

Smart Pantry Application

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The NEED:

▶ Three issues seen in elder population:

▶ **Memory loss**

- ▶ Help elders and caregivers remember which food items are currently in their pantry, which food items are near expiring, which food items' quantities are running low, and which food items to purchase.

1

▶ **Malnutrition**

- ▶ Tracking food items for elders will aid them and their caregivers in knowing their food nutrition intake (i.e., a food item is running low, they are consuming a lot of such food item.)

2

▶ **Food Waste**

- ▶ Tracking food items for elders will aid them in knowing which foods to purchase from the store and which foods they have enough. An effort to limit over purchasing food.

3



The HOW:

- ▶ Scale can recognize, record a weight, and transmit this weight (lbs.) via Wi-Fi to our Smart Pantry Application
- ▶ AWS Cognito securely authenticates account logins
- ▶ Through AppSync, the Smart Pantry Application is linked to DynamoDB (no SQL Database)
- ▶ We're coding in React Native (Javascript Library)
- ▶ Edamam is the food API (contains food data for Barcode-Add)

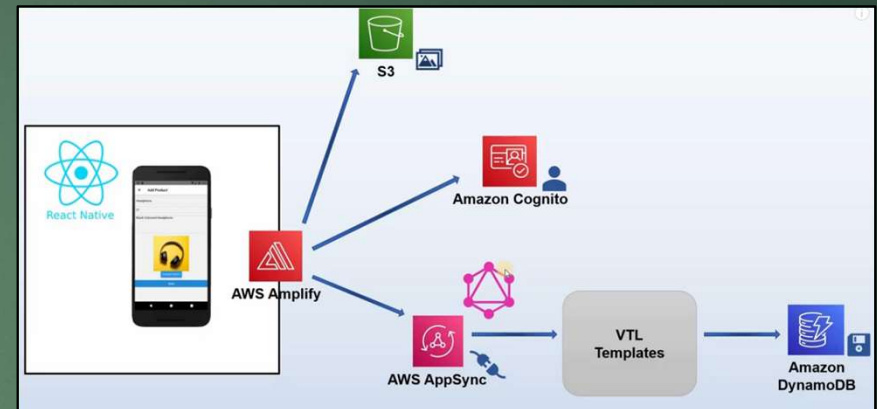


Figure 1. Overall System Design



The COMPLETION:

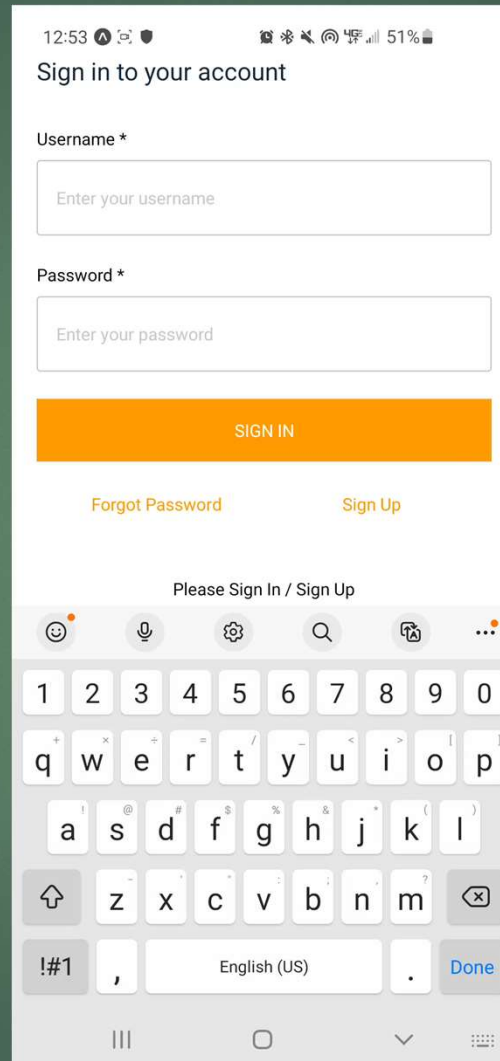
- ▶ Implemented use-cases:

