



**Smart
Internz**

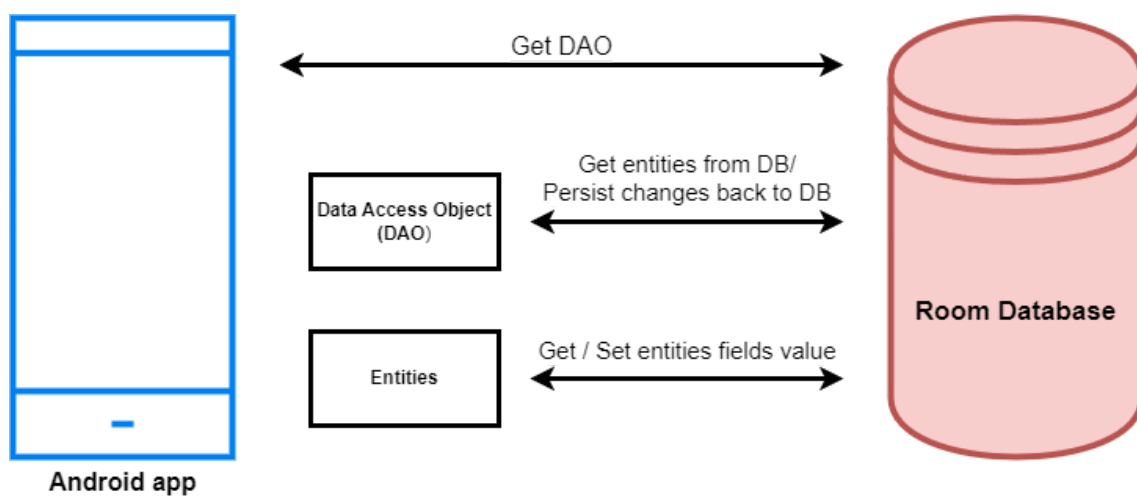
Adaptive Mail: A Flexible Email Client App

Project Based Experiential Learning Program

Adaptive Mail: A Flexible Email Client App

Adaptive Mail app is a sample project that demonstrates how to use the Android Compose UI toolkit to build a conversational UI. The app simulates a messaging interface, allowing the user to send and receive messages, and view a history of previous messages. It showcases some of the key features of the Compose UI toolkit, data management, and user interactions.

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 logs into the application.
- User enters into the main page
- User can View previously sent emails.
- User can give subject and email body to send email.

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 :

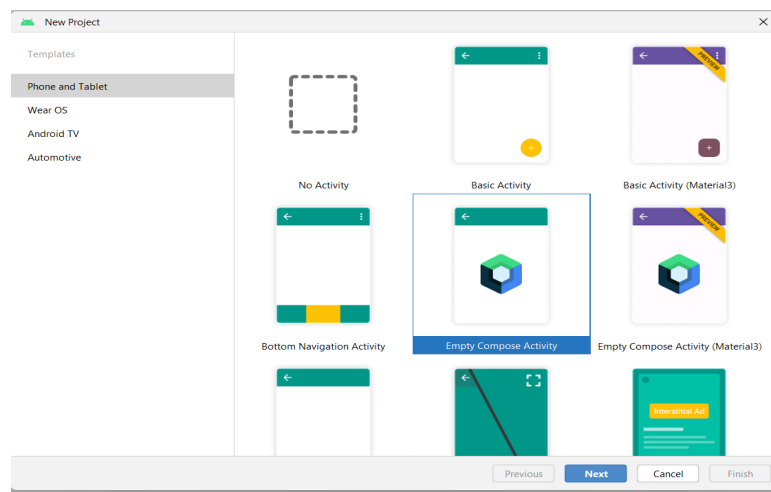
<https://developer.android.com/studio/install>

Task 2 :

Creating a new project.

Step 1 : Android studio > File > New > New Project > Empty Compose Activity

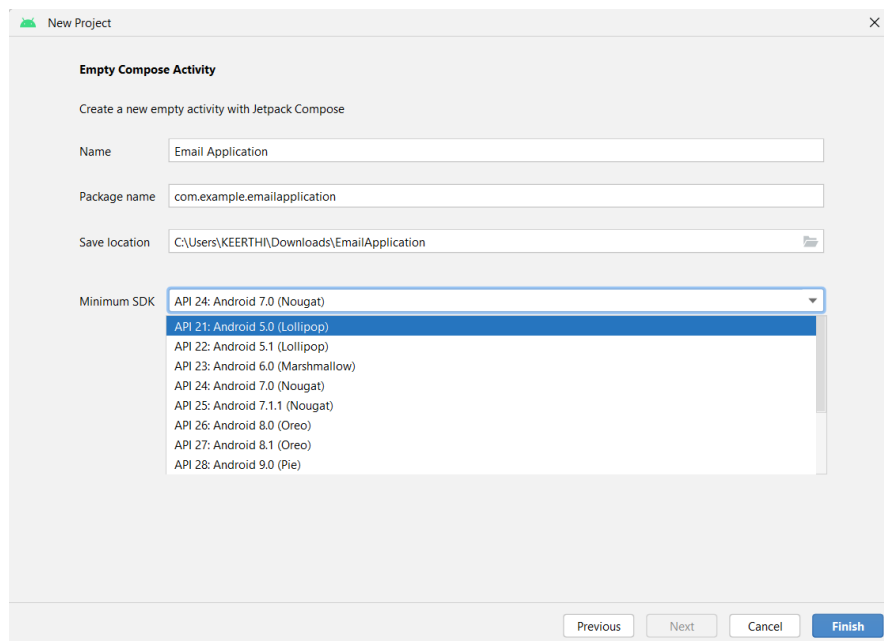
Step 2 : Click on **Next** button.



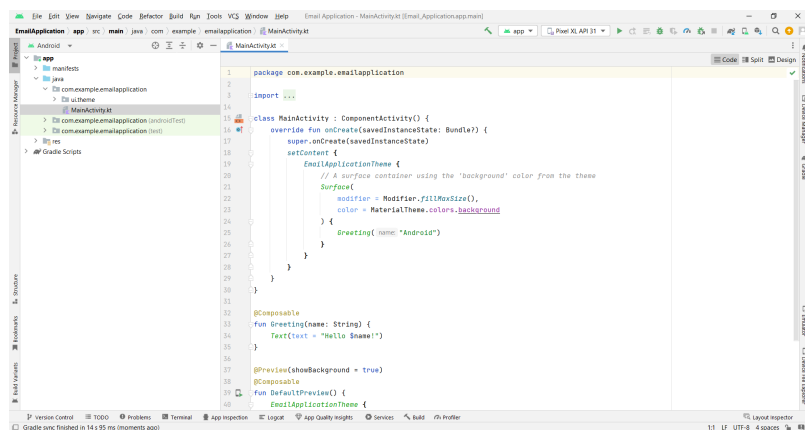
Step 3 : Give name to the new project.

