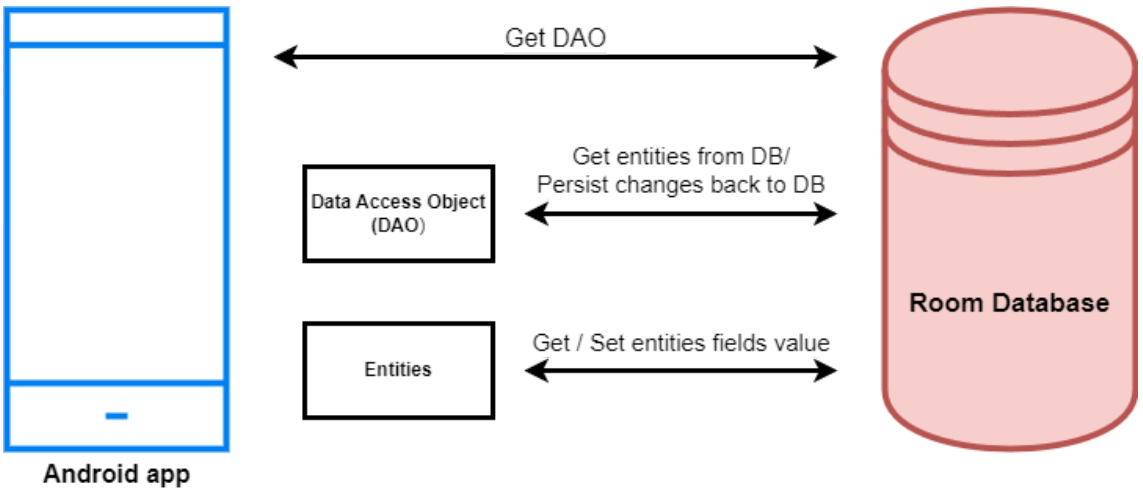
Snack Squad: A Customizable Snack Ordering and Delivery App

Project Based Experiential Learning Program

Snack Squad: A Customizable Snack Ordering and Delivery App

A project that demonstrates the use of Android Jetpack Compose to build a UI for a snack squad app. Snack Squad is a sample project built using the Android Compose UI toolkit. It demonstrates how to create a simple e-commerce app for snacks using the Compose libraries.The user can see a list of snacks, and by tapping on a snack,and by tapping on the "Add to Cart" button, the snack will be added to the cart. The user can also see the list of items in the cart and can proceed to checkout to make the purchase.

Architecture



Learning Outcomes :

By end of this project:

- You'll be able to work on Android studio and build an app.
- You'll be able to integrate the database accordingly.

Project Workflow:

- Users register into the application.
- After registration , user logins into the application.
- User enters into the main page
- User can view the items,select and order the items

- From admin login we can view the orders placed.

Tasks:

1.Required initial steps
2.Creating a new project.
3.Adding required dependencies.
4.Creating the database classes.
5.Building application UI and connecting to database.
6.Using AndroidManifest.xml
7.Running the application.

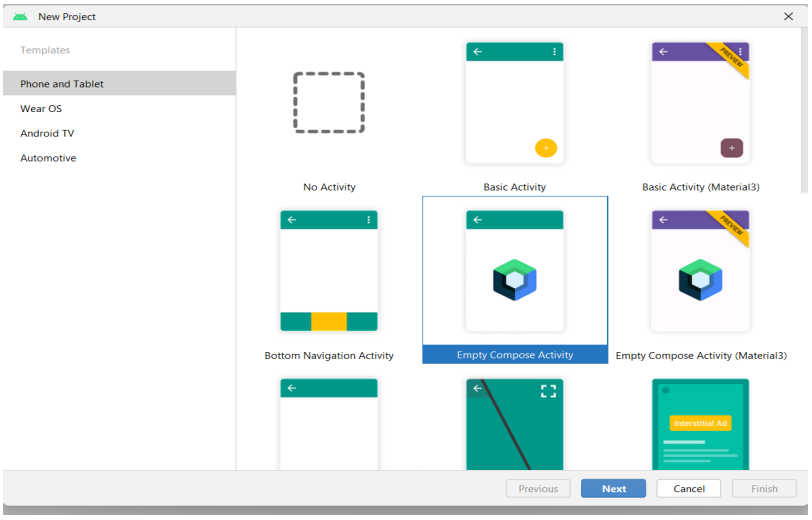
Task 1:

Required initial steps :

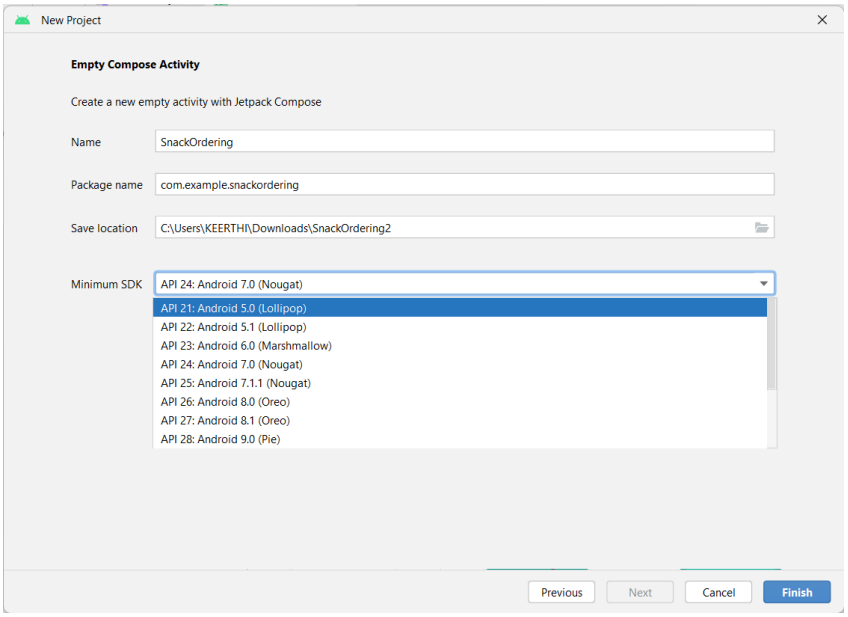
https://developer.android.com/studio/install

Task 2 :

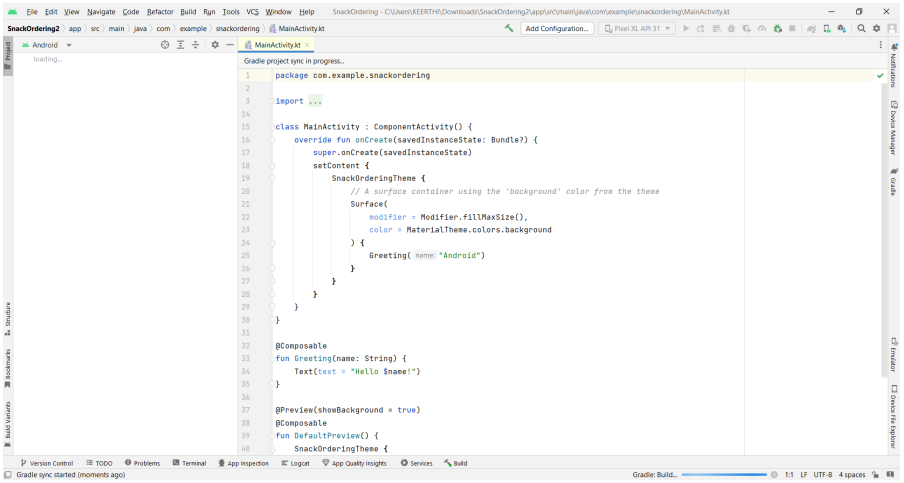
Creating a new project.
Step 1 : Android studio > File > New > New Project > Empty Compose Activity
Step 2 : Click on **Next** button.



Step 3 : Give name to the new project.
Step 4 : Give the Minimum SDK value
Step 5 : Click Finish

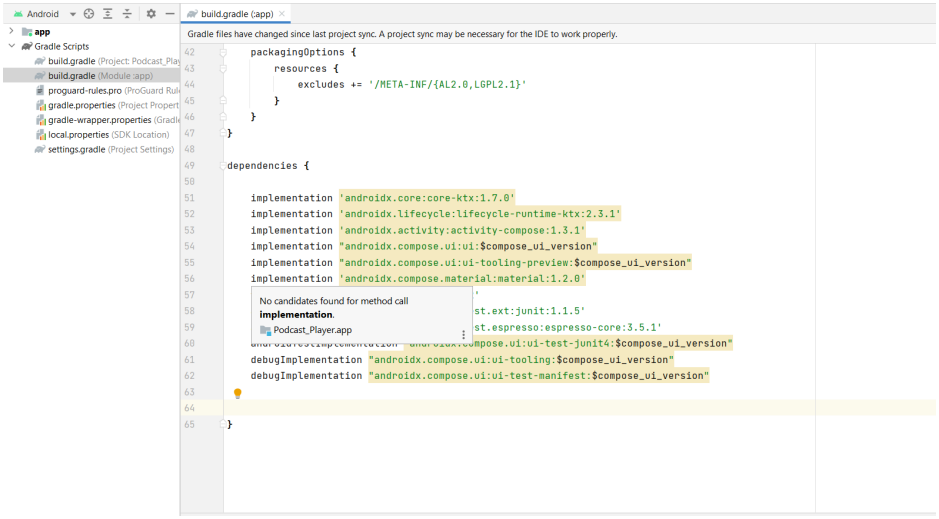


Main activity file



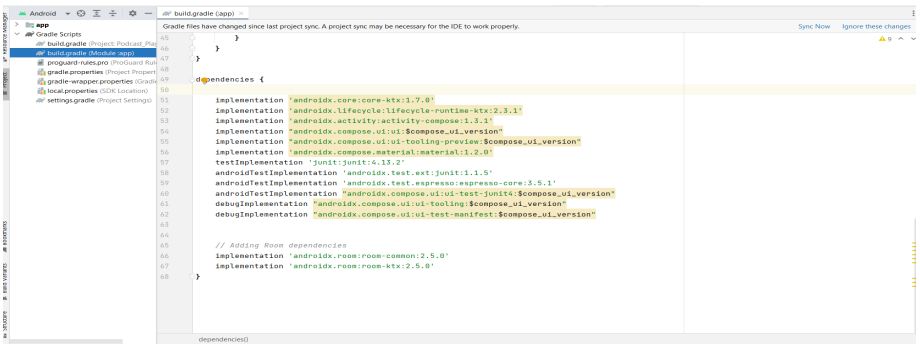
Task 3 :

Adding required dependencies.
Step 1 : Gradle scripts > build.gradle(Module :app)



Step 2 : Adding room dependencies.
Add the below code in dependencies

```
// Adding Room dependencies
implementation 'androidx.room:room-common:2.5.0'
implementation 'androidx.room:room-ktx:2.5.0'
```

