VIRTUAL INTERNSHIP - ANDROID APPLICATION DEVELOPMENT USING KOTLIN

GROCERY APPLICATION PROJECT

INTRODUCTION

Overview

In the recent decade, electronic commerce and online retailing have unquestionably happened to be essential components of the global retail landscape. Such as various other businesses, the retail scene has changed dramatically with the advent of the internet. The number of digital buyers proliferates worldwide as internet access and adoption rise rapidly, leading to online shopping increasing year after year

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, we can note down your grocery items that we are going to purchase, by doing this we can't forget any items that we want to purchase. A sample image is given below to get an idea about what we are going to do in this Project. Note that we are going to implement this project using the **Kotlin language**.

We're going to discuss how to create a Grocery Android App using MVVM and Room Database in Kotlin. With this application, the user will be able to note down the grocery items that he/she is going to purchase. 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. So, let's get started now.

PURPOSE AND USE OF THIS PROJECT :

Purpose of this project is to create a Grocery Android App using MVVM and Room Database in Kotlin. So with the help of this app, you can note down your grocery items that we are going to purchase. We also going to learn how to build different apps using new technologies like kotlin and how to use platforms like Android Studios.

We will also learn about **MVVM (Model View ViewModel).**

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. Before jumping to the project let's understand these terms.

MVVM (Model View ViewModel) :

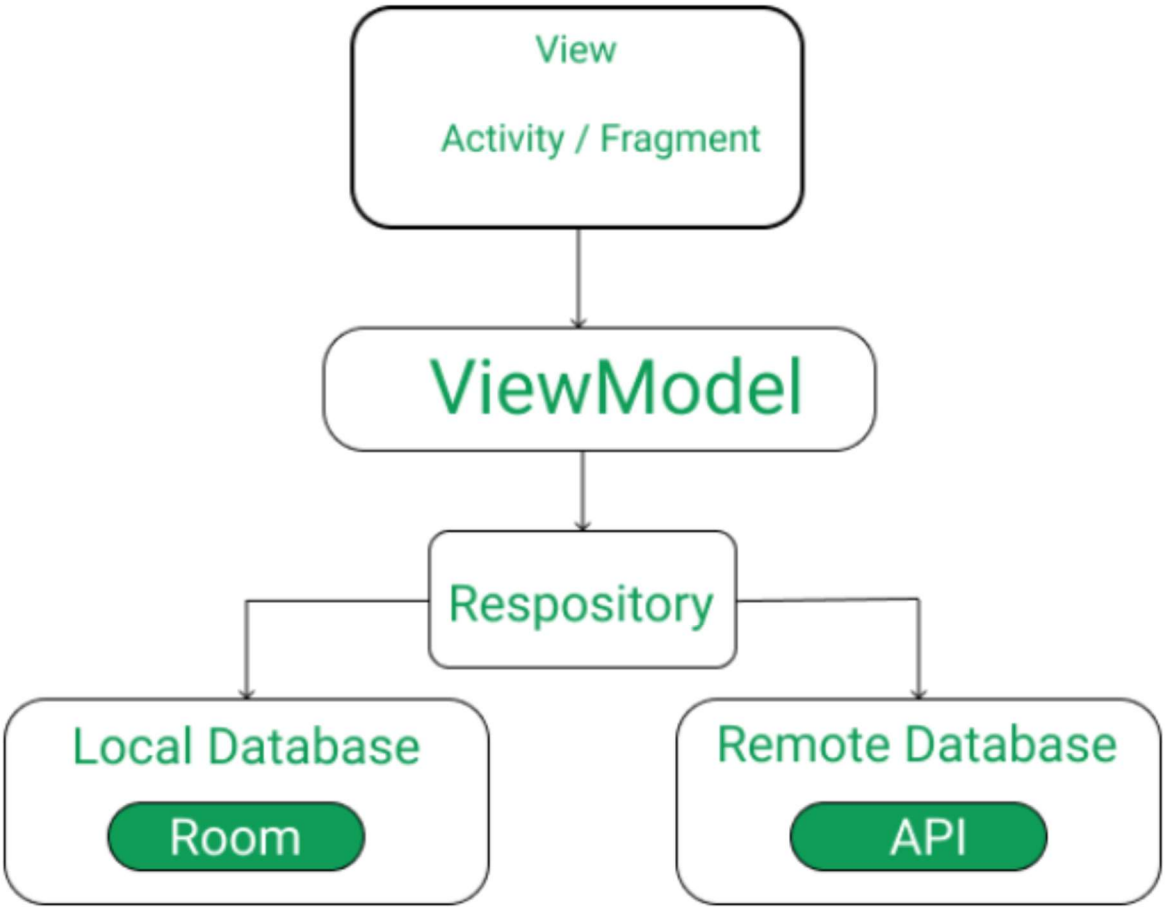
MVVM architecture in android is used to give structure to the project's code and understand code easily. MVVM is an architectural design pattern in android. MVVM treat Activity classes and XML files as View. This design pattern completely separate UI from its logic. Here is an image to quickly understand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

As we all know that the grocery industry is enormous and is increasing regardless of the challenges it is facing. Everyone needs provisions for their home and visits the grocery stores almost every month. From the past half-decade, the trend of **Online Grocery Market in the India** has become more popular with the increase in Grocery App solutions as customers find it so convenient to order from the Grocery app to go and get the groceries by themselves. Due to the busy schedules for everyone these days and also many other reasons to look for easy ways to get the work done. With an increase

in technology, people are also getting busy. Also, there is a lot of population all these made grocery stores to shift to an online buying app which has brought some challenges. Still, are you in dilemma whether to **develop a Grocery App solution for your Grocery Business before** you need to overcome a few problems.

