

Title: Grocery Android App

OBJECTIVE

The purpose of this project is to give the convenience of having all the product prices available on hand before buying something from the market. Thus creating a list of items with updated prices of products, and also calculating the expenses. It will give more productivity to its users in return and save a lot of time for the users.

Acknowledgments

I express my warm gratitude to my parents who were and are always with me in thick and thin and my class fellows and friends who encouraged me not to give up on hard jiffs. I am thankful to all family members for their prayers, moral support, and sincere wishes for the completion of my work

Introduction

1.1 Overview

Buying groceries is a periodic task that has to be done on a daily, weekly, or monthly basis. This project helps in assisting these tasks by providing a user-friendly interface to create a list of items they want to buy and keep track of their purchases all within the android app. This app provides the latest prices on the market. This will give users the convenience to know the prices of the products while at home or on the go.

1.2 Why Android?

Android is the most widely used mobile operating system in the market, there are thousands of devices made by different vendors which are supported by different versions of Android OS, and there are millions of users around the globe who uses the android platform. Other than that Android provides a lot of features through different smartphones which attract a lot of users. Android also provides a good API (Application Programming Interface) with complete documentation, which assists in developing Android apps. So In conclusion, Android has such a large user base and a lot of features means a lot of people will use this app and get advantages from it, that's why I have used android to develop my applicati

Literature Survey

2.1 Existing problem

Problem Statement:

- Allow users to make a checklist of items they wish to buy
- Organize into categories based on the type of item such as groceries.
- The user should be able to choose a priority High, Medium, or Low for each item
- Ask for the permission of the user before switching on GPS

Problem Description:

Some apps help you organize your shopping list but generally lack a “reminder” capability. If they have a reminder capability, the user has to set the reminder manually for a particular time. Whereas our app will automatically use the location data and remind the user in form of an alert about the items to buy from various stores within a radius around the user. Some of the existing apps such as “Shopping List” on the Google Play Store are limited to groceries

2.2 Proposed solution

Before designing the application, I conducted a theoretical background study relating to this problem. I took into account the problem people face while buying their groceries and keeping track of their expenditure on this category of expenses. People often use to forget the items they have to buy; they don't know the prices of products beforehand i.e. without visiting a grocery shop or market. On the other hand, there are a lot of users with android smartphones who use

