

Check In & Check Out

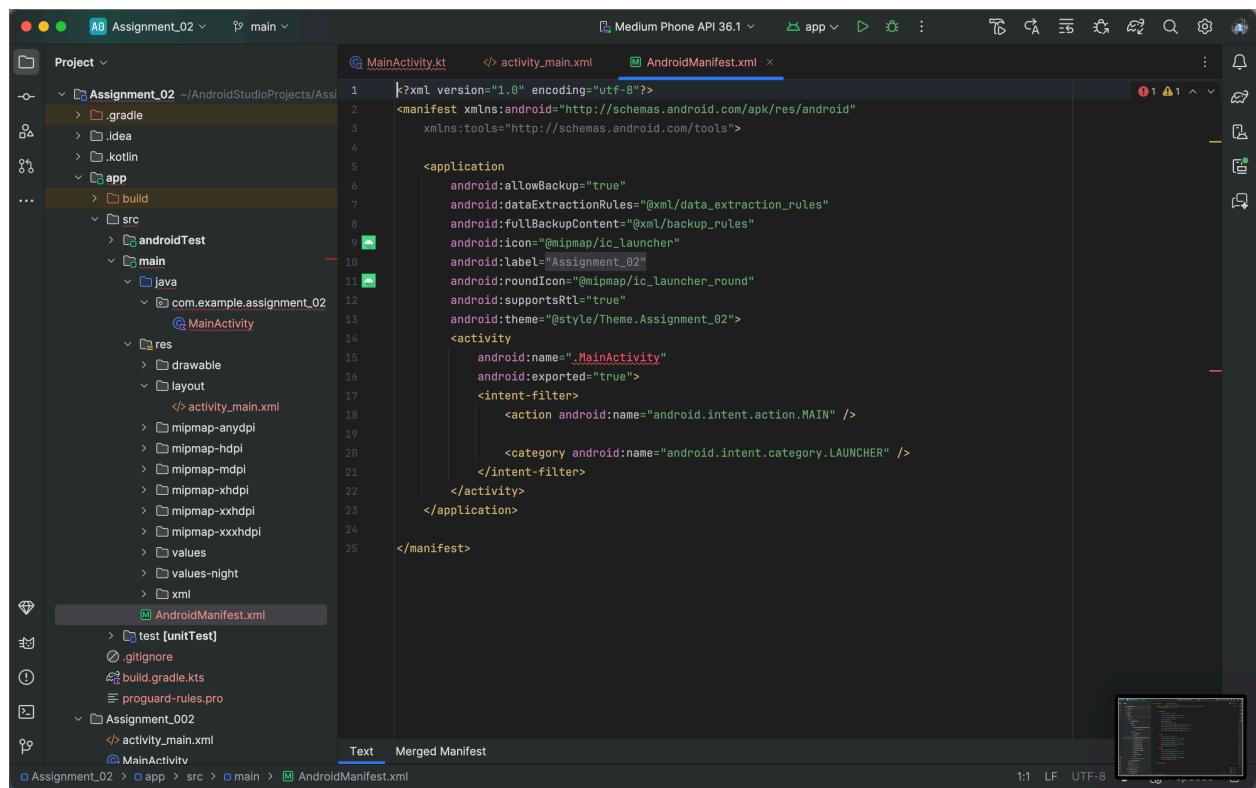
Aim

Develop an application for Tech Lounge Check in / Check out App. to count number of students inside the block.

Procedure:

- Create a new project in **Android Studio**.
- Add a **TextView** to display the number.
- Add two **Buttons** for **Increment** and **Decrement**.
- Initialize a number variable in **MainActivity**.
- Increase the value on **Increment button click**.
- Decrease the value on **Decrement button click**.
- Run the app and verify the output.

AndroidManifest.xml



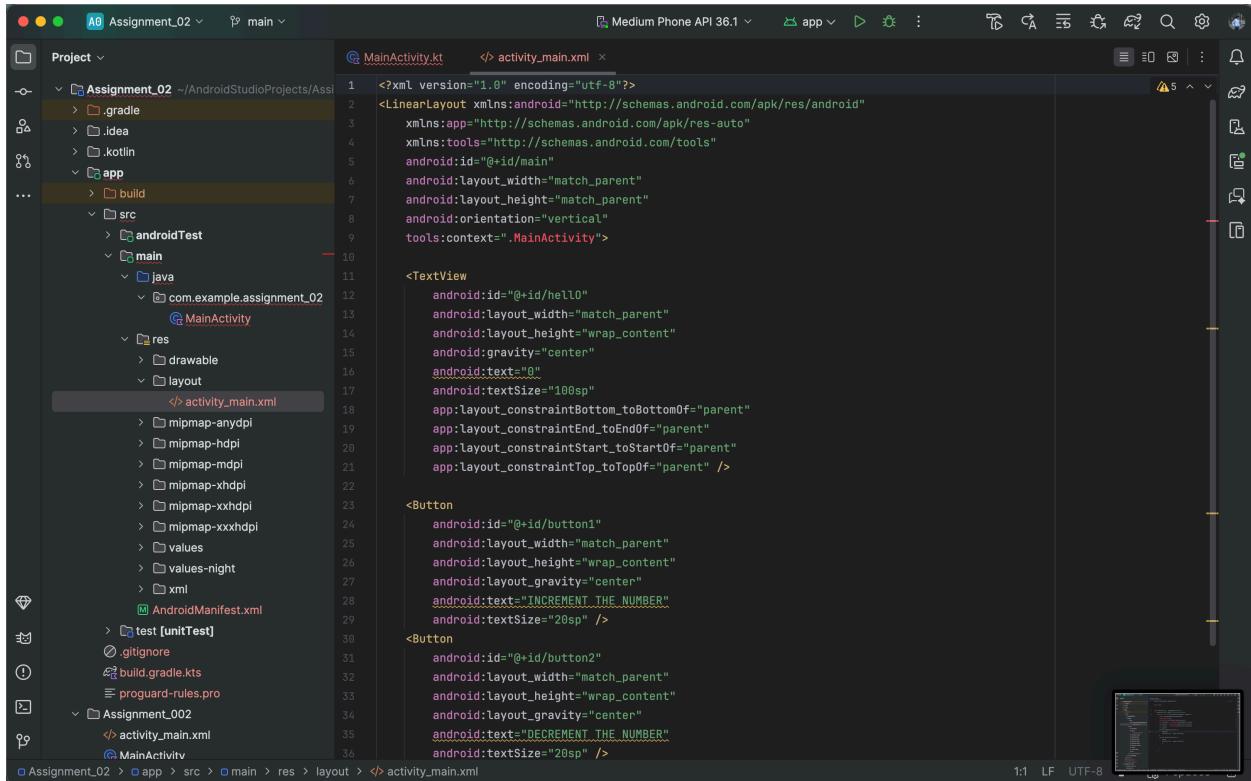
The screenshot shows the Android Studio interface with the project 'Assignment_02' open. The left sidebar displays the project structure, including the app module and its sub-directories like build, src, and res. The main editor window shows the `AndroidManifest.xml` file, which defines the application's manifest. The code is as follows:

