Internship Project Report

Project Title : Virtual Internship – Android Application Development using Kotlin

Duration : 01/08/2022 – 30/09/2022

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1 INTRODUCTION

1.1 Overview A brief description about your project
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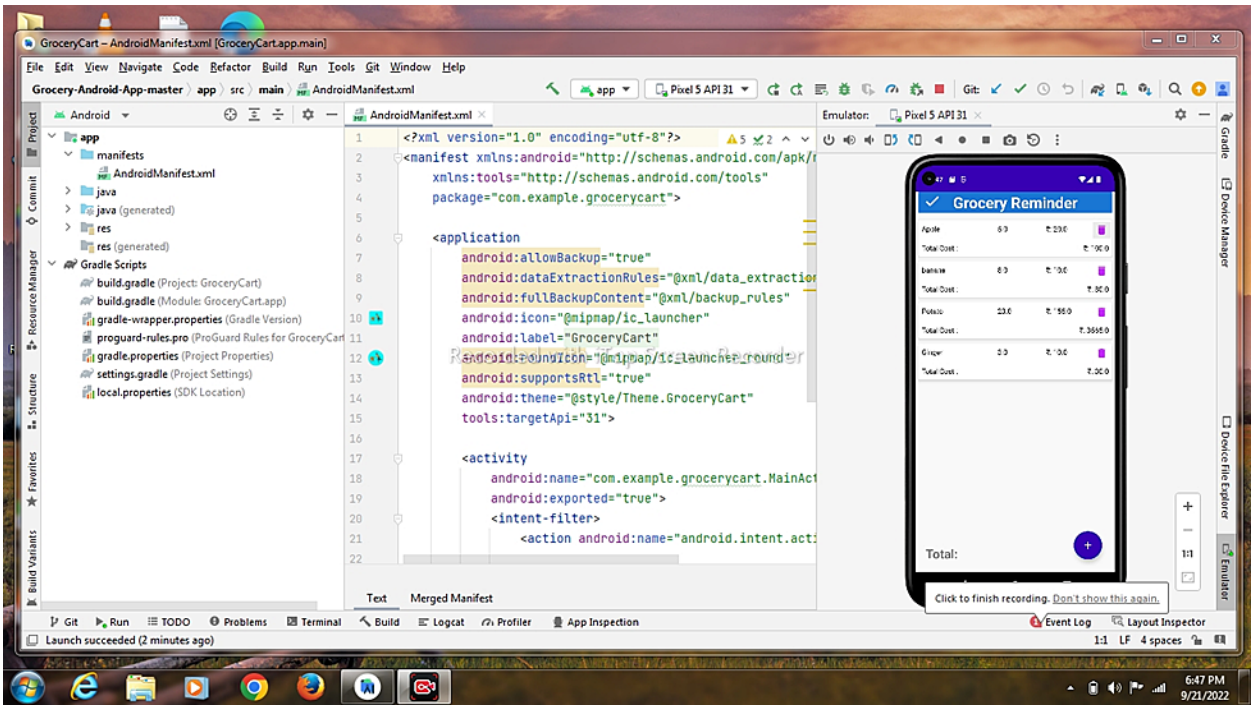
1.1 Overview A brief description about your project

In this Project, I have 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. A sample image is given below to get an idea about what I heve to do in this Project. That heve to implement this project using the **Kotlin** language.



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.

1.2 Purpose The use of this project. What can be achieved using this.

Perhaps you've heard that it's a good idea to shop with a grocery list. Yet even when you make a list, you still forget to buy foods you need. Do some types of lists work better than others?

Many organizational experts recommend making some type of list with similar items placed together. Grouping foods by category on your grocery list helps you remember food items and avoid a return trip to the store. Also, by grouping foods together, you're less likely to double back in the store for a food missed when in a particular section.

To save time, you might develop a form you can photocopy or print from your computer for weekly use. Or ... rather than a paper and pencil list, you might check out the various apps that help you keep your list on your smart phone. Some of them can be synced across various devices and even shared with others. Added features for some include information on related coupons, recipes, healthy food recommendations and more. Before paying for an app, try some of the free ones first to see how you like this method of keeping a grocery list. Or, if you already use an app to keep lists, include groceries among the lists you

set up.

2 LITERATURE SURVEY

2.1 Existing problem Existing approaches or method to solve this problem

2.2 Proposed solution What is the method or solution suggested by you?

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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.

RecycleView

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 a coroutine to perform an operation on other

threads, by this our main thread doesn’t block and our app doesn’t crash.

2.2 Proposed solution What is the method or solution suggested by you?

Grouping foods by category on your grocery list helps you remember food items and avoid a return trip to the store. Also, by grouping foods together, you're less likely to double back in the store for a food missed when in a particular section.

