

# Recipe Finder

Show and Tell 2

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Group 19

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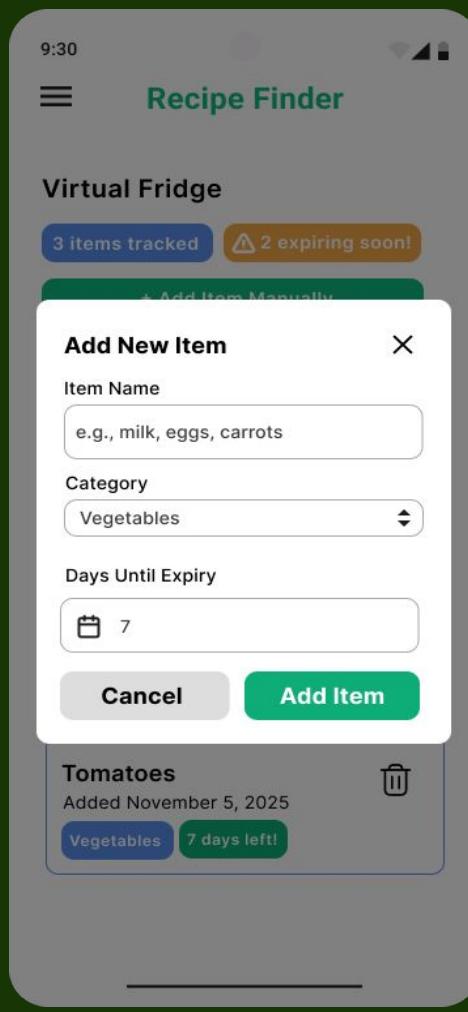
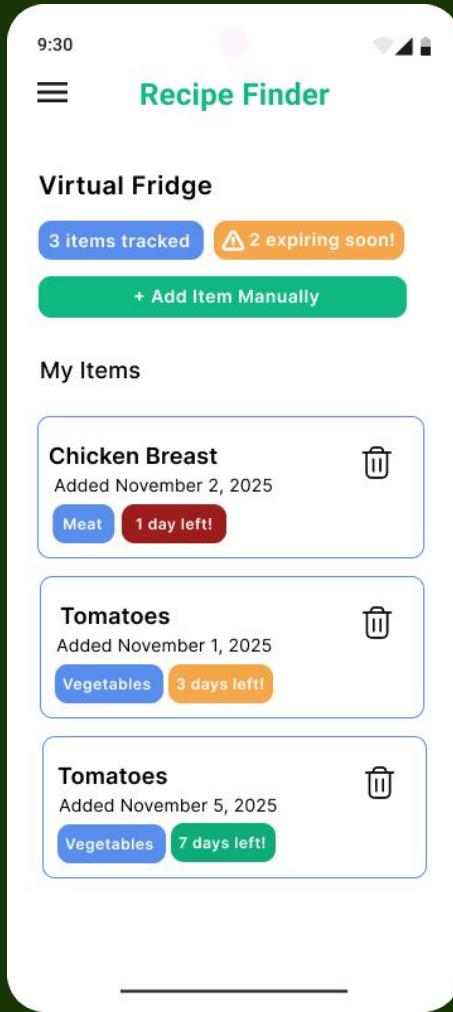
# What is Recipe Finder?

- A mobile app that generates recipes based on the ingredients you have.
- Lets users enter ingredients by typing or taking a photo.
- Provides clear step-by-step instructions and ingredient lists for each recipe.
- Helps users discover new meal ideas tailored to their ingredients.
- Supports personal preferences and dietary needs.
- Allows users to save and revisit their favorite recipes.

# Features List

## Virtual Fridge

- Users manually add and manage leftover ingredients to help track what's currently available at home
- Monitor the shelf life of ingredients to ensure they get used before expiry
- **Final Version:**
  - integrates the stored ingredients with recipe generator
  - allow users to take a photo to list their ingredients



# Recipe Generator

- **ViewModel** calls **searchRecipes()** in the **RecipeRepository** when search is initialized
- **Retrofit** library builds a POST request with the typed ingredients and sends it to your **FastAPI** backend
- **FastAPI** receives the request, sends the ingredients to **Gemini**, and asks for structured recipe JSON
- **FastAPI** extracts/validates **Gemini's** output and returns a clean JSON array back to the app
- **Retrofit/Gson** converts the JSON into **List<ApiRecipe>**, **repository** returns it to the **ViewModel**, and the UI updates with the recipes
- Final Version:
  - supports image-based ingredient recognition to generate recipes automatically
  - backend server will be deployed to a cloud-hosted environment so the Android app can access it from anywhere



## Recipe Finder

eggs, tomato



Or take an image



Found 4 recipes



### Simple Scrambled Eggs with Tomato

• 1-2

⌚ 10 minutes

Eggs, tomato, salt, pepper, butter/oil



### Fried Egg with Sliced Tomato

• 1

⌚ 7 minutes

Eggs, tomato, salt, pepper, butter/oil



### Tomato Omelette

• 1

⌚ 10 minutes

Eggs, tomato, salt, pepper, butter/oil



### Poached Eggs with Blistered Tomatoes

• 1

⌚ 15 minutes

Eggs, tomato, water, vinegar, salt, ...



## Recipe Finder



### Simple Scrambled Eggs with Tomato

• 1-2 ⌚ 10 minutes

#### Ingredients

- 2-3 eggs
- 1/2 medium tomato
- 1 tsp butter or oil
- to taste salt
- to taste black pepper

#### Instructions

1. Dice the tomato into small pieces.
2. Whisk eggs in a bowl with salt and pepper.
3. Heat butter or oil in a non-stick skillet over medium heat.
4. Add diced tomato to the skillet and cook for 1-2 minutes until slightly softened.
5. Pour in the whisked eggs.
6. Gently stir and fold the eggs as they cook, until scrambled to your desired consistency.
7. Serve immediately.



# Features List

## Favorite Recipes

- Save and view favorite recipes
- Quickly access previously generated or liked recipes

## User Profile

- Stores user preferences (dietary restrictions, favorite cuisines)
- **Final Version:** personalize recipe generation based on user profile settings

## User Login and Account Creation

- Users have to create an account which is saved to the database
- Users have to provide a valid login to get access to the app

# Threaded Design Diagram

## Diagram

# Demo





# Work Breakdown

Justinne	Kevin	Mark	Brian	Yan Ting
Virtual Fridge Fragment and Mockup	Provide support where needed	Recipe Generator with Gemini API	Video Presentation	Results ViewModel
Profile Dialogs and Data Store	Google slides	Database	User login and account creation	Recipe Database
Threaded Design Diagram				





# Thank You For Listening!

Recipe Finder: Smarter Cooking,  
Less Waste.



# MVVM Diagram

Model: fetch API for recipes and “recipe found” in main tab, DAO for favorite tab

View: See Figma , need 3 activities(main with main and favorite with navigation view, picture taking activity, search result display)

VM: listview in favorite tab, listview in main tab on “recipe found”, connected to database repo

[MVVM](#)

\*\*Not part of the presentation

Put this in the Youtube description

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Project Webpage: <https://justinnebaltazar.github.io/recipe-finder/>