- ▶ Create Account
- ▶ Login
- ▶ Create Pantry
- ▶ Manual Add Item
- ▶ Barcode Add Item
- ▶ Update Item
- ▶ Remove Item
- ▶ Settings
- ▶ Notifications



Create Account/ Login

- ▶ Create Smart Pantry App account
- ▶ Login in Smart Pantry App



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Sign in to your account

Username *

Enter your username

Password *

Enter your password

SIGN IN

[Forgot Password](#) [Sign Up](#)

Please Sign In / Sign Up

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!#1 , English (US) . Done

Slide 5

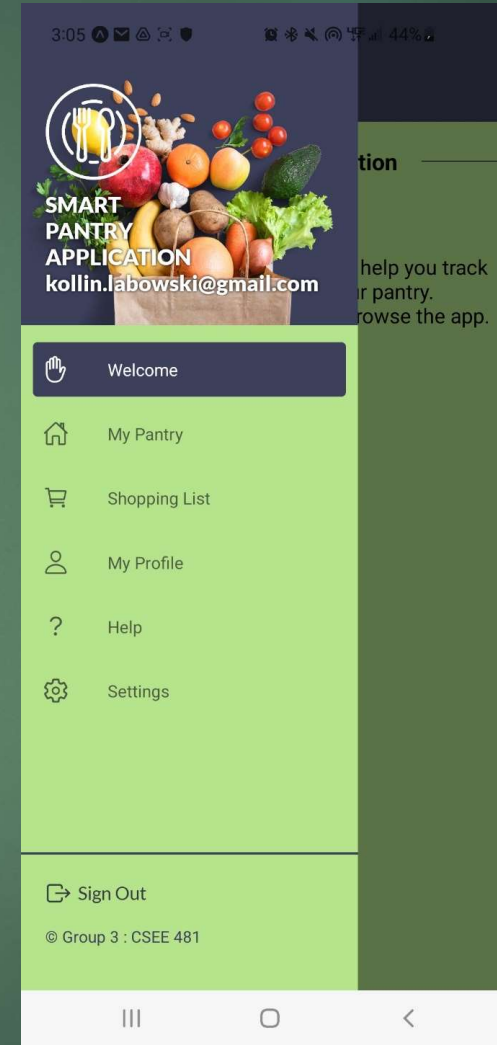
KLO

We will probably want to take a new video for this use case but i left the vid there for now

Kollin Labowski, 2022-04-14T00:12:07.892

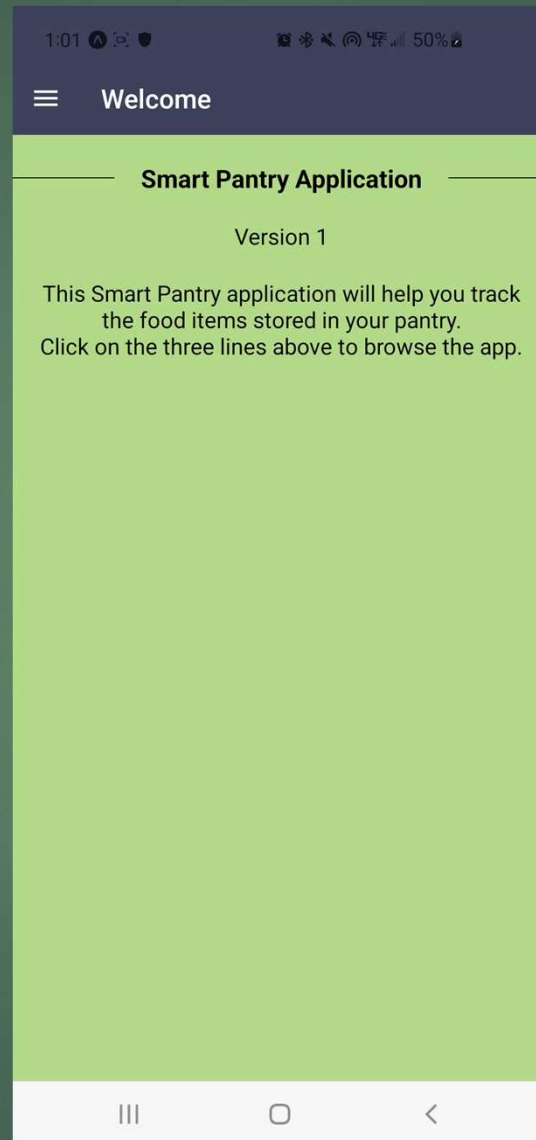
Welcome Page & Drawer

- ▶ Welcome page
- ▶ My Pantry
- ▶ Shopping List
- ▶ My Profile
- ▶ Help
- ▶ Settings
- ▶ Sign Out



