

# Required Initial Steps

Required initial steps :

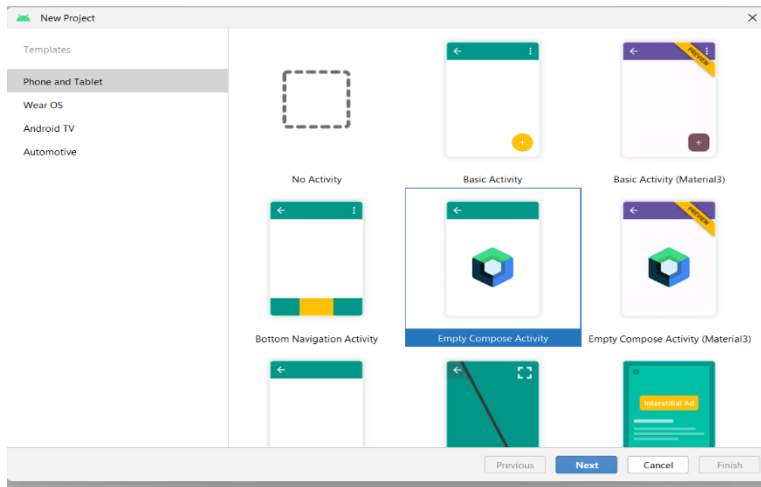
<https://developer.android.com/studio/install>

## Creating A New Project

Creating a new project.

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

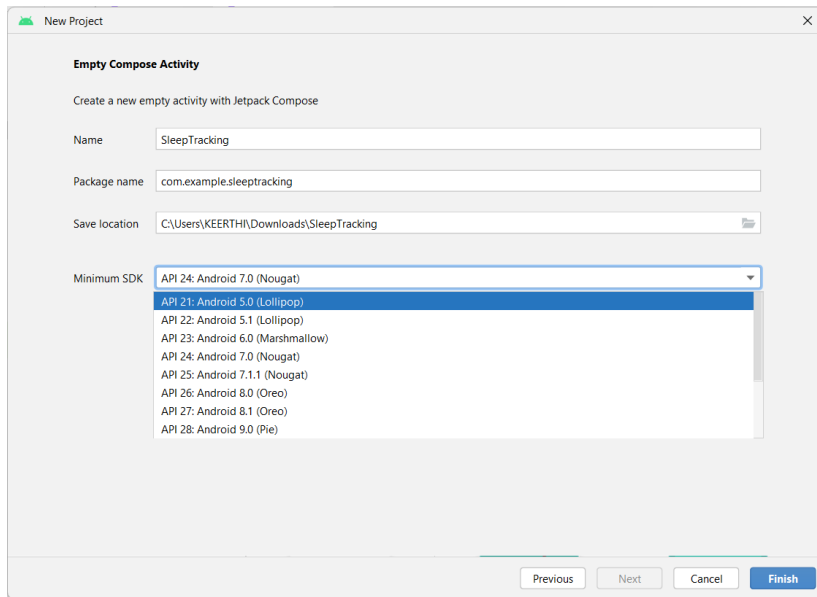
Step 2 : Click on **Next** button.



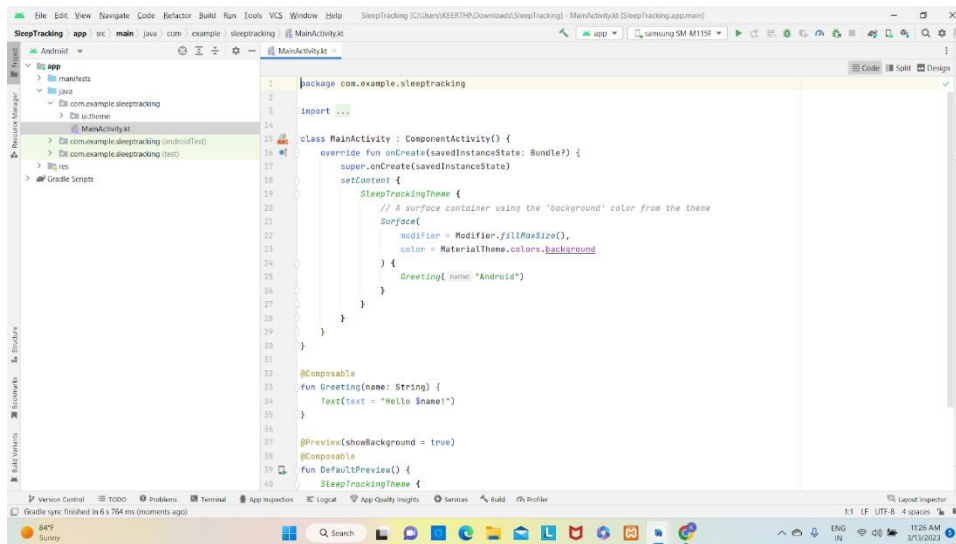
Step 3 : Give name to the new project.

