2023 Mobile Programming
Team Project Proposal

Content

Background

1 Reducing Food Waste

Many households often forget about the food ingredients they put in the refrigerator, leading to a significant amount of food spoilage. By tracking consumption dates and sending notifications about impending expirations, we anticipate that ingredient utilization can be increased.

2 Ensuring Health and Safety

By providing information about expiration dates and tracking food stock in the refrigerator, we can prevent the consumption of expired or spoiled ingredients. This enhances the convenience of recognizing the freshness and safety of ingredients.

3 Increasing Ingredient Utilization

For those who live alone or do not cook often, there's a tendency to underutilize ingredients at home, which eventually leads to food waste. By providing recipes that can be made with the ingredients in the refrigerator, we can increase ingredient utilization.

4 Providing Convenience

While there are apps that provide expiration date information, they lack voice recognition features and require users to manually enter the expiration dates or upload photos, which can be cumbersome. Our service can help manage ingredients conveniently through voice recognition.

Introduction Application

Application Name

Fridge
Guardian

Fridge
Guardian

Goal

To help users efficiently manage their refrigerator by tracking the expiration dates of ingredients and suggesting recipes based on available ingredients

Introduction Application

Basic Description

1. A notification service that sends alerts as the expiration date of the food ingredients approaches. Users can register the information of ingredients either by typing directly using the keyboard or through voice recognition

2. A recipe application that provides recipes which can be prepared with the ingredients registered by the user.
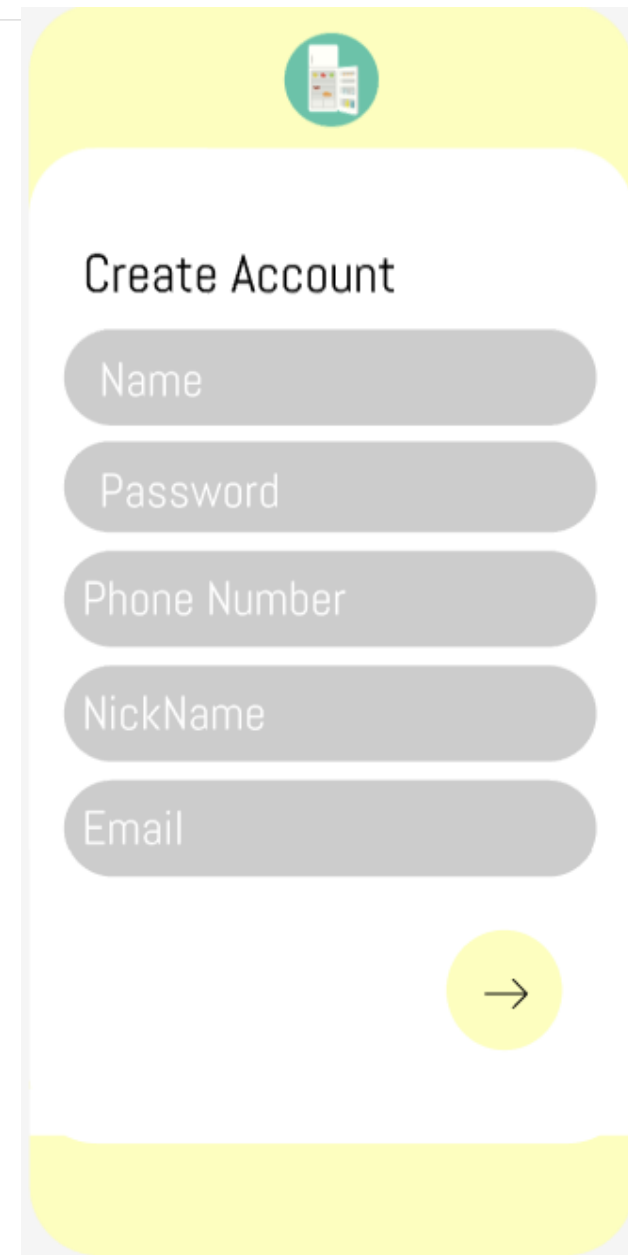
3. A recipe sharing community