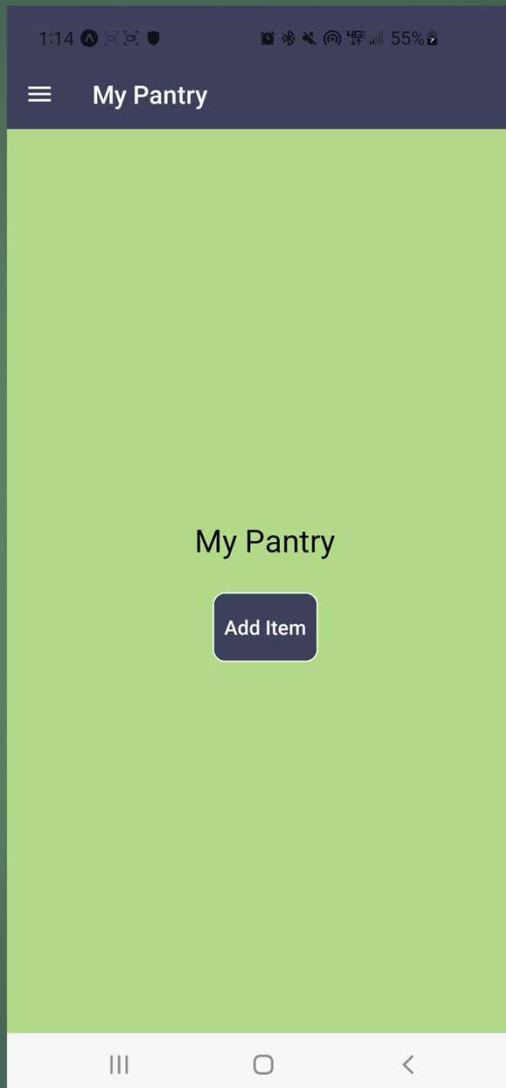
Create Pantry

► Create a pantry



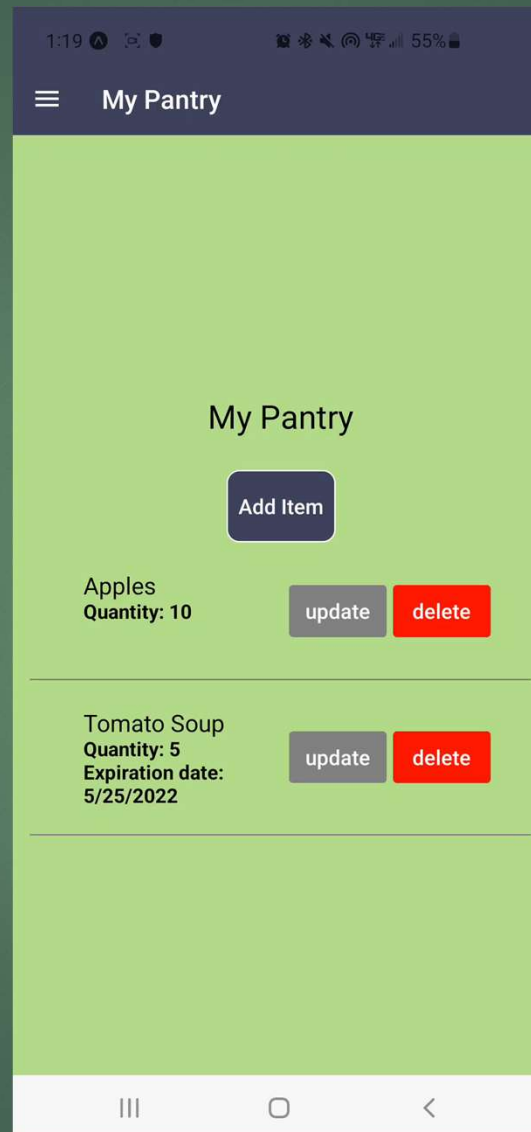
Manual Item Add

- ▶ Add an item to your pantry by manually inputting its information



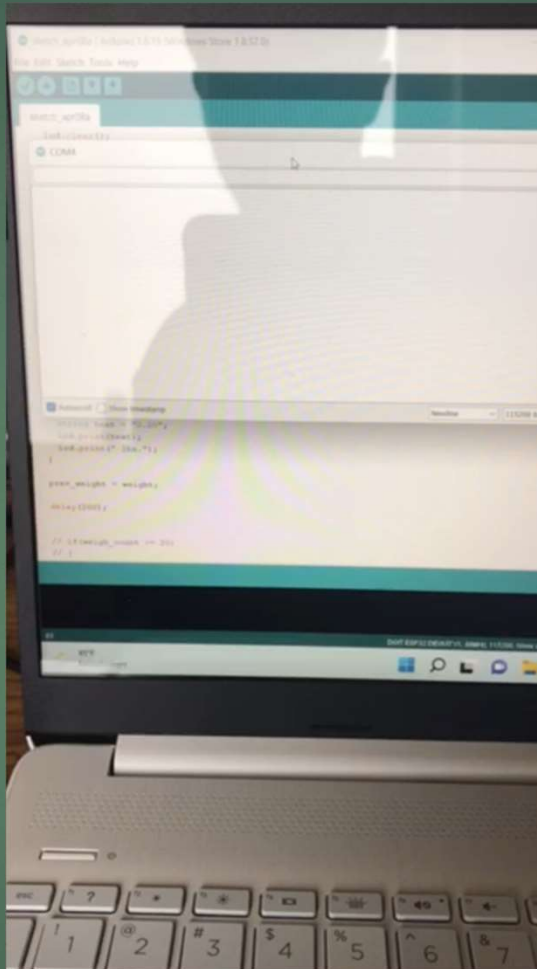
Barcode Item Add

- ▶ Add an item to your pantry by scanning its barcode



