



PROJECT NAME : An Android Application for Keeping Up with the Latest Headlines

TEAM MEMBERS : 1. Polisetty V V Durga Brahmaji

2.Surekha Suravarapu

3.Vallabhu Siva Sai

4.Pratti Victor Singh

TEAM ID : LTVIP2023TMID05811

An Android Application for Keeping Up with the Latest Headlines :

The app's main feature is displaying a list of news articles, each with a title, image, and brief description. Users can scroll through the list of articles and tap on an article to view more details. The app uses the Jetpack Compose UI toolkit to build the UI and it uses the coil library to load images. The app fetches data from a remote server using Retrofit library and demonstrates how to use the Jetpack Compose UI toolkit for Android development.

Learning Outcomes :

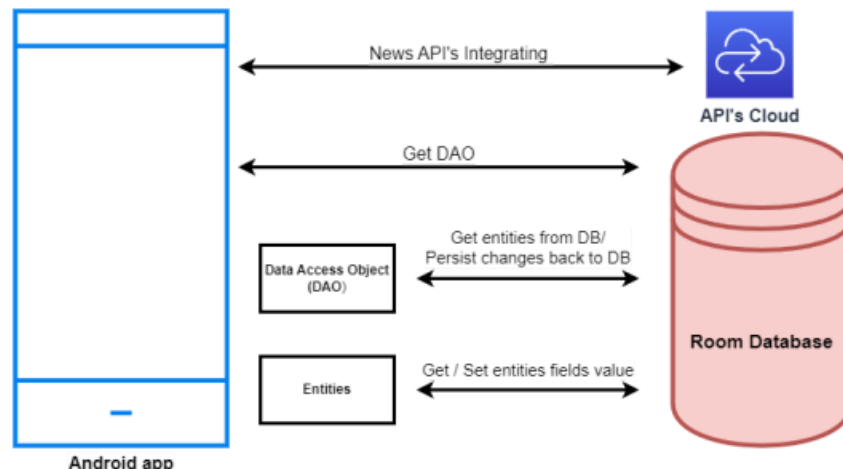
By end of this project:

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

Project Workflow:

- Users register into the application.
- After registration , user logs into the application.
- User enters into the main page

Architecture



Tasks:

- 1.Required initial steps
- 2.Creating a new project.
- 3.Adding required dependencies.
- 4.Adding permissions
- 5.Creating the database classes.
- 6.Creating API Service and required classes for integrating API
- 7.Building application UI and connecting to database.
- 8.Modifying AndroidManifest.xml 9.Running the application.

Task 1:

Required initial steps :

Task 2 :

Creating a new project.

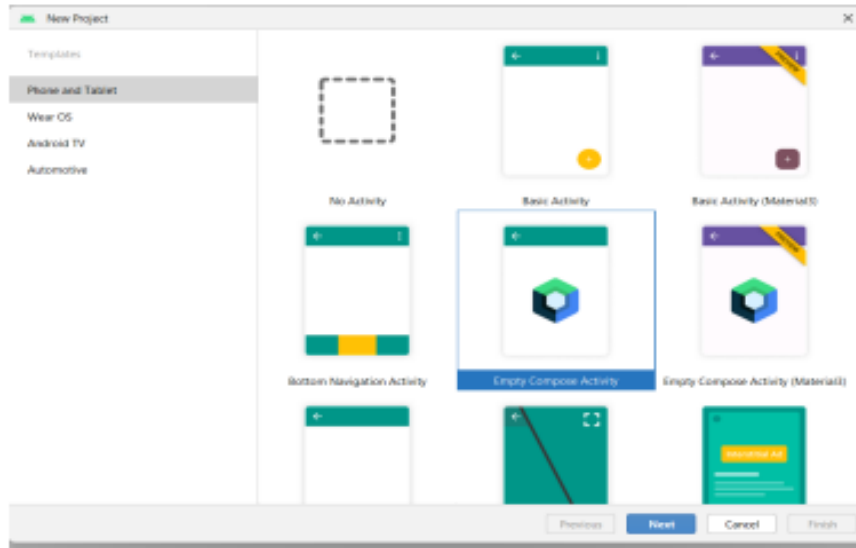
Step 1 : Android studio > File > New > New Project > Empty Compose Activity

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 fil



Task 3 :

Adding required dependencies.