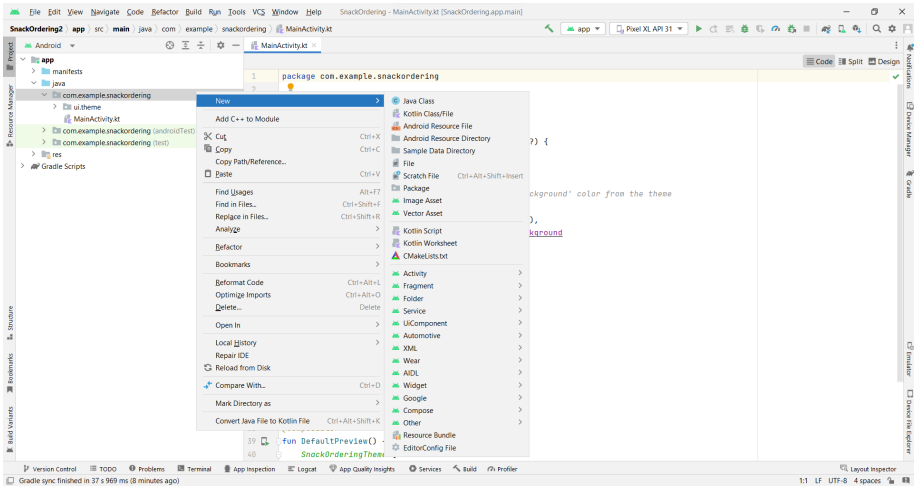


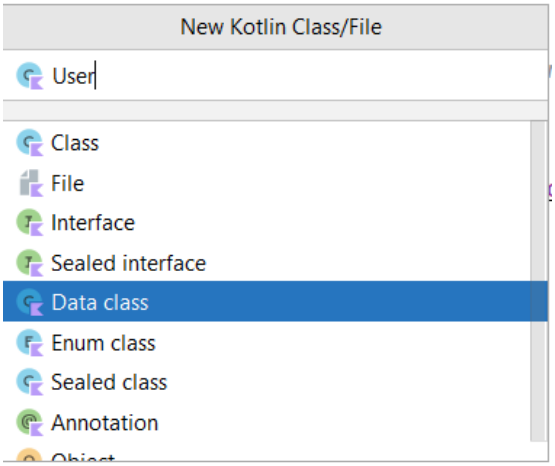
Step 3 : Click on Sync now

Task 4:

Creating the database classes.
In this project we will be having two databases, one is for user registration and login, and other is for tracking the orders of the user, which is used for admin page .

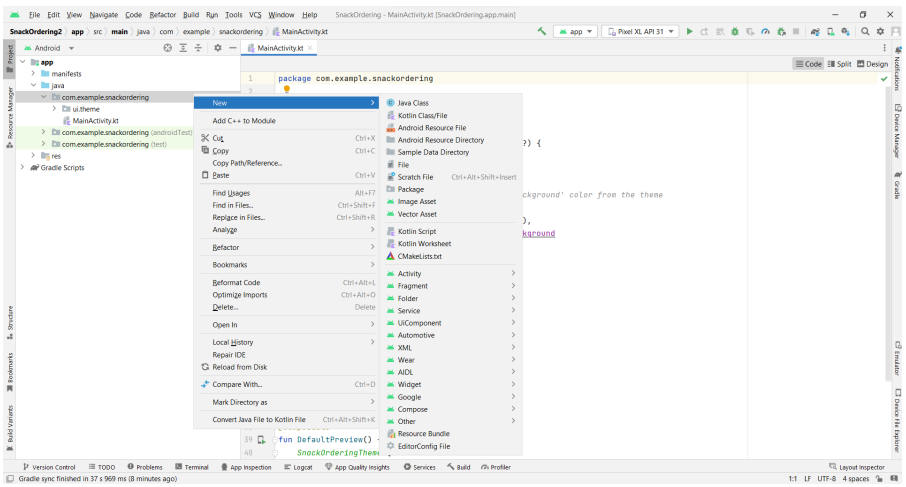
Database 1
Step 1 : Create User data class

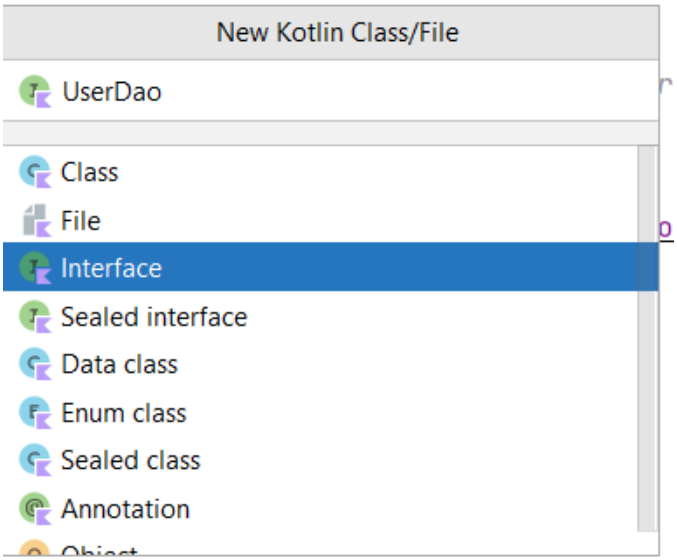




User class code:
https://github.com/smartinternz02/SnackOrdering/tree/main/app/src/main/java/com/example/snackordering/User.kt

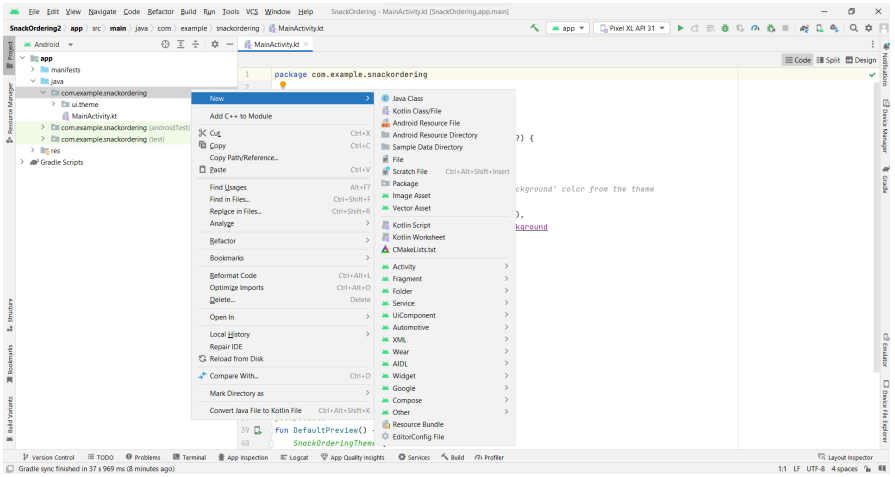
Step 2 : Create an UserDao interface

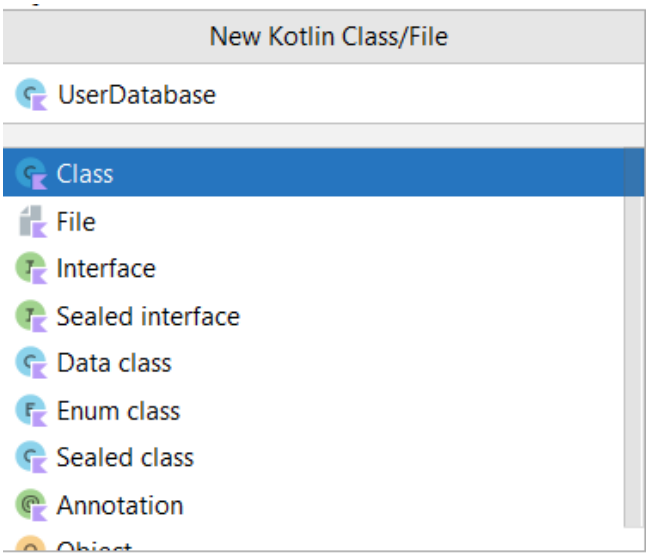




UserDao interface code:
https://github.com/smartinternz02/SnackOrdering/tree/main/app/src/main/java/com/example/snackordering/UserDao.kt

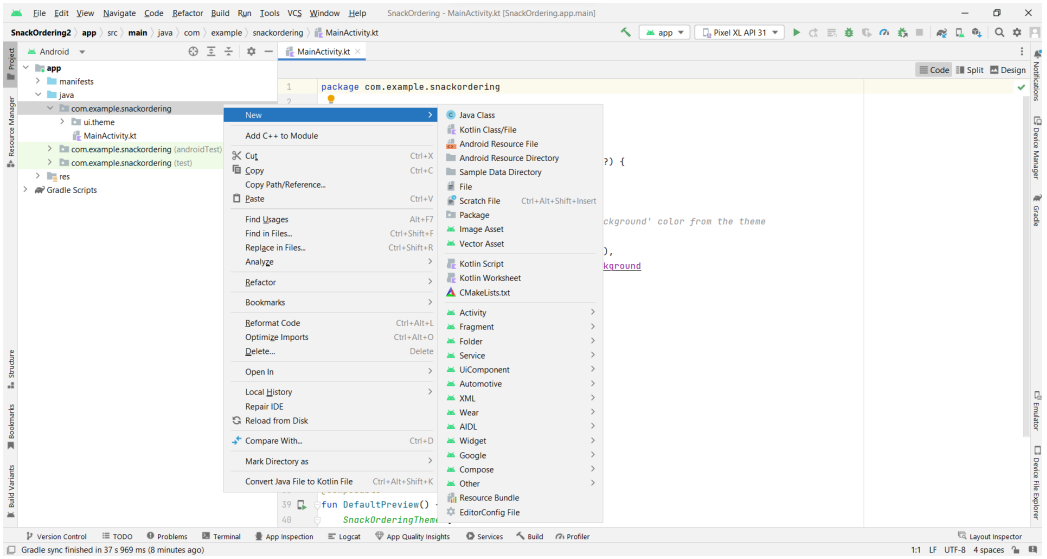
Step 3 : Create an UserDatabase class

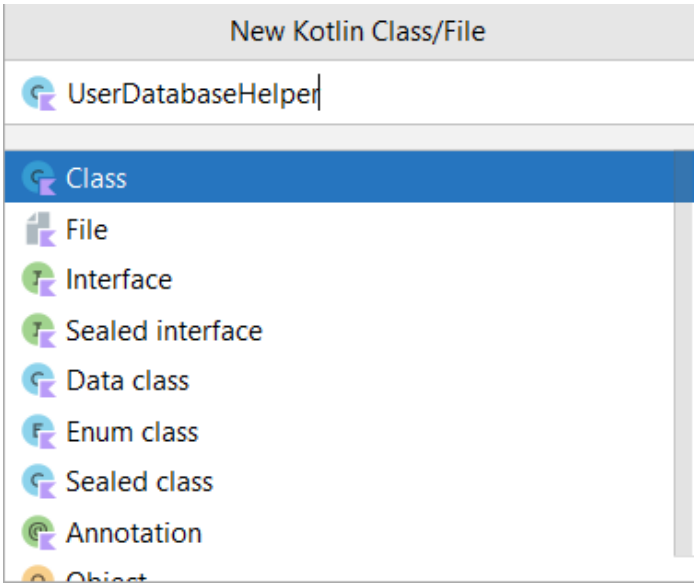




UserDatabase class code : https://github.com/smartinternz02/SnackOrdering/tree/main/app/src/main/java/com/example/snackordering/UserDatabase.kt