THEORITICAL ANALYSIS

Block diagram: Diagrammatic overview of the project.



After seeing this image, its understood how it will work. Let talk about the operations and concepts we gonna use in order to shape this project.

ROOM DATABASE

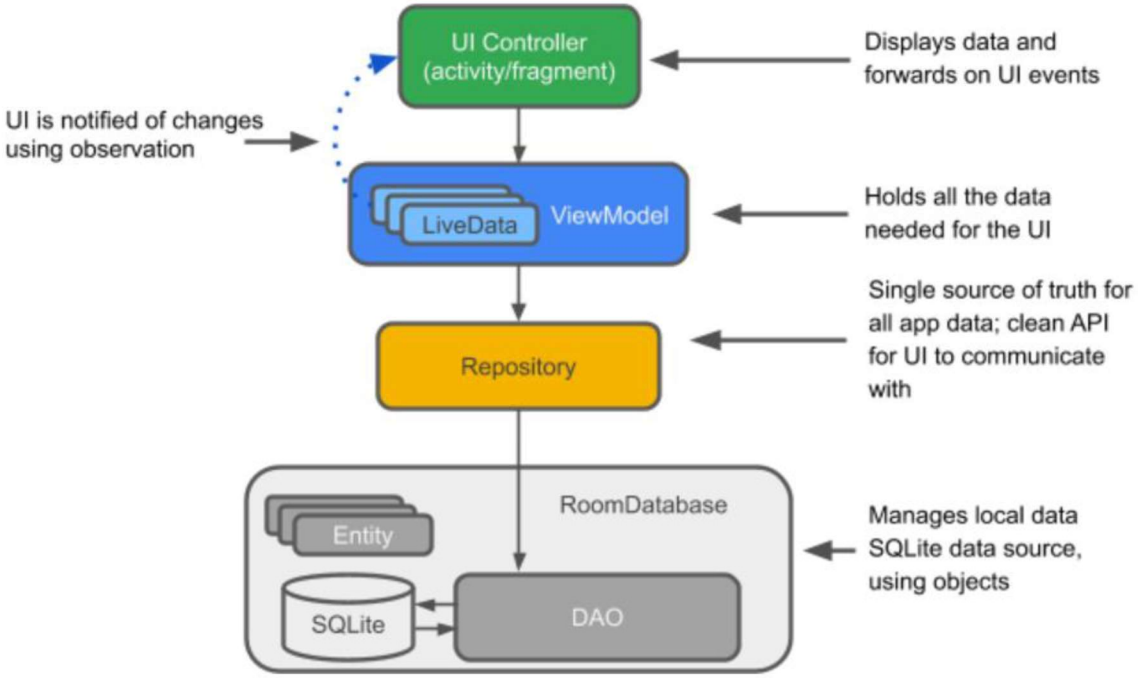
Room persistence library is a database management library and it is used to store the data of apps like grocery item name, grocery item quantity, and grocery item price. Room is a cover layer on SQLite which helps to perform the operation on the database easily.

RECYCLEVIEW

Recycler View 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 a coroutine to perform an operation on other threads, by this our main thread doesn't block and our app doesn't crash.



AND SOFTWARE REQUIREMENTS OF THE PROJECT.

HARDWARE USED:

1. Laptop or PC with Android studio installed into it along with a good internet connection.
2. Android mobile phone for running our app(if not we can use Emulator as well.)