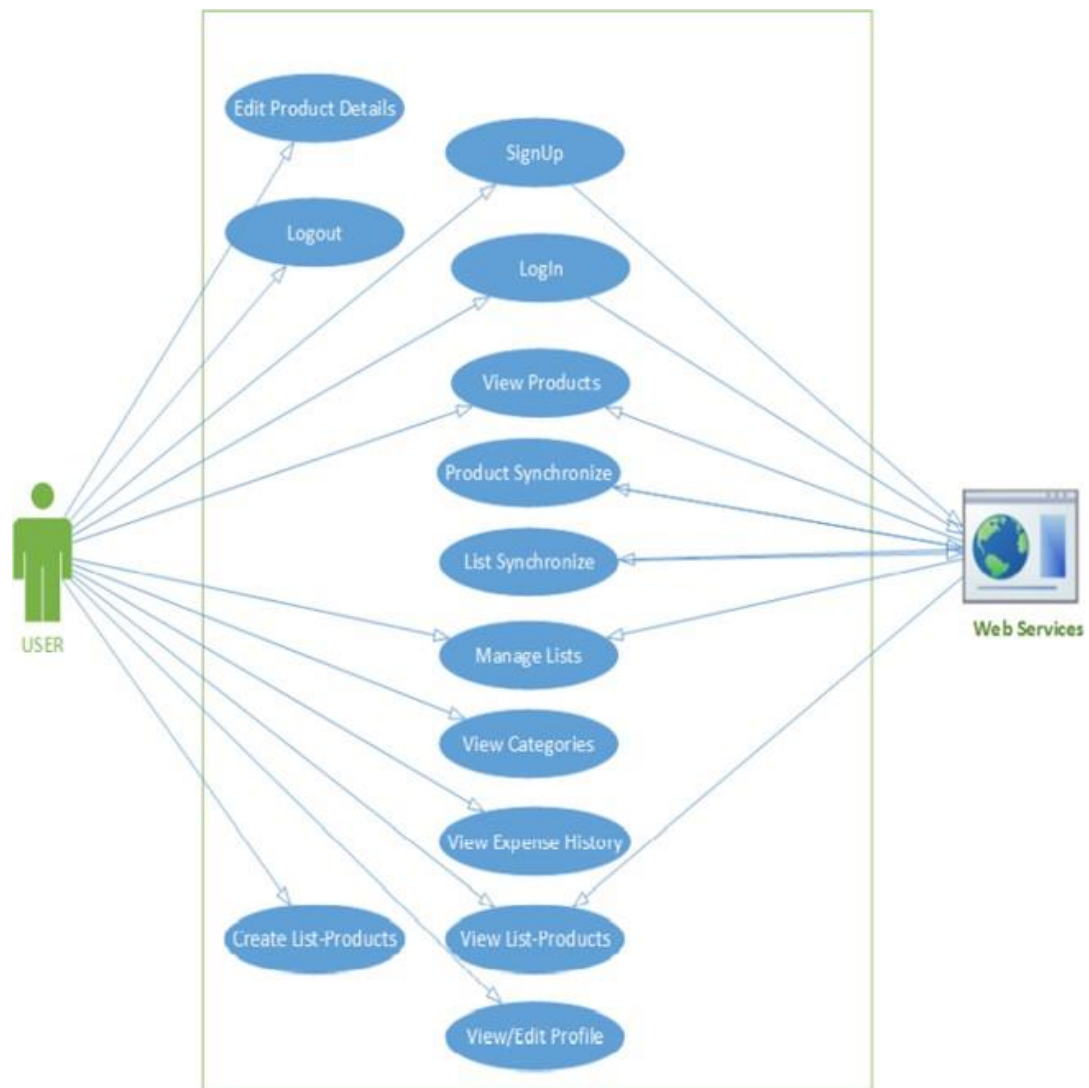
apps like to-do lists, etc. which don't help them in assisting this task but rather give them more overhead to research product prices and insert them into the to-lists app manually. There is the majority of Android users (36.6%) use the android KitKat version, so I have developed my application on this version of android to give support to most users. But the app compatibility is not just limited to the KitKat version, users with older versions or newer versions can use this app without losing any functionality

- Create the project from a template
- Examine the project structure.
- Run your application to see if everything is working or not.
- Start by creating the base layout.
- Create the item interface.
- Add the button.
- Create the popup interface.
- Write the logic to add items to the cart.
- Write the logic to remove items from the cart.
- Write the logic to calculate the total expenditure incurred by grocery items.

THEORETICAL ANALYSIS

3.1 Block diagram

Diagrammatic overview of the project.



3.2 Hardware / Software Designing

Hardware and software requirements of the project

A functional requirement describes the functions based on which the app has been developed, these are functional features users can have while using the app.

- **User Login / Registration:** Before using any functionality of the app, the User must create an account first, this functionality is available within the app. Users have to provide a username, email, password, and other optional information related to the user such as Name, Date of Birth, Profile Picture, etc.
- **Lists Creation / Deletion:** Users can manage the lists they create, they can add items, or remove items from a particular list at any time. Users can also delete any list they have created.
- **Lists Price calculation:** Once a user creates a list, this app automatically calculates the prices of products in that list and shows the sum of product prices and the number of products in that list.