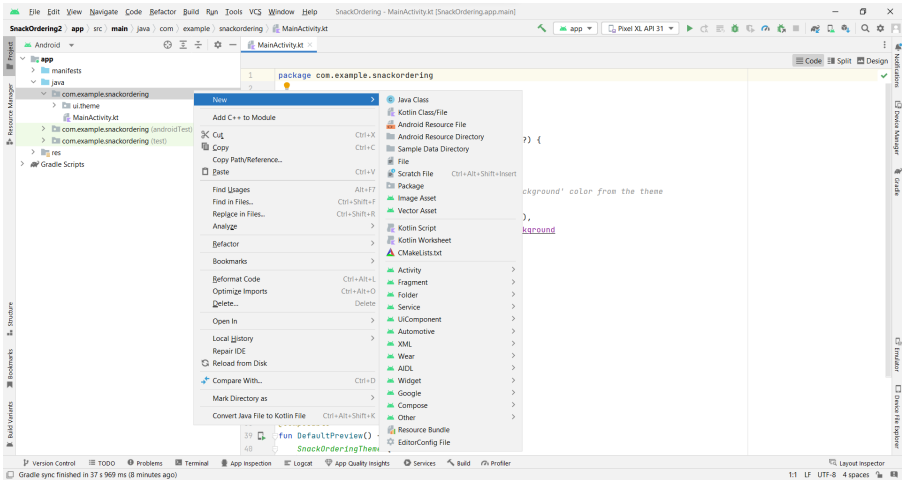
Step 4 : Create an UserDatabaseHelper class

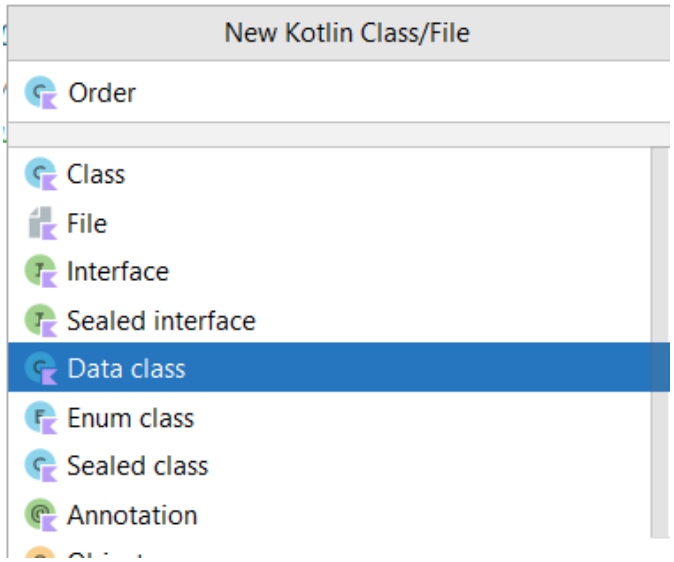




UserDatabaseHelper class code :
https://github.com/smartinternz02/SnackOrdering/tree/main/app/src/main/java/com/example/snackordering/UserDatabaseHelper.kt

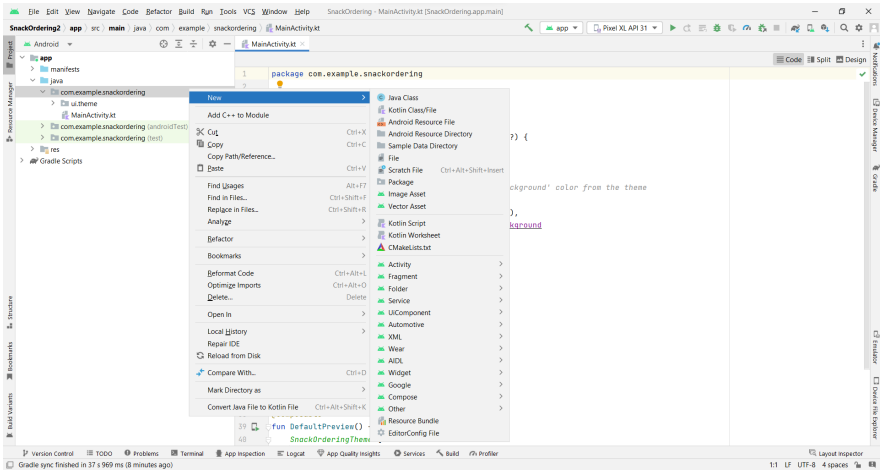
Database 2
Step 1 : Create Order data class

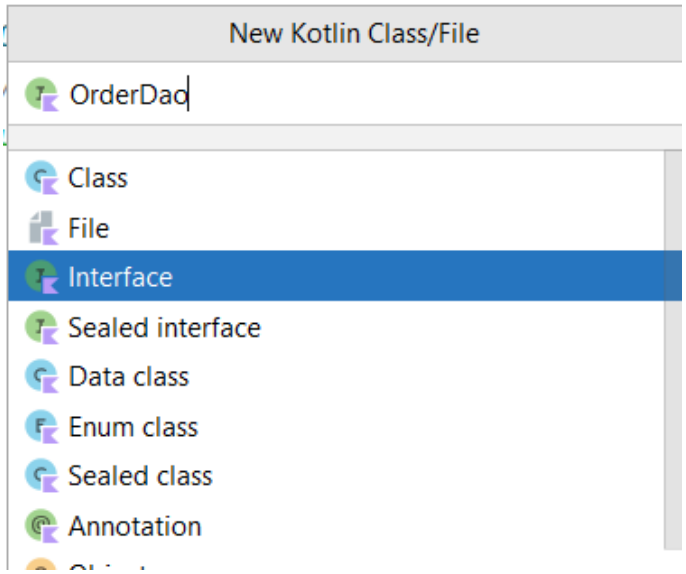




Order data class code:
https://github.com/smartinternz02/SnackOrdering/tree/main/app/src/main/java/com/example/snackordering/Order.kt

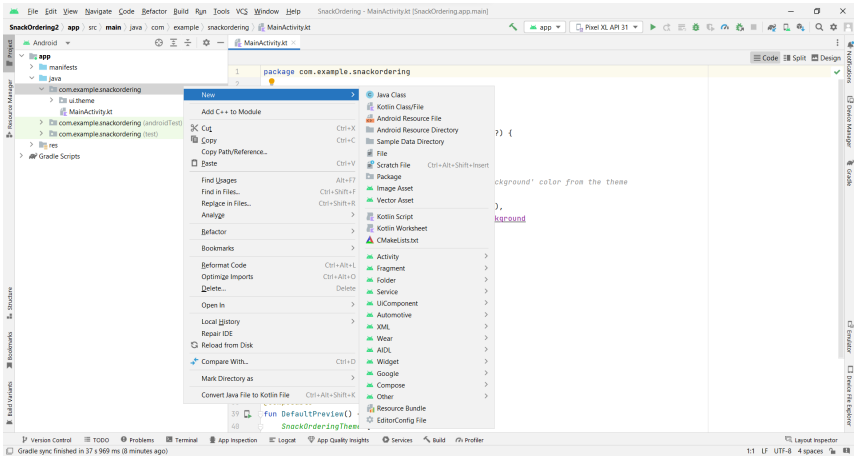
Step 2 : Create OrderDao interface

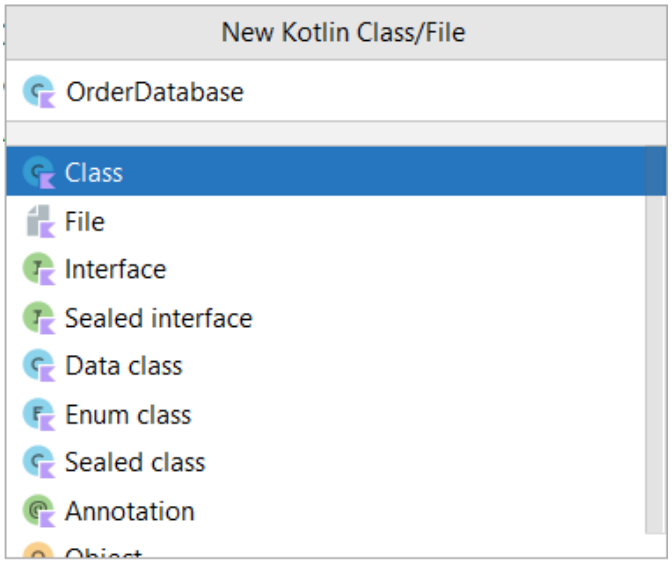




OrderDao interface code:
https://github.com/smartinternz02/SnackOrdering/tree/main/app/src/main/java/com/example/snackordering/OrderDao.kt

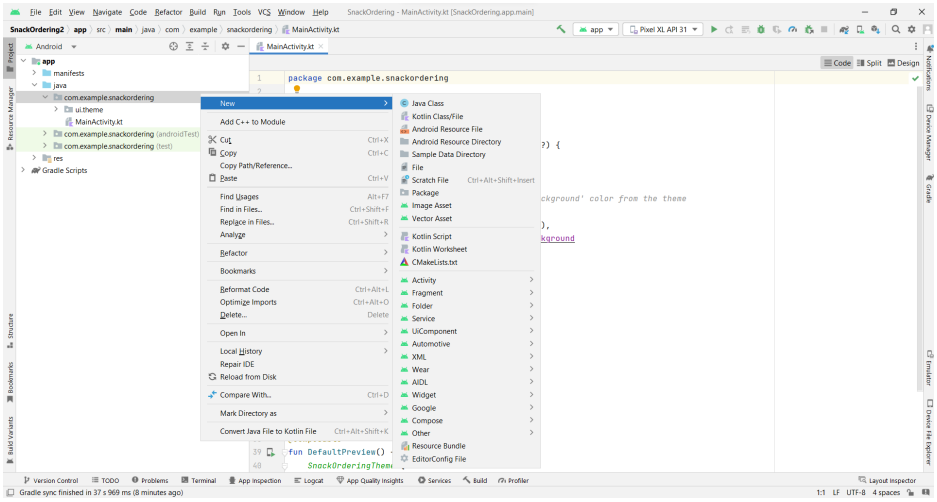
Step 3 : Create OrderDatabase class

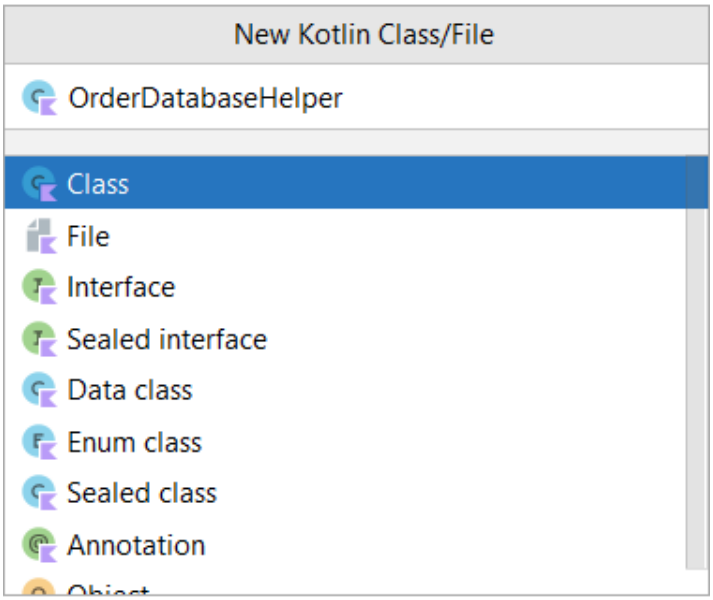




OrderDatabase class code:
https://github.com/smartinternz02/SnackOrdering/tree/main/app/src/main/java/com/example/snackordering/OrderDatabase.kt