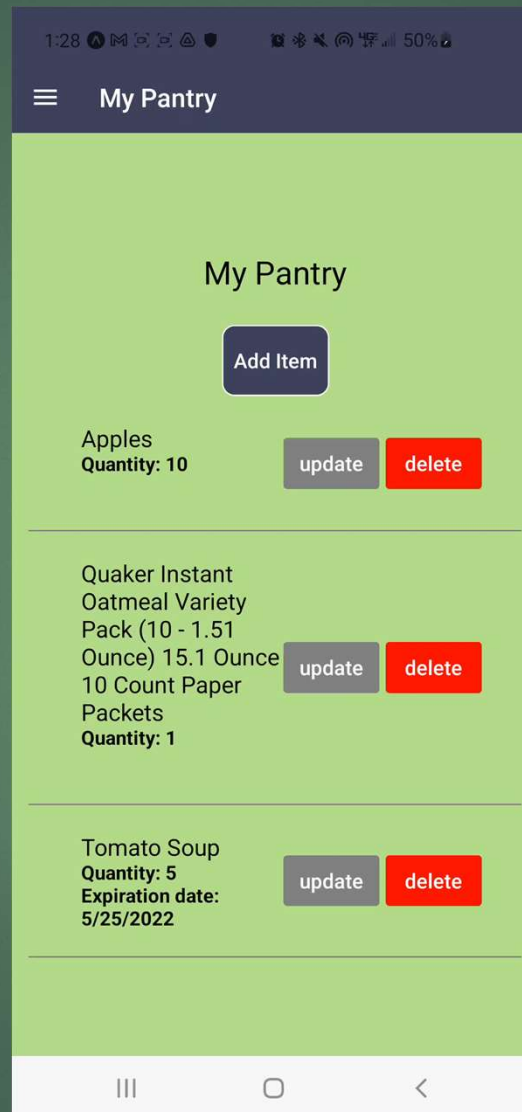
Scale

- ▶ Weigh an item and send the weight to the database
- ▶ Sends through Wi-Fi



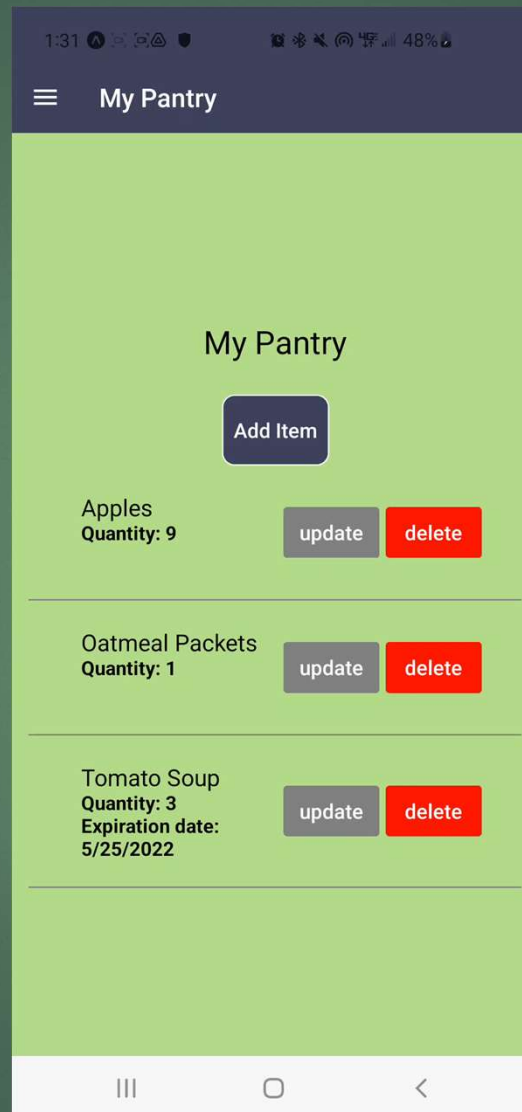
View Pantry/ Update Item

- ▶ View your pantry's contents
- ▶ Update an item's quantity
- ▶ Add to shopping list



