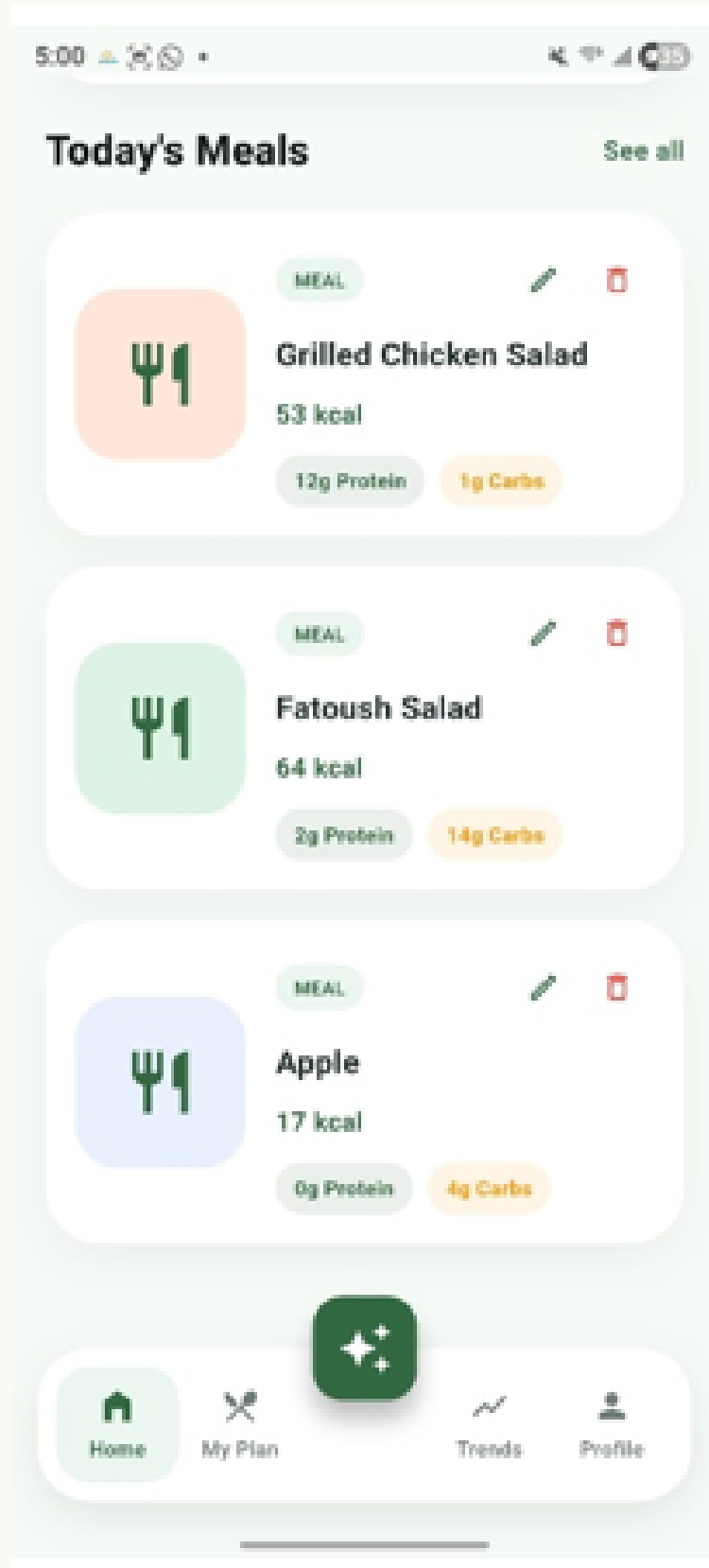
Exact step count
5000

[Cancel] [Save]

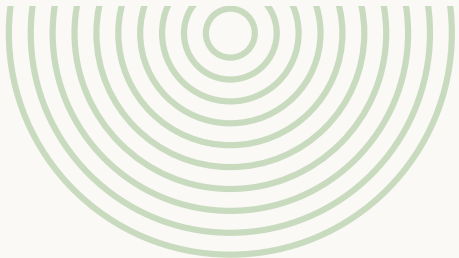
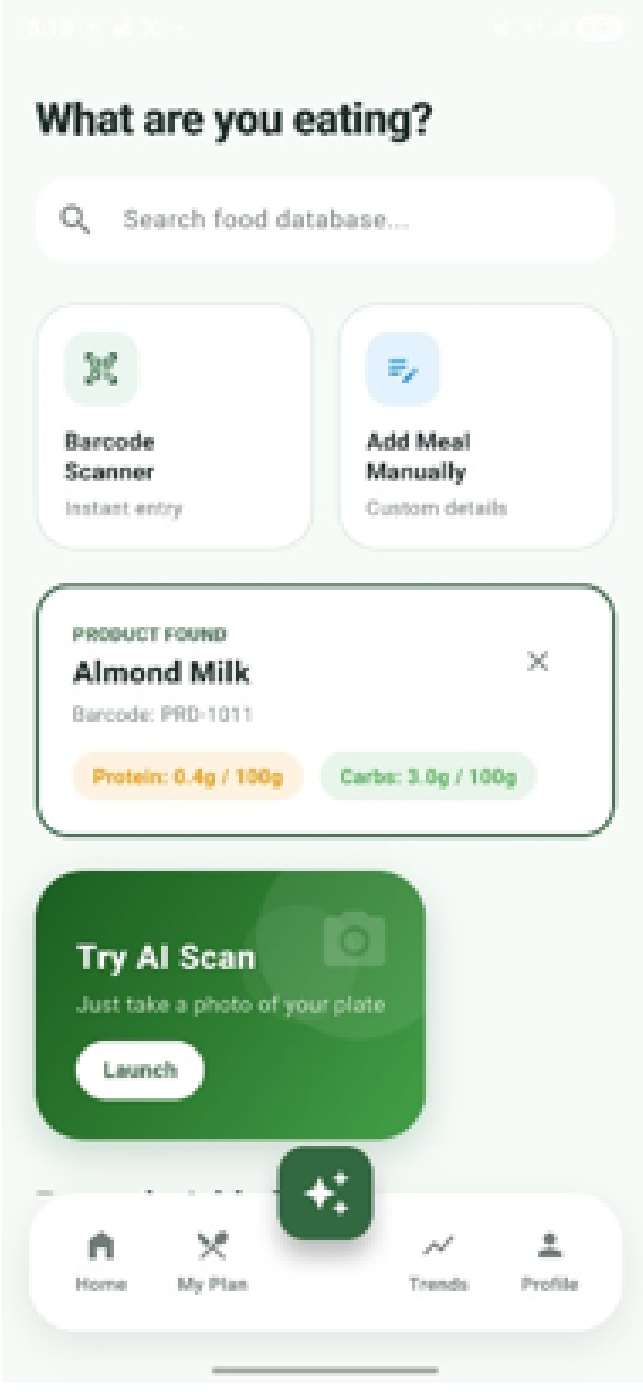
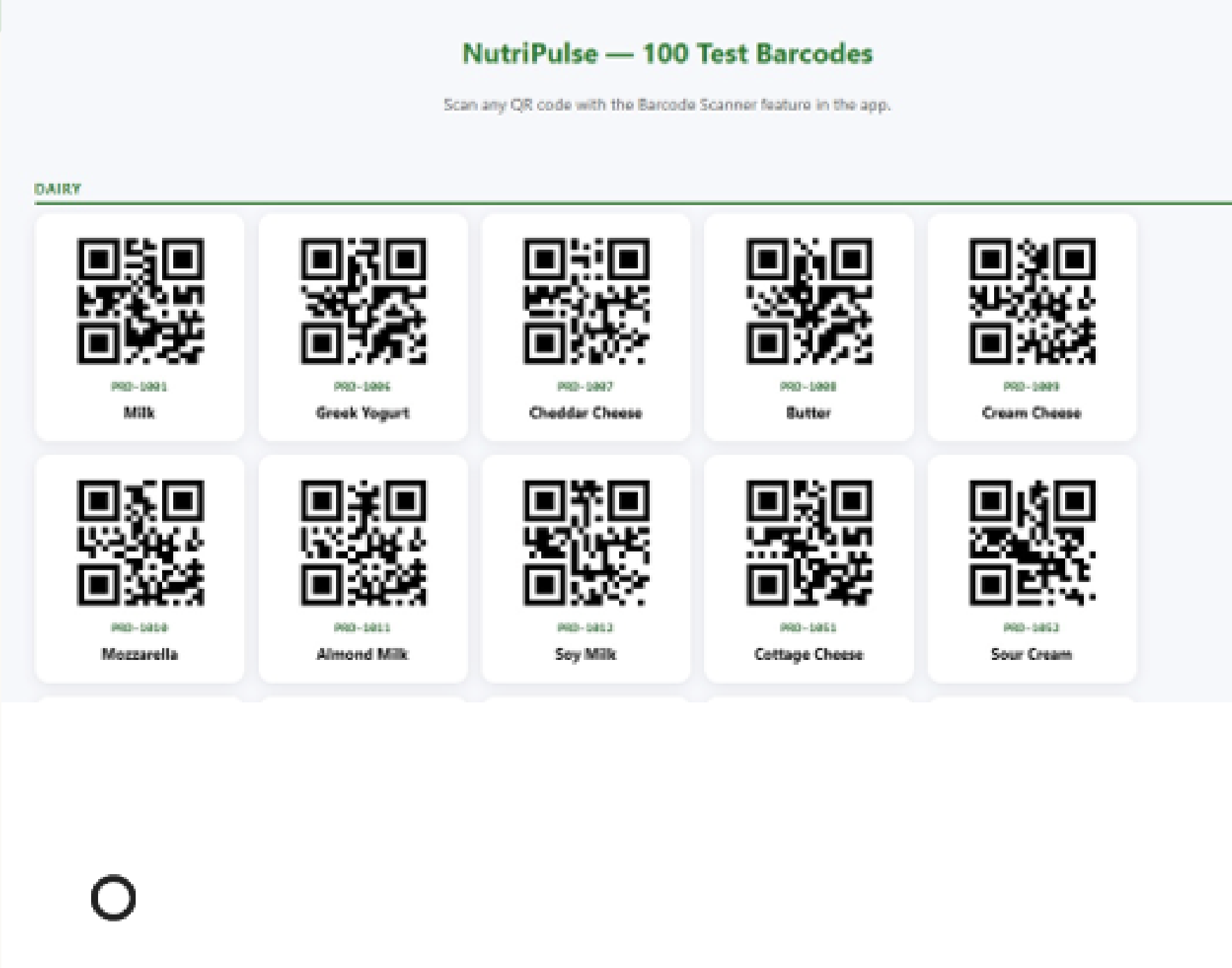
Protein focus day