Step 4 : Create OrderDatabaseHelper class

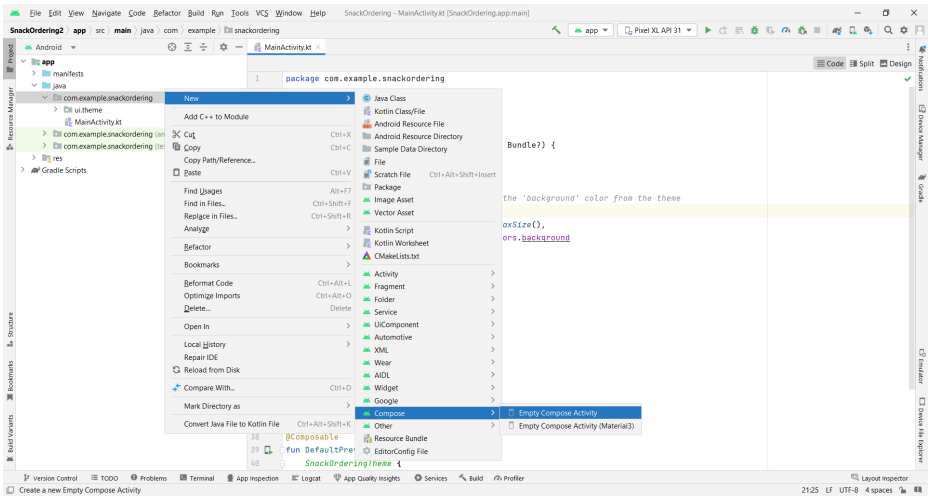


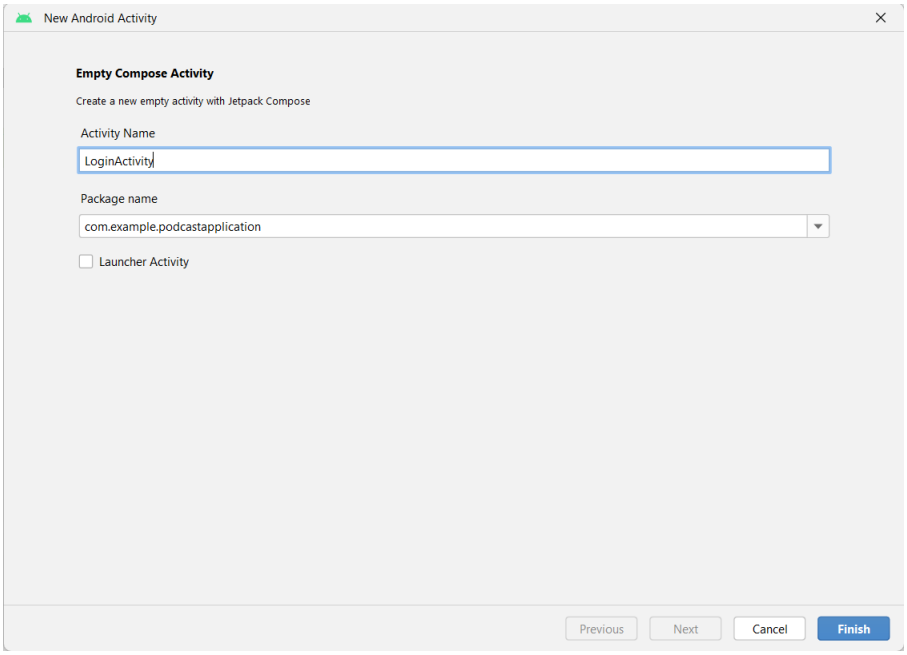


OrderDatabaseHelper class code:
https://github.com/smartinternz02/SnackOrdering/tree/main/app/src/main/java/com/example/snackordering/OrderDatabaseHelper.kt

Task 5:

Building application UI and connecting to database.
Step 1: Creating LoginActivity.kt with database





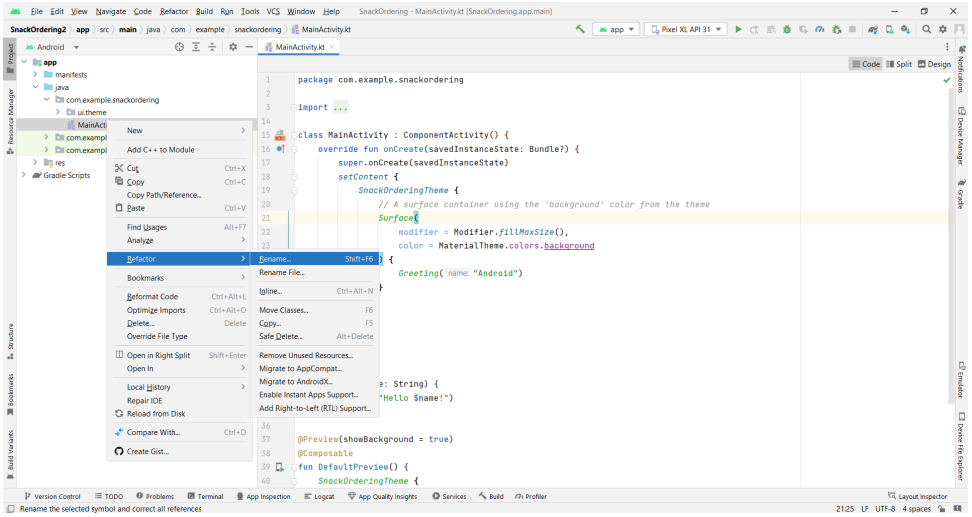
Database connection in LoginActivity.kt

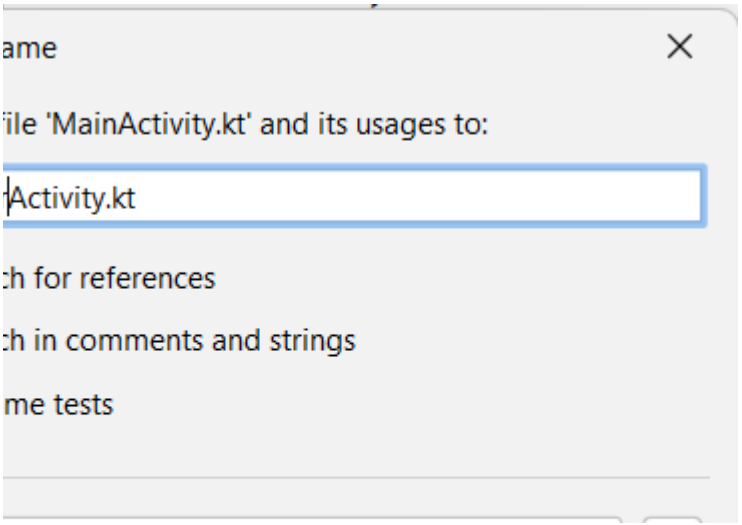
```kotlin
package com.example.snackordering

import ...

class LoginActivity : ComponentActivity() {
    private lateinit var databaseHelper: UserDatabaseHelper
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        databaseHelper = UserDatabaseHelper( context: this)
        setContent {
            SnackOrderingTheme {
                // A surface container using the 'background' color from the theme
                Surface(
                    modifier = Modifier.fillMaxSize(),
                    color = MaterialTheme.colors.background
                ) {
                    LoginScreen( context: this, databaseHelper)
                }
            }
        }
    }
}
@Composable
fun LoginScreen(context: Context, databaseHelper: UserDatabaseHelper) {

    Image(painterResource(id = R.drawable.order), contentDescription = "",
        alpha =0.3F,
        contentScale = ContentScale.FillHeight,

    )

    var username by remember { mutableStateOf( value: "") }
    var password by remember { mutableStateOf( value: "") }
    var error by remember { mutableStateOf( value: "") }
```

Complete code in below link:

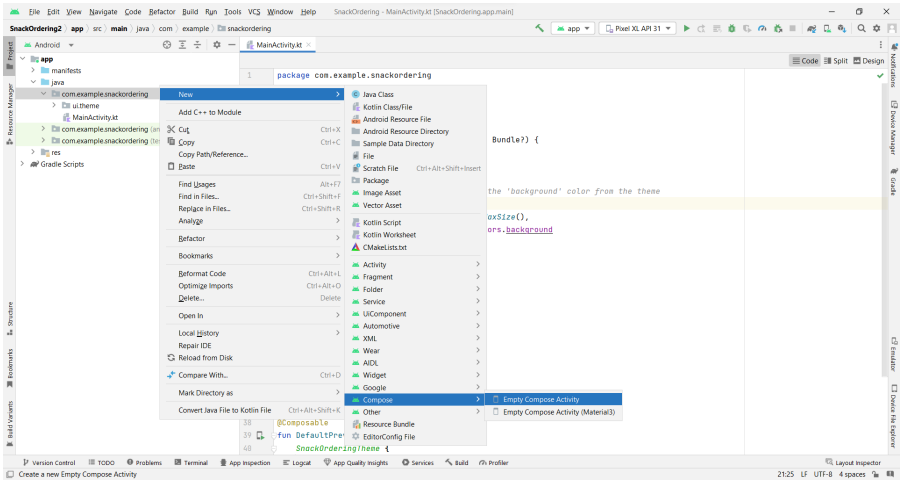
https://github.com/smartinternz02/SnackOrdering/tree/main/app/src/main/java/com/example/snackordering/LoginActivity.kt

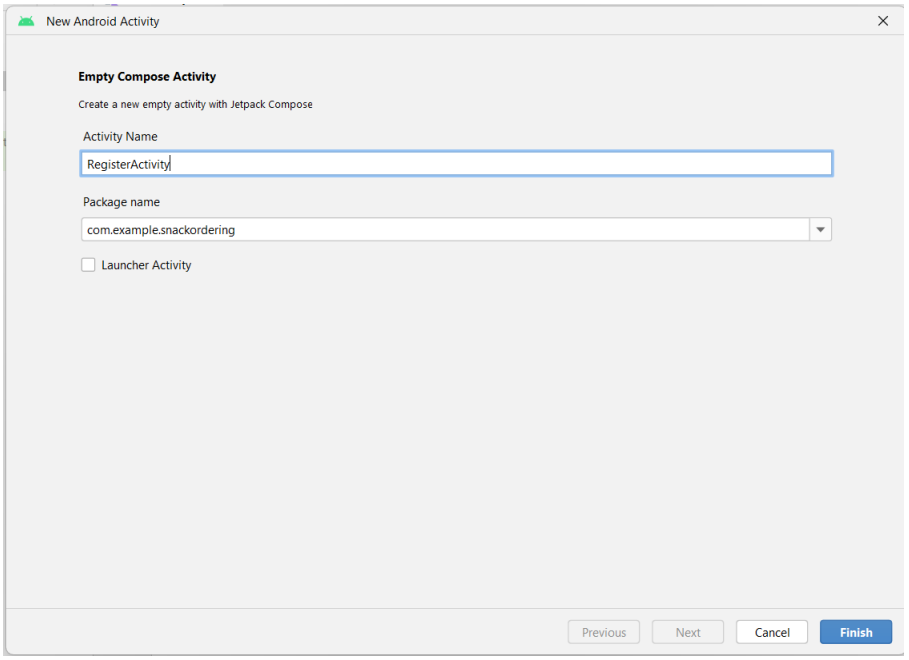
Step 2 : Creating MainActivity.kt with database
MainActivity is converted into RegisterActivity.kt as follows below:





Now click on the Refactor.