Step 4 : Give the Minimum SDK value

Step 5 : Click Finish



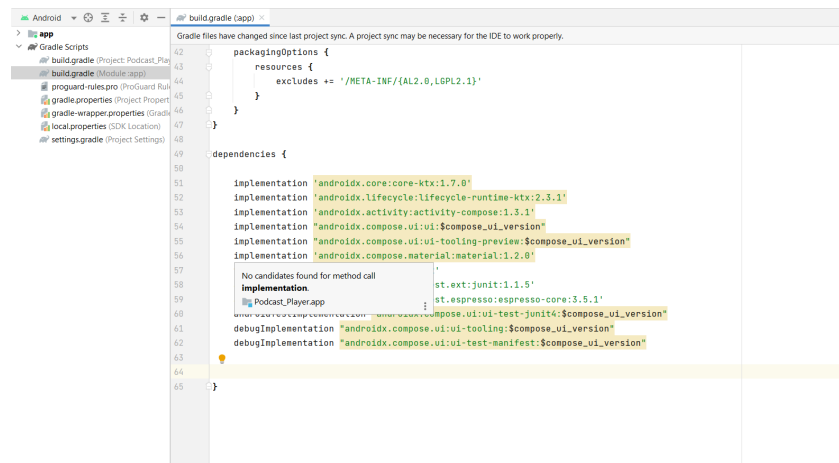
Main activity file



Task 3 :

Adding required dependencies.

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



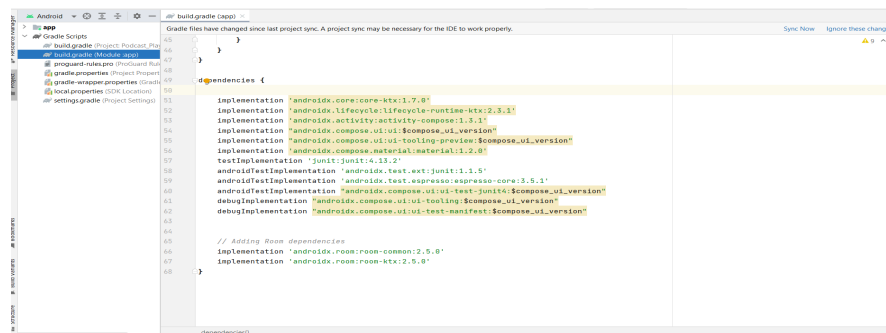
Step 2 : Adding room dependencies.

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

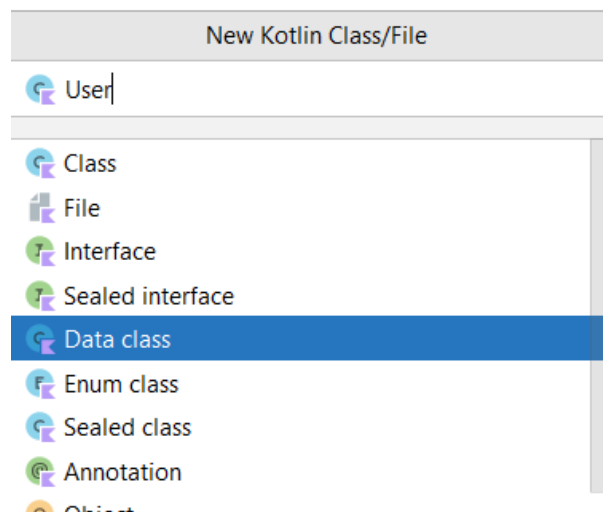
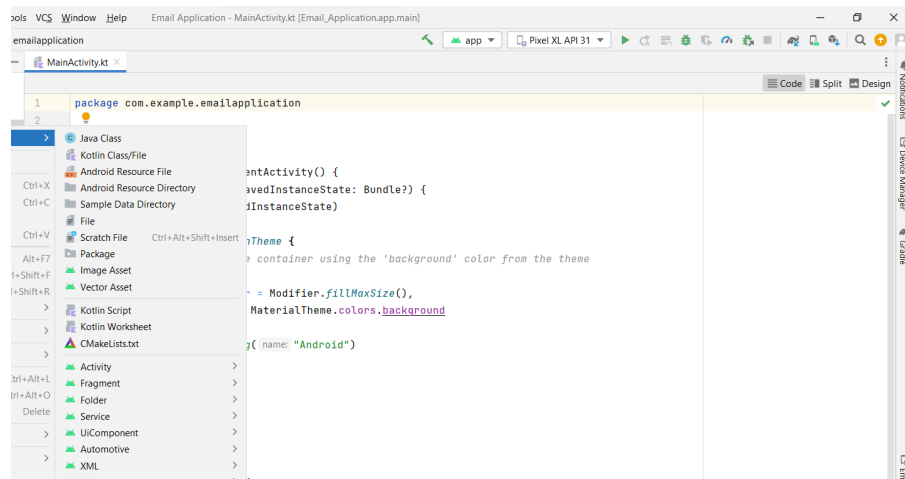
Task 4:

Creating the database classes.

In this project we will be having two databases, one is for user registration and login, and other is for admin to view the details of survey forms.

Database 1

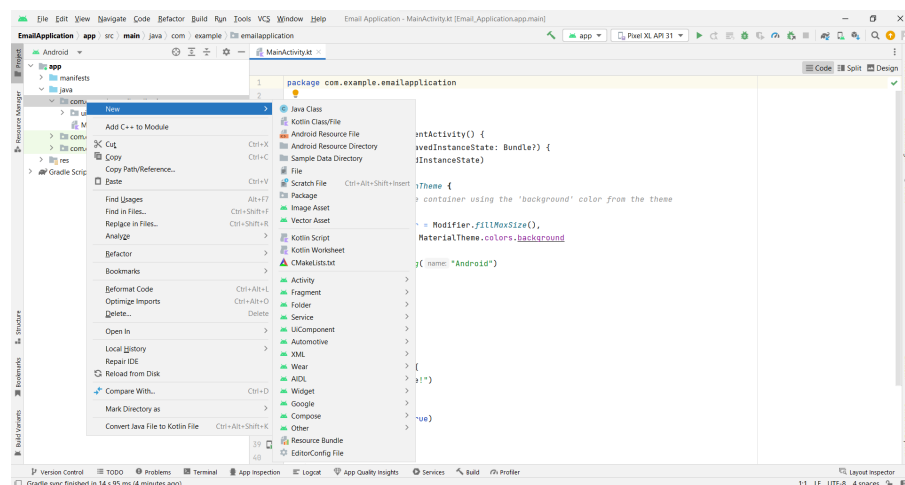
Step 1 : Create User data class

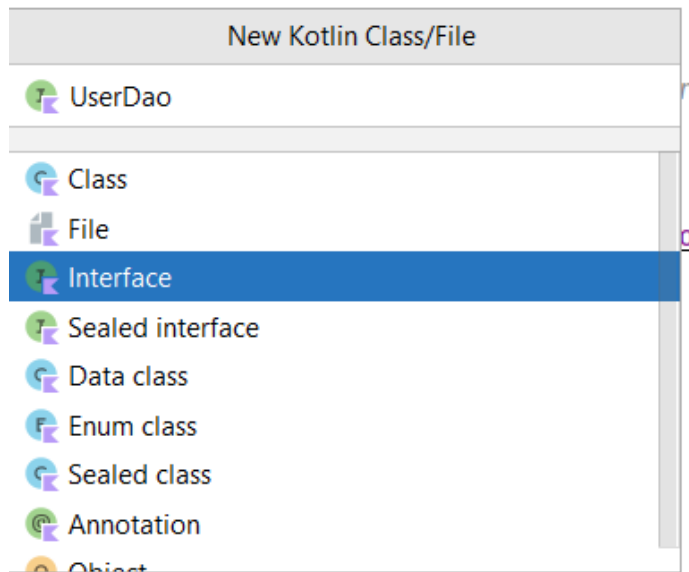


User data class code:

<https://github.com/smartinternz02/AdaptiveEmailApp/tree/main/app/src/main/java/com/example/emailapplication/User.kt>

Step 2 : Create an UserDao interface

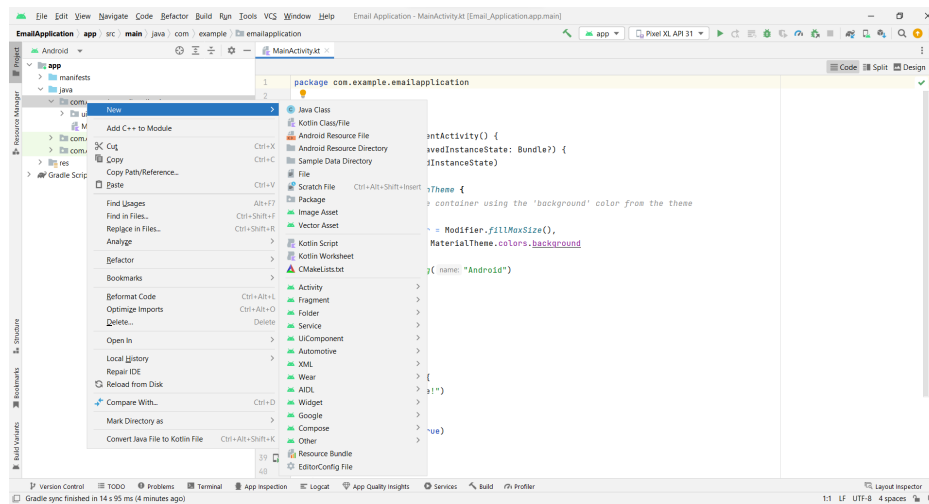


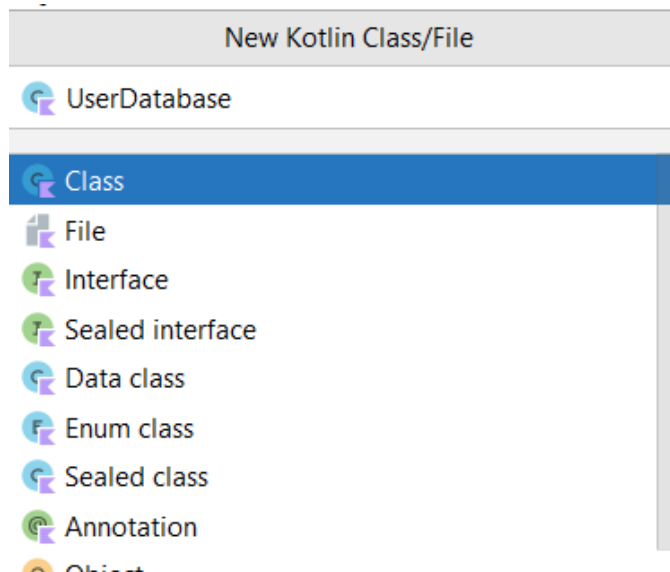


UserDao interface code:

<https://github.com/smartinternz02/AdaptiveEmailApp/tree/main/app/src/main/java/com/example/emailapplication/UserDao.kt>

Step 3 : Create an UserDatabase class

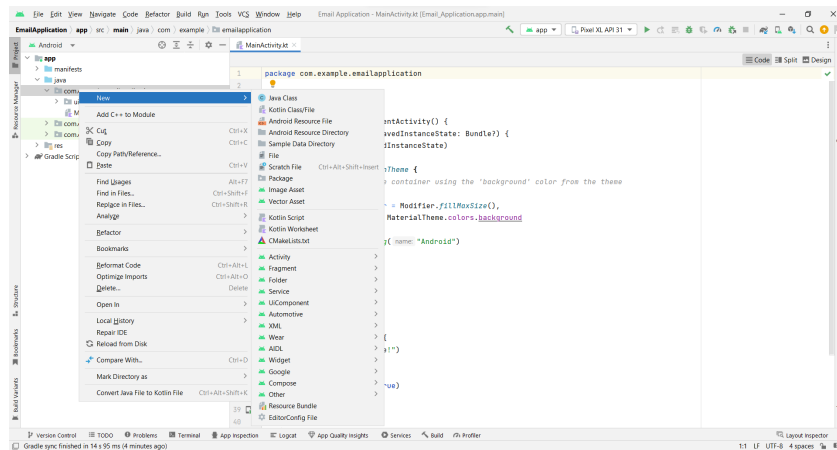


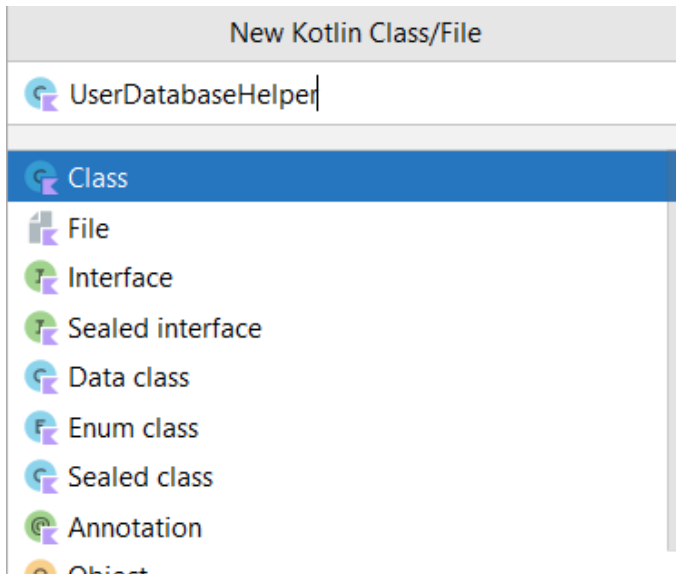


UserDatabase class code :

<https://github.com/smartinternz02/AdaptiveEmailApp/tree/main/app/src/main/java/com/example/emailapplication/UserDatabase.kt>