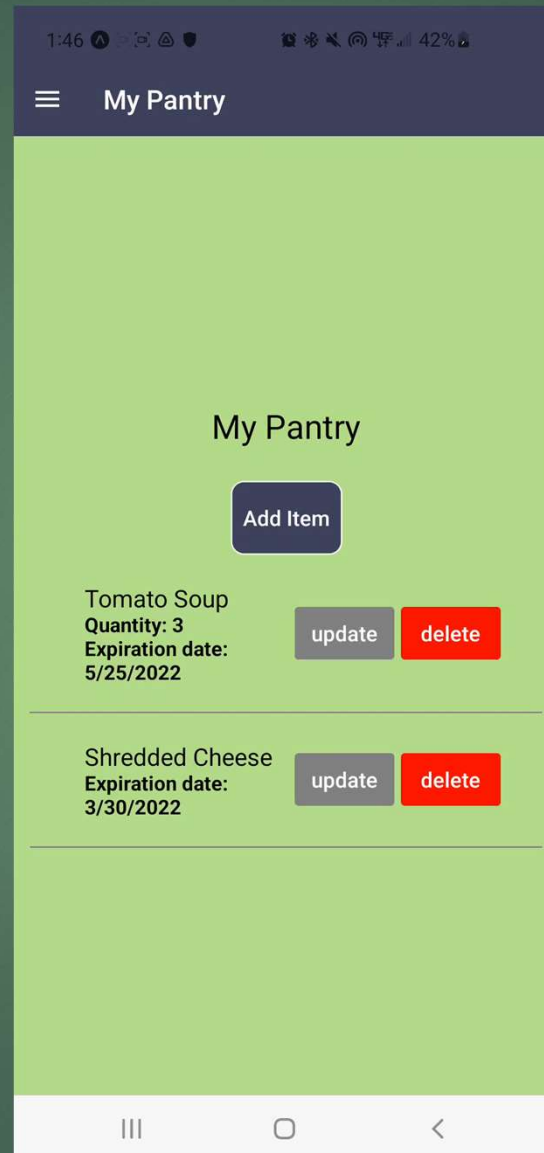
Remove Item

- ▶ Remove an item from your pantry



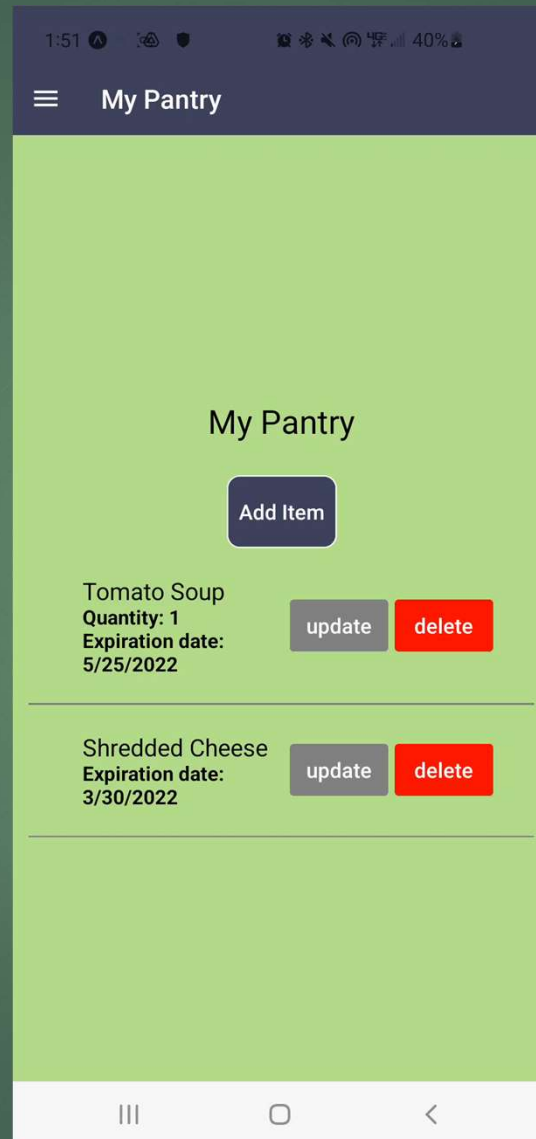
Notifications

- ▶ Notify user when an item's expiration date is near or when its quantity is low