- **Allow users to make a checklist of items they wish to buy.**
- **Organize into categories based on type of item such as groceries, clothing, apparel,electronics**
- **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**
- **Use the GPS location and find stores in a particular radius for the items on the shopping list.**
- **Should provide an option to the user to disable notifications.**

3 THEORITICAL ANALYSIS

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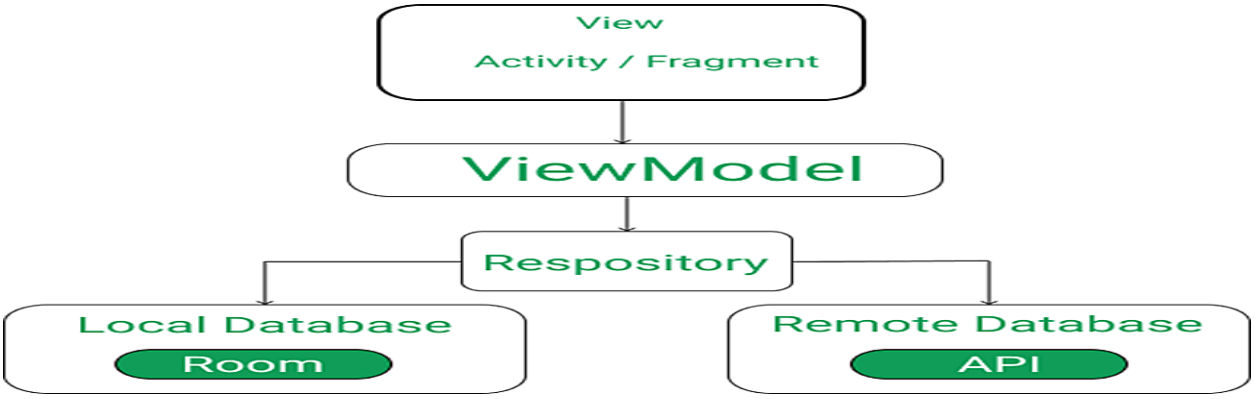
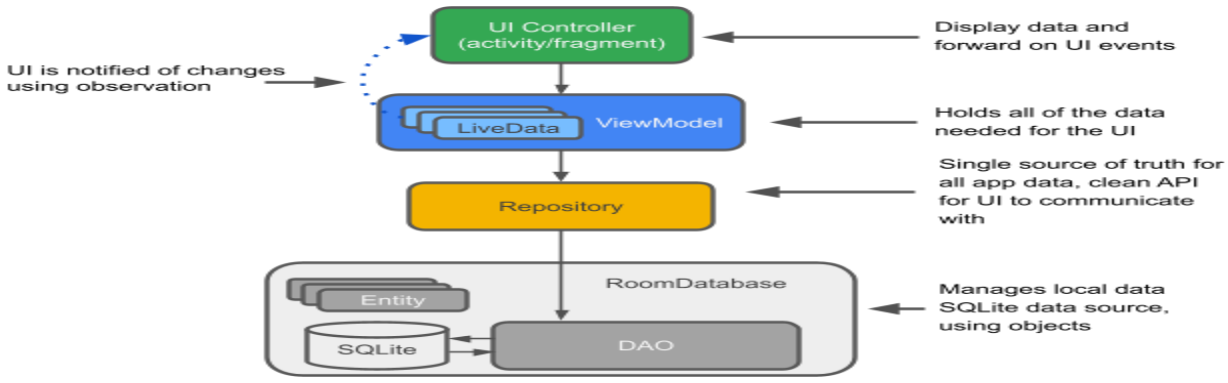