Step 4 : Create an UserDatabaseHelper class



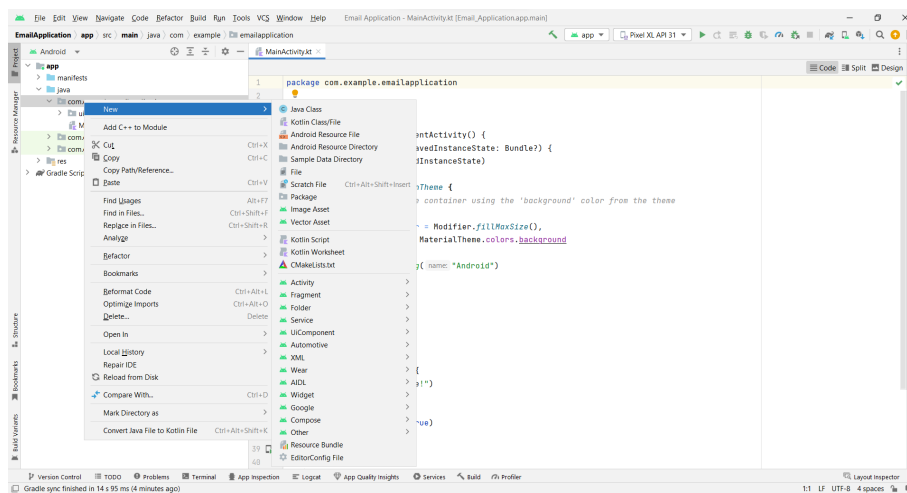


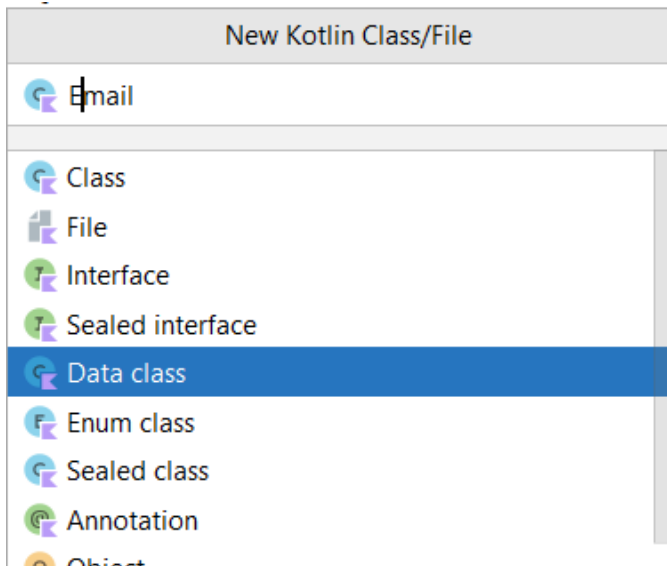
UserDatabaseHelper class code :

<https://github.com/smartinternz02/AdaptiveEmailApp/tree/main/app/src/main/java/com/example/emailapplication/UserDatabaseHelper.kt>

Database 2

Step 1 : Create Email data class

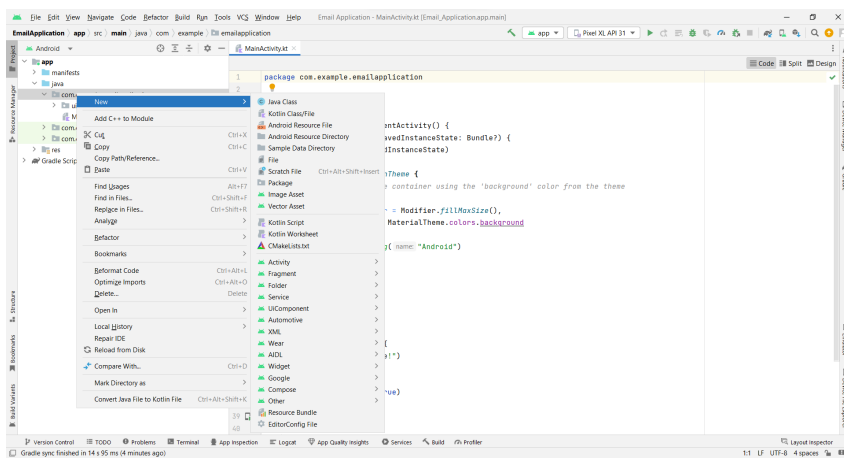


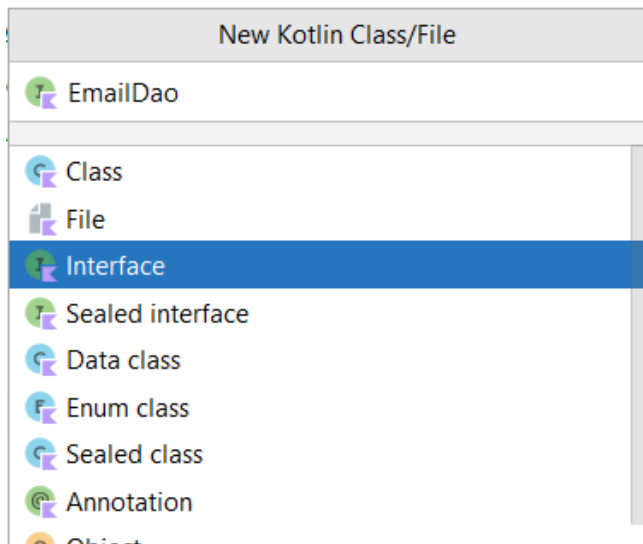


Email data class code:

<https://github.com/smartinternz02/AdaptiveEmailApp/tree/main/app/src/main/java/com/example/emailapplication/Email.kt>

Step 2 : Create EmailDao interface

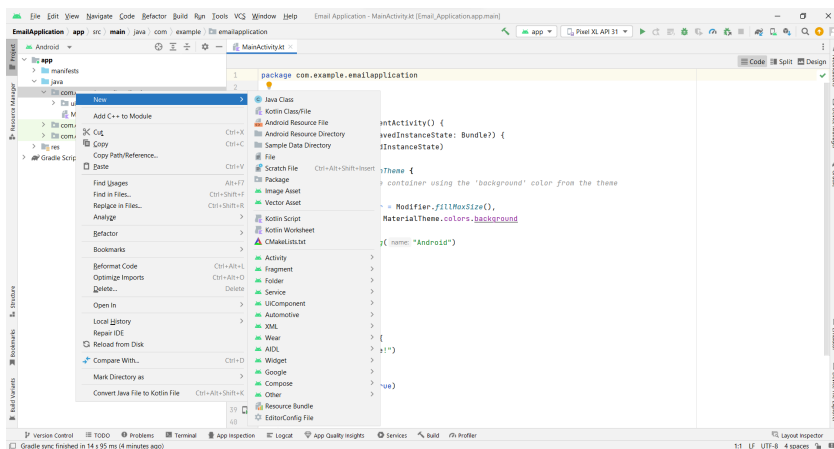


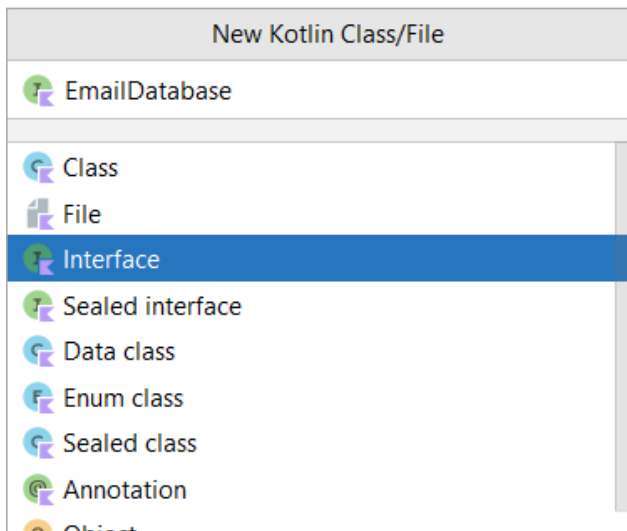


EmailDao interface code:

<https://github.com/smartinternz02/AdaptiveEmailApp/tree/main/app/src/main/java/com/example/emailapplication/EmailDao.kt>