Target User

1. People who want to reduce food waste, utilize their ingredients,

2. People who want to explore new recipes, share their own recipes with a community.
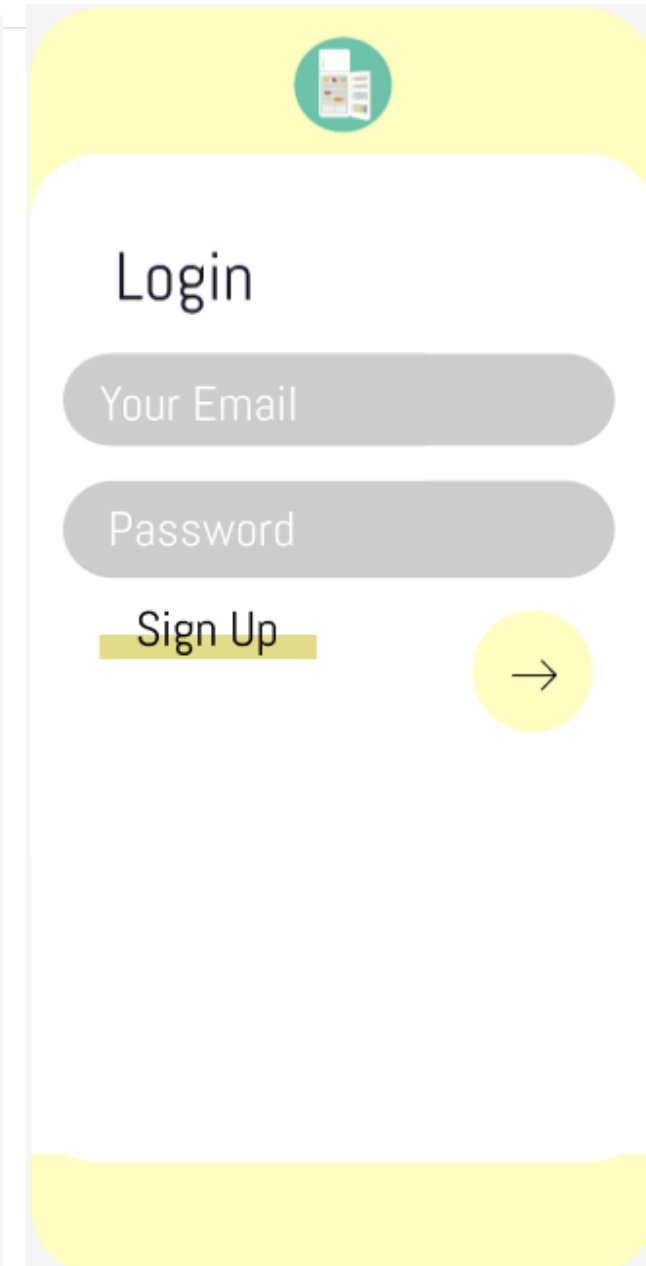
Function explanation with Basic UI