Step 4 : Give the Minimum SDK value

Step 5 : Click Finish



## Main activity file

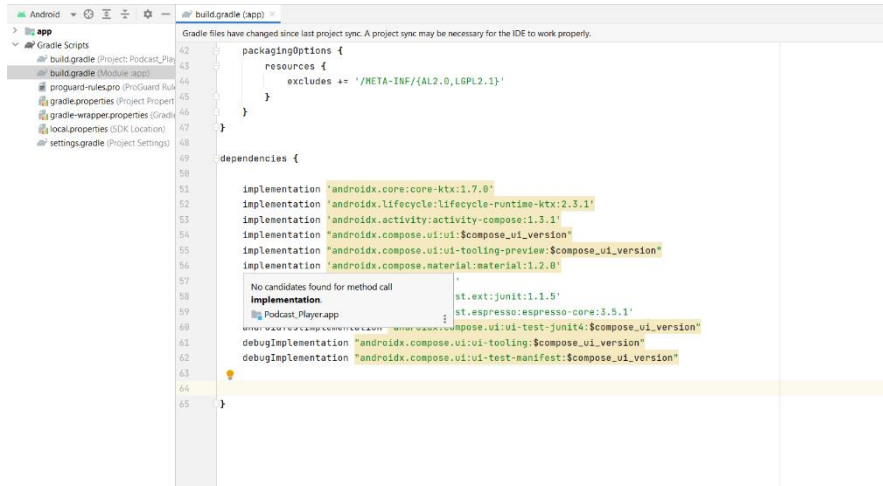


## Adding Required Dependencies

This milestone, explains about adding required dependencies.