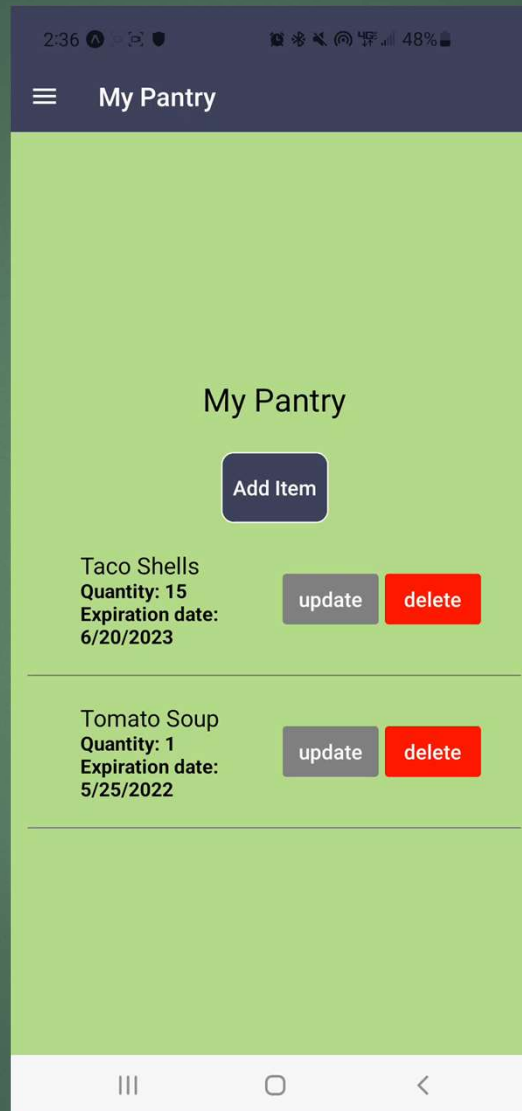
Shopping List

- ▶ Create/add to a shopping list



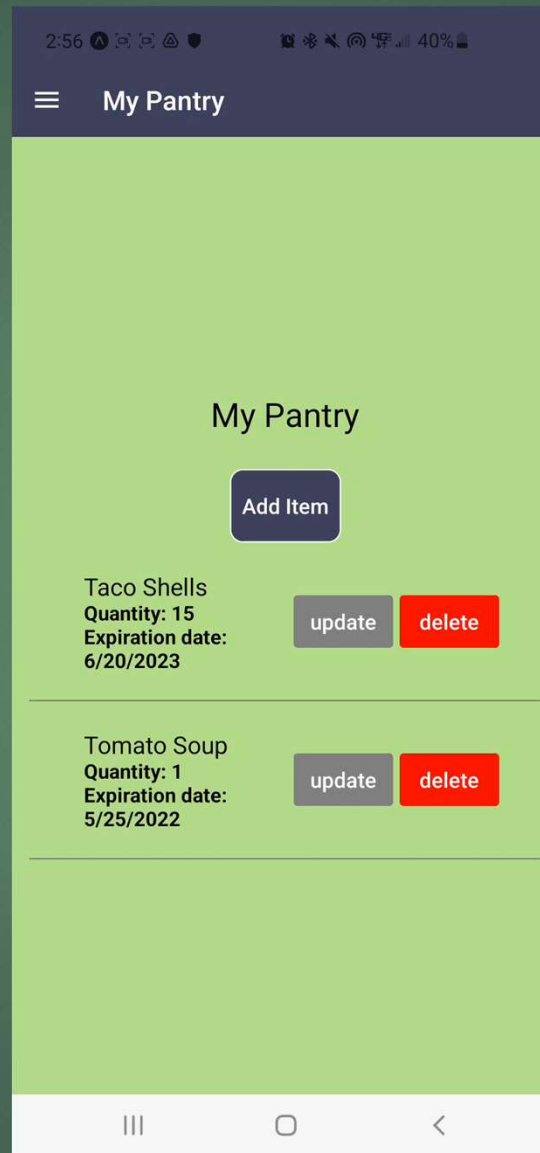
Collaborator Pantries

- ▶ View another Smart Pantry app user's pantry



Settings

- ▶ My Information
- ▶ Pantry Management
- ▶ Collaborator Pantry
- ▶ Notifications
- ▶ Help
- ▶ About
- ▶ Meet the App Developers
- ▶ Sign Out



To Summarize...

The IN-PROGRESS:

- ▶ **Home Screen** – display near expiring items, quantity low items, and all pantry items with a search bar functionality