Create Account

- With Name, Password, Phone Number, NickName, Email, user can create account
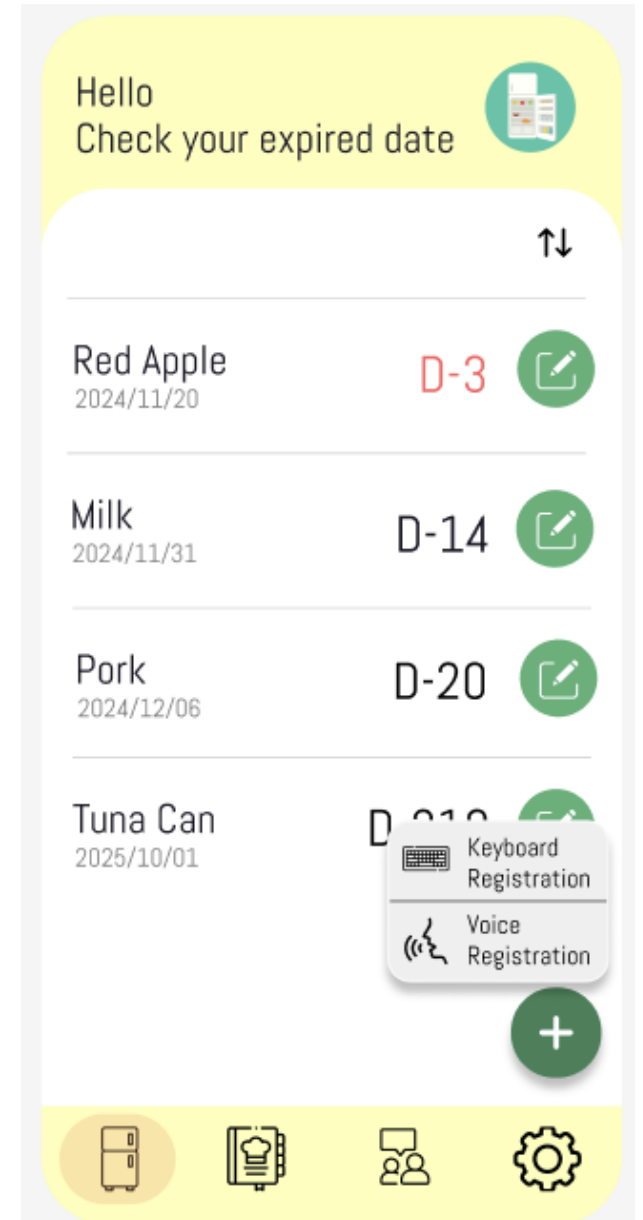
Function explanation with Basic UI

Date Notification

- User can know the expiration date of the register foods

Register Ingredients

- Keyboard Registration
- Voice Registration

Function explanation with Basic UI

Keyboard Registration

Voice Registration

Function explanation with Basic UI

Recipe Search with Dish name

- User can search Recipe with Dish Name
- User can see which recipes have the most bookmarks(hot 10 Recipe)