## Gradle Scripts > Build.Gradle(Module :App)

# Gradle scripts > build.gradle(Module :app)



## Add The Below Code In 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'
```



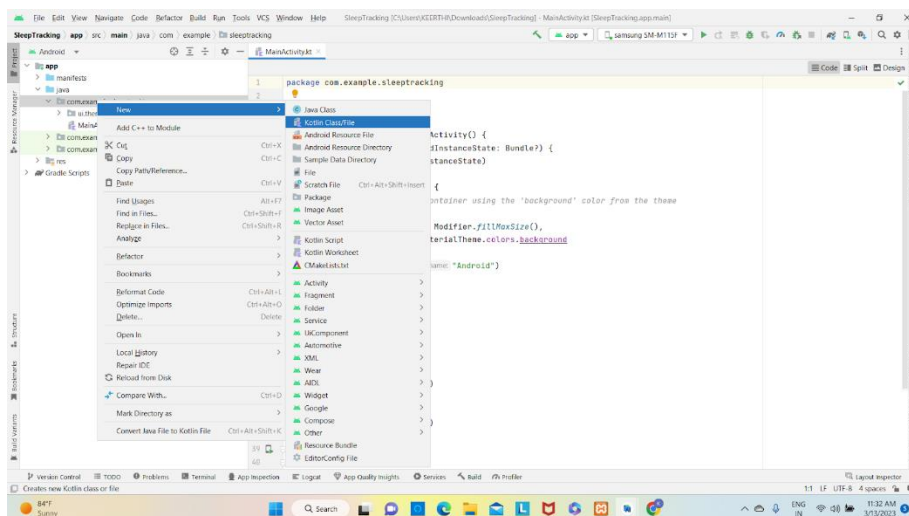
Step 3 : Click on Sync now

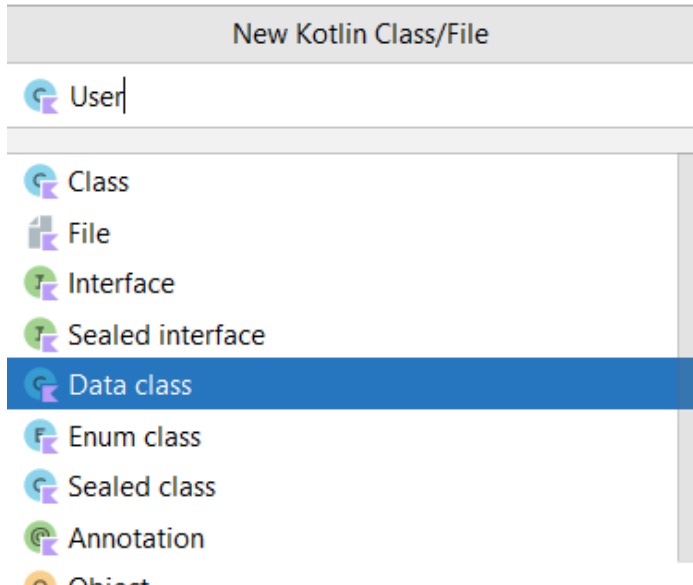
# Creating The Database Classes.

## 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 sleep of the user.

## Database 1 (Create User Data Class) (Create User data class)



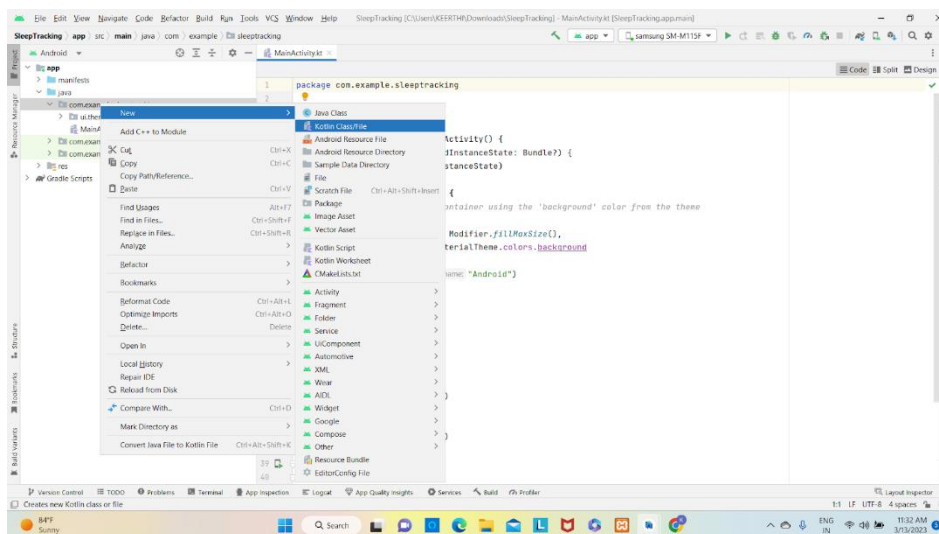


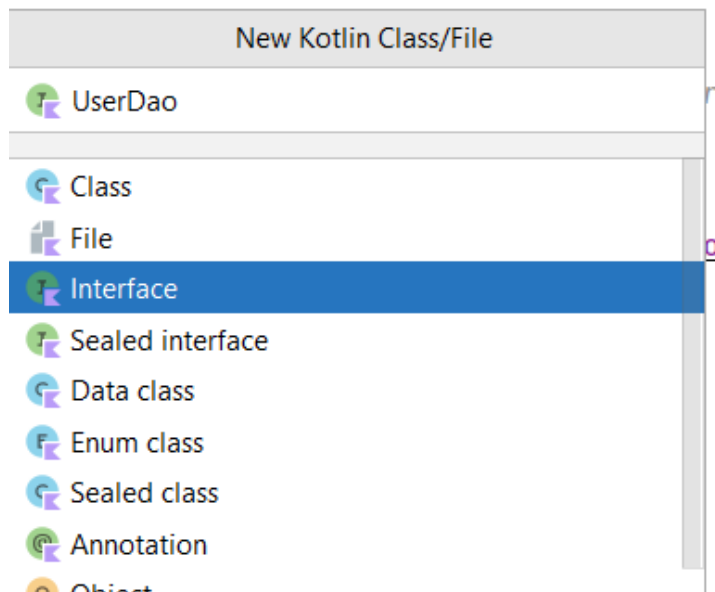
User class code:

<https://github.com/smartinternz02/Sleep-tracking/tree/main/app/src/main/java/com/example/projectone/User.kt>

## Create An UserDao Interface

### Create an UserDao interface



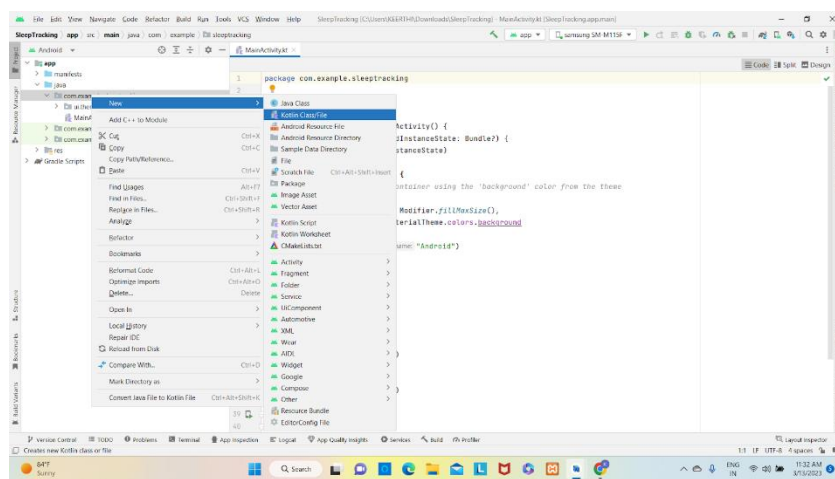