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

Step 2 : Adding room dependencies. Add the below code in dependencies //
Room Database implementation 'androidx.room:room-common:2.5.0'
implementation 'androidx.room:room-ktx:2.5.0'

Step 3 : Adding Retrofit dependencies // Retrofit implementation
'com.squareup.retrofit2:retrofit:2.9.0' implementation
"com.squareup.okhttp3:okhttp:5.0.0-alpha.2" implementation
'com.squareup.retrofit2:converter-gson:2.9.0'

Step 4 : Adding Coil dependencies

Step 5 : Click on Sync now

```
dependencies {

    implementation 'androidx.core:core-ktx:1.7.0'
    implementation 'androidx.lifecycle:lifecycle-runtime-ktx:2.3.1'
    implementation 'androidx.activity:activity-compose:1.3.1'
    implementation "androidx.compose.ui:ui:$compose_ui_version"
    implementation "androidx.compose.ui:ui-tooling-preview:$compose_ui_version"
    implementation 'androidx.compose.material:material:1.2.0'

    testImplementation 'junit:junit:4.13.2'
    androidTestImplementation 'androidx.test.ext:junit:1.1.5'
    androidTestImplementation 'androidx.test.espresso:espresso-core:3.5.1'
    androidTestImplementation "androidx.compose.ui:ui-test-junit4:$compose_ui_version"
    debugImplementation "androidx.compose.ui:ui-tooling:$compose_ui_version"
    debugImplementation "androidx.compose.ui:ui-test-manifest:$compose_ui_version"

    // Room Database
    implementation 'androidx.room:room-common:2.5.0'
    implementation 'androidx.room:room-ktx:2.5.0'

    // Retrofit
    implementation 'com.squareup.retrofit2:retrofit:2.9.0'
    implementation "com.squareup.okhttp3:okhttp:5.0.0-alpha.2"
    implementation 'com.squareup.retrofit2:converter-gson:2.9.0'

    implementation("io.coil-kt:coil-compose:1.4.0")
}
```

Task 4:

Adding permissions

Step 1: Open AndroidManifest.xml.

Step 2: Add permission to access wifi and internet

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools">

    <!-- permissions-->
    <uses-permission android:name="android.permission.INTERNET"/>
    <uses-permission android:name="android.permission.ACCESS_WIFI_STATE"/>