[Home] [My Plan] [Trends] [Profile]

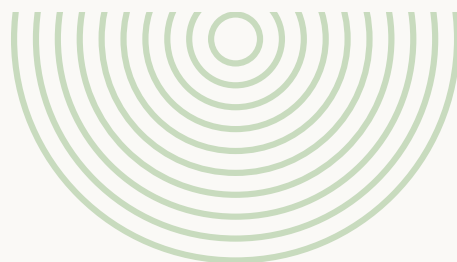
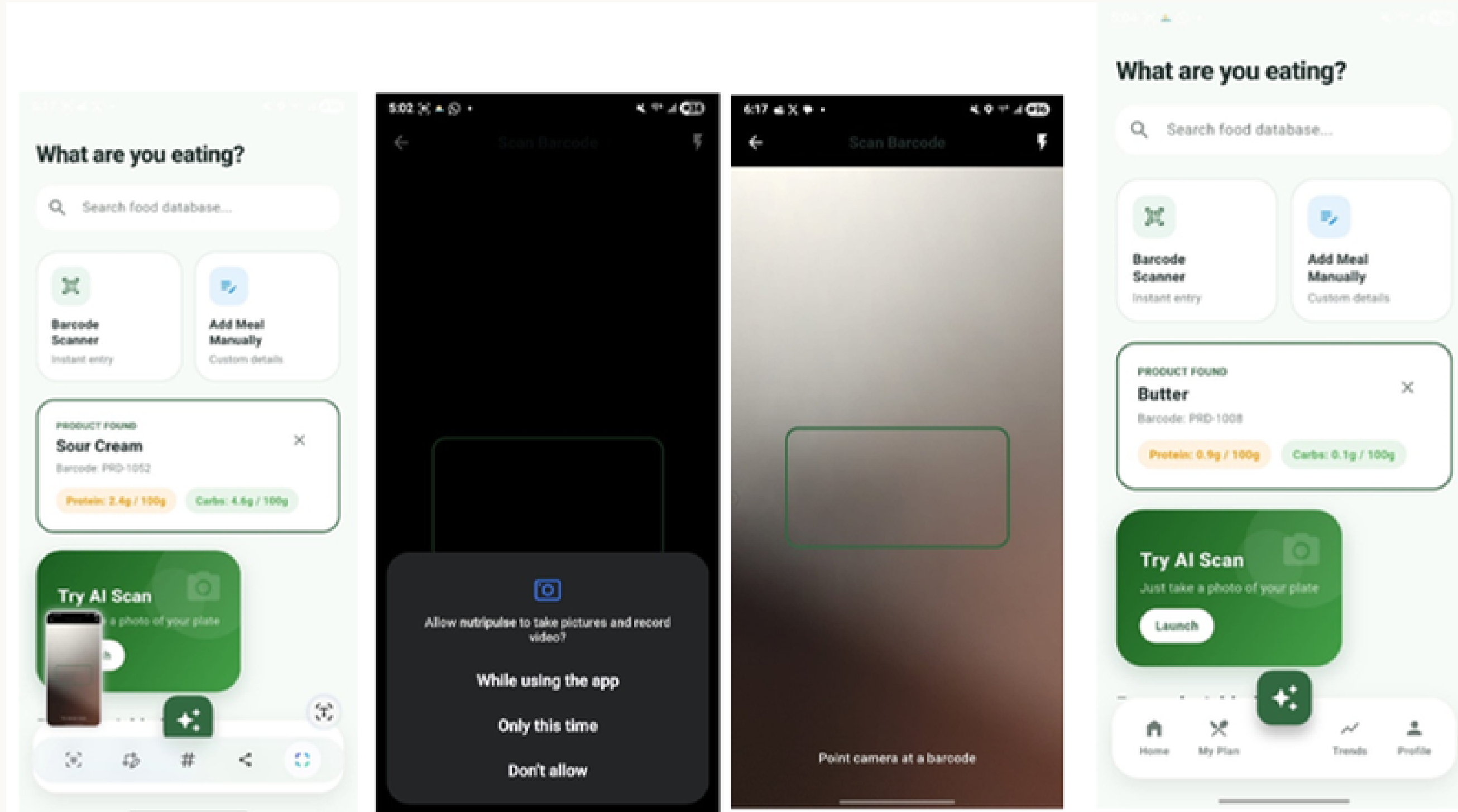
Home Dashboard