- ▶ **Shopping List** – automatically add an item to the user's shopping list if its expiration date is near or quantity is running low
- ▶ **Splash Screen** – what shows upon signing into the app
- ▶ **Scale** – send weight through ESP32 to database

The PLAN (for Engr. Expo):

- ▶ Complete above IN-PROGRESS tasks
- ▶ Continue testing our application

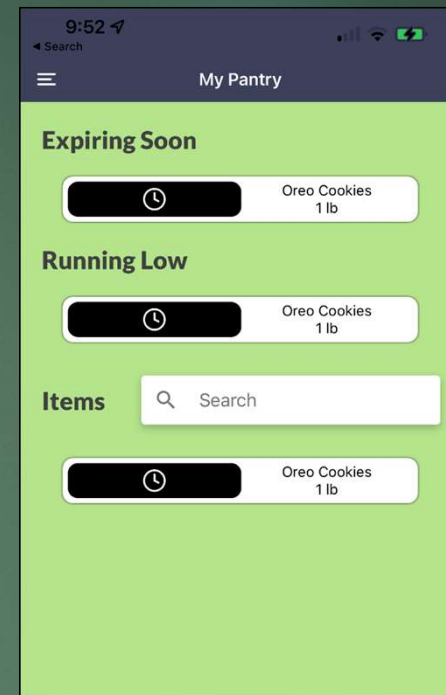


Figure 2. New Home Screen





Questions or Comments