    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@drawable/news_app_icon"
        android:label="News Headlines"
        android:supportRtl="true"
        android:theme="@style/Theme.NewsHeadlines"
```

Task 5:

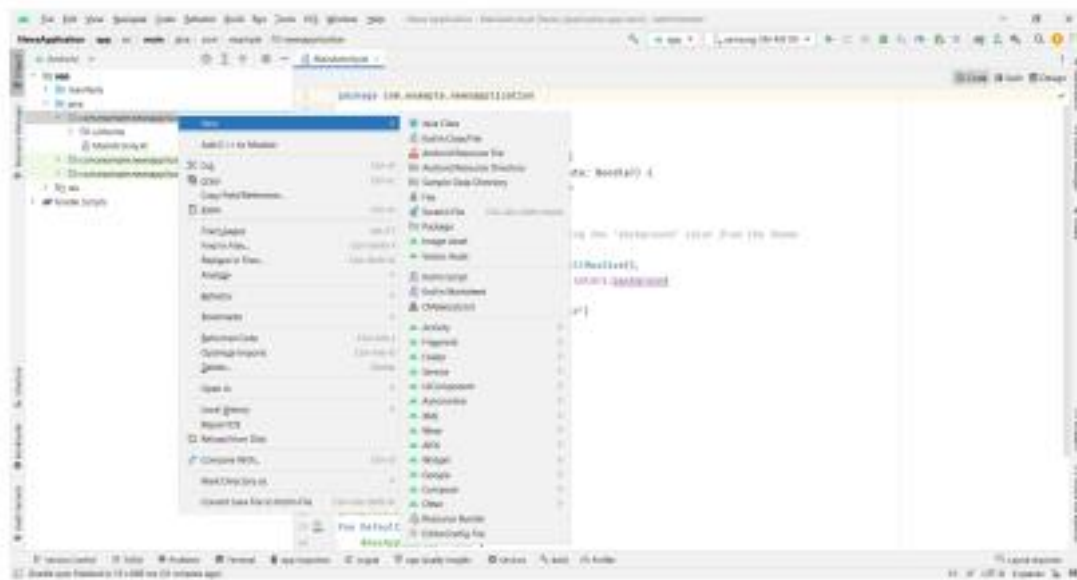
Creating the database classes

Step 1 : Create User data class

Step 2 : Create an UserDao interface

Step 3 : Create an UserDatabase class

Step 4 : Create an UserDatabaseHelper class



Task 6 :

Creating API Service and required classes for integrating API

Step 1: Create a API key for the required API

Step 2: Copy and paste the complete json file to json2kt.com

Step 3: Create ApiService interface

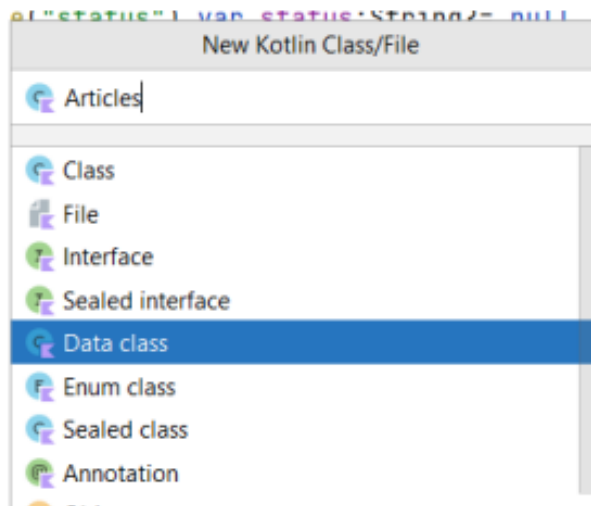
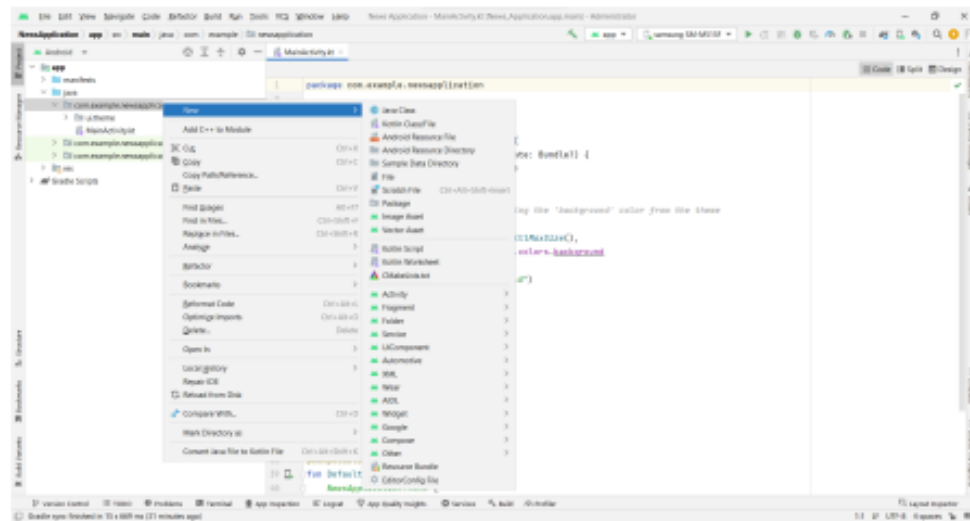
Step 4: Create Model data class

Step 5: Create News data class

Step 6: Create Source data class

Step 7: Create Articles data class

Step 8: Create MainViewModel class



Task 7:

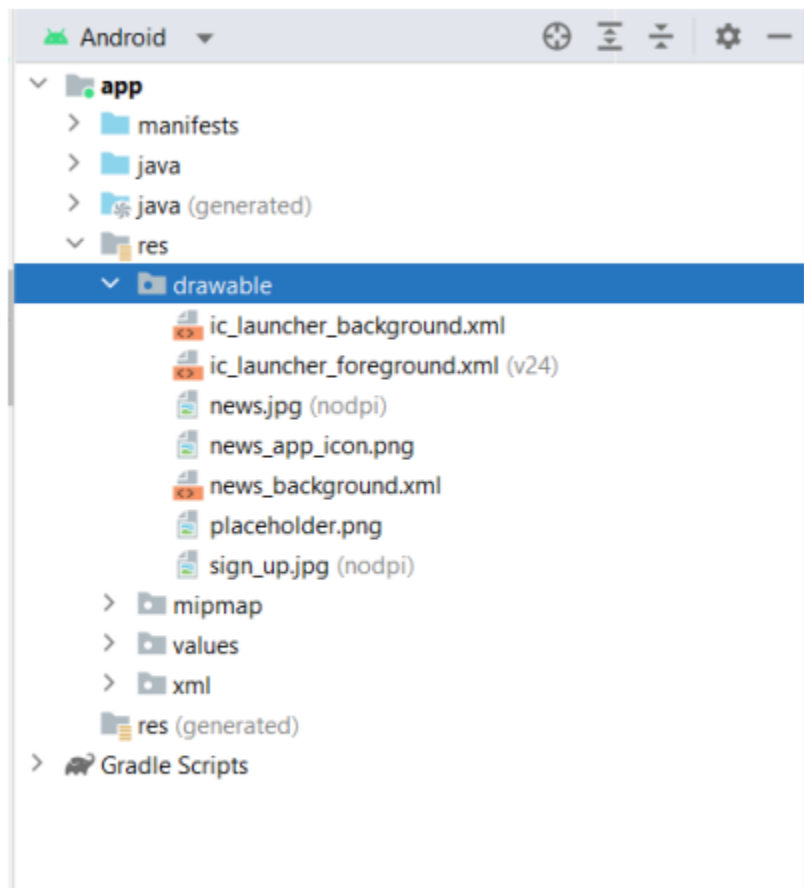
Building application UI and connecting to database.

Step 1: Creating LoginActivity.kt with database

Step 2 : Creating RegistrationActivity.kt with database

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

Step 4 : Creating DisplayNews.kt file



Modifying AndroidManifest.xml