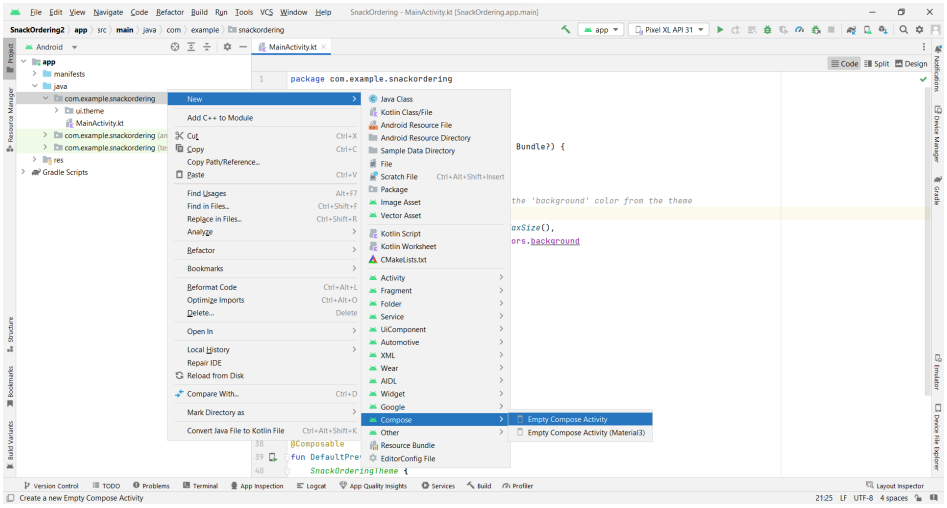


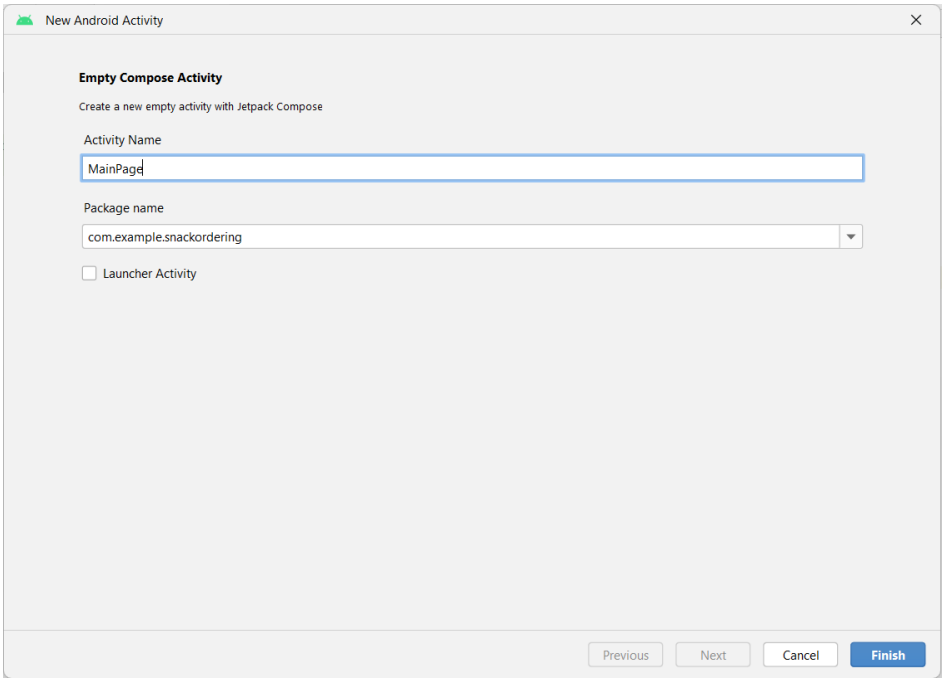
Database connection in RegisterActivity.kt

```
package com.example.snackordering

import ...

class MainActivity : ComponentActivity() {
    private lateinit var databaseHelper: UserDatabaseHelper
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        databaseHelper = UserDatabaseHelper( context: this)
        setContent {
            SnackOrderingTheme {
                // A surface container using the 'background' color from the theme
                Surface(
                    modifier = Modifier.fillMaxSize(),
                    color = MaterialTheme.colors.background
                ) {

                    RegistrationScreen( context: this,databaseHelper)
                }
            }
        }
    }
}
@Composable
fun RegistrationScreen(context: Context, databaseHelper: UserDatabaseHelper) {
    Image(
        painterResource(id = R.drawable.order), contentDescription = "",
        alpha =0.3F,
        contentScale = ContentScale.FillHeight,)
    var username by remember { mutableStateOf( value: "") }
    var password by remember { mutableStateOf( value: "") }
    var email by remember { mutableStateOf( value: "") }
    var error by remember { mutableStateOf( value: "") }
```

Complete code in below link:
https://github.com/smartinternz02/SnackOrdering/tree/main/app/src/main/java/com/example/snackordering/RegisterActivity.kt

Step 3 : Creating MainPage.kt file

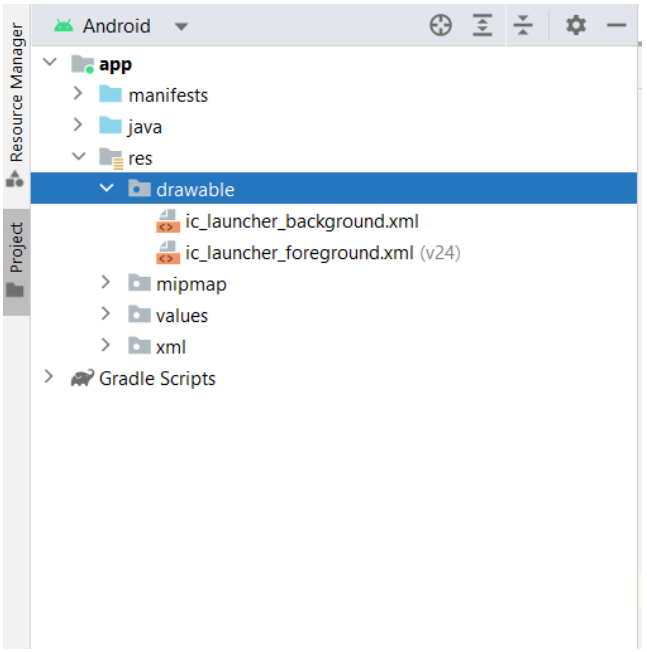

File Edit View Navigate Code Refactor Build Run Tools VCS Window Help
SnackOrdering - MainActivity.kt [SnackOrdering.app.main]
SnackOrdering2 app src main java com example snackordering
Pixel XL API 31
Android
MainActivity.kt
Code Split Design
app
manifests
java
com.example.snackordering
ui.theme
MainActivity.kt
res
Gradle Scripts
package com.example.snackordering
New
Add C++ to Module
Cut Ctrl+X
Copy Ctrl+C
Copy Path/Reference...
Paste Ctrl+V
Find Usages Alt+F7
Find in Files... Ctrl+Shift+F
Replace in Files... Ctrl+Shift+R
Analyze
Refactor
Bookmarks
Reformat Code Ctrl+Alt+L
Optimize Imports Ctrl+Alt+O
Delete... Delete
Open In
Local History
Repair IDE
Reload from Disk
Compare With... Ctrl+D
Mark Directory as
Convert Java File to Kotlin File Ctrl+Alt+Shift+K
Java Class
Kotlin Class/File
Android Resource File
Android Resource Directory
Sample Data Directory
File
Scratch File Ctrl+Alt+Shift+Insert
Package
Image Asset
Vector Asset
Kotlin Script
Kotlin Worksheet
CMakeLists.txt
Activity
Fragment
Folder
Service
UiComponent
Automotive
XML
Wear
AIDL
Widget
Google
Compose
Other
Resource Bundle
EditorConfig File
Empty Compose Activity
Empty Compose Activity (Material3)
Bundle?) {
the 'background' color from the theme
axSize(),
ors.background
@Composable
fun DefaultPre
SnackOrderingTheme {
Version Control TODO Problems Terminal App Inspection Logcat App Quality Insights Services Build Profiler
Layout Inspector
Create a new Empty Compose Activity
21:25 LF UTF-8 4 spaces


New Android Activity
Empty Compose Activity
Create a new empty activity with Jetpack Compose
Activity Name
MainPage
Package name
com.example.snackordering
Launcher Activity
Previous
Next
Cancel
Finish

```kotlin
package com.example.snackordering

import ...


class MainPage : ComponentActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContent {
            SnackOrderingTheme {
                // A surface container using the 'background' color from the theme
                Surface(
                    modifier = Modifier.fillMaxSize(),
                    color = MaterialTheme.colors.background
                ) {
                    FinalView( mainPage: this)
                    val context = LocalContext.current
                    //PopularFoodColumn(context)
                }
            }
        }
    }
}


@Composable
fun TopPart() {

    Row(
        modifier = Modifier
            .fillMaxWidth()
            .background(Color( color: 0xffeceef0)), Arrangement.SpaceBetween
    ) { this: RowScope
        Icon(
```

In MainPage.kt file the main application is developed

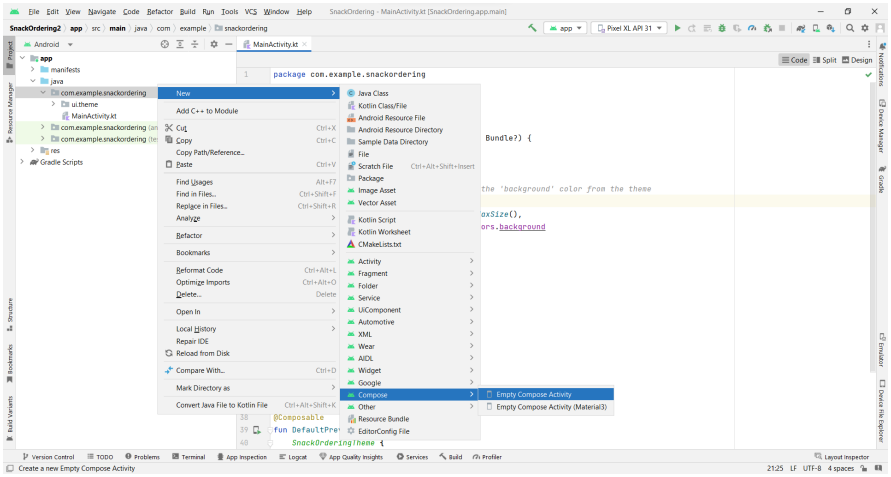
- Before creating UI we need to add some images in drawables which are in res