Step 3 : Create EmailDatabase class

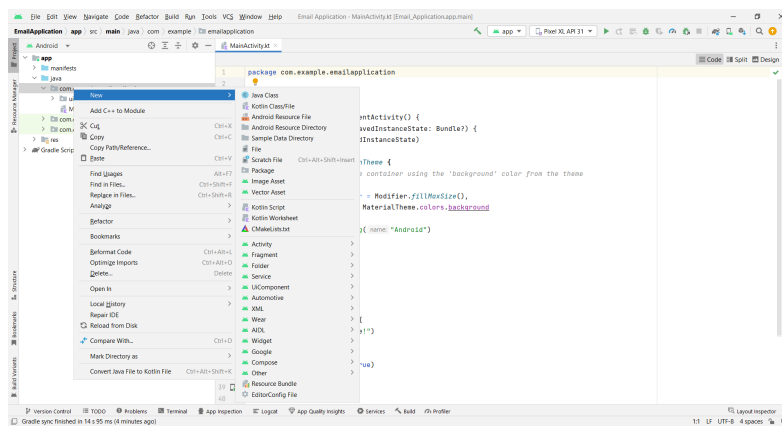


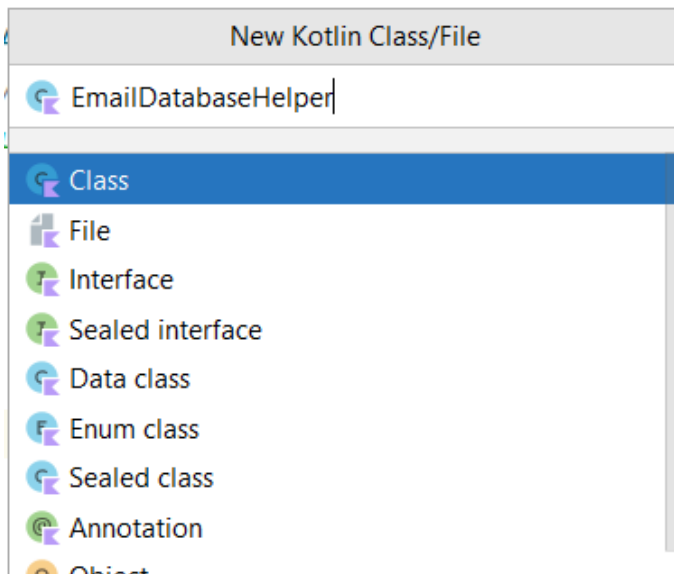


EmailDatabase class code:

<https://github.com/smartinternz02/AdaptiveEmailApp/tree/main/app/src/main/java/com/example/emailapplication/EmailDatabase.kt>

Step 4 : Create EmailDatabaseHelper class





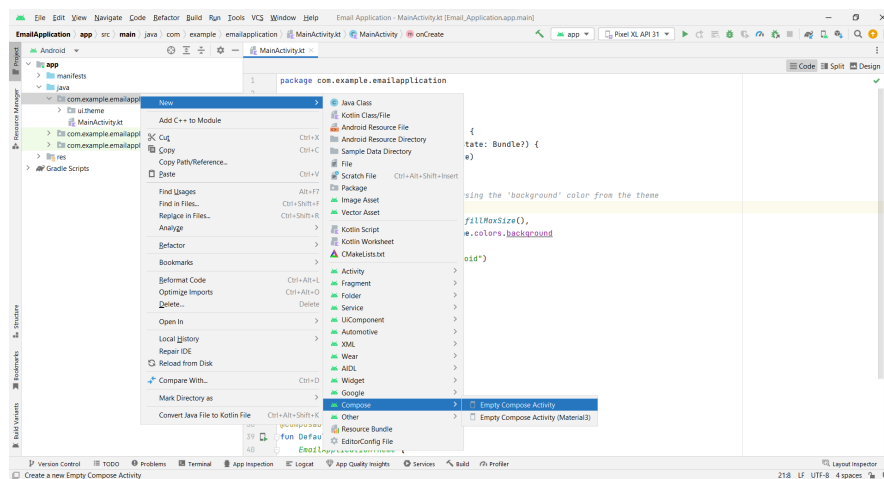
EmailDatabaseHelper class code:

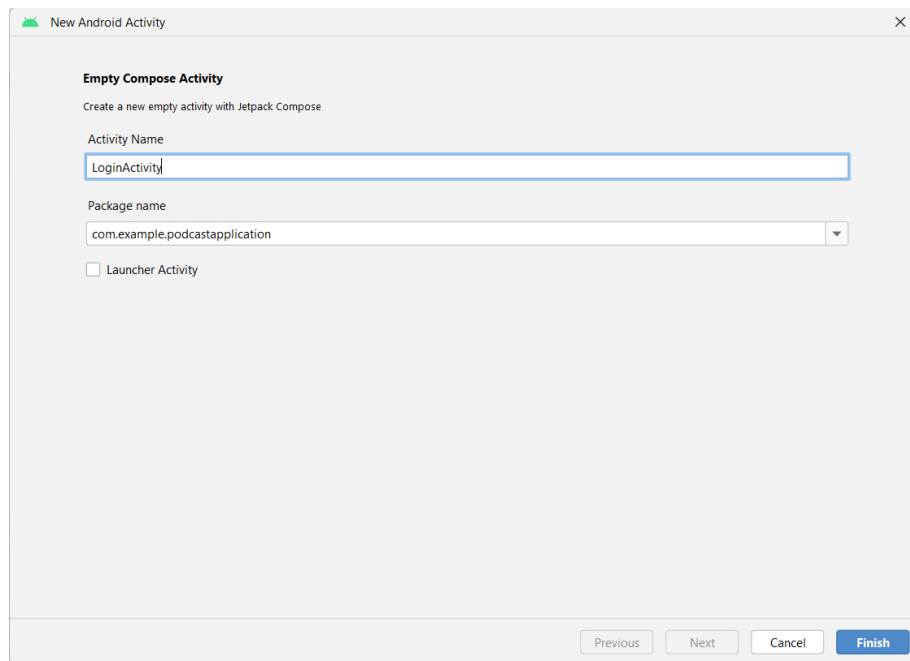
<https://github.com/smartinternz02/AdaptiveEmailApp/tree/main/app/src/main/java/com/example/emailapplication/UserDatabaseHelper.kt>

Task 5:

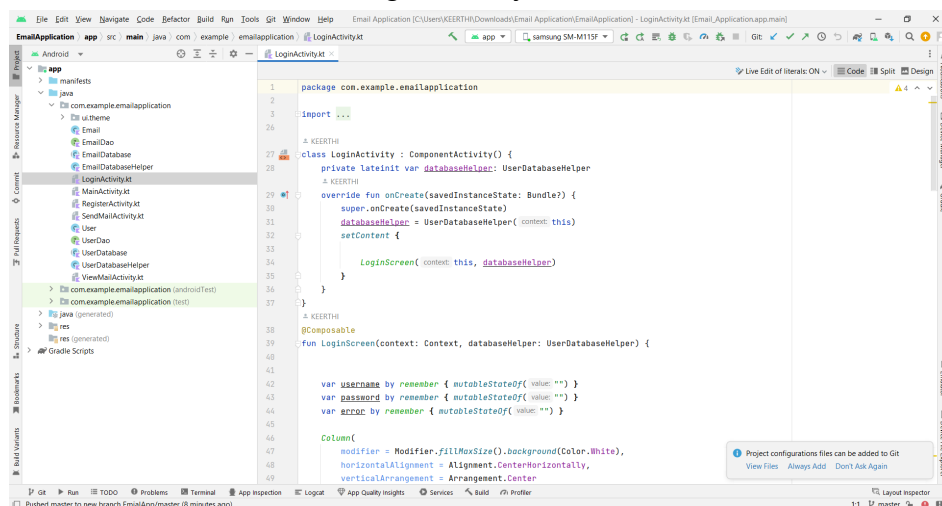
Building application UI and connecting to database.