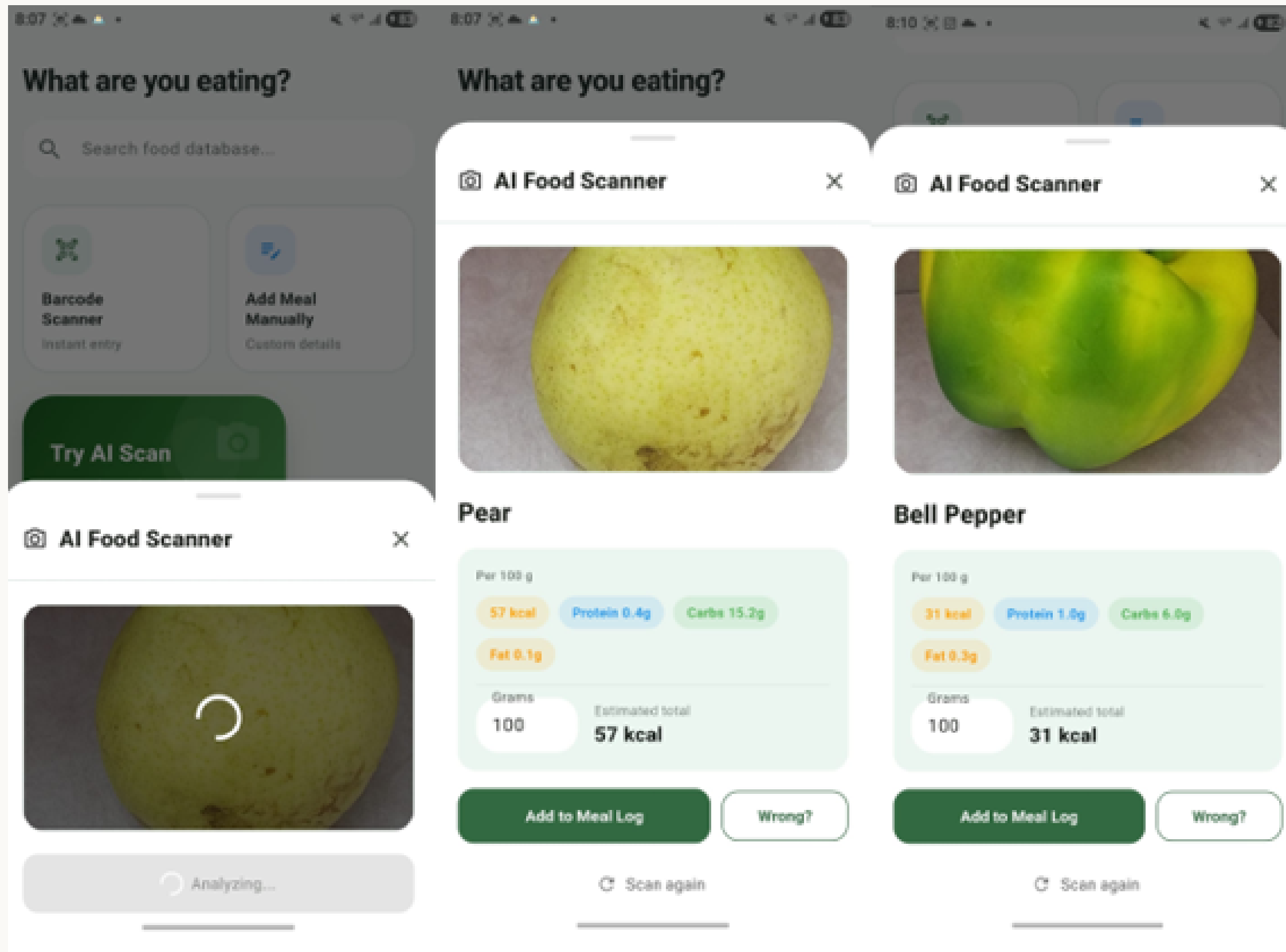
Barcode Scanner



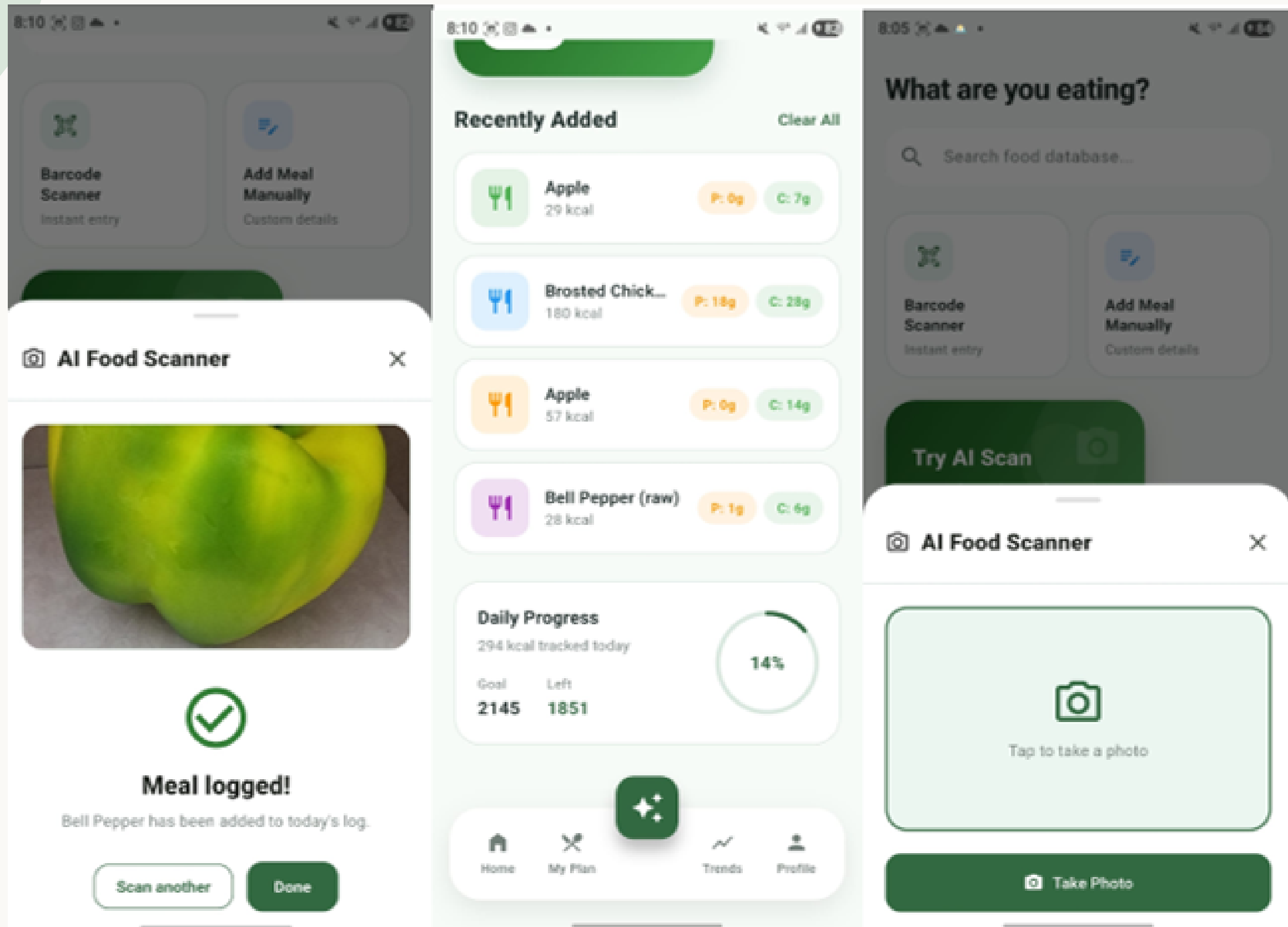
Barcode Scanner



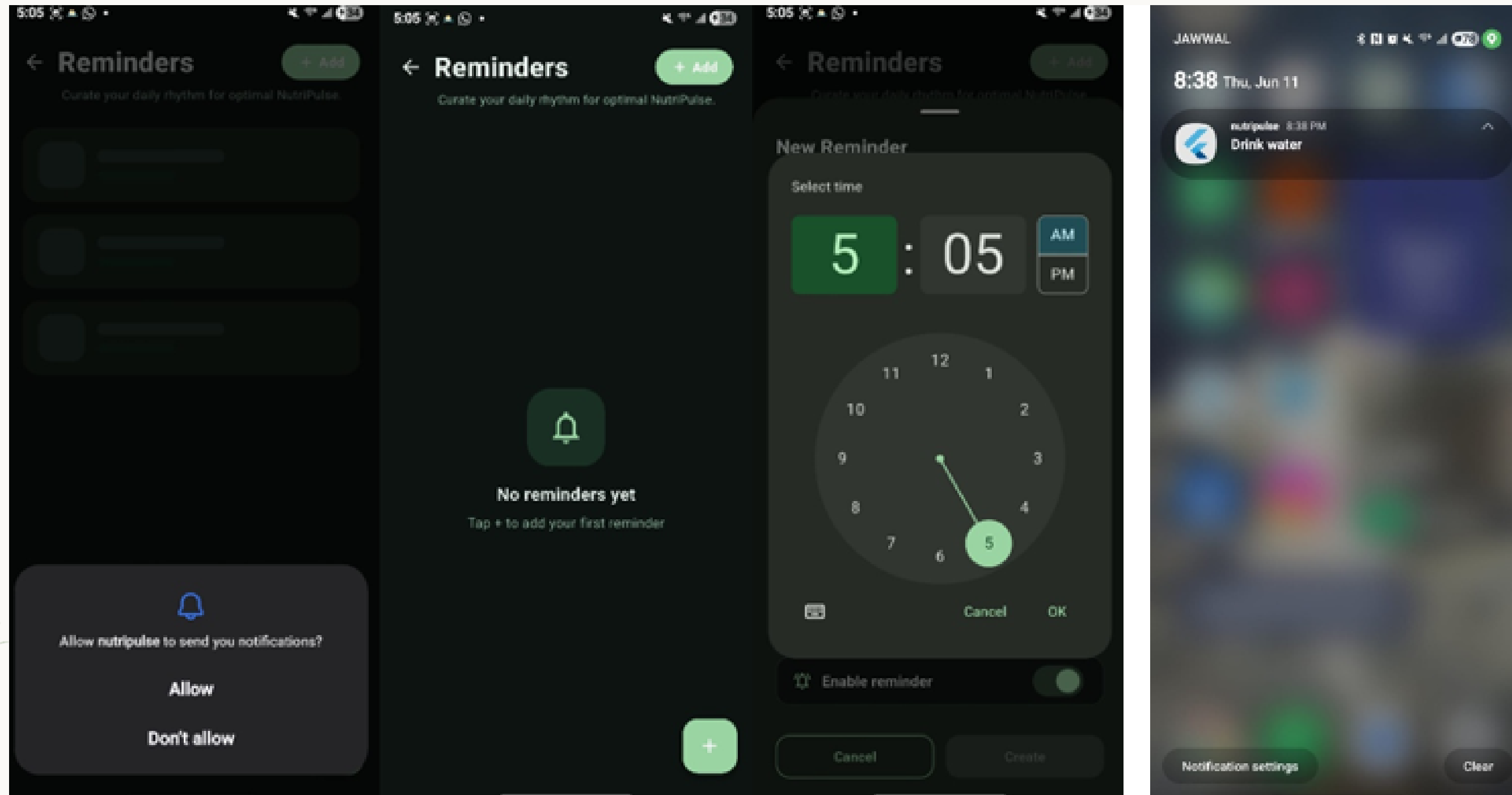
