Project Report

BUILD A GROCERY ANDROID APP

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UNDER

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Virtual Internship - Android Application Development Using Kotlin

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1. INTRODUCTION

1.1 ABSTRACT

Shopping is one of the activities that some people consider part of their life, while others do not even think of it. This comparison makes us discover people's problems with shopping. People have shopping problems such as limited time, expats in foreign countries without cars, a transportation issue, people consider physical shopping as a waste of time, health issues, long distance to market. And the difficulty in obtaining some items.

As the problems mentioned above, we have explored our idea, which is related to personal shopping. Therefore, we have built an application that combines different market shops, i.e. (Malls, supermarkets, and pharmacies).

This personal grocery shopping is an innovative app that allows the customers to get all their needs and suggest items based on previous history. Then deliver items to their doorstep and can facilitate online shopping procedure where customers can browse unlimited products all at one time. This work supports people in exploiting their time to be safer and more accessible than wasting it physically.

Moreover, people can order the product from home instead of going around for long distances for shopping. In addition, this app could help people who are facing health problems and unable to buy something physically to avoid future problems.

Finally, some people do not have transportation methods for shopping, and they should keep pace with the evolution.

1.2 OBJECTIVE

The main aim of this project is to list the items so that whenever users go to grocery stores, users will not be able to forget their items and this grocery application helps the users to tackle their day to day chaos more effortlessly.

1.3 PROBLEM TARGETED

It’s not easy for the users to remember every item in this hectic lifestyle, they frequently can’t recall their required necessity so we decided to build an app to store the items in the database for their future use. After buying the items users can delete the added items in the database.

1.4 PROBLEM’S PRIMARY GOALS

The goal of this project is to make an app that stores the user items in a cart and can modify and delete the added item in the list. To develop a reliable system, I have some specific goals such as:

Develop a system such that users can add item details like product name, product Quantity, and Product Price.

Develop a database room that is used to store the user data which already been added by the user in the cart and the user can also remove the previously added item in the cart. Develop a good UI design that user friendly to the user.

Develop a good UI that is supported for all android devices.

1.5 INTRODUCTION

We are going to build a grocery application in android using Android Studio. Many times we forget to purchase things that we want to buy, after all, we can't remember all the items, so with the help of this app, you can note down your grocery items that you are going to purchase, by doing this you can't forget any items that you want to purchase. In this project, we are using (MVVM) for architectural patterns, Room for database, Recycler View and Coroutines to display the list of items.

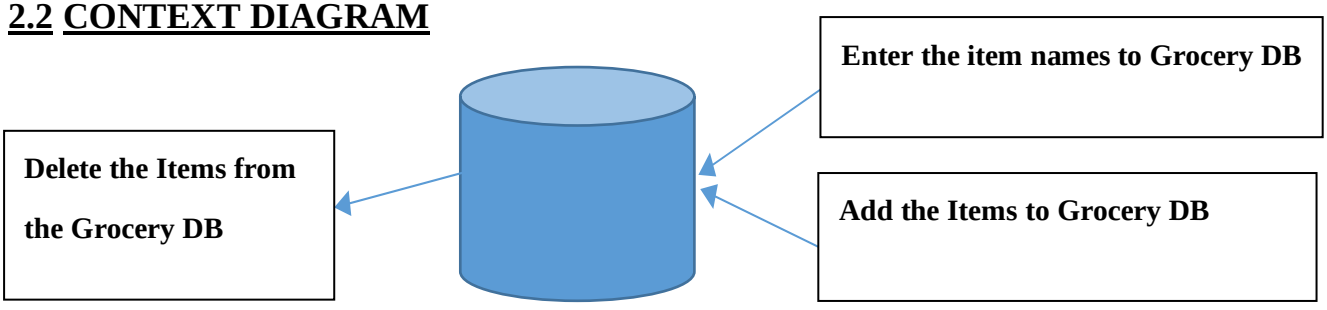
2. BACKGROUND & DIAGRAMS

2.1 BACKGROUND

The grocery cart application project will help the user or admin to store the list of items in proper sequence. User/Admin can add and remove the items in the list according to his/her will.

- UI DESIGN IN THE ANDROID PLATFORM
- ANDROID APPLICATION DEVELOPMENT
- DATABASE CONNECTION TO STORE USER DATA

2.2 CONTEXT DIAGRAM

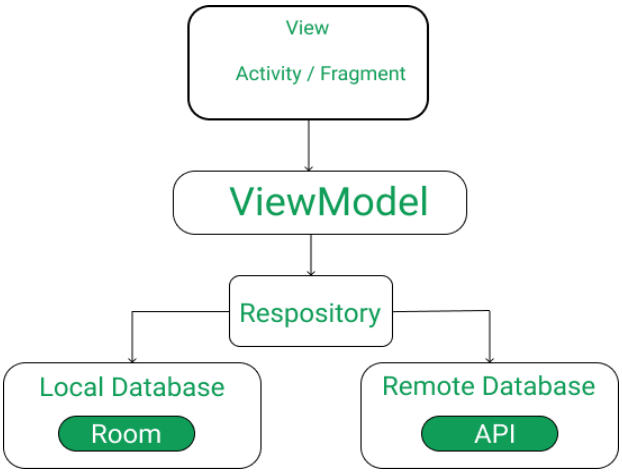


3: Implementation and Designing

In this project, we are using MVVM (Model View ViewModel) for architectural patterns, **Room** for database, Coroutines and RecyclerView to display the list of items.

MVVM (Model View ViewModel)

MVVM architecture in android is used to give structure to the project's code and understand code easily. MVVM is an architectural design pattern in android. MVVM treat Activity classes and XML files as View. This design pattern completely separate UI from its logic. Here is an image to quickly understand MVVM.



ROOM Database

Room persistence library is a database management library and it is used to store the data of apps like grocery item name, grocery item quantity, and grocery item price. Room is a cover layer on SQLite which helps to perform the operation on the database easily.

RecyclerView

RecyclerView is a container and it is used to display the collection of data in a large amount of data set that can be scrolled very effectively by maintaining a limited number of views.

Coroutines

Coroutines are a lightweight thread, we use coroutines to perform an operation on other threads, by this our main thread doesn't block and our app doesn't crash.

4. Conclusion and Future Scope

4.1 Conclusion & Future Scope

This grocery application will help to store the list of data items include name of item, price and quantity required. Admins store his/her data in the list, the grocery application very helpful to users.

Future Scope:

This application helps to store the list of items by Admin. In Future we can also add scheduled addition of items according to requirement of user.

The Features are:

- Add User Panel
- Add Admin Panel
- Provide Login Authentication
- Add Image to user Product and Rating

5. URLs, GitHub URL, Account IDs and Acknowledgements

5.1 URLs & Account Ids

GitHub URL: https://github.com/Ankitsh-rtx/GroceryApp

Demo Link:

https://drive.google.com/file/d/13PMIvJj3dKQHwR4VTIdvZH93shSDP4iw/view?usp=sharing

SmartInternz Registered ID:

https://smartinternz.com/student-profile/feed/U0IyMDIyMDIwNDkyOA==

5.2 Acknowledgements

I would like to convey my heartfelt gratitude to Mr Sandeep Doodigani for his tremendous direction and assistance in the completion of my project. I would also like to thank him for providing me with this wonderful opportunity to work on a project with the topic Grocery App. This project would not have been accomplished without their help and insights.

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