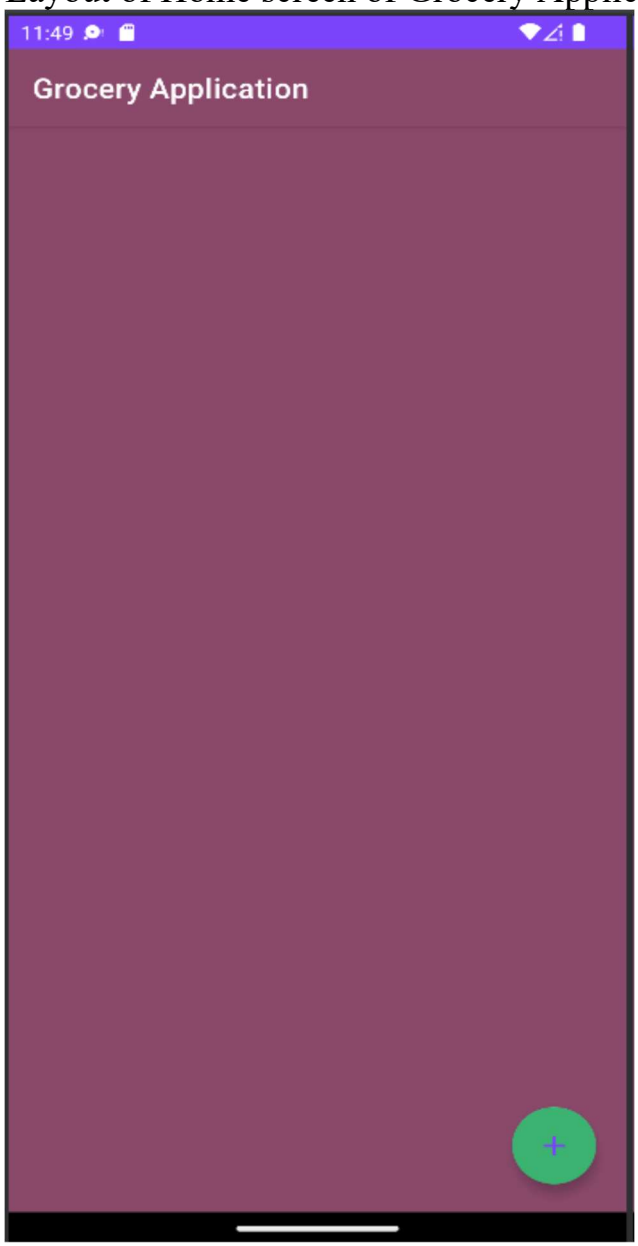
SOFTWARE AND TECHNOLOGY REQUIREMENTS:

1. Andorid studio.
2. Github.
3. Emulator. etc
4. Kotlin.

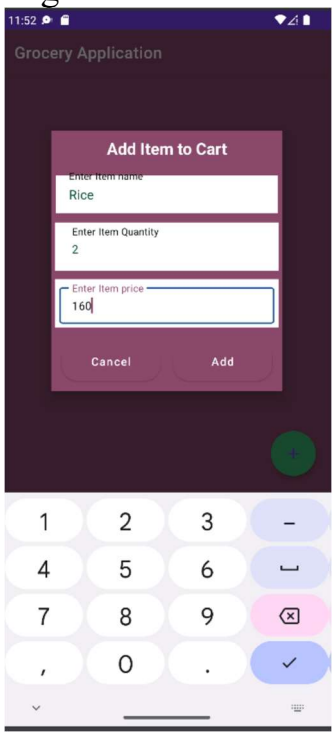
RESULT:

a) Logo of Grocery application.

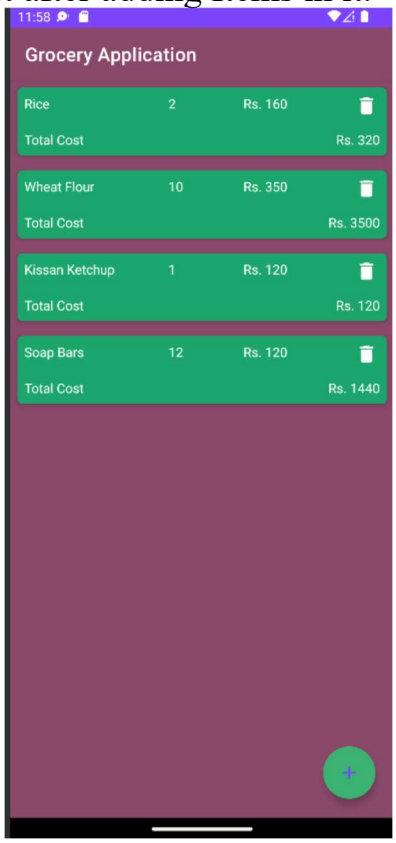
b) Layout of Home screen of Grocery Application.



c) Adding items to Cart.



d) Cart after adding Items in it.



ADVANTAGES:

- User can purchase grocery products through his mobile phones that support android.
- User does not have to wait in long queue and does not have to struggle with trolleys.
- User can coolly sit at home and purchase the products according to his like.

DISADVANTAGES:

- This system won't work in mobile phone that does not support android.
- Product quality would differ from manually purchasing product in a supermarket.

APPLICATIONS:

- This application can be used by any user who loves to shop and this application can be used by many house wives.

CONCLUSION:

As people are shifting to online ordering, it is a good idea to develop an online grocery delivery app development. You need to take a few steps to easily overcome the challenges that are being faced by the remaining owners of the grocery business.

This project will be helpful to larger masses of people. The project is user friendly and can make improvements based on the user requirements. The project will be more useful in today's busy world. The project is made in a realistic method with proper security enhancements.

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GitHub Repository Link: https://github.com/devanshukranjan/Grocery.git
Gogle Developer Link: https://g.dev/devanshukranjan
Video Demo Link:
https://drive.google.com/file/d/1aH9H04U7Ahd4XNgoIiQ4U2ZUQJS7XZG-/view?usp=sharing