Step 1: Creating LoginActivity.kt with database





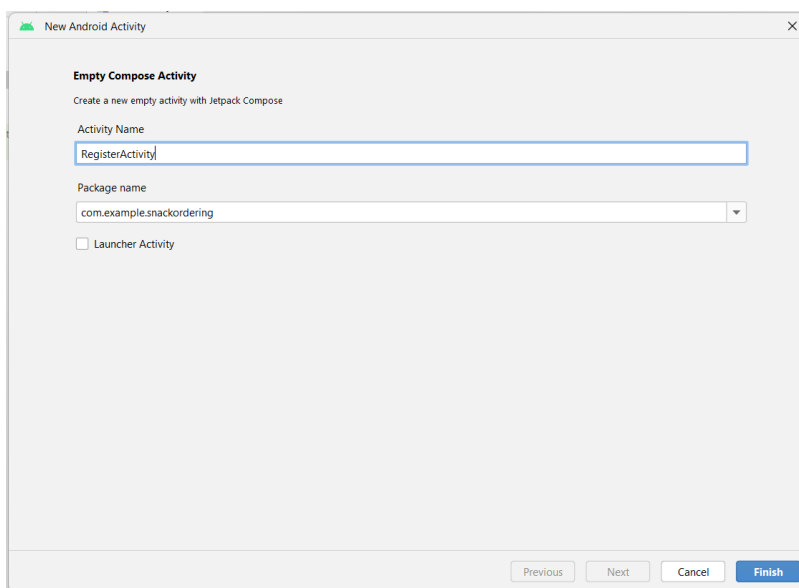
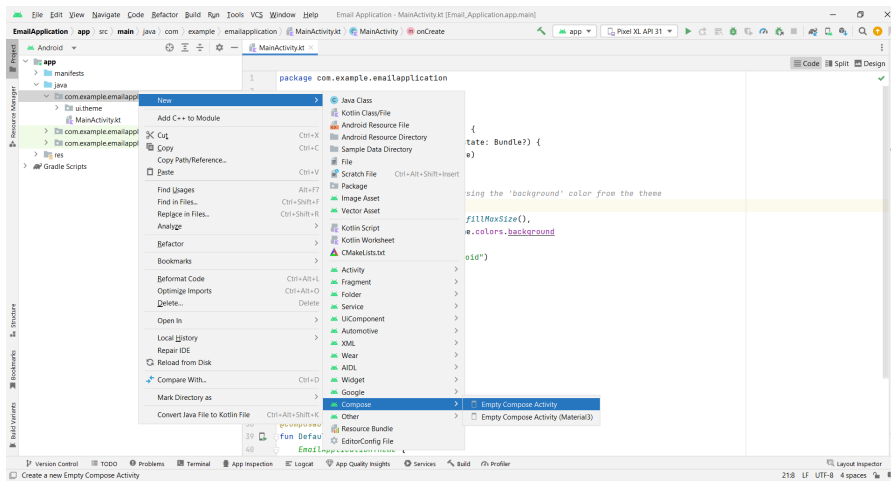
Database connection in LoginActivity.kt



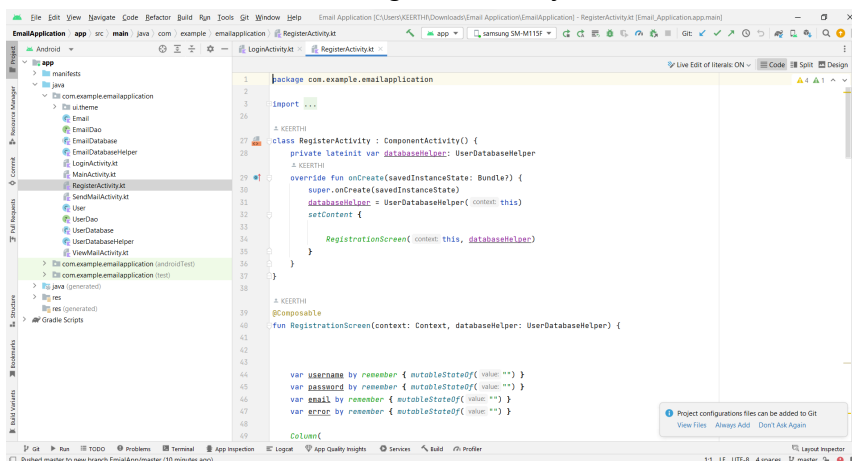
Complete code in below link:

<https://github.com/smartinternz02/AdaptiveEmailApp/tree/main/app/src/main/java/com/example/emailapplication/LoginActivity.kt>

Step 2 : Creating RegisterActivity.kt with database



Database connection in RegisterActivity.kt



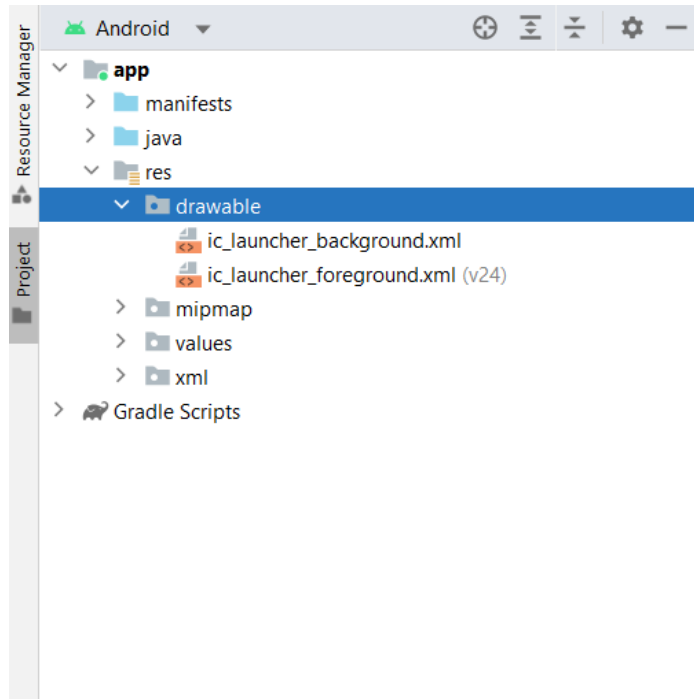
Complete code in below link:

<https://github.com/smartinternz02/AdaptiveEmailApp/tree/main/app/src/main/java/com/example/emailapplication/RegisterActivity.kt>

Step 3 : Creating MainActivity.kt file

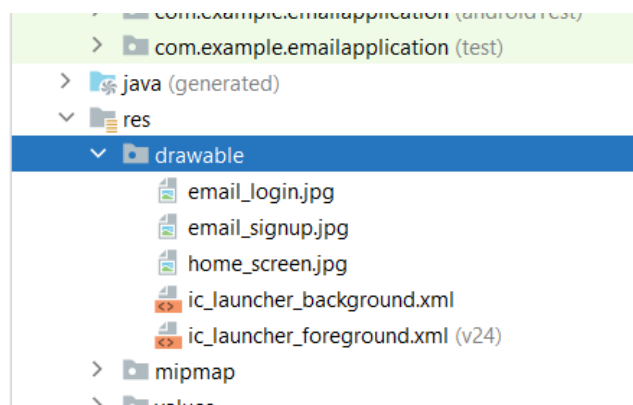
In MainActivity.kt file the main application is developed