AI Food Scanner



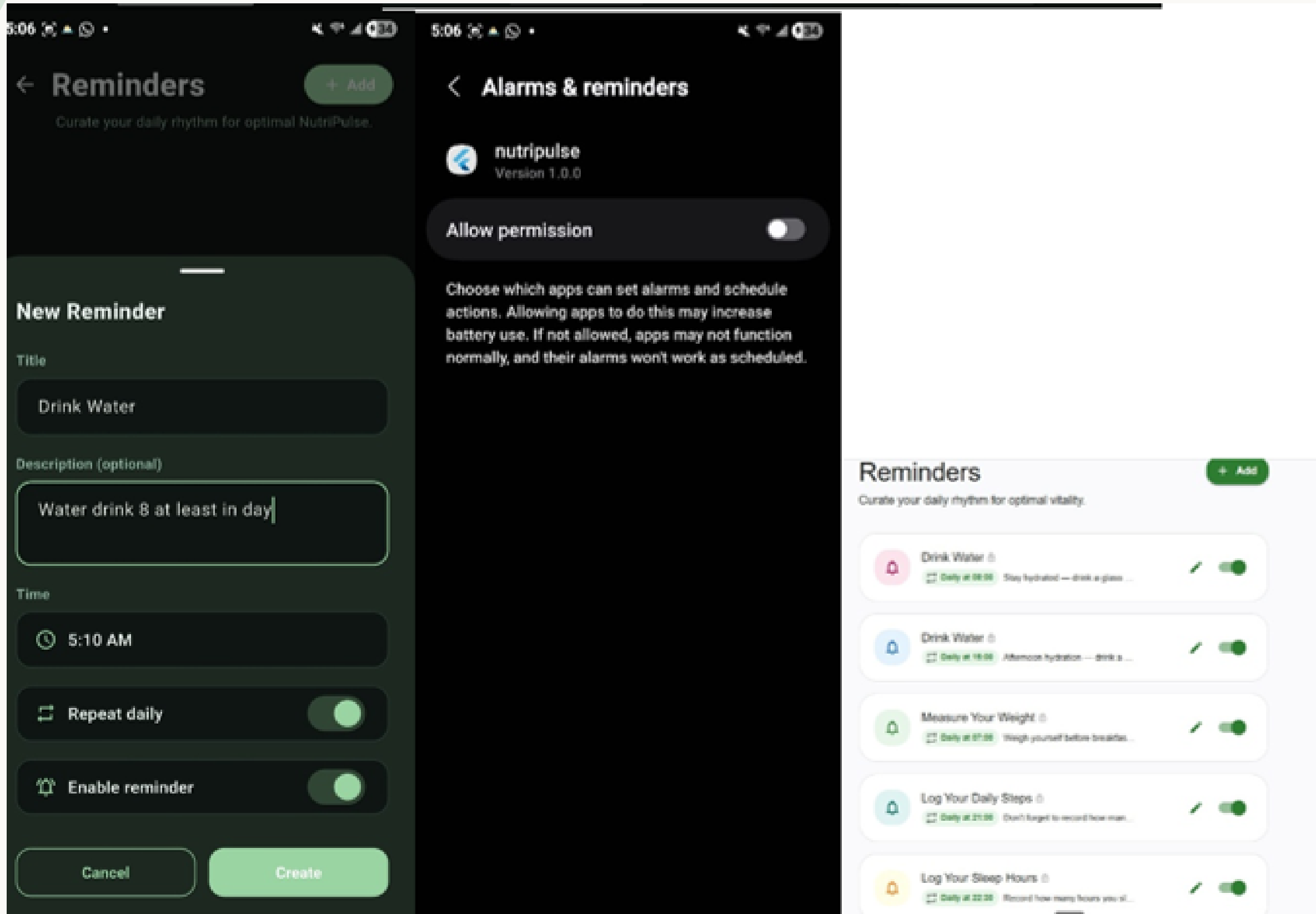
AI Food Scanner



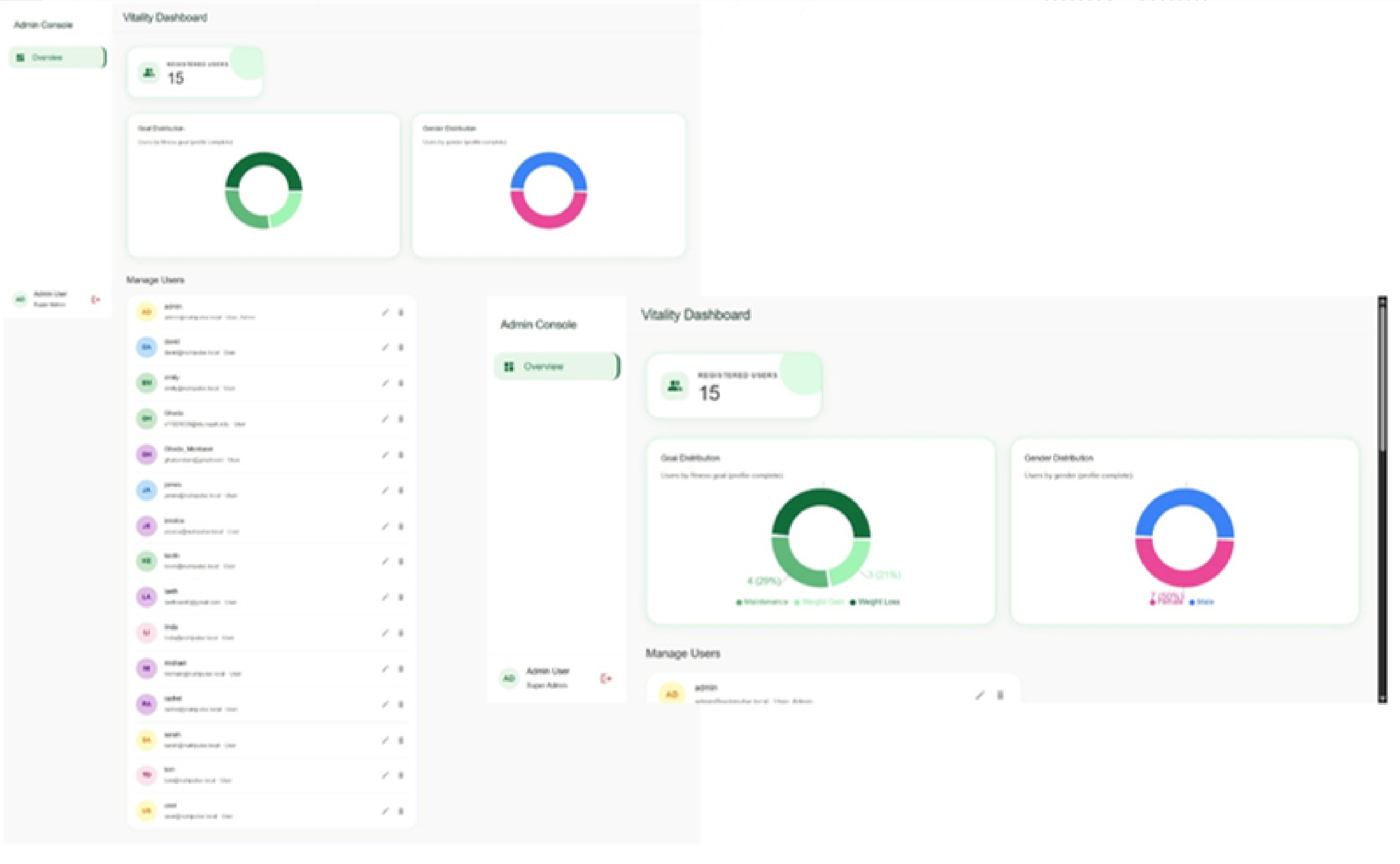
Reminder Management System