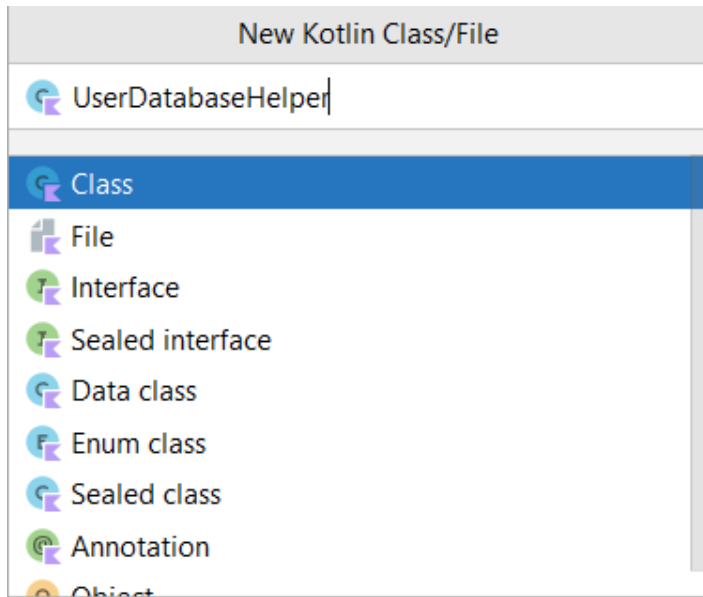
UserDao interface code:

<https://github.com/smartinternz02/Sleep-tracking/tree/main/app/src/main/java/com/example/projectone/UserDao.kt>

## Create An UserDatabaseHelper Class

Create an UserDatabaseHelper class





UserDatabaseHelper class code :

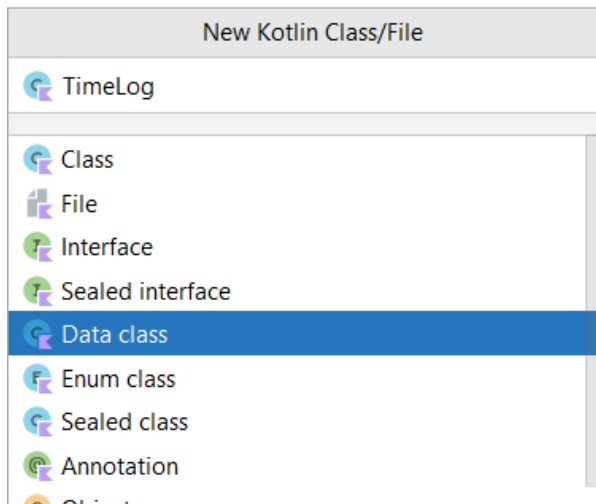
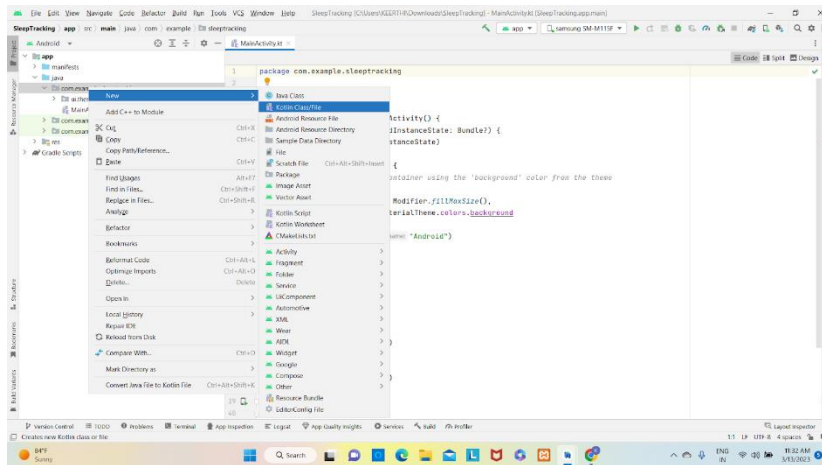
<https://github.com/smartinternz02/Sleep-tracking/tree/main/app/src/main/java/com/example/projectone/UserDatabaseHelper.kt>

## Database 2

This milestone explains about Database 2

## Create TimeLog Data Class

### Create TimeLog data class



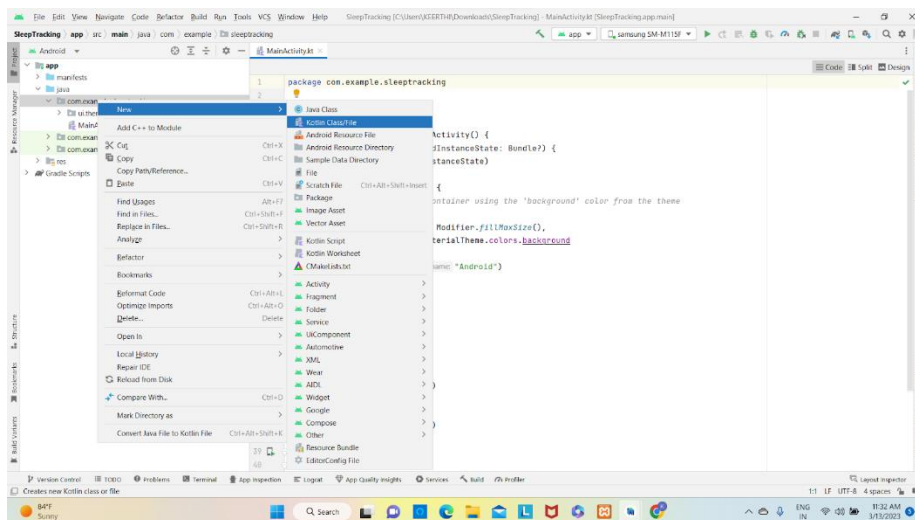
TimeLog data class code:

<https://github.com/smartinternz02/Sleep-tracking/tree/main/app/src/main/java/com/example/projectone/TimeLog.kt>

## Create An TimeLogDao Interface

### Create an TimeLogDao interface



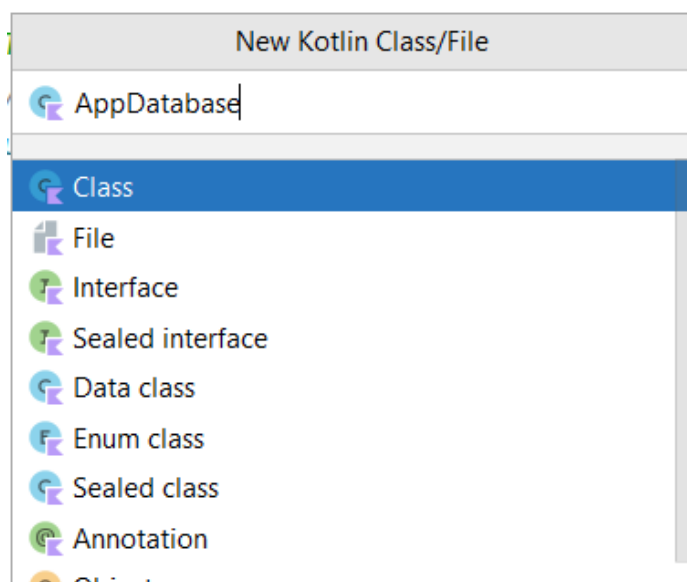
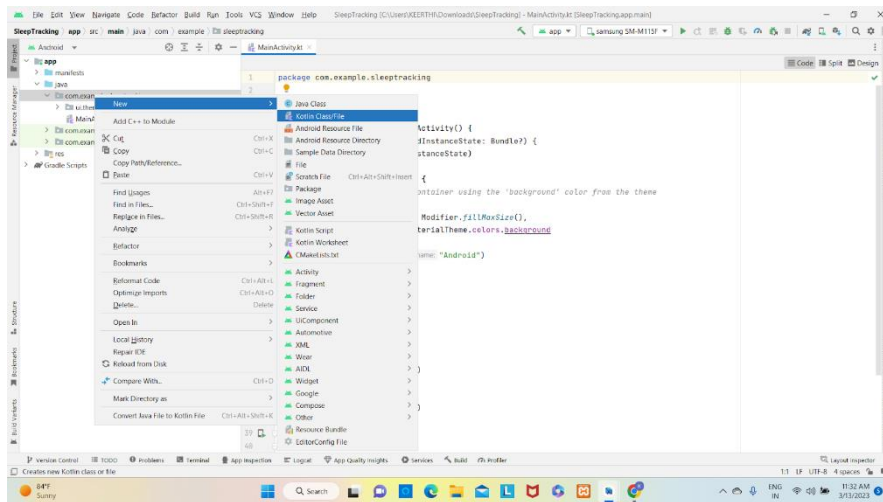


TimeLogDao interface code:

<https://github.com/smartinternz02/Sleep-tracking/tree/main/app/src/main/java/com/example/projectone/TimeLogDao.kt>

## Create An AppDatabase Class

## Create an AppDatabase class

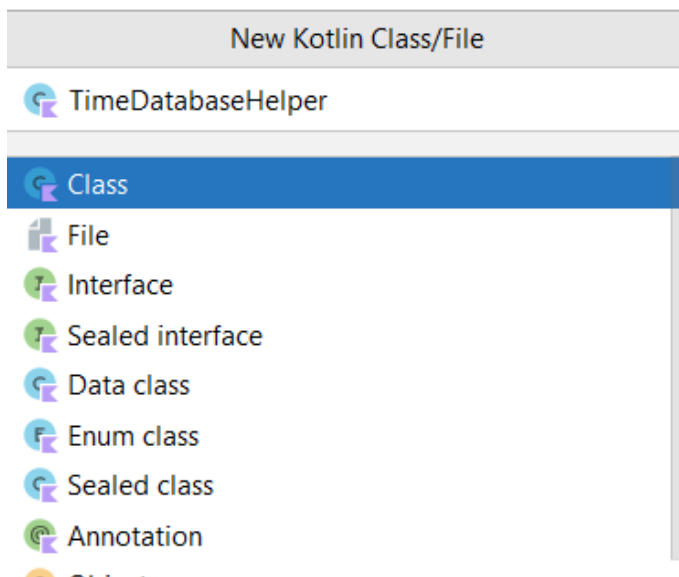
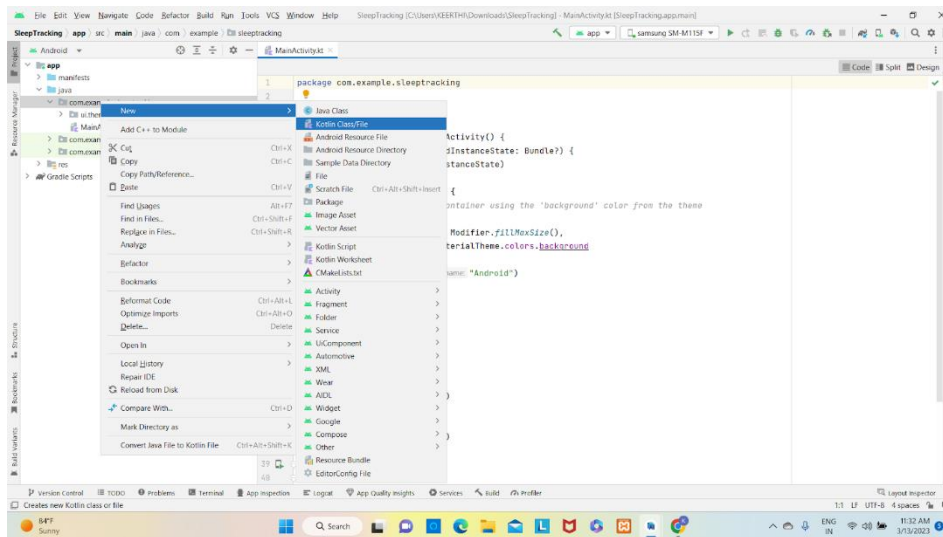


AppDatabase class code:

<https://github.com/smartinternz02/Sleep-tracking/tree/main/app/src/main/java/com/example/projectone/AppDatabase.kt>