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

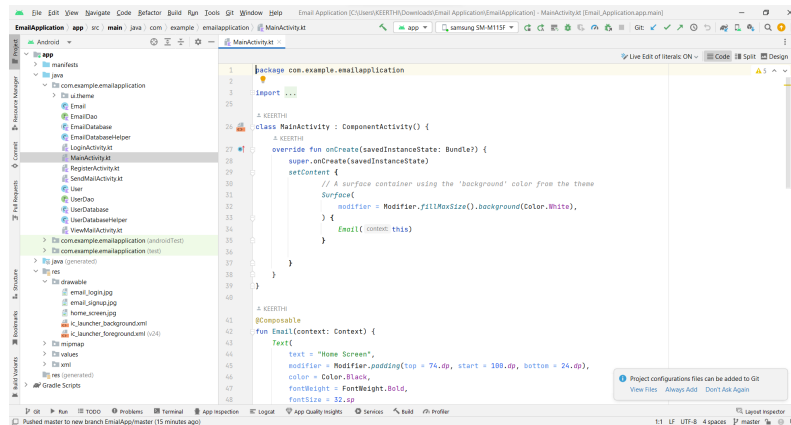


Download the required drawable from the code:

<https://github.com/smartinternz02/AdaptiveEmailApp/tree/master/app/src/main/res/drawable>



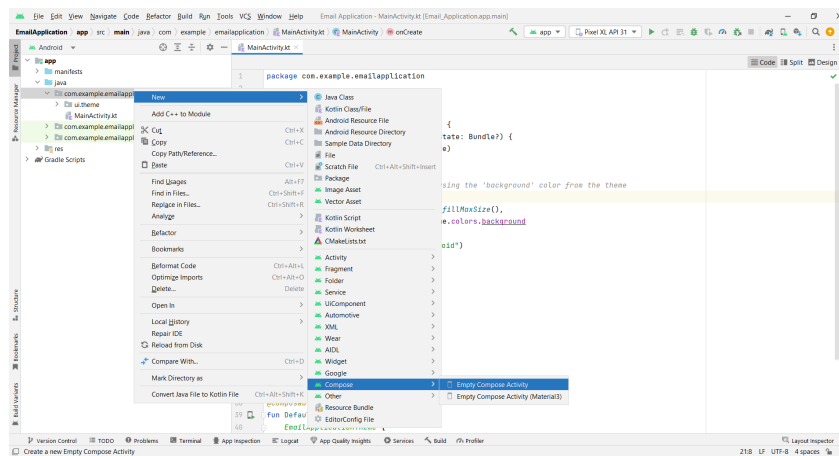
MainActivity.kt

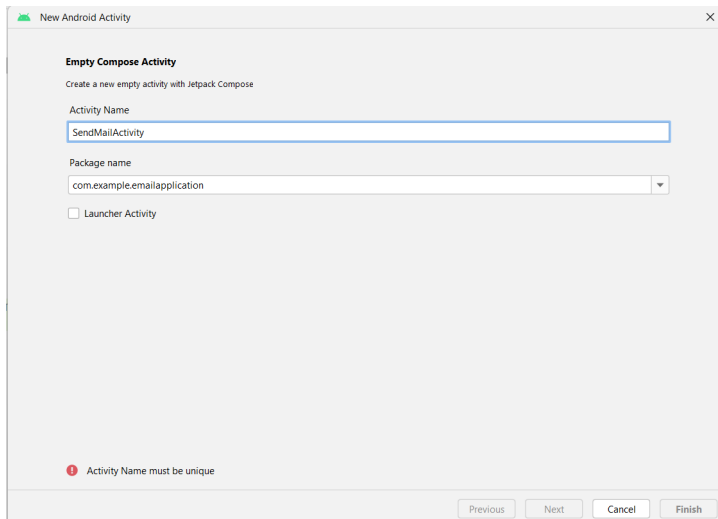


Complete code in below link:

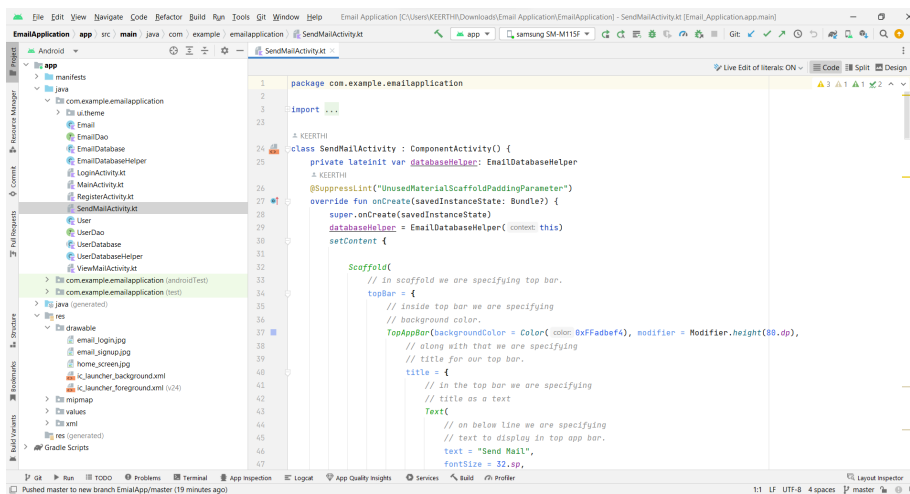
<https://github.com/smartinternz02/AdaptiveEmailApp/tree/main/app/src/main/java/com/example/emailapplication/MainActivity.kt>

Step 4 : Creating SendMailActivity.kt file





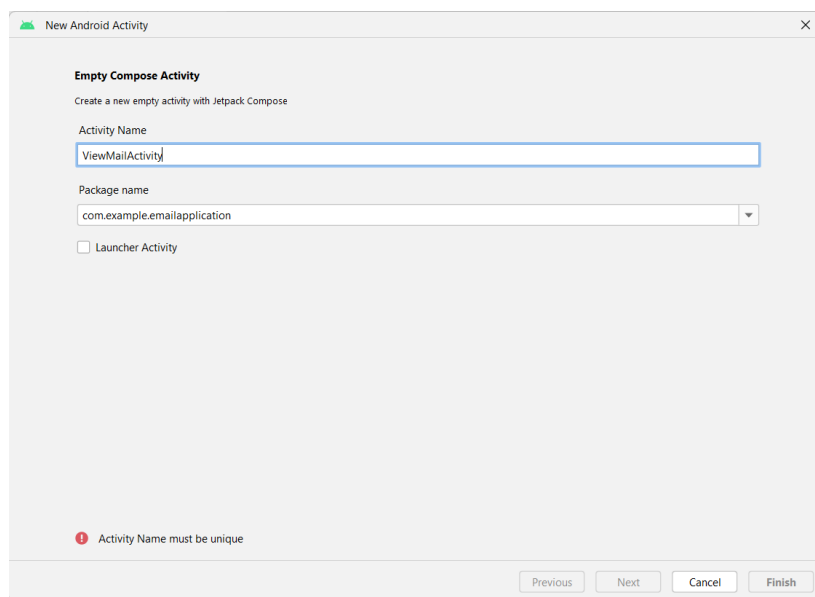
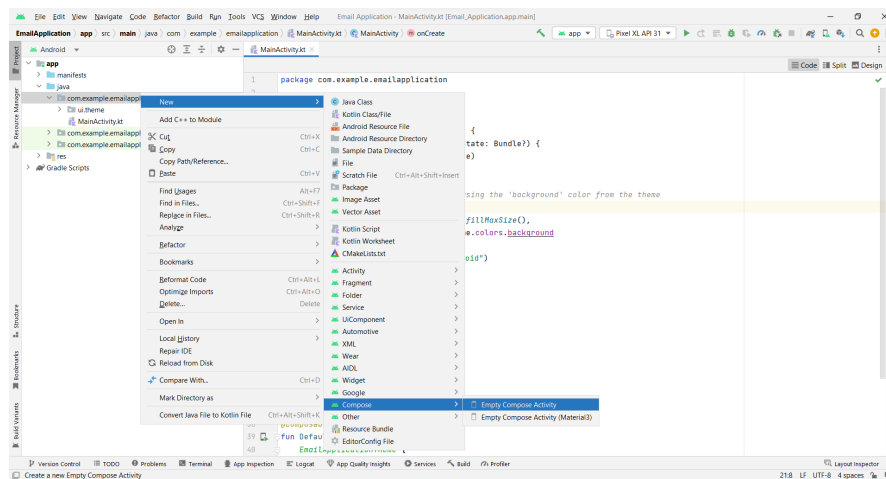
SendMailActivity.kt