Function explanation with Basic UI
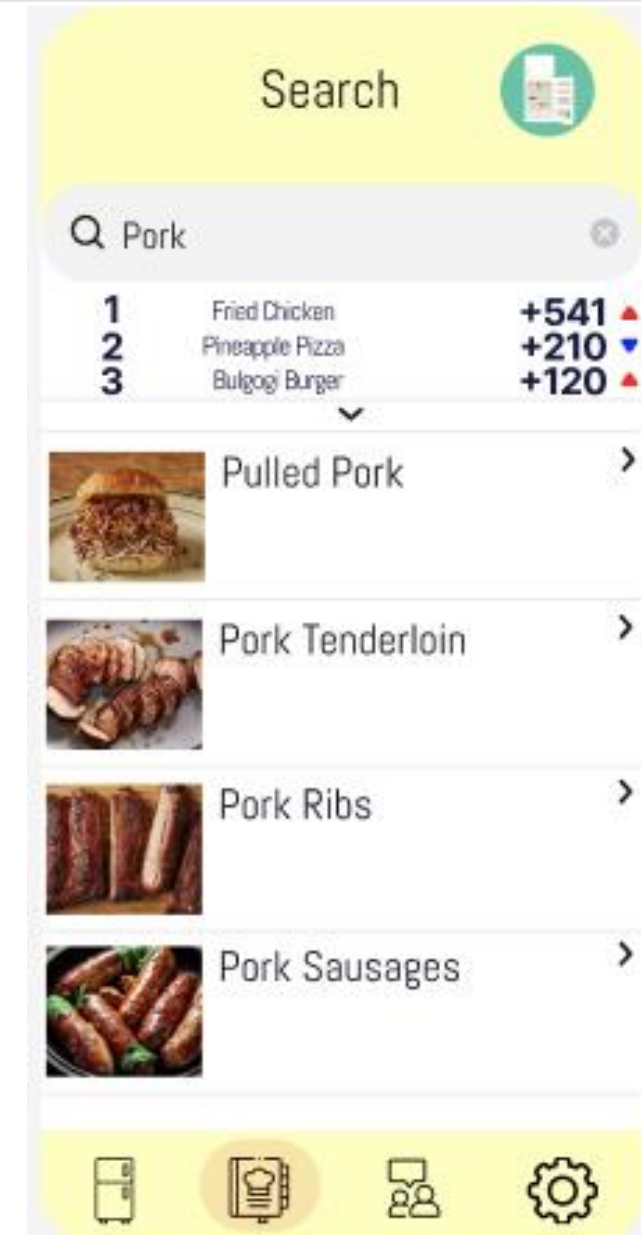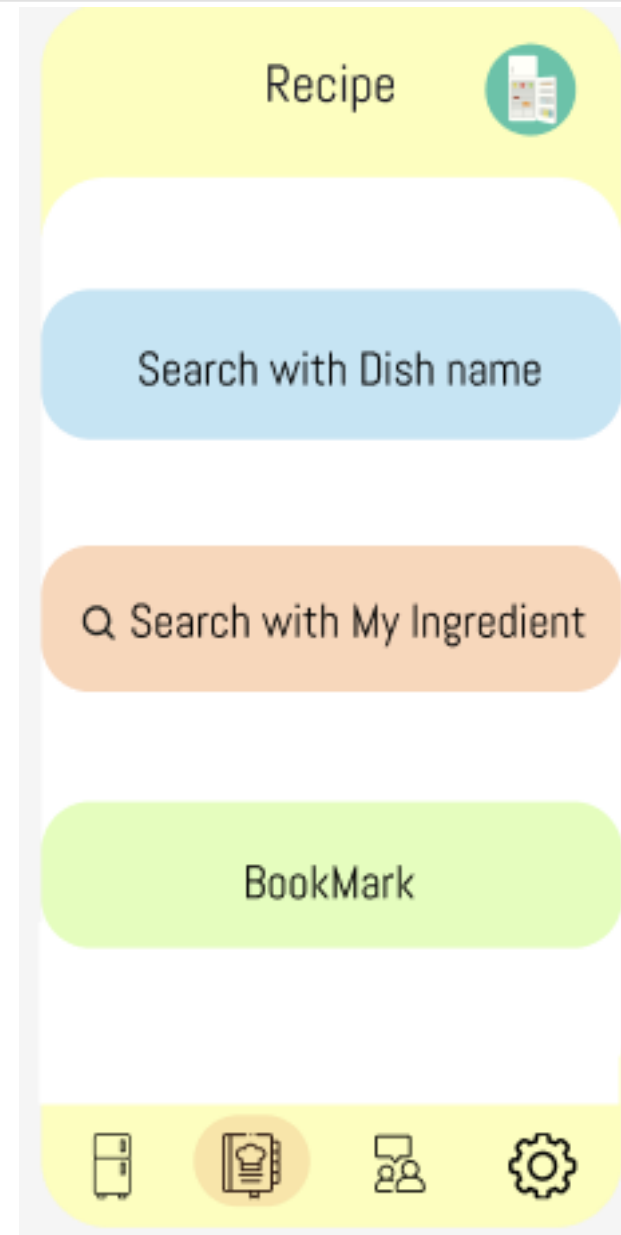
Recipe search with ingredients