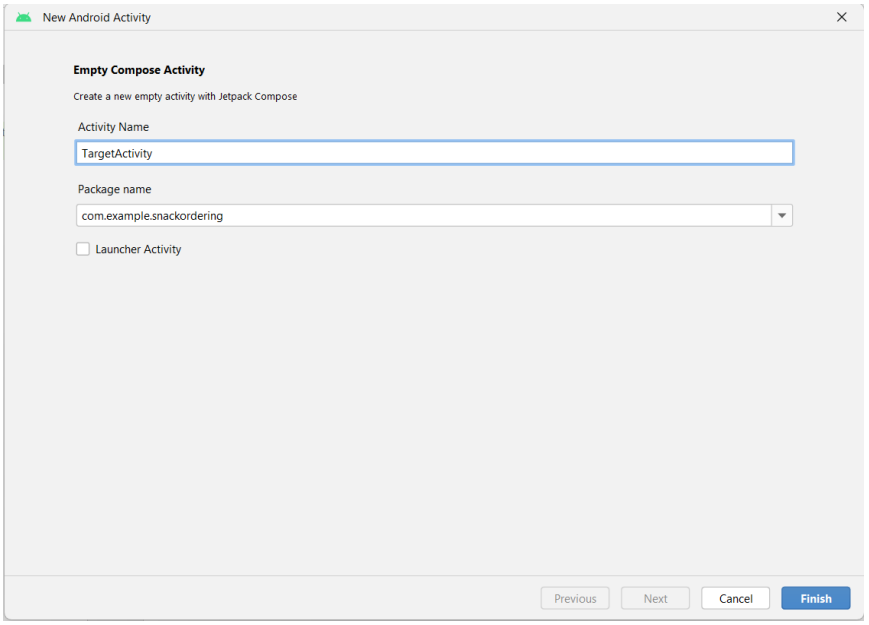


Download the required drawable from the code:
https://github.com/smartinternz02/SnackOrdering/tree/main/app/src/main/res/drawable-nodpi

Complete code of MainPage.kt :
https://github.com/smartinternz02/SnackOrdering/tree/main/app/src/main/java/com/example/snackordering/MainPage.kt

Step 4 : Creating TargetActivity.kt

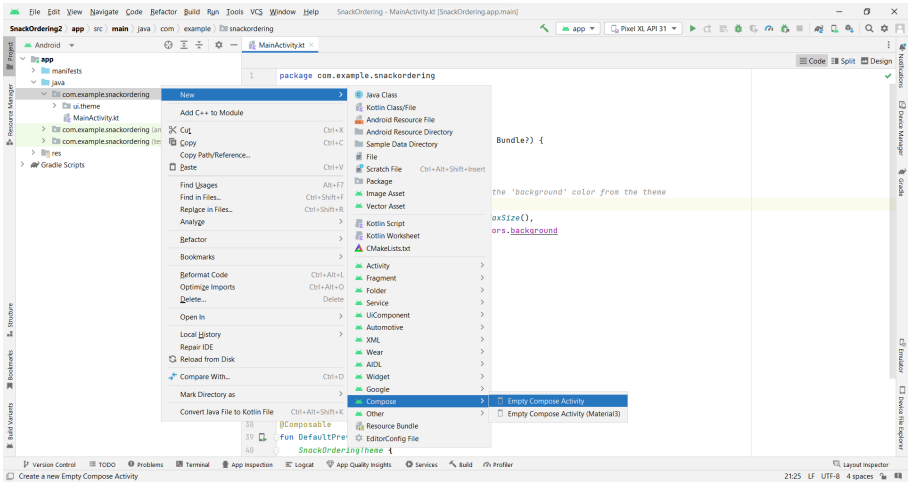


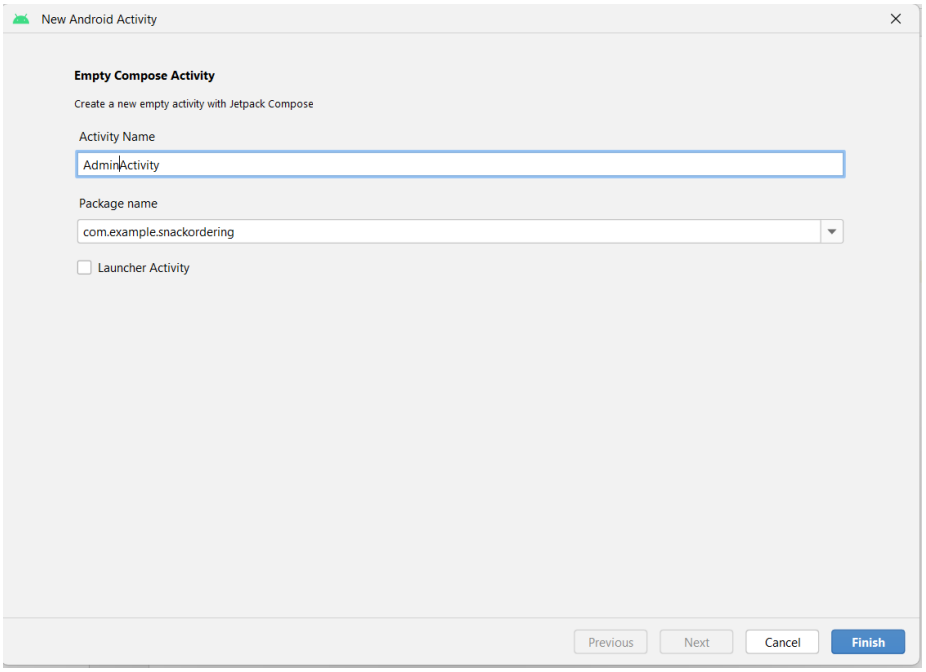


```
package com.example.snackordering

import ...
class TargetActivity : ComponentActivity() {
    private lateinit var orderDatabaseHelper: OrderDatabaseHelper
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        orderDatabaseHelper = OrderDatabaseHelper( context: this)
        setContent {
            SnackOrderingTheme {
                // A surface container using the 'background' color from the theme
                Surface(
                    modifier = Modifier.fillMaxSize().background(Color.White)) {
                    Order( context: this, orderDatabaseHelper)
                    val orders = orderDatabaseHelper.getAllOrders()
                   Log.d( tag: "swathi", orders.toString())
                }
            }
        }
    }
}
@Composable
fun Order(context: Context, orderDatabaseHelper: OrderDatabaseHelper){
    Image(painterResource(id = R.drawable.order), contentDescription = "",
        alpha =0.5F, contentScale = ContentScale.FillHeight)
    Column(
        horizontalAlignment = Alignment.CenterHorizontally,
        verticalArrangement = Arrangement.Center)
    { this: ColumnScope
        val mContext = LocalContext.current
        var quantity by remember { mutableStateOf( value: "") }
        var address by remember { mutableStateOf( value: "") }
        var error by remember { mutableStateOf( value: "") }
```

Complete code of TargetActivity.kt : https://github.com/smartinternz02/SnackOrdering/tree/main/app/src/main/java/com/example/snackordering/TargetActivity.kt

Step 4 : Creating AdminActivity.kt


File Edit View Navigate Code Refactor Build Run Tools VCS Window Help
SnackOrdering - MainActivity.kt [SnackOrdering.app.main]
SnackOrdering2 app src main java com example snackordering
MainActivity.kt
package com.example.snackordering
New
Add C++ to Module
Cut Ctrl+X
Copy Ctrl+C
Copy Path/Reference...
Paste Ctrl+V
Find Usages Alt+F7
Find in Files... Ctrl+Shift+F
Replace in Files... Ctrl+Shift+R
Analyze
Refactor
Bookmarks
Reformat Code Ctrl+Alt+L
Optimize Imports Ctrl+Alt+O
Delete... Delete
Open In
Local History
Repair IDE
Reload from Disk
Compare With... Ctrl+D
Mark Directory as
Convert Java File to Kotlin File Ctrl+Alt+Shift+K
Java Class
Kotlin Class/File
Android Resource File
Android Resource Directory
Sample Data Directory
File
Scratch File Ctrl+Alt+Shift+Insert
Package
Image Asset
Vector Asset
Kotlin Script
Kotlin Worksheet
CMakeLists.txt
Activity
Fragment
Folder
Service
UiComponent
Automotive
XML
Wear
AIDL
Widget
Google
Compose
Other
Resource Bundle
EditorConfig File
Empty Compose Activity
Empty Compose Activity (Material3)
@Composable
fun DefaultPre
SnackOrderingTheme {
Bundle?) {
the 'background' color from the theme
oxSize(),
ors.background
Version Control TODO Problems Terminal App Inspection Logcat App Quality Insights Services Build Profiler Layout Inspector
Create a new Empty Compose Activity
21:25 LF UTF-8 4 spaces


New Android Activity
Empty Compose Activity
Create a new empty activity with Jetpack Compose
Activity Name
AdminActivity
Package name
com.example.snackordering
Launcher Activity
Previous
Next
Cancel
Finish

```kotlin
package com.example.snackordering

import ...

class AdminActivity : ComponentActivity() {
    private lateinit var orderDatabaseHelper: OrderDatabaseHelper
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        orderDatabaseHelper = OrderDatabaseHelper( context: this)
        setContent {
            SnackOrderingTheme {
                // A surface container using the 'background' color from the theme
                Surface(
                    modifier = Modifier.fillMaxSize(),
                    color = MaterialTheme.colors.background
                ) {
                    val data=orderDatabaseHelper.getAllOrders();
                    Log.d( tag: "swathi" ,data.toString())
                    val order = orderDatabaseHelper.getAllOrders()
                    ListListScopeSample(order)
                }
            }
        }
    }
}

@Composable
fun ListListScopeSample(order: List<Order>) {
    Image(
        painterResource(id = R.drawable.order), contentDescription = "",
        alpha =0.5F,
        contentScale = ContentScale.FillHeight)
```

Complete code of AdminActivity.kt : https://github.com/smartinternz02/SnackOrdering/tree/main/app/src/main/java/com/example/snackordering/AdminActivity.kt

Task 6:

Modifying AndroidManifest.xml

```
        android:name=".AdminActivity"
        android:exported="false"
        android:label="AdminActivity"
        android:theme="@style/Theme.SnackOrdering" />
    <activity
        android:name=".MainPage"
        android:exported="true"
        android:label="SnackSquad"
        android:theme="@style/Theme.SnackOrdering">
        <intent-filter>
            <action android:name="android.intent.action.MAIN" />

            <category android:name="android.intent.category.LAUNCHER" />
        </intent-filter>
    </activity>
    <activity
        android:name=".TargetActivity"
        android:exported="false"
        android:label="TargetActivity"
        android:theme="@style/Theme.SnackOrdering" />
    <activity
        android:name=".LoginActivity"
        android:exported="false"
        android:label="LoginActivity"
        android:theme="@style/Theme.SnackOrdering" />
    <activity
        android:name=".MainActivity"
        android:exported="false"
        android:label="MainActivity"
        android:theme="@style/Theme.SnackOrdering" />
</application>
</manifest>
```

When we run the app we will get the MainActivity.kt file as our first screen , but we want LoginActivity.kt , So we need to change in AndroidManifest.xml.