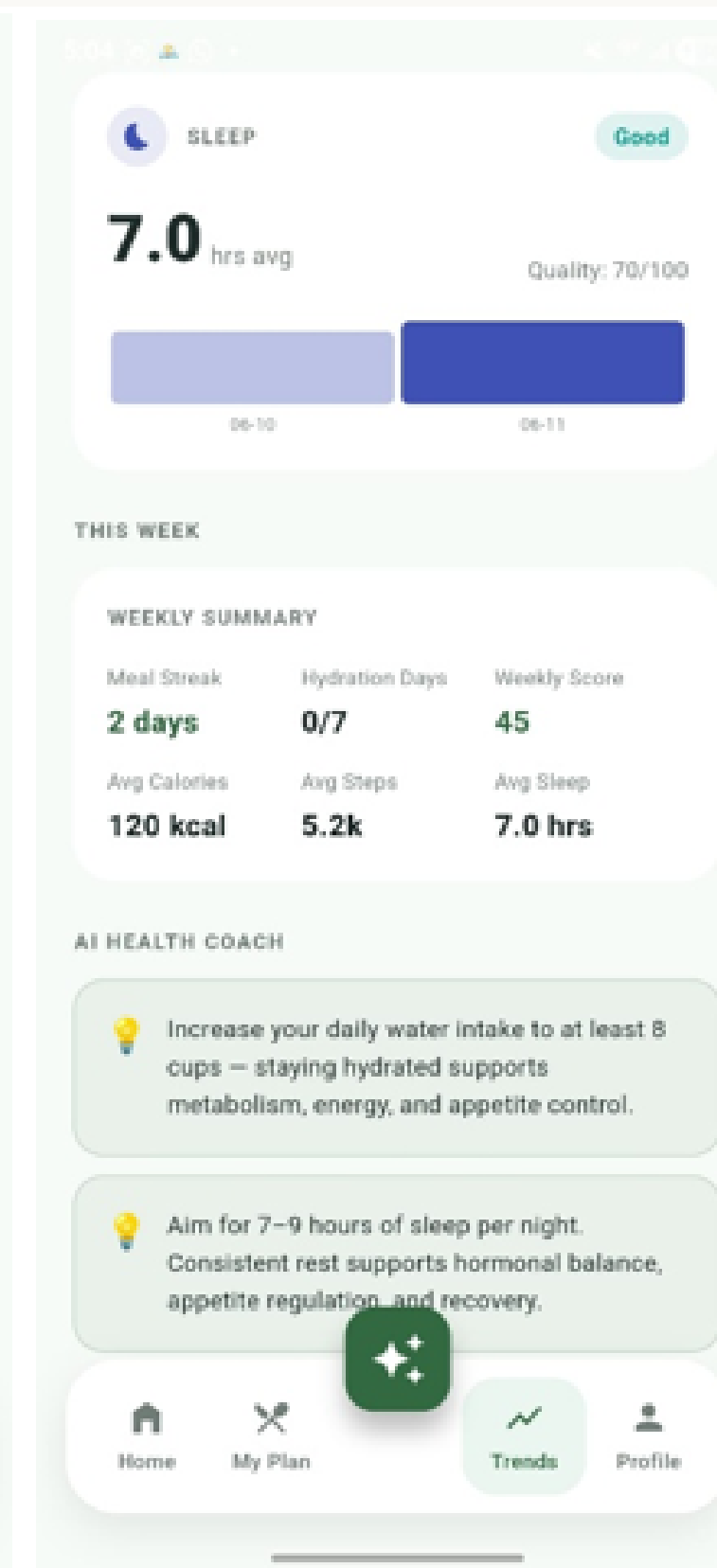
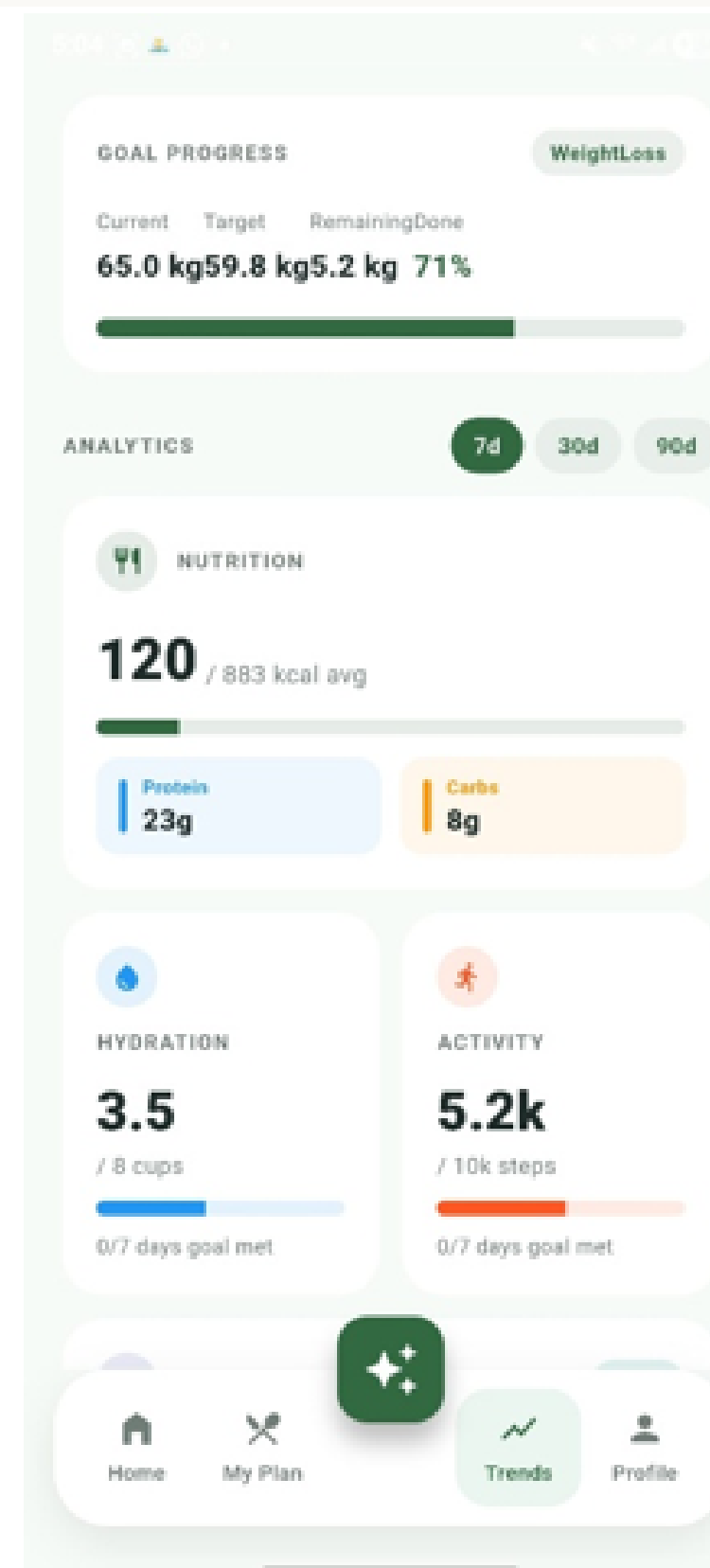
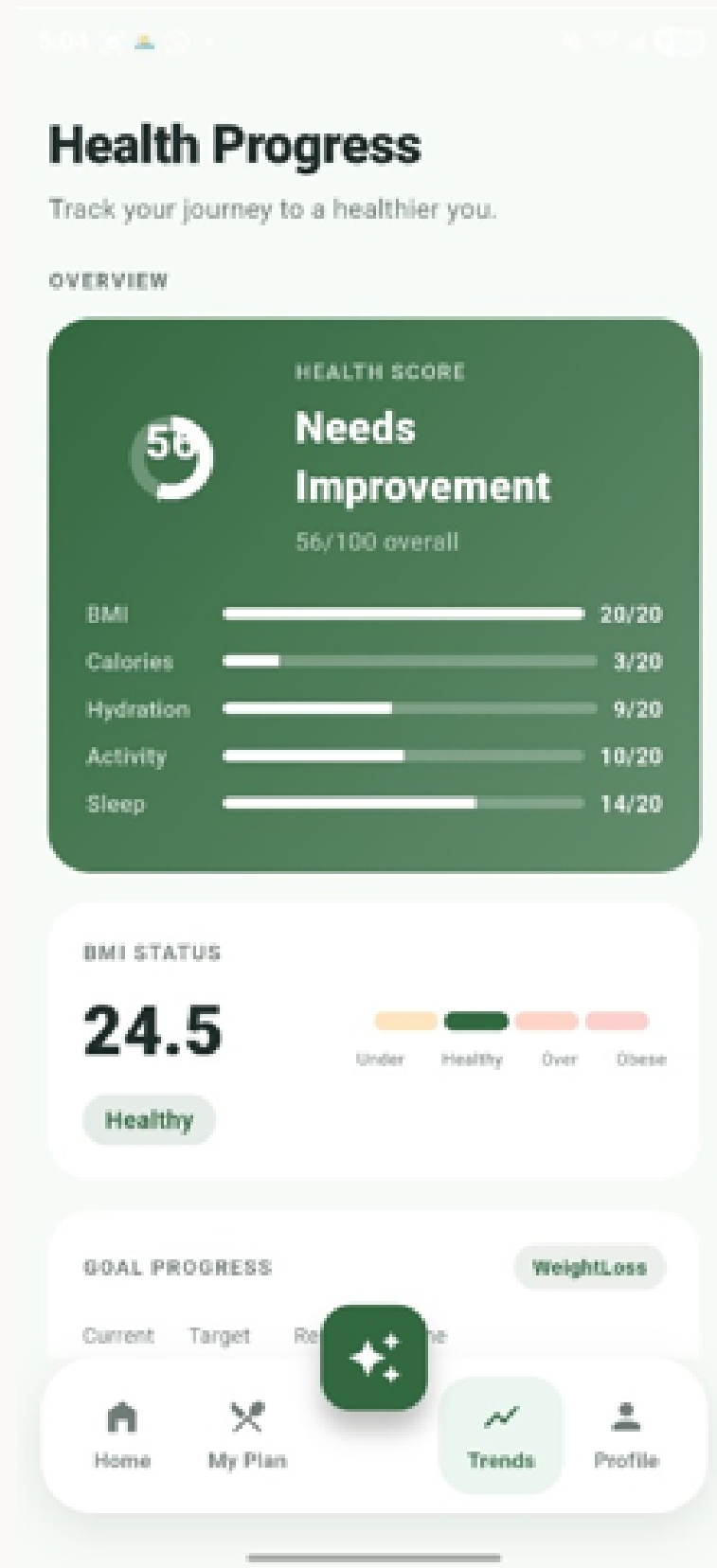
Reminder Management System