- User can search Recipe with customer's Ingredient

- When users select ingredients they have registered, the app suggests recipes that can be made with those selected ingredients.
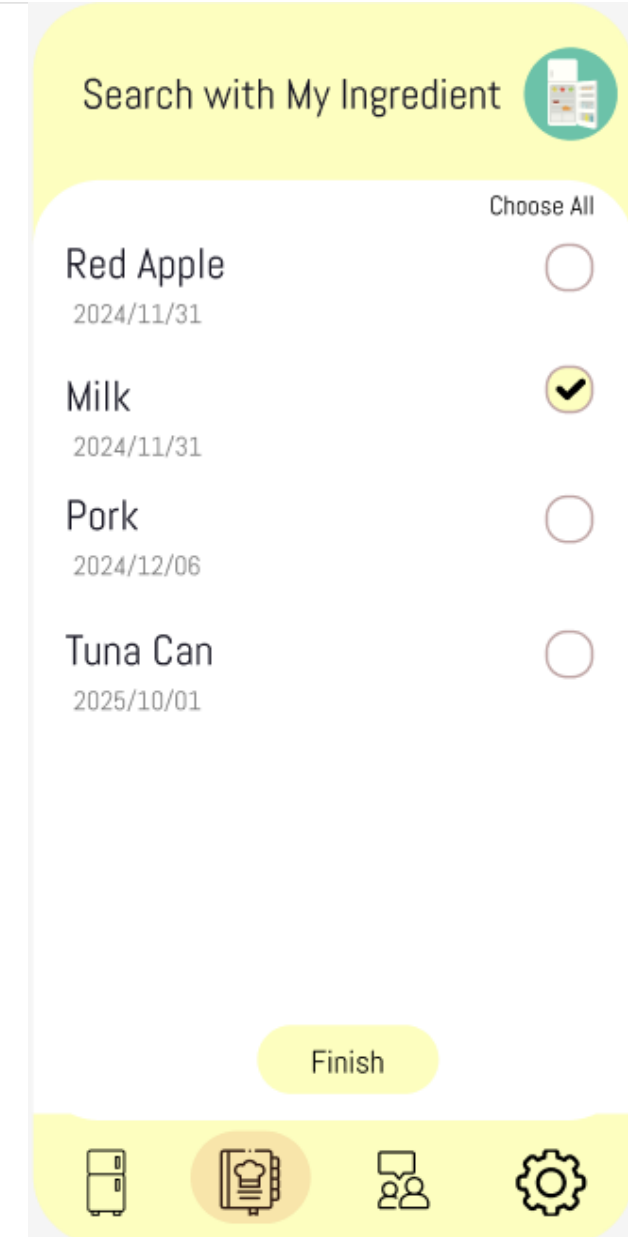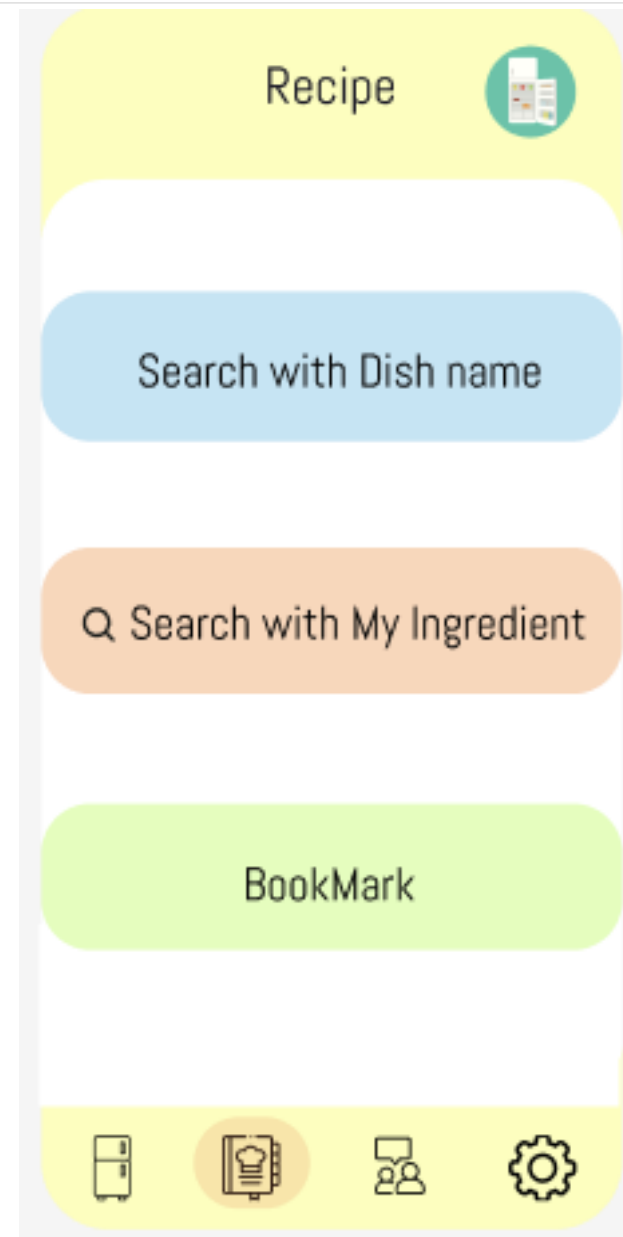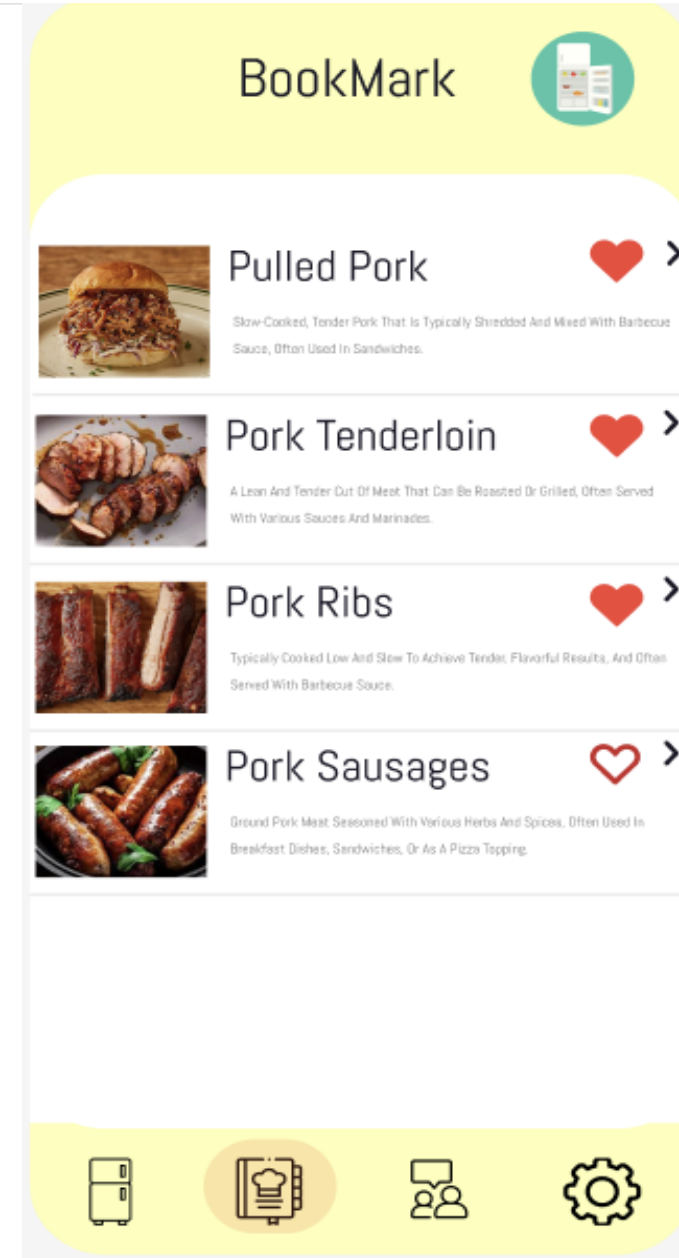
Function explanation with Basic UI