3.2 Hardware / Software designing Hardware and software requirements of the project

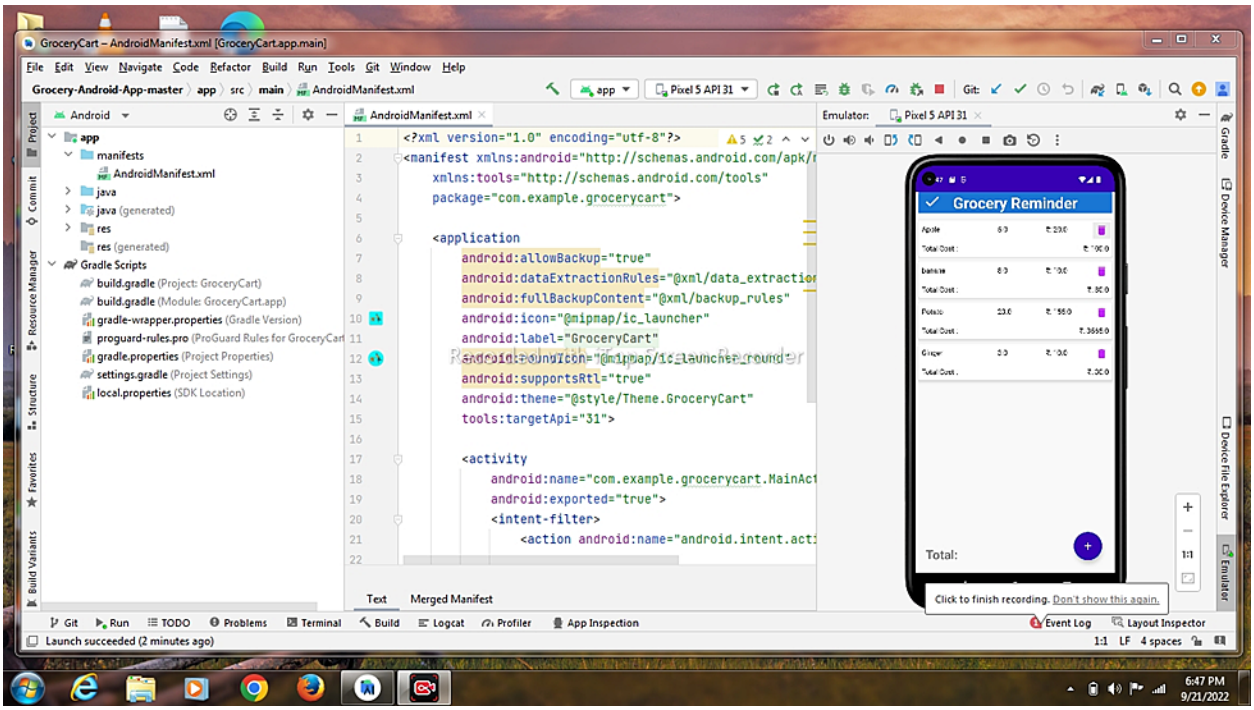
- **Android Studio**
- **An Android device or emulator.**
- **HAXM**

4 EXPERIMENTAL INVESTIGATIONS



5.Flowchart

6. Result



7.Advantages and Disadvantages

Advantages :

- **Is saves your money.**
- **Its saves your time and energy.**
- **It reduces waste.**
- **It makes you feel good.**

Disadvantages :

- **Sometimes app not work properly.**
- **The previous list not deleted.**

8 APPLICATIONS

- **MainActivity: displays words in a list using a RecyclerView and the WordListAdapter. In MainActivity, there is an Observer that observes the words from the database and is notified when they change.**
- **NewWordActivity: adds a new word to the list.**
- **WordViewModel: provides methods for accessing the data layer, and it returns LiveData so that MainActivity can set up the observer relationship.***
- **LiveData<List<Word>>: Makes possible the automatic updates in the UI components. You can convert from Flow, to LiveData by calling flow.toLiveData().**
- **Repository: manages one or more data sources. The Repository exposes methods for the ViewModel to interact with the underlying data provider. In this app, that backend is a Room database.**
- **Room: is a wrapper around and implements a SQLite database. Room does a lot of work for you that you used to have to do yourself.**
- **DAO: maps method calls to database queries, so that when the Repository calls a method such as getAlphabetizedWords(), Room can execute SELECT * FROM word_table ORDER BY word ASC.**

- **DAO can expose `suspend` queries for one-shot requests and `Flow` queries - when you want to be notified of changes in the database.**
- **`Word`: is the entity class that contains a single word.**
- **`Views` and `Activities` (and `Fragments`) only interact with the data through the `ViewModel`. As such, it doesn't matter where the data comes from.**

9 . Conclusion

From my internship at Smartinternz platform,I was able to get better understanding of how the Android app develop and develope new app.I enjoyed working with the SamrtInternz to advice and implement my knowledge.

I have get so many knowledge from this internship and develop so many app .Overall,I found the Android development Internship experience to be positive,and I’m sure I will be able to use the skils I learned in my career later.

It will be very helpful in my career.

10.Future Scope

In between 2016-2022 India's online grocery market is expected to grow at a compounded annual growth rate of 62 per cent. India is the sixth-largest grocery market in world with US$ 360 billion (Rs 21,60,000 crore) worth although the online grocery shopping is still in its developing stage.

It is very helpful for people.

11.Bibliography

1.https://www.geeksforgeeks.org/how-to-build-a-grocery-android-app-using-mvvm-and-room-database/

2.https://developer.android.com/codelabs/android-room-with-a-view-kotlin

Appendix

google developer link:https://g.dev/pratikshaPMP

youtube demo vedio link:https://youtu.be/0QyhUj4PJLk

github link:https://github.com/Pratiksha551/Android-App.git