Dynamic Grocery List Application

SOFTWARE REQUIREMENTS SPECIFICATION (SRS)

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1.0 Introduction

1.1 Overview

This document serves as an outline of what requirements should be expected from a mobile grocery list application. This document will detail the purpose of implementing the grocery app for potential clients and stakeholders. However, this document does not address development concerns such as cost, testing methods and development phases. Prepared in this document are the motives and basic plan for developing a mobile grocery list application. This application allows users to dynamically share grocery lists in real time. It provides the ease to modify and update a list of groceries between multiple users instantly.

1.2 Project Goals

The leading goals for the mobile grocery app are listed below.

1. The app should be simple for a user to intuitively interact with. Any user should be able to pick up their phone and naturally navigate and modify the grocery list.
2. Should provide clear communication between users like notifications/reminders and notes pertaining to the grocery list.
3. Should be organized by including the ability to sort, filter and categorize the grocery list.
4. Should be convenient and save time by adding features like automatically adding reoccurring purchased items or provide the option in the form of reminders/suggestions.

1.3 Definitions and Acronyms

Pertaining – be appropriate, related, or applicable.

Intuitively – without conscious reasoning; instinctively.

Stakeholders - a person with an interest or concern in something, especially a business.

1.4 Assumptions

It is assumed that the user is using an Apple IOS or Android OS.

It is assumed that the user has access to Wi-Fi or cellular service.

2.0 Design Constraints

2.1 Environment

The mobile grocery application will use existing resources such as location services and contact list of the OS.

2.2 User Characteristics

The primary users of this system are individuals aged 18 and up. Their responsibilities are listed below:

- Log in to account.
- Add to list.
- Delete from list.
- Modify list.
- Add notes to list.
- Communicate with other users.
- Create reminders.

The users of this system have full knowledge of the domain. It is not necessary to take background and technical sophistication into account for managing this application for all user groups. Educational requirements include the ability to read and write. However, a second group of users such as those unable to read/write in English may be taken into consideration as a second priority. Their responsibilities include the following.

- Switch account to their listed language.
- The same responsibilities are listed in the first group of users.

However, a third group of users such as children who are unable to read and write may be taken into consideration as a third priority group. Their responsibilities include the following:

- Identifying pictures.

- Identifying symbols.
- Ability to understand/hear speech.

2.3 Potential System Evolution

Potential system modifications that will be made to enhance the user experience and ease of use are listed below:

- ability to connect directly with 3rd party applications affiliated with grocery stores.
- Software feature that allows the user to find a grocery store that has the best deal for an item.

3.0 Functional Requirements

Listed below is the design, graphic, and operating system requirements and any constraints, assigned numbers like 2.1, 2.2, etc)

3.1 User login page

3.1.1 Authentication of a user when he/she tries to log into the system.

3.1.2 Display Home Page of custom shopping lists and a plus button to add a list and name it. Included also is a minus button that allows you to click on a list and remove it.

3.2 Searching the Database

3.2.1 Navigate to the next page by clicking on a list.

3.2.2 Users can navigate the software easily by using navigational buttons that show where to locate specific products.

3.2.3 The items are separated into categories like produce, bakery, dairy etc. along with a plus button to add a category.

3.3 Features

3.3.1 Each item has a check box that lets the user check it once they obtain it.

3.3.2 The software feature that if you double click an item the details are shown like quantity option, notes and other details.

3.3.3 A software feature in the app allows users to filter or sort items.

3.3.4 A software feature in the app that reminds users of items that they routinely add.

3.3.5 A software feature in the app allows users to add custom notes.

3.3.6 The background color for all windows is a vibrant blue.

3.3.7 Add from recent feature.

4.0 Non-Functional Requirements

4.1 Security

4.1.1 Users shall be required to authenticate before accessing their grocery lists or making changes.

4.1.2 The application shall enforce password complexity requirements (e.g., minimum length, uppercase, lowercase, special characters) and implement password hashing.

4.1.3 The application shall include a secure password recovery process, such as email-based password reset, with adequate verification to prevent unauthorized access.

4.2 Capacity

4.2.1 The application shall be able to respond to requests to add items to a grocery list with no more than 2 seconds.

4.2.2 The application shall be able to provide search results for product queries in less than 2 seconds.

4.3 Scalability

4.3.1 The application shall support a minimum of 1,000 concurrent users without a significant degradation in performance.

4.3.2 Each grocery list shall be able to handle at least 50 items without impacting response times.

4.4 Backup

4.4.1 Regularly back up user data and app configurations at least once a day, with incremental backups every several hours during peak usage periods.

4.5 Error Handling

4.5.1 The application should record errors with timestamps, types, and context.

4.5.2 The application provides clear and user-friendly error messages that:

Explain the issue in plain language.

Suggest actions users can take to resolve the problem.

5.0 External Interface Requirements

5.1 User Interface Requirements

5.1.1 The user interface should be clean and easy to navigate.

5.1.2 Users should be able to add, edit, and remove grocery items.

5.1.3 Grocery items should be displayed in a list format with item names and quantities.

5.1.4 Users should be able to mark items as purchased or not purchased.

5.1.5 There should be a search bar for users to quickly find specific items.

5.1.6 Users should be able to categorize items (e.g., "Produce," "Dairy," "Meat").

5.2 Hardware Interface Requirements

5.2.1 The app should be compatible with Android and iOS mobile devices.

5.2.2 It should run on standard smartphones and tablets.

5.3 Software Interface Requirements

5.3.1 The app should support sharing lists with other users via email or messaging apps.

5.3.2 Data should be stored securely in a cloud-based database with user authentication.

5.4 Communication Interface Requirements

5.4.1 It should utilize JSON for data exchange between the app and the server.

5.4.2 The app should use secure communication for transmitting data between the app and the cloud server.

5.4.3 Real-time notifications should be supported for shared lists to keep users updated on changes made by others.

APPENDICES