Detail Recipe

- Users can view information about the cooking process, ingredient introduction, and cooking time for a specific recipe.

BookMark

- Users can add recipes they want to bookmark by pressing the heart button.
- Bookmarked recipes can be viewed in the user's Bookmark page.
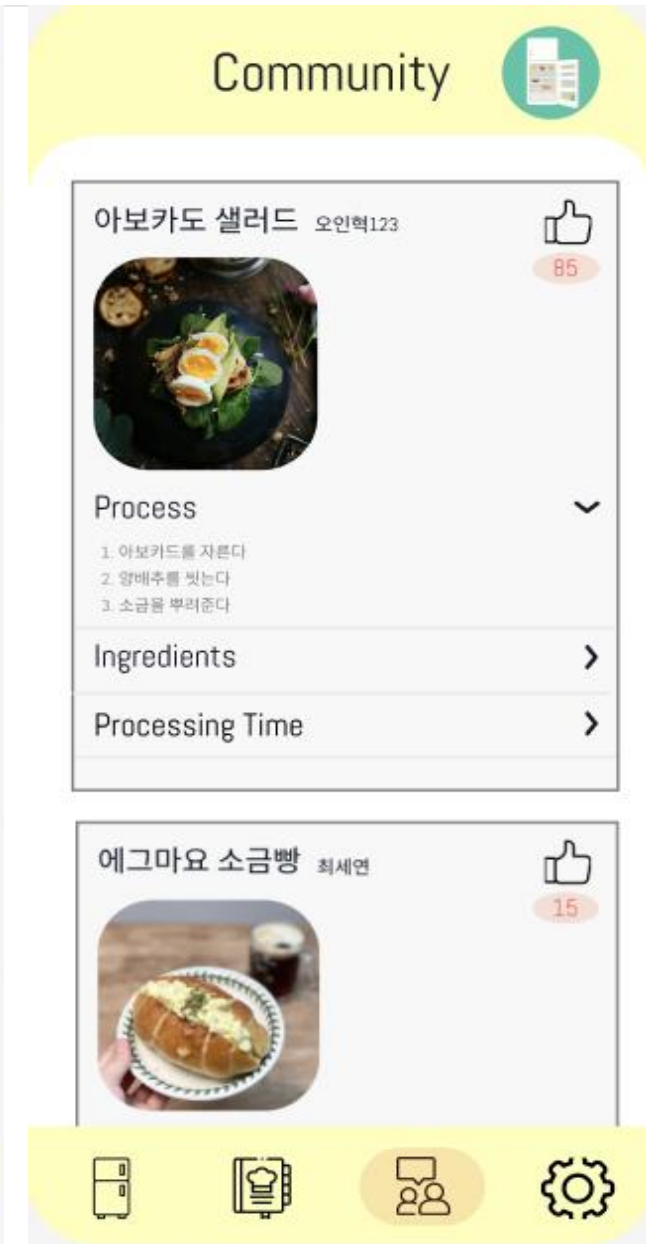
Function explanation with Basic UI

Community Main

- User can check related foods by clicking on the food category.
- User can check which recipes have been liked the most by people.

Community

- Users can view recipes posted by people in a designated form and upload their own recipes.

Function explanation with Basic UI

MyPage

- User can check and edit their information
- User can withdraw from this service

Expectation Component

User Authentication

- Firebase Authentication : https://firebase.google.com/docs/auth

Database

- Firebase Store : https://firebase.google.com/products/firestore

Storage

- Firebase Storage : https://firebase.google.com/products/storage

Notification Service

- Firebase Cloud Messaging (FCM) : https://firebase.google.com/products/cloud-messaging

Date Selection

- DatePicker Component

Design User Interface

- Material Design Components (MDC)
  : https://m2.material.io/develop/android/docs/getting-started

Expectation Component

Organize converted text into list

- OpenAI API SDK : https://beta.openai.com/docs/api-reference/create-completion

Voice recognition/Speech-to Text

- **Android's SpeechRecognizer class :**
https://firebase.google.com/docs/auth

Network Communication

- Volley : https://developer.android.com/training/volleyRecyclerView

Ingredient List View

- RecyclerView: https://developer.android.com/guide/topics/ui/layout/recyclerview

Local Data Management

- Shared Preferences: https://developer.android.com/training/data-storage/shared-preferences

Expected Timeframe

Work	W9 (11 / 06) Proposal	W10 (11 / 13)	W11 (11 / 20)	W12 (11 / 27) Work-In Progress	W13 (12 / 04)	W14 (12 / 11)	W15 (12 / 18) Final
Development — Customer Registration and Verification							
Log In / Out Process							
Account Management							
List Management							
Notification							
Ingredient Registration Mangement							
Recipe Management							
Community							
Writing a report and Beta testing							

Role & Responsibilites

AA
- Git Management,
- Main(Ingredients, Expiration, Registration) Development

BB
- UI Design, Database Design
- Recipe Activity(Search, Register, Bookmark) Development

CC
- Community Development
- Account(Login in/out, MyPage) Development

Thank you