Proposed Languages

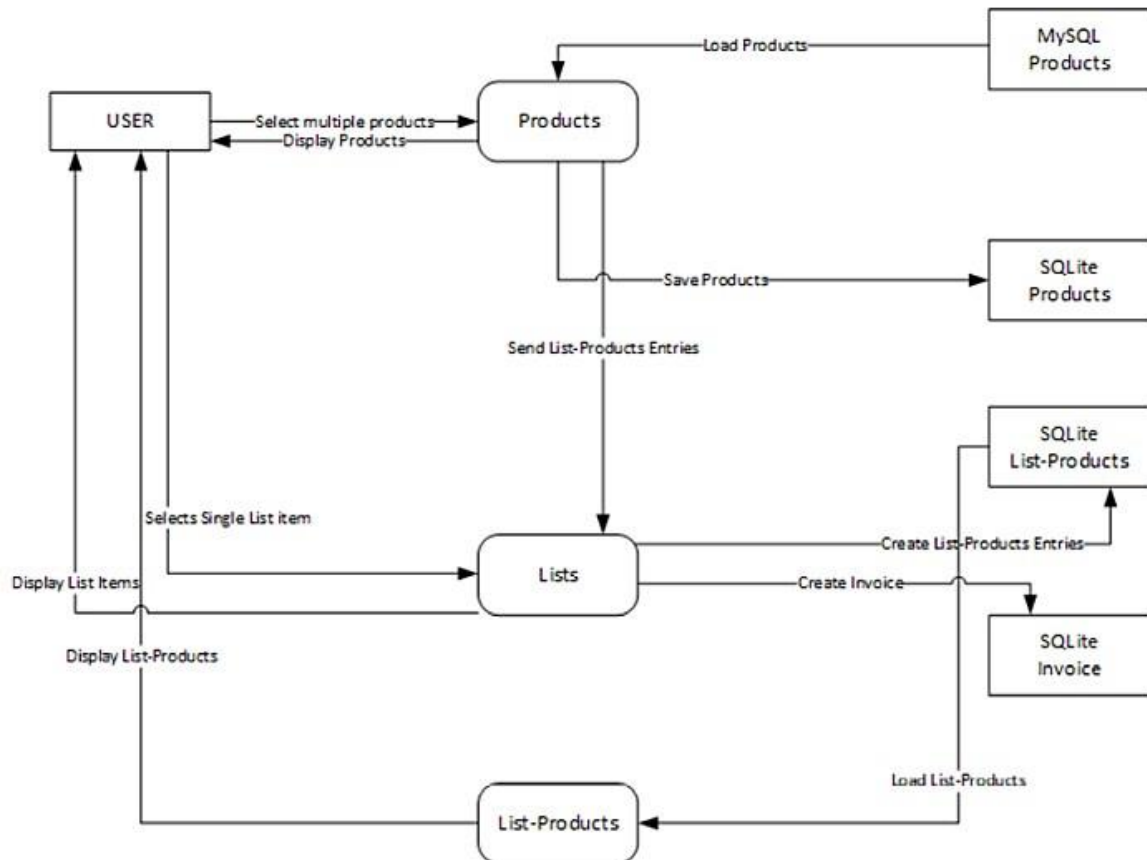
- Kotlin

Proposed Development Software :