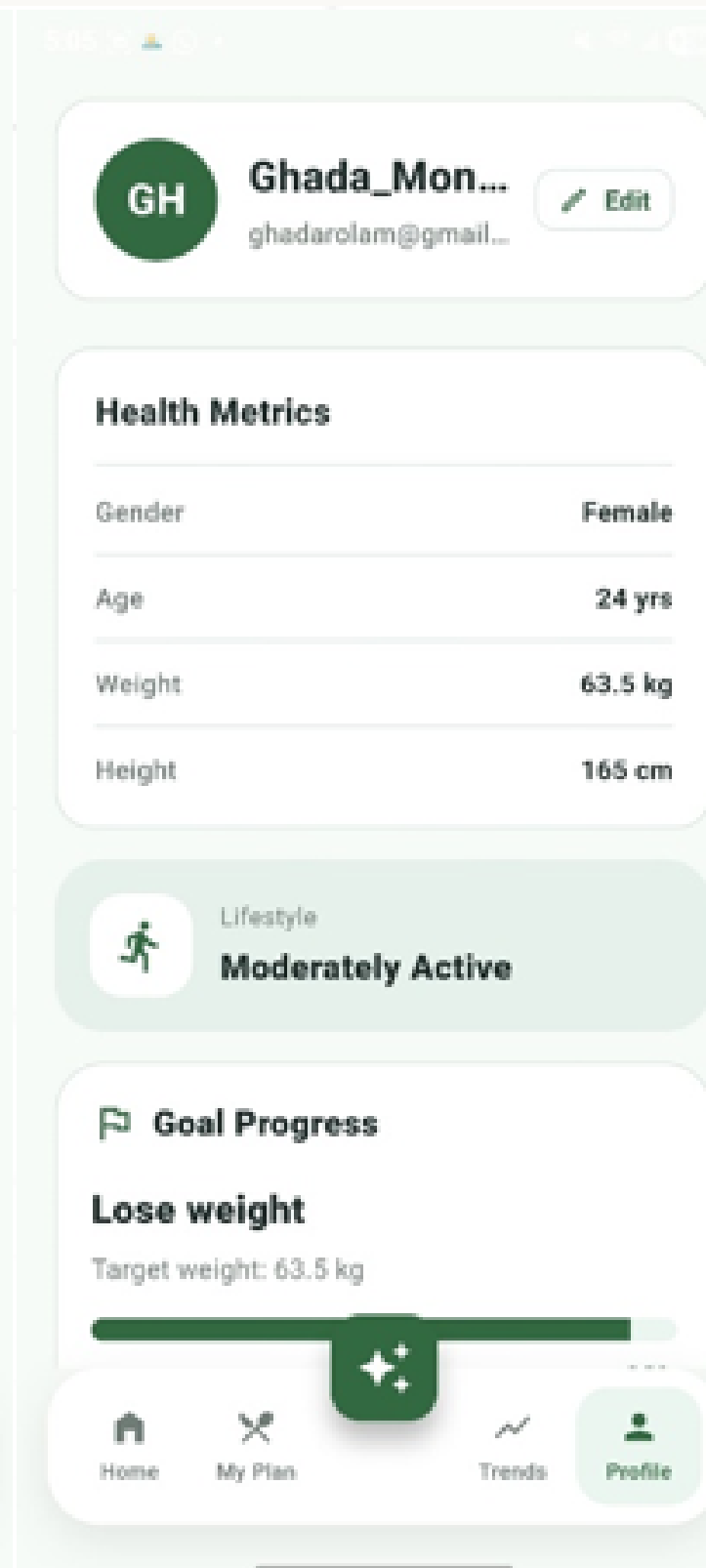
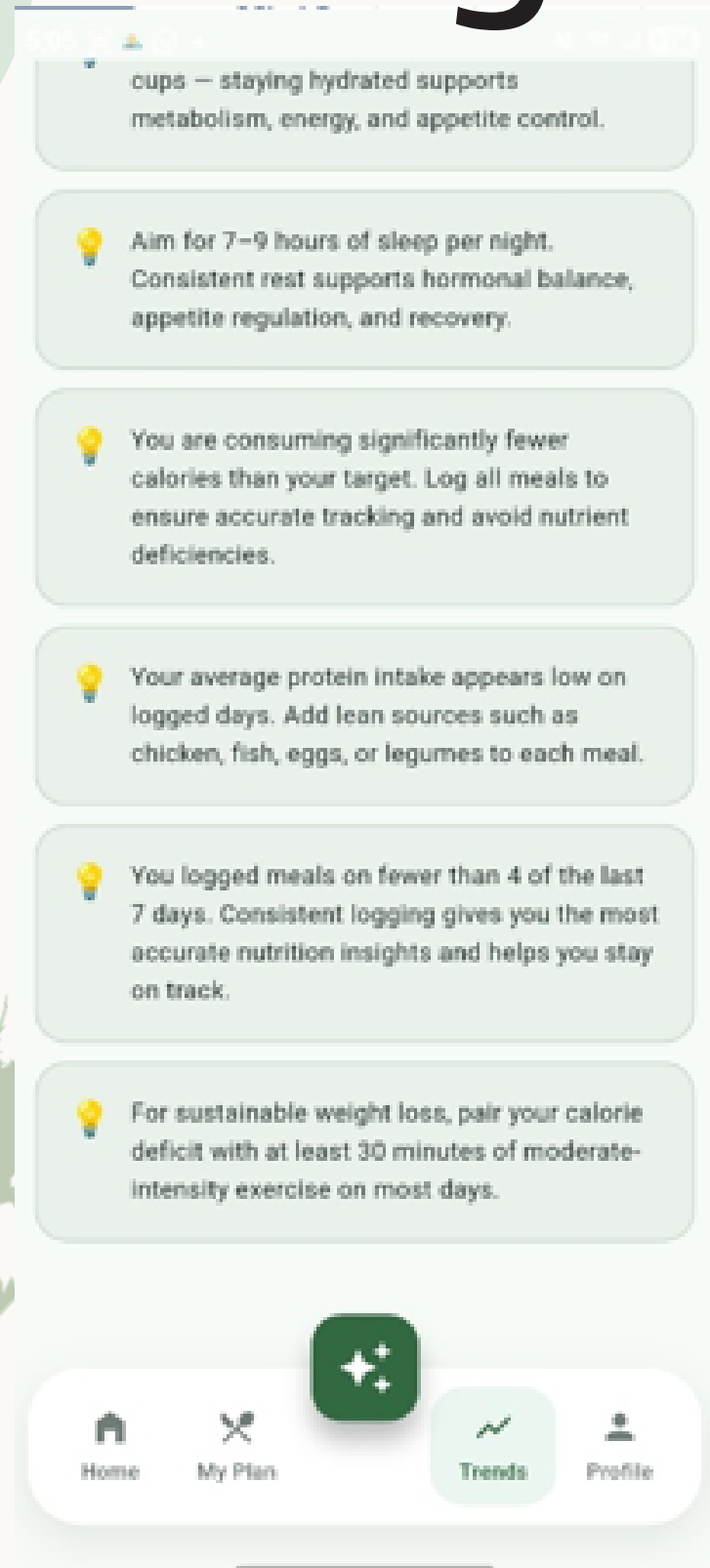
Admin Dashboard