## Create An TimeDatabaseHelper Class

Create an TimeDatabaseHelper class



TimeDatabaseHelper class code:

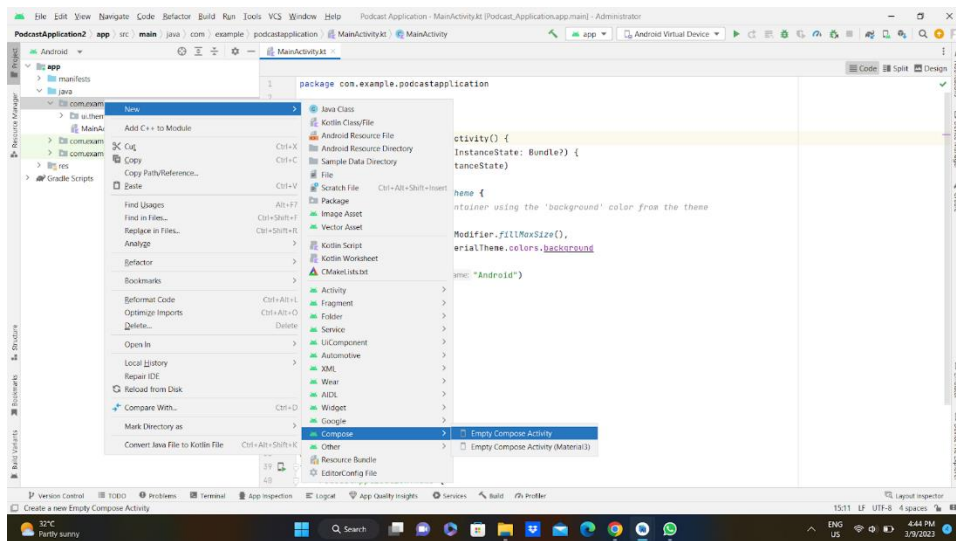
<https://github.com/smartinternz02/Sleep-tracking/tree/main/app/src/main/java/com/example/projectone/TimeDatabaseHelper.kt>

# Building Application UI And Connecting To Database

This milestone explains about building application UI and connecting to database.

## Creating LoginActivity.Kt With Database

## Creating LoginActivity.kt with database



New Android Activity

Empty Compose Activity

Create a new empty activity with Jetpack Compose

Activity Name

LoginActivity

Package name

com.example.podcastapplication

☐ Launcher Activity

Previous

Next

Cancel

Finish

Database connection in LoginActivity.kt

