Lettuce Save - The Busy Student's Grocery Planner
Member Details - Group 18

Member 1: Piper Winder

- Role: User Experience
- GitHub Username: piper-winder

Member 2: Hilarion Christian Gunawan

- Role: Deadline coordinator
- GitHub Username: HilarionTech77

Member 3: Paolo Mota Marques

- Role: Quality Assurance Manager
- GitHub Username: motamarp

Member 4: Ahman Raines

- Role: Backend/Database
- GitHub Username: araines05

Link to GitHub Repository - https://github.com/motamarp/cs362-grocery-list-project

Role Descriptions

Deadline Coordinator – Makes sure everything is according to schedule, progress is being made

Quality Assurance Manager – Makes sure everything is integrated properly and works well cohesively

User Experience - Makes sure that features are intuitive and pleasing to the eye, application follows the same branding profile throughout

Backend/Database - Ensures database interactions are cohesive throughout the program

Communication

Microsoft Teams will be used for the majority of the group's communication, with emphasis on project delegation, management, and development. A group chat will be created as well for immediate logistical communications, so as not to spam documentation on Teams. Members are expected to respond within 24 hours of receiving a message, with reasonable exceptions. For program development, proper block commenting will be implemented along with consistent documentation whenever a commit is pushed. Lastly, we all agree to be respectful and honest with each other, holding each other accountable and asking for help when needed.

Handling Missed Deadlines
Ideally, having a team member with a specific role as deadline coordinator will help us make all of our deadlines. In the case that something might not be finished in time, all members are expected to reach out to other team members for assistance and a plan will be made.

Project Description

Abstract
Our project is a grocery-list app that not only helps the user in making meal plans based on their preferences and constraints, it also helps to be more convenient throughout their shopping journey. Instead of being frustrated when you cannot find the specific item you want in a store, our app has the feature that allows you to search which store has the specific brand of item you want to buy, price comparisons, and if it is in stock.

Goal
This system will address the problems that users face when creating and planning their grocery lists. This includes understanding what needs restocking, finding the best option to purchase, and meeting other miscellaneous requirements (such as dietary restrictions). Essentially, users of this app will be granted a more efficient and sustainable way to track groceries in a personalized fashion. This would serve to solve the issues of forgetting to purchase certain necessities, while also easing navigation of dietary restrictions and providing alternatives for items.

Current practice
Grocery list apps today generally serve the purpose of organization. They allow you to add or remove, and search up items to develop a purchase plan. Presently, there are several existing grocery list applications that have their own differentiating features. Some of these include sharing lists with family members and friends, notifying the user exactly where aisle items are located, and providing cooking instructions for food recipes. Despite the numerous features of these applications, most do not provide a personalized use and instead serve the user base in general. Finding cost-efficient and alternative items for personal necessities can still prove difficult.

Novelty
While many other grocery list apps are available, our system is specifically catered towards busy students who wish to eat healthy while both staying cost efficient and saving on time. Thus, we will provide price comparisons for each item in their list. Many applications have options to create separate lists for each grocery store but users are still required to parse out the lists themselves manually, we hope to have an interface that provides a comprehensive list that

automatically sorts which stores to buy what from. As students ourselves, we know exactly what our targeted audience wants so we will make sure to incorporate our individual preferences throughout the design process.

Effects

This grocery list application will specifically be super beneficial for college students who wish to eat well balanced meals that are cost efficient but don't have the time or resources to schedule or plan them all on their own. As a student, I end up spending hours planning my shopping lists, determining what recipes are worthwhile, and finding the ingredients at a reasonable price. Our aim is to make grocery shopping and meal planning less of a hassle so that users can focus on things that actually matter to them like school or work.

Technical Approach

We plan on using python as our code language since there are many premade packages available to streamline the process so members can focus majority of their time on function logic instead of generalized frameworks.

Something like C++ also uses manual memory management, whereas Python can handle it more efficiently and nearly autonomously.

Risks

A challenge that we foresee while developing this project is properly accessing grocery store's individual online resources with our application to provide seamless integration and up to date information. We hope to mitigate these risks by providing clear user instructions, finding previously constructed databases to access, and researching grocery store's online capabilities.

Major Features:

We plan to implement healthy meal plan recommendations, with built in logic to display recipes that go together throughout the whole week to cut down on food waste. The meal plans will be customizable with specific differentiations such as how often one wishes to cook, if they are ok with leftovers, and how many servings they need each meal. Users will also be able to upload their own recipes via website link, PDF, or manual. Within the actual list itself, we will provide price comparisons for each ingredient needed along with which stores have the items in stock.

Essentially:

- Healthy Meal Plan
    - Customizable to each user's individual needs
    - Prioritizes minimizing food waste and affordability
- Ingredient finding

- User Recipe Uploads
- Store price comparisons

Stretch Goals:

- We hope to implement suggestive restocking through learning weekly grocery patterns, which will involve possible AI use.
- Another possible feature we hope to implement is a comprehensive dietary review, where the user can track their macros and supplements they are receiving through their food.