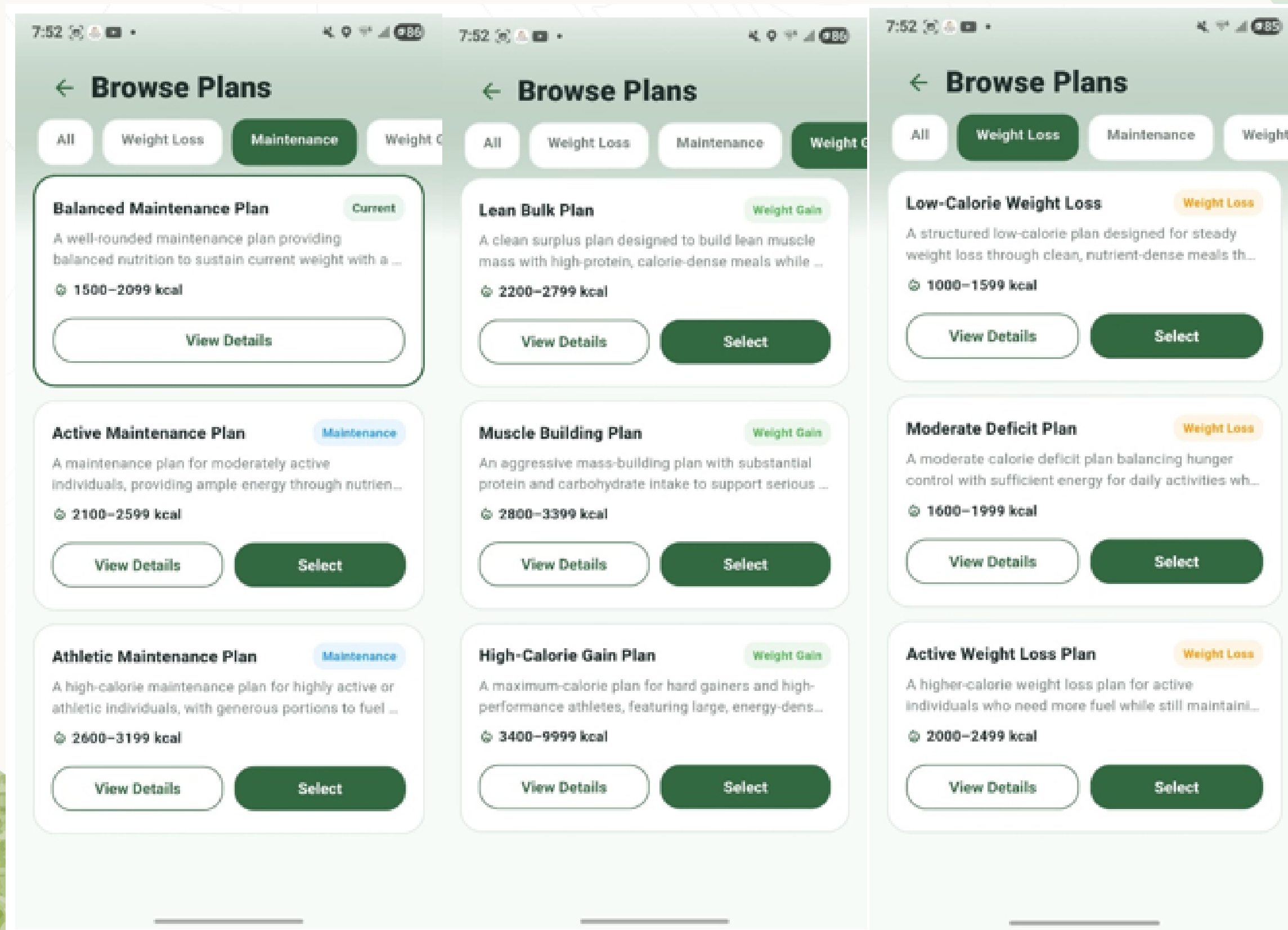
Progress Tracking



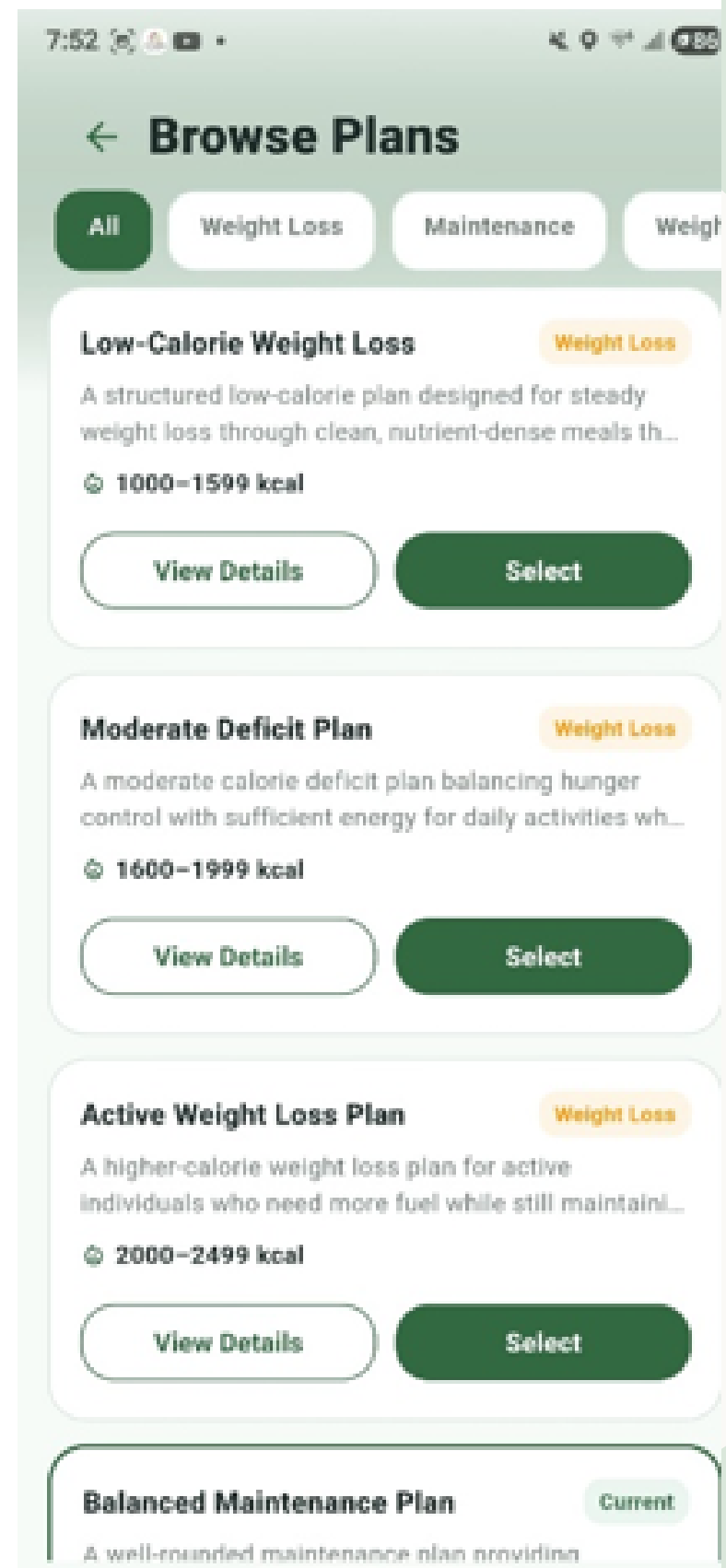
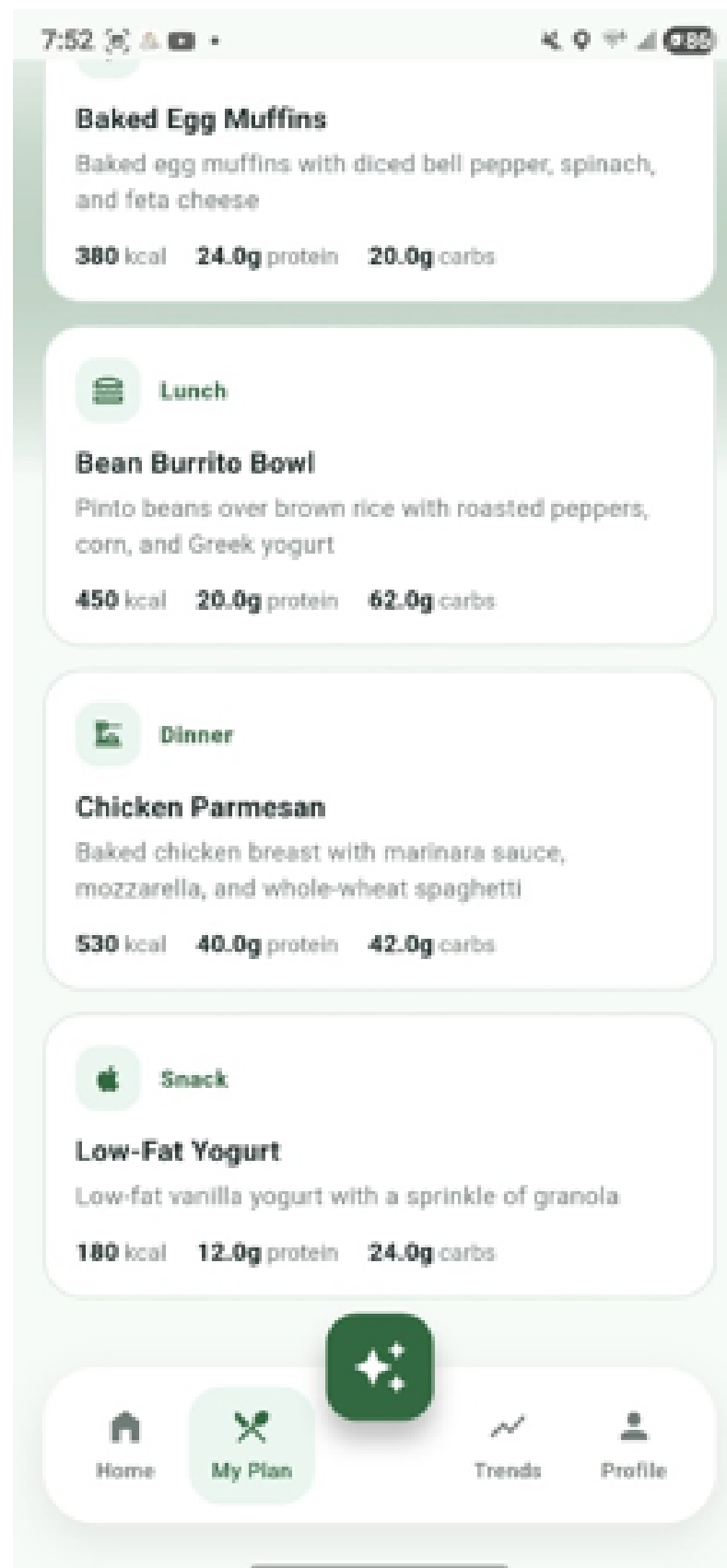
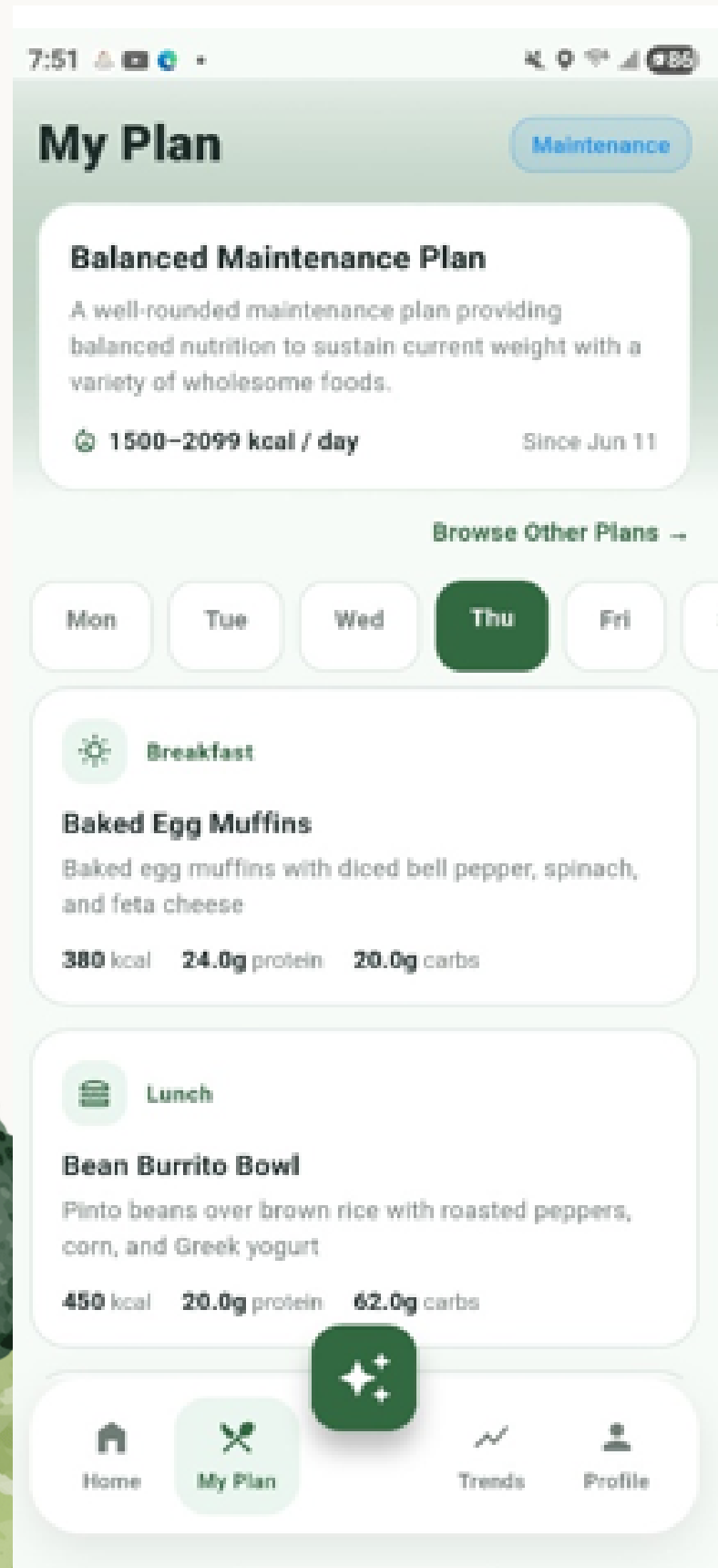
Progress Tracking



Nutrition Plans



Nutrition Plans





AI Model

- Dataset: Fruits-360
- Model: MobileNet V2
- Framework: PyTorch
 - Optimizer: Adam
- Loss Function: Cross Entropy Loss
- Output: Food Recognition & Nutrition Analysis





Future Work

- Expanding the food recognition dataset
- Improving model accuracy
- Integrating wearable health devices
- Supporting multilingual interfaces
- Developing more advanced machine learning models for personalized health recommendations





Any questions ?





thanks you