- Android Studio
- Windows Operating System
- Android Operating system

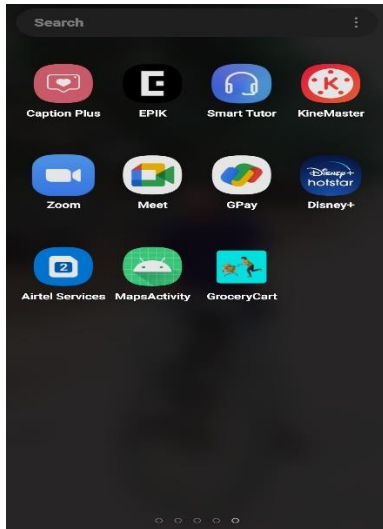
FLOWCHART

Level 1 DFD

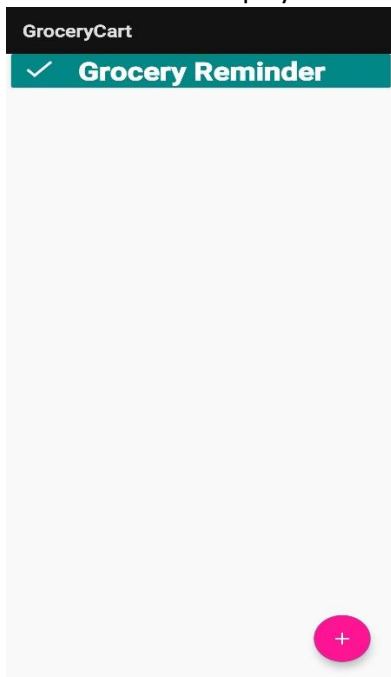


Expected Outcome

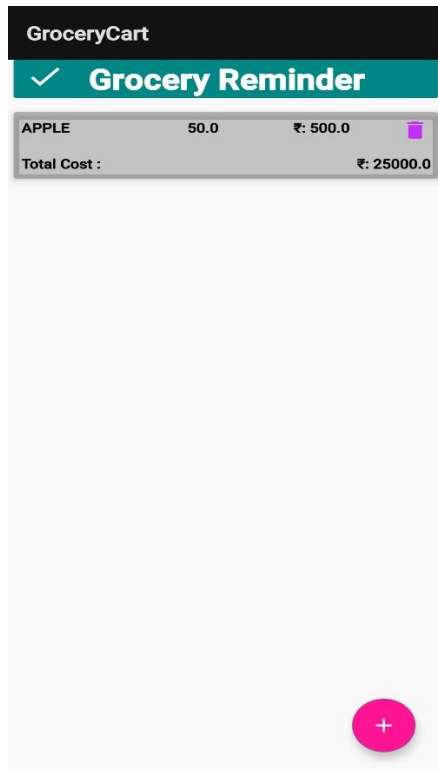
- Open the Grocery Maker App with a Green icon



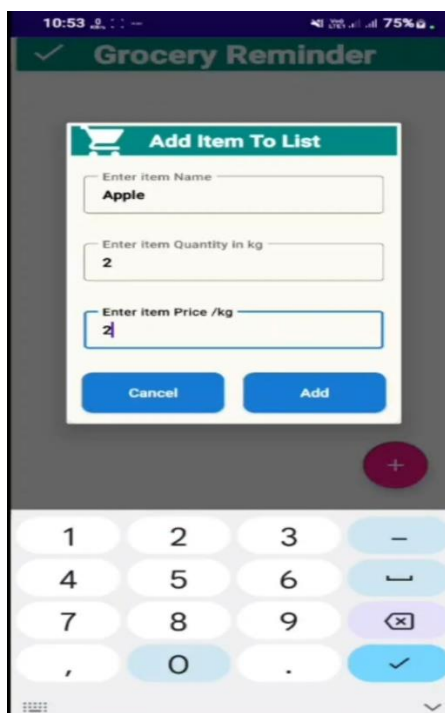
- The cart is empty! Let's add a few groceries here.



- A popup box appears after clicking on the entering button in the corner.



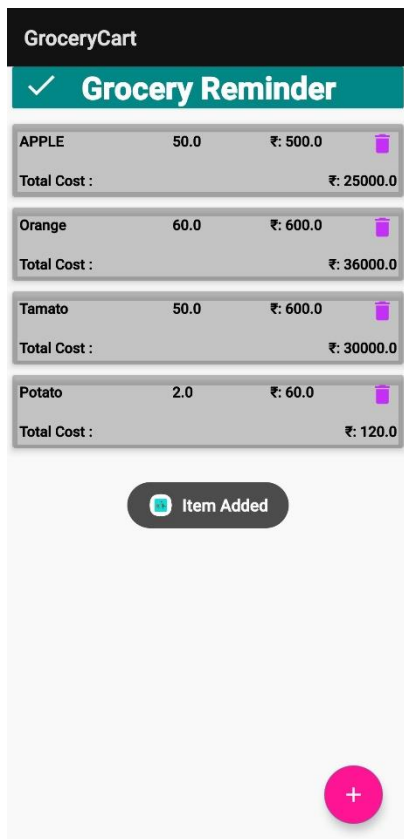
- Fill the Grocery item, their Quantity, and total price in the field.