Changed AndroidManifest.xml.

```
        android:exported="false"
        android:label="AdminActivity"
        android:theme="@style/Theme.SnackOrdering" />
    <activity
        android:name=".LoginActivity"
        android:exported="true"
        android:label="SnackSquad"
        android:theme="@style/Theme.SnackOrdering">
        <intent-filter>
            <action android:name="android.intent.action.MAIN" />

            <category android:name="android.intent.category.LAUNCHER" />
        </intent-filter>
    </activity>
    <activity
        android:name=".TargetActivity"
        android:exported="false"
        android:label="TargetActivity"
        android:theme="@style/Theme.SnackOrdering" />
    <activity
        android:name=".MainPage"
        android:exported="false"
        android:label="MainPage"
        android:theme="@style/Theme.SnackOrdering" />
    <activity
        android:name=".MainActivity"
        android:exported="false"
        android:label="MainActivity"
        android:theme="@style/Theme.SnackOrdering" />
</application>

</manifest>
```

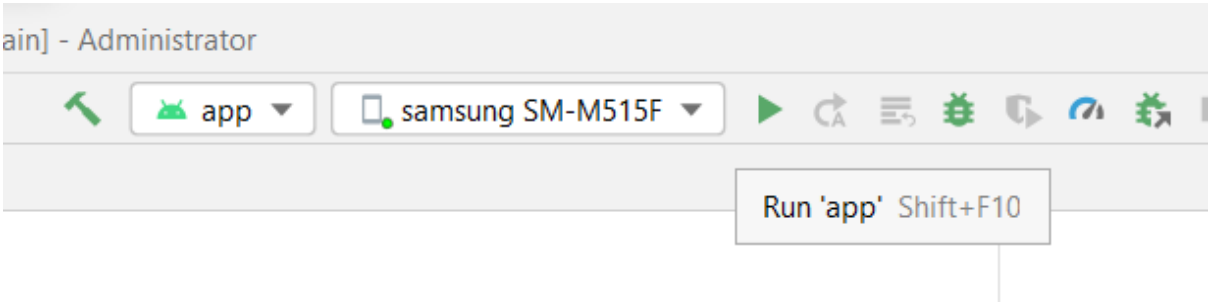
Complete AndroidManifest.xml code:
https://github.com/smartinternz02/SnackOrdering/blob/main/app/src/main/AndroidManifest.xml

Task 7:

Running the application.

Step 1: Run apps on a hardware device
https://developer.android.com/studio/run/device

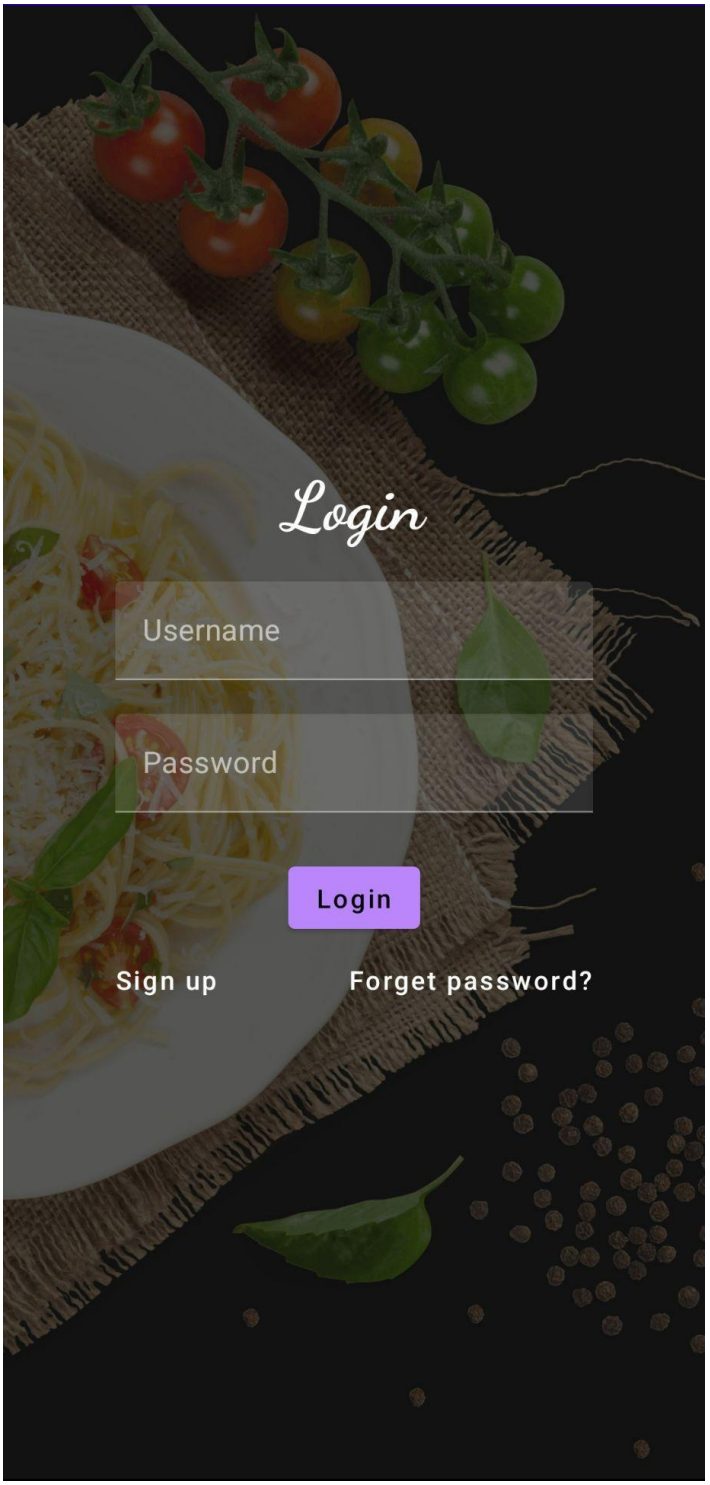
Step 2: Run the application in Mobile



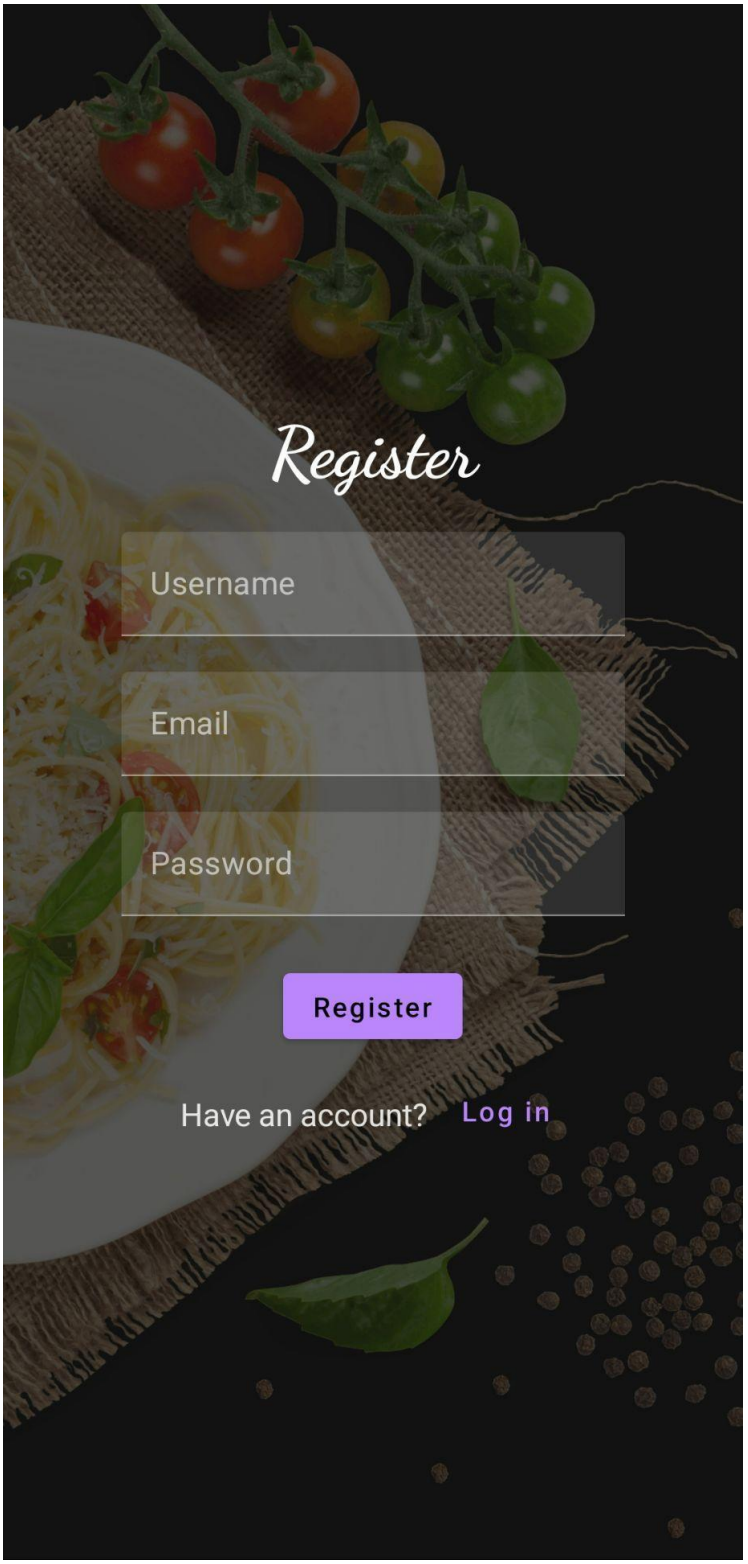
Complete Project Link:
https://github.com/smartinternz02/SnackOrdering

Final Output of the Application :

Admin Module: After logging in with Admin Credentials which are hard coded.
Login Page :

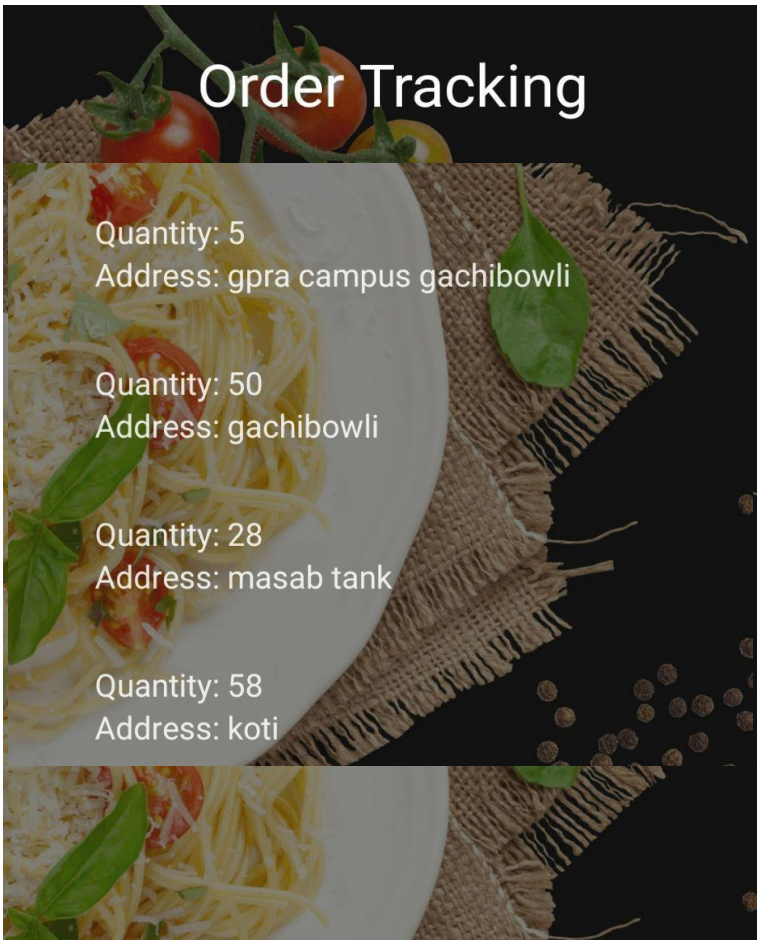


Register Page :