```

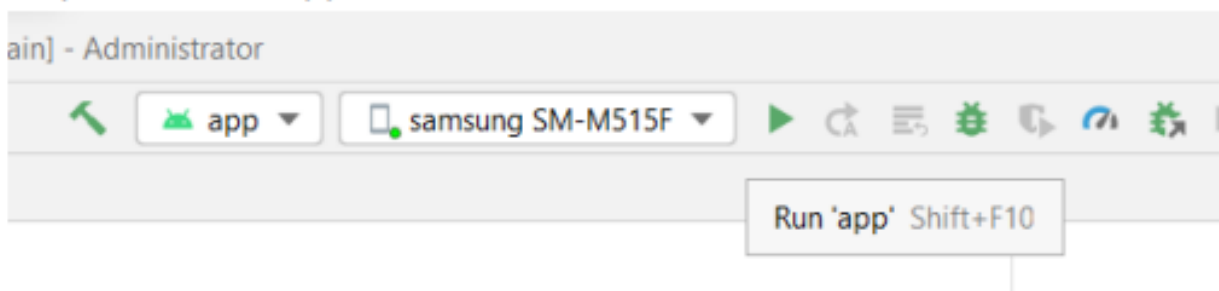
10 android:theme="@style/Theme.NewsHeadlines"
11 tools:targetApi="31">
12 <activity
13     android:name=".MainActivity"
14     android:exported="false"
15     android:label="@string/title_activity_main_page"
16     android:theme="@style/Theme.NewsHeadlines" />
17 <activity
18     android:name=".RegistrationActivity"
19     android:exported="false"
20     android:label="@string/title_activity_registration"
21     android:theme="@style/Theme.NewsHeadlines" />
22 <activity
23     android:name=".LoginActivity"
24     android:exported="true"
25     android:label="@string/title_activity_login"
26     android:theme="@style/Theme.NewsHeadlines" />
27 <activity
28     android:name=".NewsPage"
29     android:exported="false"
30     android:label="@string/title_activity_news_page"
31     android:theme="@style/Theme.NewsHeadlines" />
32 <activity
33     android:name=".SplashScreen"
34     android:exported="true"
35     android:label="@string/app_name"
36     android:theme="@style/Theme.NewsHeadlines" />
37 <intent-filter>
38     <action android:name="android.intent.action.MAIN" />
39
40     <category android:name="android.intent.category.LAUNCHER" />
41 </intent-filter>
42 </activity>
43 </application>
44
45 </manifest>

```

Task 9:

Running the application.

Step 1: Run apps on a hardware device



Complete Project Link:

<https://github.com/maniteja529/An-Android-Application-For-Keeping-Up-with-the-Latest-Headlines>

Login Page:






Illustration of a news broadcast with a "BREAKING NEWS" sign and people around a large screen.

Login

 username

 password

Log In

[Sign up](#) [Forgot password ?](#)

Register Page :

Sign Up



username



password




email

Register


Have an account? [Log in](#)

Main News Headlines Page :

Latest NEWS




Top Crypto Trader Issues Bitcoin Warning, Says BTC Flashing Vibes of March 2020 Meltdown - The Daily Hodl
A closely followed crypto trader is




Saudi oil giant Aramco posts record \$161.1 billion profit for 2022 - CNBC
Saudi state-controlled Aramco achieved a record profit last year, boosted by higher energy prices

Silicon Valley Bank: the spectacular unravelling of the tech industry's banker - Financial Times
News, analysis and comment from the Financial Times, the



Meta looking into new social platform that could rival Twitter - The Hill
Meta, Facebook's parent company, is looking into a new social media platform that could



Crypto Exhales as USDC Stablecoin Rebounds

Display News Page :

Top Crypto Trader Issues Bitcoin Warning, Says BTC Flashing Vibes of March 2020 Meltdown - The Daily Hodl

A closely followed crypto trader is issuing an alert to Bitcoin (BTC) holders, saying that the king crypto's current market structure looks similar to its price action prior to a deep plunge about three years ago.

