

Team Picture



Team Competency:

Emily Kinne: Senior (8th semester) Computer Engineer:

C, Java, Python, VHDL

Software engineering internship with Collins Aerospace and Cardinal Glass

Max Solaro: Junior Cyber Security Engineering (7th Semester):

Python, Java, C, VHDL,

Instructor (Cyber Security Lab: Encryption and Steganography) – Cambridge, MA

Tary Todd: Junior (5th Semester) Computer Engineering:

C, Java, Python, C#, Verilog

Software engineering co-op with Collins Aerospace.

Riley Spick: Senior Computer Science:

Java, Python, C, MySQL, Bash

Software Engineering internship with Businessolver, Automation Development

Project:

Name: FÜD

Problem being addressed: Keeping track of food items in household inventory.

Description of project:

What problem we will solve:

Food is often wasted and goes bad when people do not know they have it. In addition, people are always looking for ways to be more organized. This app would be helpful for reminding people what they have in their home and when it needs to be restocked. Having an app that can keep track of your inventory would have many usages. For example, the app would be useful for cooking and finding recipes based off of your current inventory, being able to compare your food with ingredients from a specific recipe, or keeping a grocery list,

How your project will work:

This app essentially works as a large database to store each user's inventory. This would be linked to a user's account created with a username and password. Users can create household groups if they are living with roommates and these household groups can track shared groceries such as milk or bread and display the shared goods between all roommates. The app will have a home screen that enables users to navigate to the app's various features. One feature would be the inventory which can be populated manually or potentially via receipt scanning. Another feature would keep track of a grocery list and another would be able to compare the items in the inventory with a specific recipe. In addition, the app could also recommend recipes from the items a user has. Lastly, the app would have a feature to be able to chat with other users in a forum and communicate with cooking and tech support.

Language/Platform/Libraries:

- Android Studio (java)
- Springboot (Database?)
- Recipe API

Large/Complex:

- 2 people have not used android studio knowing the API
- Little database experience (collectively)
- Connecting all the different systems
- Some people have never worked on mobile development
- Local database use

Features of App:

User accounts:

Admin (Developers)

- To handle development aspects/ accept tickets that users submit.

Individual Users

- Have access to general functionality that the app provides

Household (Group Decisions)

- Keep track of shared goods
- Keep track of last person
- Polling system of some sort
 - Once enough “okays” are met from individual users in household, household will make a decision.

Household:

- Individual user would create initial household, and then send invites for people to join the household.

Homepage

Available options:

Login option

Register option

Settings page?

- Change password

List of your inventory:

Search functionality to be able to search for inventory items

Categorization functionality to display all available inventory items

Abilities to Add and Remove items from inventory

- Remove if items are expiring (or close to date)
 - Automatically removed all items are used
- Add items manually when new items are purchased
 - When adding an item, would be able to input expiration date, quantity, and any other variables that would pertain to the item.

Functionality built into app where it will display recipes that can be made with available inventory items.

- Will reference recipe API from database server
- Will list by category, will have search functionality built in.

Categorization

- Organize groceries to display either shared household goods vs individual goods
- Groceries can be sorted into different categories for easy look up ie. dairy, snacks, fruits, vegetables, meats.

Reminder if something is out of stock

Grocery list

Recipe recommendations based on what you have

- Uses a one time query against a recipe api to fill a server side database with recipes.
- Can query this server side database and cross reference a users inventory with recipes to recommend recipes that the user could create with their available items.

Check if you have the ingredients to make a specific recipe

- Offers a search functionality against a recipe database
- Cross references search recipes with user inventory to check if the user has all ingredients required

Chat with other members of the app and support (forum)

Extras:

Spoilage List - date purchased/expiration

Scanning receipts - camera usage

Recipe Database