```

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

@Composable
fun LoginScreen(context: Context, databaseHelper: UserDatabaseHelper) {
    var username by remember { mutableStateOf(value: "") }
    var password by remember { mutableStateOf(value: "") }
    var error by remember { mutableStateOf(value: "") }
}

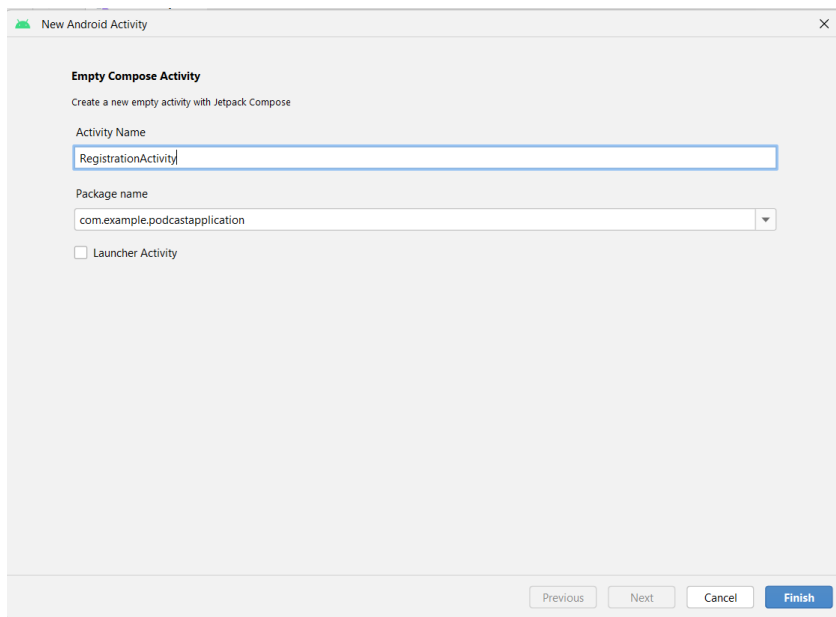
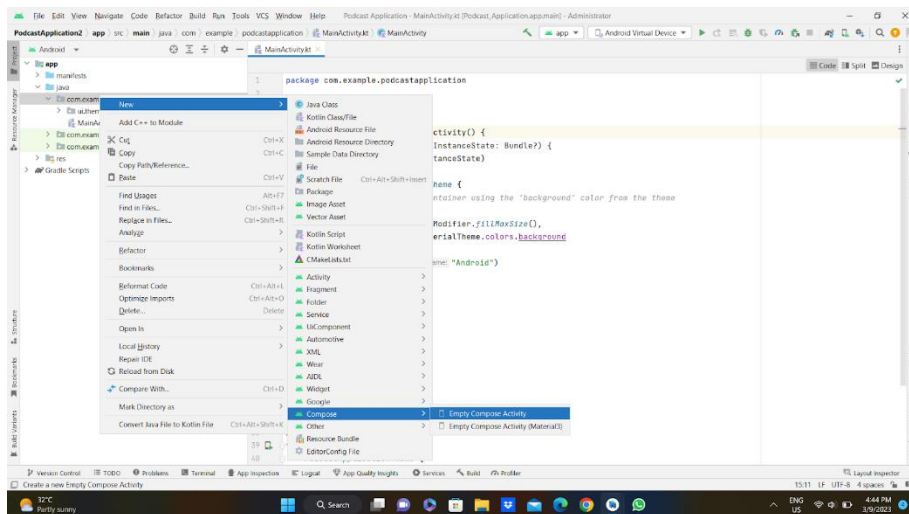
```

Complete code in below link:

<https://github.com/smartinternz02/Sleep-tracking/tree/main/app/src/main/java/com/example/projectone/LoginActivity.kt>

## Creating RegistrationActivity.Kt With Database

### Creating RegistrationActivity.kt with database



Database connection in RegistrationActivity.kt

```

class RegistrationActivity : ComponentActivity() { private lateinit var databaseHelper: UserDatabaseHelper
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        databaseHelper = UserDatabaseHelper(context: this)
        setContent {
            PodcastPlayerTheme {
                // 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) {
    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/Sleep-tracking/tree/main/app/src/main/java/com/example/projectone/RegisterActivity.kt>

Required drawables



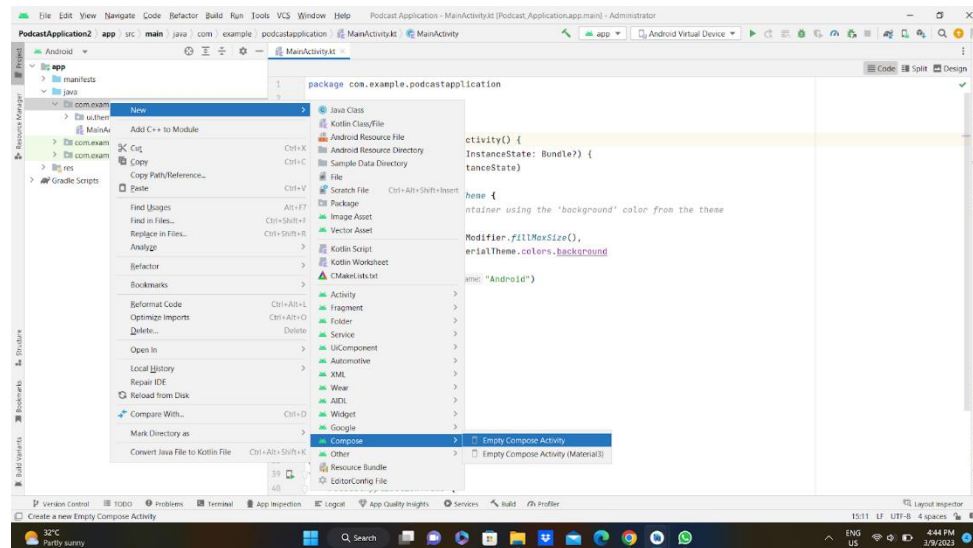
The screenshot displays the Android Studio IDE with the following components:


- Top Toolbar:** Contains standard IDE actions like File, Edit, View, Navigate, Refactor, Build, Run, Tools, VCS, Window, and Help. It also shows the current project path: SleepTracking (C:\Users\JEERTH\Downloads\SleepTracking) - MainActivity.kt [SleepTracking.app.main].
- Left Sidebar:**
  - Source Manager:** Shows the project structure with folders like app, manifests, java, and res.
  - Project:** Displays the package hierarchy: com.example.sleeptracking > ui.theme > MainActivity.kt.
  - Resource Manager:** Shows the res folder.
  - Gradle Scripts:** Shows the build.gradle file.
  - Structure:** Shows the package structure.
  - Bookmarks:** Shows no bookmarks.
  - Run Variables:** Shows no variables.
  - Build Variants:** Shows no variants.
  - Drawables:** Shows no drawables.
- Main Editor:** Displays the MainActivity.kt file with the following code:
 

```
1 package com.example.sleeptracking
2
3 import ...
4
5
6
7
8
9
10
11
12
13
14 class MainActivity : AppCompatActivity() {
15     override fun onCreate(savedInstanceState: Bundle?) {
16         super.onCreate(savedInstanceState)
17         setContentView(
18             R.layout.activity_main
19         )
20         // A surface container using the 'background' color from the theme
21         Surface(
22             modifier = Modifier.fillMaxSize(),
23             color = MaterialTheme.colors.background
24         ) {
25             Greeting(name = "Android")
26         }
27     }
28 }
29
30
31
32 @Composable
33 fun Greeting(name: String) {
34     Text(text = "Hello $name!")
35 }
36
37 @Preview(showBackground = true)
38 @Composable
39 fun DefaultPreview() {
40     SleepTrackingTheme {
41         Greeting(name = "Android")
42     }
43 }
```
- Right Sidebar:** Contains tabs for Code, Split, and Design. The Code tab is active.
- Bottom Toolbar:** Contains various development tools like Version Control, Profiler, Layout Inspector, and others.