Complete code in below link:

<https://github.com/smartinternz02/AdaptiveEmailApp/tree/main/app/src/main/java/com/example/emailapplication/SendMailActivity.kt>

Step 5 : Creating ViewMailActivity.kt file



Complete code in below link:

<https://github.com/smartinternz02/AdaptiveEmailApp/tree/main/app/src/main/java/com/example/emailapplication/ViewMailActivity.kt>

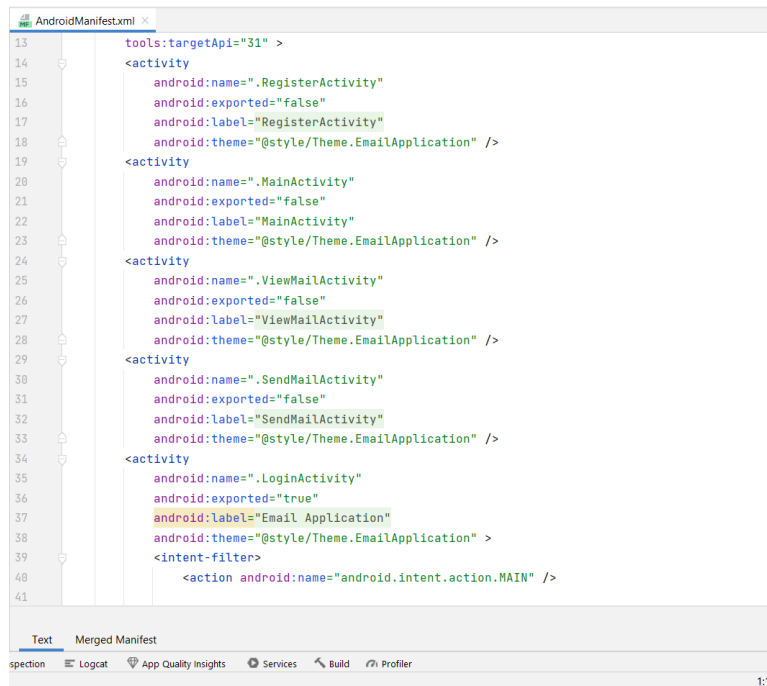
Task 6:

Modifying AndroidManifest.xml

```
AndroidManifest.xml x
1  <?xml version="1.0" encoding="utf-8"?>
2  <manifest xmlns:android="http://schemas.android.com/apk/res/android"
3      xmlns:tools="http://schemas.android.com/tools" >
4
5      <application
6          android:allowBackup="true"
7          android:dataExtractionRules="@xml/data_extraction_rules"
8          android:fullBackupContent="@xml/backup_rules"
9          android:icon="@mipmap/ic_launcher"
10         android:label="Email Application"
11         android:supportRtl="true"
12         android:theme="@style/Theme.EmailApplication"
13         tools:targetApi="31" >
14         <activity
15             android:name=".RegisterActivity"
16             android:exported="false"
17             android:label="RegisterActivity"
18             android:theme="@style/Theme.EmailApplication" />
19         <activity
20             android:name=".MainActivity"
21             android:exported="false"
22             android:label="MainActivity"
23             android:theme="@style/Theme.EmailApplication" />
```

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



Complete AndroidManifest.xml code:

<https://github.com/smartinternz02/AdaptiveEmailApp/blob/master/app/src/main/AndroidManifest.xml>

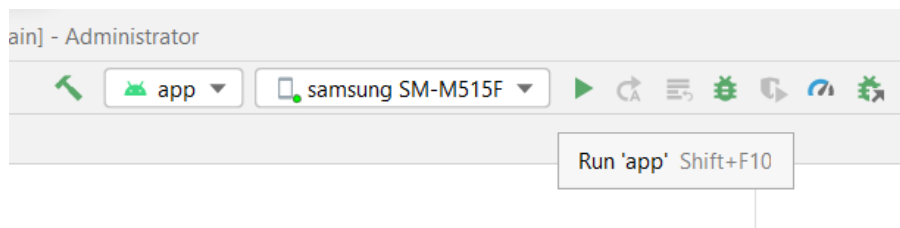
Task 7:

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/AdaptiveEmailApp>

Final Output of the Application :

Login Page :



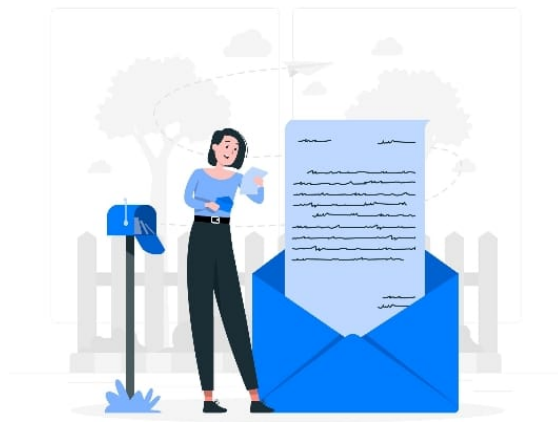
Login

Login

[Sign up](#)

[Forget password?](#)

Register Page :



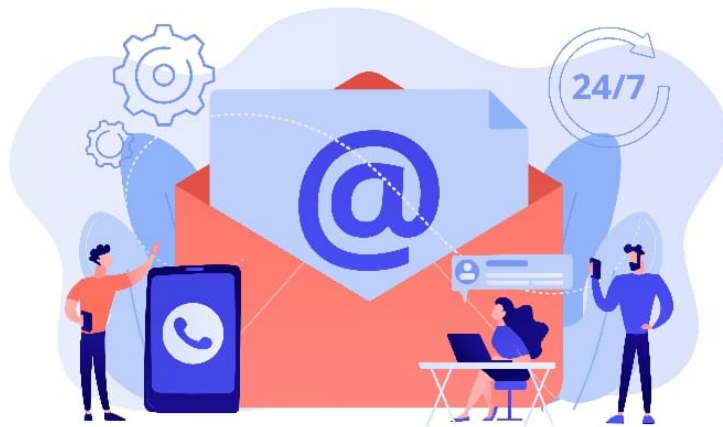
Register

Register

Have an account? [Log in](#)

Main Page:

Home Screen



Send Email

View Emails

ViewMail Page:

View Mails

Receiver_Mail: kavya78@gmail.com

Subject: Android

Body: This is an Adaptive Email app

Receiver_Mail: shirishbokka7@gmail.com

Subject: Order

Body: your courier has arrived