

Project Team SP-5 —Grocery List Monetized

CS 4850 - Section 03 – Fall 2024

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Project Team

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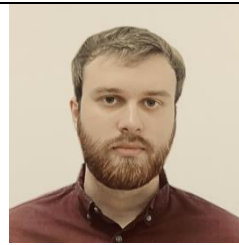
Jarely
Sanchez



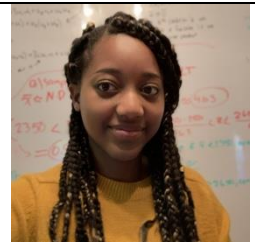
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1.0 Introduction

1.1 Overview

The Grocery Shopping App is thoughtfully designed to simplify and enhance the grocery shopping experience for users by offering features for creating and managing shopping lists, collaborating with others in real-time, receiving notifications on item updates and purchases, setting reminders for shopping list creation or store visits, and customizing user preferences. It aims to provide a seamless and secure user experience on both iOS and Android platforms, ensuring that whether a single user or multiple individuals require access to a dynamic real-time shopping list, the app efficiently tracks changes and keeps users informed.

1.2 Scope

- 1.2.1 Register and create a secure login.
- 1.2.2 Create, manage, and organize shopping lists.
- 1.2.3 Share shopping lists with other users.
- 1.2.4 Collaborate on real-time, dynamic shopping lists.
- 1.2.5 Receive notifications when items are added or purchased.
- 1.2.6 Set up reminders for shopping or store visits.
- 1.2.7 Update user profiles and preferences.

1.3 Acronyms

App: Refers to the Grocery Shopping App.

User: An individual using the app.

List: A shopping list created by a user.

Item: A product or grocery item that can be added to a list.

Notification: A message or alert delivered by the app.

Tutorial: An instructional guide for using the app.

Priority: The order in which users are notified or shown in shared lists.

2.0 Functional Requirements

2.1 User Registration and Authentication

- 2.1.1: Users will be able to register for an account with a valid email address and create a secure login/password.
- 2.1.2: Users will have the option to log in using their email accounts
- 2.1.3: Passwords will be securely stored and transmitted.

2.2 Home Page

2.2.1: The app will display a user-friendly home page with options to navigate to their lists, notifications, user profile, settings, and for first downloads the tutorial.

2.2.2: Recently accessed lists will be prominently displayed on the home page.

2.3 Shopping List Management

2.3.1: Users will be able to create, view, and edit shopping lists.

2.3.2: Real-time synchronization of lists between users must be supported.

2.3.3: Users will be able to add, remove, and mark items as purchased within a list.

2.3.4: Users will have the option to set the priority of collaborators in shared lists.

2.4 Notifications

2.4.1: Users will receive notifications when items are added or marked as purchased in shared lists.

2.4.2: Notifications will be configurable in settings.

2.5 Reminders

2.5.1: Users will have the ability to set reminders for creating new shopping lists or store visits.

2.5.2: Reminders will be customizable with date and time settings.

2.6 User Profile

2.6.1: Users will be able to view and update their profile, including a profile picture and name.

2.6.2: Users will be able to change their password.

2.7 Settings

2.7.1: Users will have the option to log out from the app.

2.7.2: Users will be able to customize app settings, including notification preferences.

3.0 Non-Functional Requirements

3.1 Security

3.1.1 Email Verification for New User

3.1.2 Password requirement- one capital, one number

3.2 Capacity

- 3.2.1 Max of 10 lists
- 3.2.2 Max of 500 entries in a list
- 3.2.3 Max of 100 characters per entry
- 3.2.4 Max of 10 people can have access to a list

3.3 Usability

- 3.3.1 Users should easily be able to navigate the user interface.
- 3.3.2 Easily be able to share/ join lists
- 3.3.3 80% of users should be able to use 75% of features
- 3.3.4 The tutorial should provide clear instructions for using app features.

3.4 Performance

- 3.4.1 The app must respond to user interactions within 4 seconds.
- 3.4.2 Real-time list synchronization should occur with minimal delay (less than 5 seconds).

3.5 Compatibility

- 3.5.1 The app must be compatible with iOS (version 12 and above) and Android (version 8 and above) devices.

4.0 Design Constraints

4.1 Platform-Specific Guidelines

- 4.1.1 Must adhere to Apple's Human Interface Guidelines for a consistent and intuitive user experience on iOS devices.
- 4.1.2 Must adhere to Google's material design principles for Android for a cohesive and familiar user experience.

4.2 Data Privacy and Security

- 4.2.1 All sensitive data must be encrypted in both transit and at rest to protect against unauthorized access from attacks.
- 4.2.2 Must implement secure authentication mechanisms to ensure that only authorized users can access their accounts.

4.3 Resource Constraints

4.3.1 Must be optimized to minimize battery consumption, particularly during real-time synchronization and background notifications.

4.3.2 Must optimize data usage to accommodate users with limited data plans or poor connectivity.

4.4 Accessibility

4.4.1 Must comply with the WCAG, Web Content Accessibility Guidelines, to ensure users with disabilities can fully utilize the app and all its capabilities.

4.5 Legal and Regulatory Constraints

4.5.1 Must comply with the guidelines and policies of the Apple App Store and Google Play Store.

4.5.2 Must adhere to consumer protection laws in regions where the app is accessible.

4.6 Integration with Third-Party Services

4.6.1 Respect rate limits of third-party service APIs by implementing thoughtful design and proper error handling of any requests sent.

4.6.2 Minimize dependency on unnecessary external libraries to reduce risk of vulnerabilities, performance issues, and deprecations.