<https://github.com/smartinternz02/Sleep-tracking/tree/main/app/src/main/java/com/example/projectone/MainActivity.kt>

## Creating TrackActivity.kt file



 New Android Activity ✕

**Empty Compose Activity**  
Create a new empty activity with Jetpack Compose

Activity Name

Package name

☐ Launcher Activity

Previous

Next

Cancel

Finish

Database connection and fetching in TrackActivity.kt

```

class TrackActivity : ComponentActivity() {

    private lateinit var databaseHelper: TimeLogDatabaseHelper

    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)

        databaseHelper = TimeLogDatabaseHelper(context = this)
        setContentView {
            ProjectOneTheme {
                // A surface container using the 'background' color from the theme
                Surface {
                    modifier = Modifier.fillMaxSize(),
                    color = MaterialTheme.colors.background
                } {
                    //ListListScopeSample(timeLogs)

                    val data=databaseHelper.getTimeLogs();
                    Log.d( tag: "Sandeep" ,data.toString())
                    val timeLogs = databaseHelper.getTimeLogs()
                    ListListScopeSample(timeLogs)
                }
            }
        }
    }
}

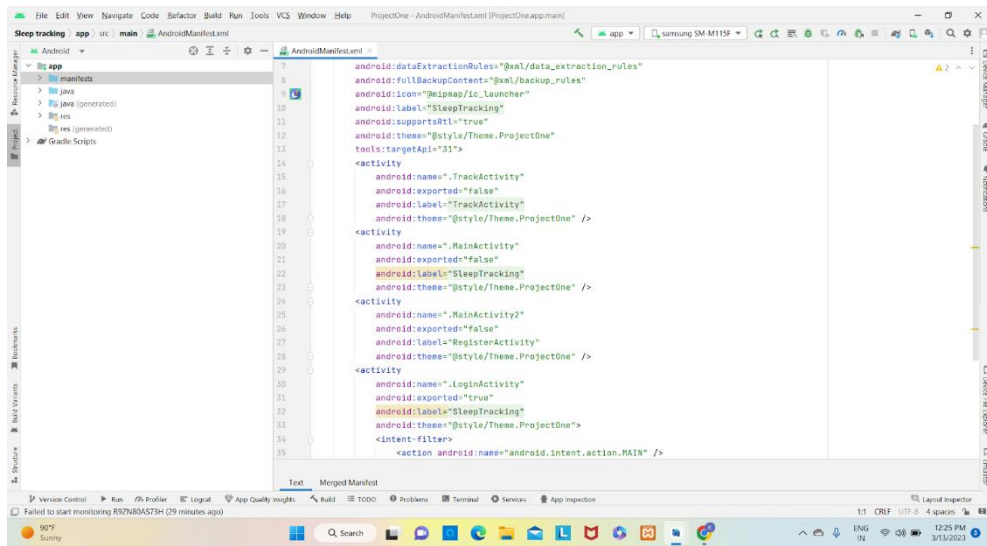
```

Complete code in below link:

<https://github.com/smartinternz02/Sleep-tracking/tree/main/app/src/main/java/com/example/projectone/TrackActivity.kt>

## Modifying AndroidManifest.Xml

## Modifying AndroidManifest.xml



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.

```

tools:targetApi="31">
<activity
    android:name=".TrackActivity"
    android:exported="false"
    android:label="TrackActivity"
    android:theme="@style/Theme.ProjectOne" />
<activity
    android:name=".MainActivity"
    android:exported="false"
    android:label="SleepTracking"
    android:theme="@style/Theme.ProjectOne" />
<activity
    android:name=".MainActivity2"
    android:exported="false"
    android:label="RegisterActivity"
    android:theme="@style/Theme.ProjectOne" />
<activity
    android:name=".LoginActivity"
    android:exported="true"
    android:label="SleepTracking"
    android:theme="@style/Theme.ProjectOne">
    <intent-filter>
        <action android:name="android.intent.action.MAIN" />

        <category android:name="android.intent.category.LAUNCHER" />
    </intent-filter>

```

Complete AndroidManifest.xml code:

<https://github.com/smartinternz02/Sleep-tracking/blob/main/app/src/main/AndroidManifest.xml>

## Running The Application

This milestone explains about running the application.