Software Requirements Specification (SRS)

Shopping List App

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1. Introduction

1.1 Overview

The purpose of this document is to provide detailed specifications for the development of a **Shopping List App** for Android. This app will allow users to create, manage, and maintain a list of shopping items. The app will support features such as adding, editing, and deleting items, as well as notifying users when changes occur.

1.2 Scope

The **Shopping List App** is intended for Android users who need a simple tool to keep track of their shopping items. The app will store shopping data locally using a **Content Provider**, and it will also support notifications when items are added or removed using **Broadcast Receivers**.

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2. Overall Description

2.1 Product Perspective

The **Shopping List App** is a standalone application designed for Android smartphones. It will provide users with a simple interface to manage shopping items. The app will store data locally and will not require internet connectivity for core functionality.

2.2 Product Functions

- Add new shopping items to the list.
- Edit existing shopping items.
- Remove items from the list.
- Notify users when an item is added, edited, or deleted.
- Store shopping items locally using a **Content Provider**.
- Send notifications when changes occur using **Broadcast Receivers**.

2.3 User Characteristics

- **Experience**: The app is designed for users with basic mobile app experience.
- **Demographics**: Users of all ages who require a simple tool for managing shopping lists.

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3. System Features

3.1 Add Shopping Items

- **Description**: Users will be able to add items to their shopping list with details such as the name of the item, quantity, and any optional notes.
- **Functional Requirements**:
    - The app must allow users to input item details.
    - The **Content Provider** will handle inserting new data into the SQLite database.
    - The app will trigger a **Broadcast** to notify users when an item is added.

3.2 Edit Shopping Items

- **Description**: Users can edit the details of items they previously added to the shopping list.
- **Functional Requirements**:
    - The app must allow users to modify the name, quantity, and notes of an item.
    - The **Content Provider** will update the item in the database.
    - A **Broadcast** will notify users when an item is edited.

3.3 Delete Shopping Items

- **Description**: Users can remove items from the shopping list when they are no longer needed.
- **Functional Requirements**:
    - The app must allow users to delete items from the list.
    - The **Content Provider** will delete the item from the SQLite database.
    - A **Broadcast** will notify users when an item is removed.

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4. External Interface Requirements

4.1 User Interface

- **Main Screen**: Displays the current shopping list. Users can add, edit, delete from this screen.
- **Add/Edit Screen**: Provides a form to enter or modify the details of a shopping item.
- **Notifications**: When items are added, edited, or deleted, the app will display a notification.

4.2 Software Interfaces

- **SQLite Database**: For storing and managing shopping list data.
- **Content Provider**: To perform CRUD operations on the SQLite database.

- **Broadcast Receivers**: For notifying users of changes to the shopping list.

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5. Sample Use Cases

- **Use Case 1**: Add a shopping item.
    - The user opens the app, clicks the "Add Item" button, enters the name, quantity, and notes, and saves the item. The new item appears in the shopping list.
- **Use Case 2**: Edit a shopping item.
    - The user selects an item from the list, updates the quantity, and clicks "Save." The shopping list updates with the edited item.
- **Use Case 3**: Delete a shopping item.
    - The user long-presses on an item and selects "Delete." The item is removed from the list.

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6. Conclusion

The Shopping List App is designed to provide Android users with an intuitive and efficient way to manage their shopping items. With features such as adding, editing, and deleting shopping items, as well as notifications for any list modifications, the app aims to simplify the shopping process for users. By storing data locally through a Content Provider and leveraging Broadcast Receivers to alert users of changes, the app ensures a smooth, responsive, and user-friendly experience. This SRS document outlines the essential functionality and design considerations for the app, setting a clear path for its development. The app will meet the needs of users who require a straightforward and effective tool for managing their shopping lists without needing internet connectivity.

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