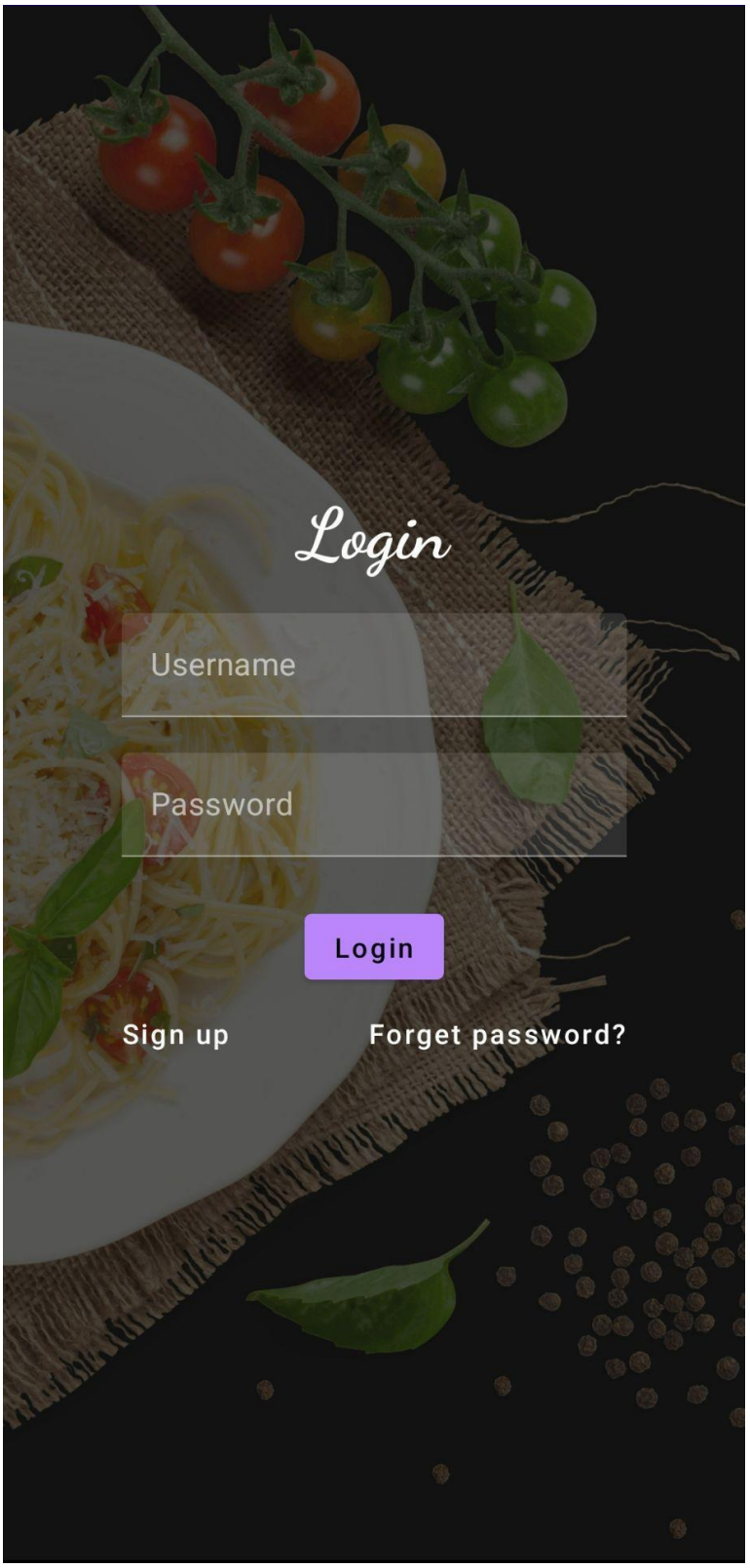


After logging in with Admin Credentials which are hard coded. Password must be “admin” .

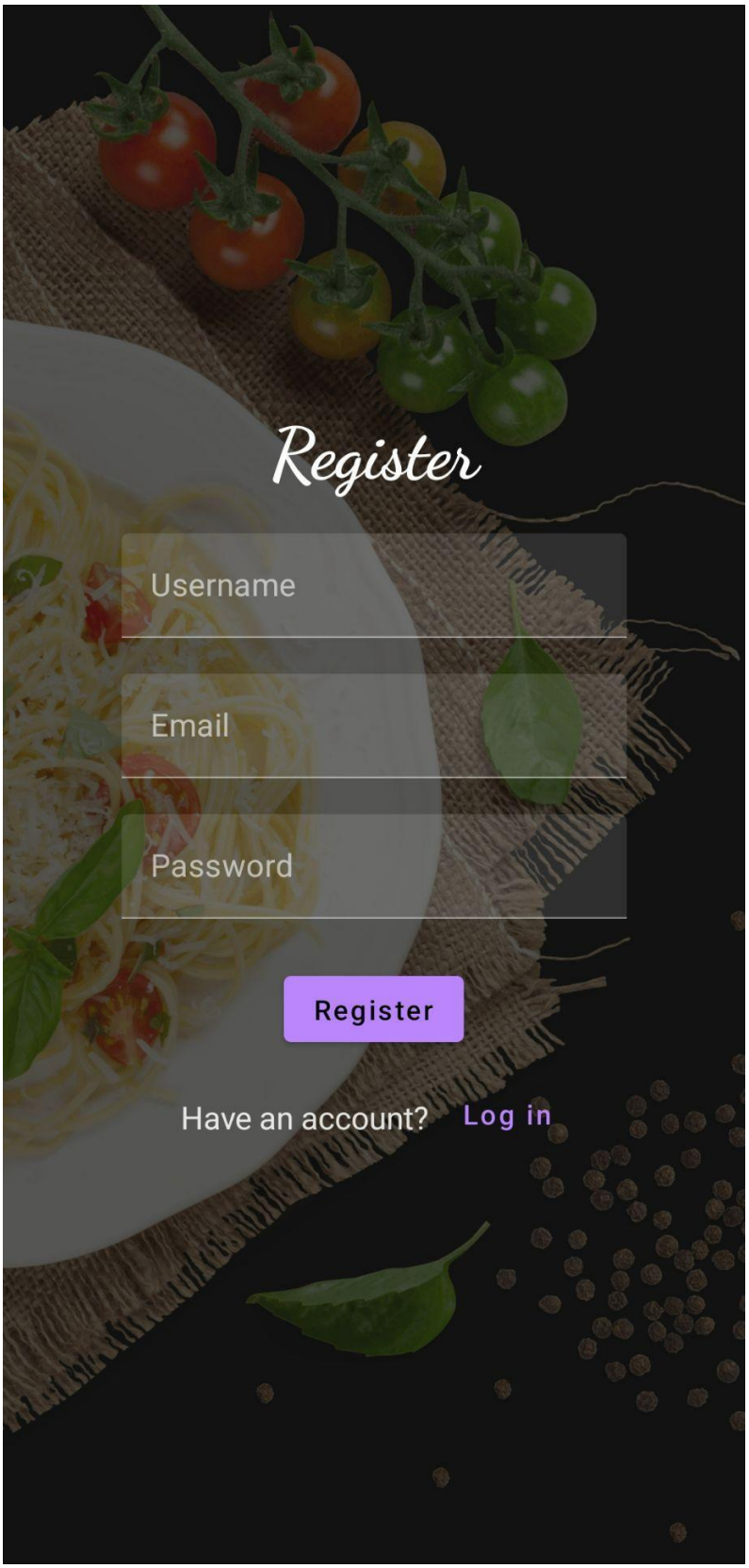
Admin page:



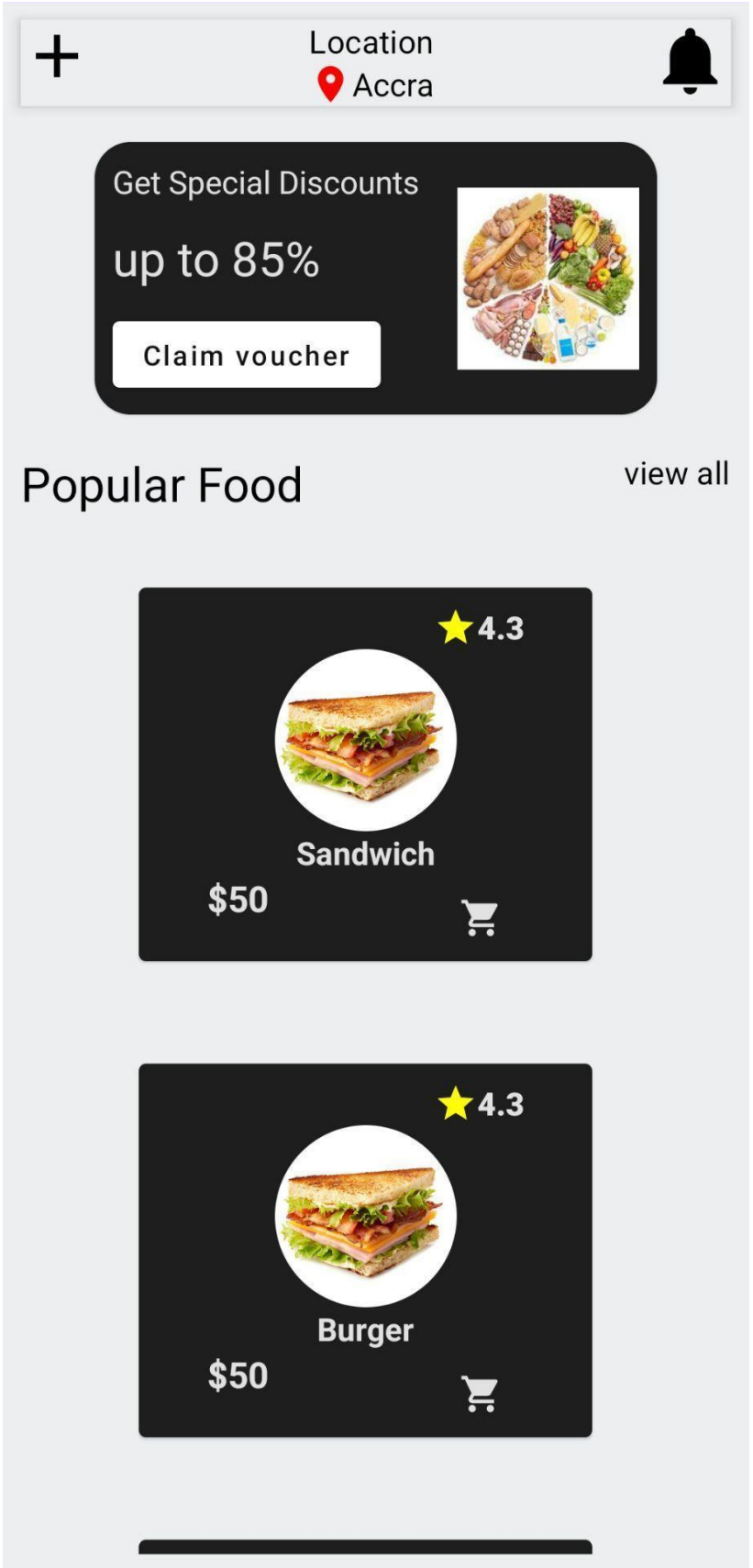
User Module:
Login Page :



Register Page :



Main Page :


Location
Accra
Get Special Discounts
up to 85%
Claim voucher
Popular Food
view all
4.3
Sandwich
$50
4.3
Burger
$50

Order Page :