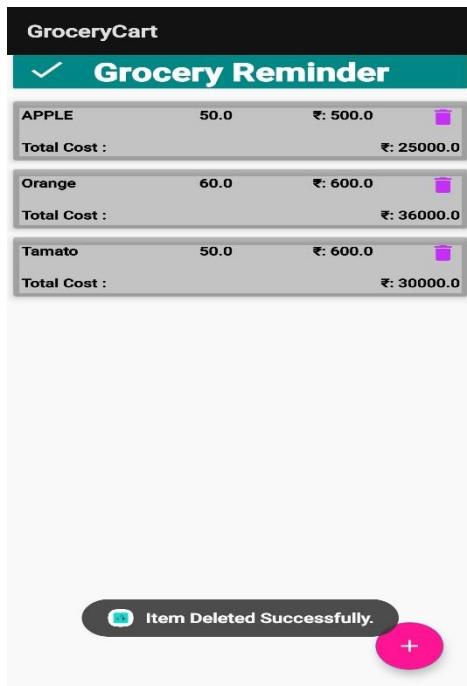
- Your first Grocery item is on the list!



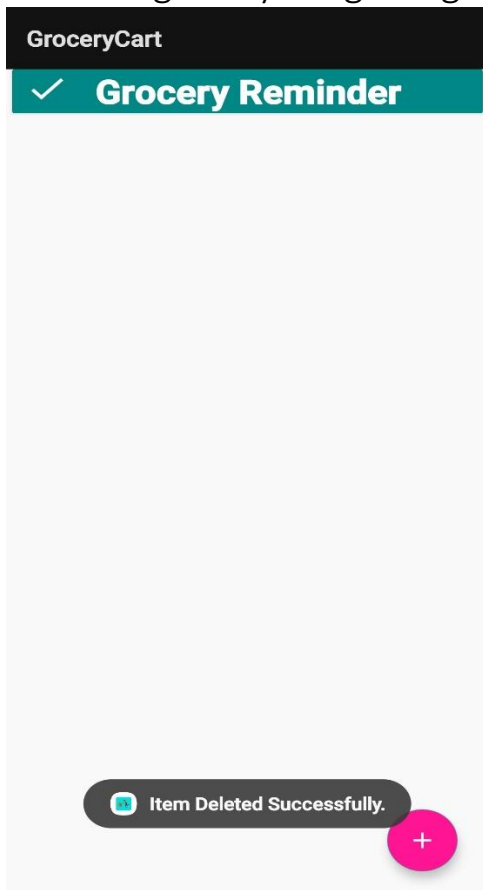
- Add a few more Grocery items to the List & see the Total Price change.



- Check the subtraction logic by clicking on the DELETE button.



- Removing everything brings our Total Price back to 0



ADVANTAGES & DISADVANTAGES

Advantages:

- Buying groceries is a periodic task that has to be done on a daily, weekly, or monthly basis
- This project helps in assisting these tasks by providing a user-friendly interface to create a list of items they want to buy and keep track of their purchases all within the android app.
- This app provides the latest prices on the market.

Disadvantages:

- You have to own a smartphone for using this app
- You have to proper internet connection

CONCLUSION

The main purpose of this application is to give the users a service for which the user has not to have to make a lot of effort. Through this application, a lot of tasks are automated which saves the user a lot of time and they can increase their productivity by using this application, As a way that they can find all the latest prices of products on the tip of their finger, they can create multiple lists, and more than that they can keep track of what they are buying by keeping an eye on expense history

FUTURE SCOPE

This application is in an always evolving process, As there are new versions of Androids are released this application will be modified accordingly with the new features that will be available along with the new versions. This application will also be developed for iOS which will let more users use this application

URLs:

1)GitHub URL : <https://github.com/smartinternz02/SPSGP-77966-Virtual-Internship---Android-Application-Development-Using-Kotlin>

2)Video Demo URL : <https://youtu.be/-yVGyOLpjVA>

Account IDs:

1)GitHub ID : <https://github.com/SRIDHARAN1819/Grocery-app-sri>

2)SmartInternz ID : <https://smartinternz.com/student-profile/feed/U0IyMDIyMDIyOTIyMg==>

Reference

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- <https://developer.android.com/>