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

    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="Assignment_02"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Assignment_02">

        <activity
            android:name=".MainActivity"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>
</manifest>
```

Activity_main.xml

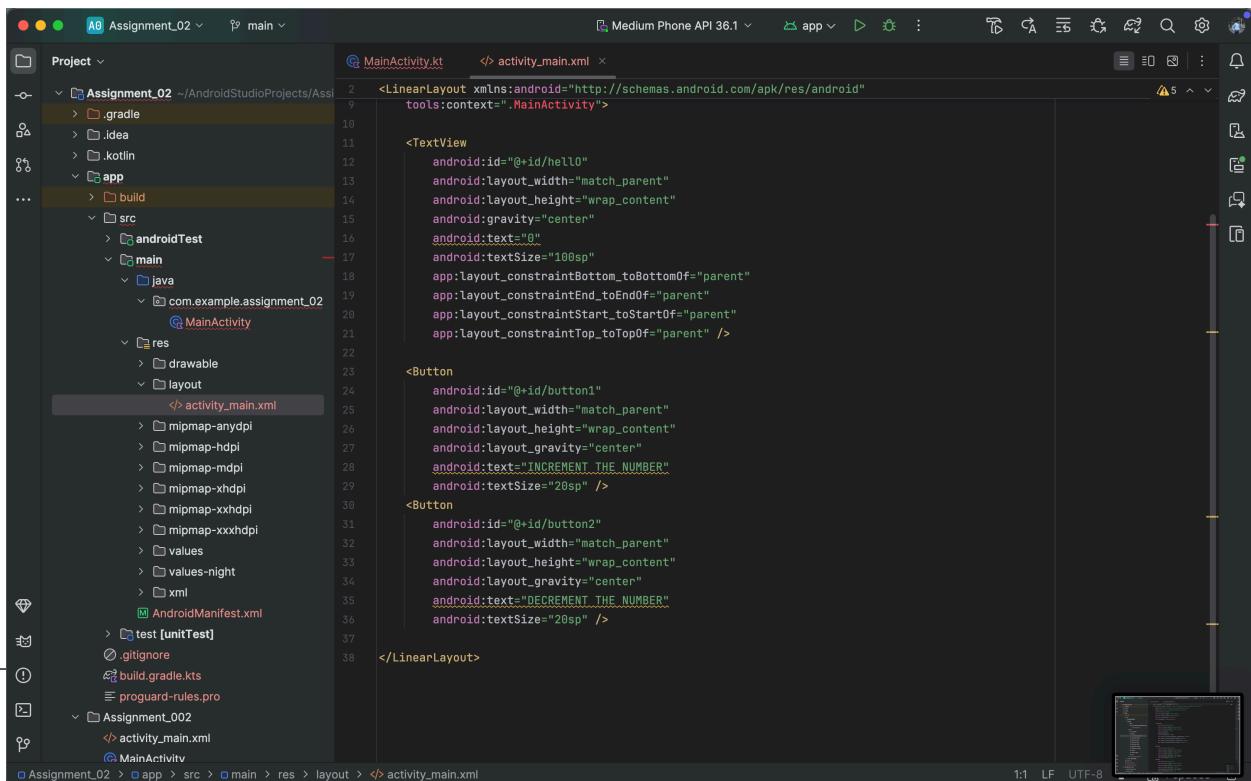


The screenshot shows the Android Studio interface with the project structure on the left and the XML code for `activity_main.xml` on the right. The code defines a linear layout with a text view and two buttons.

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    android:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    tools:context=".MainActivity"

    <TextView
        android:id="@+id/hello"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:gravity="center"
        android:text=""
        android:textSize="100sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <Button
        android:id="@+id/button1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:text="INCREMENT THE NUMBER"
        android:textSize="20sp" />
    <Button
        android:id="@+id/button2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:text="DECREMENT THE NUMBER"
        android:textSize="20sp" />
</LinearLayout>
```



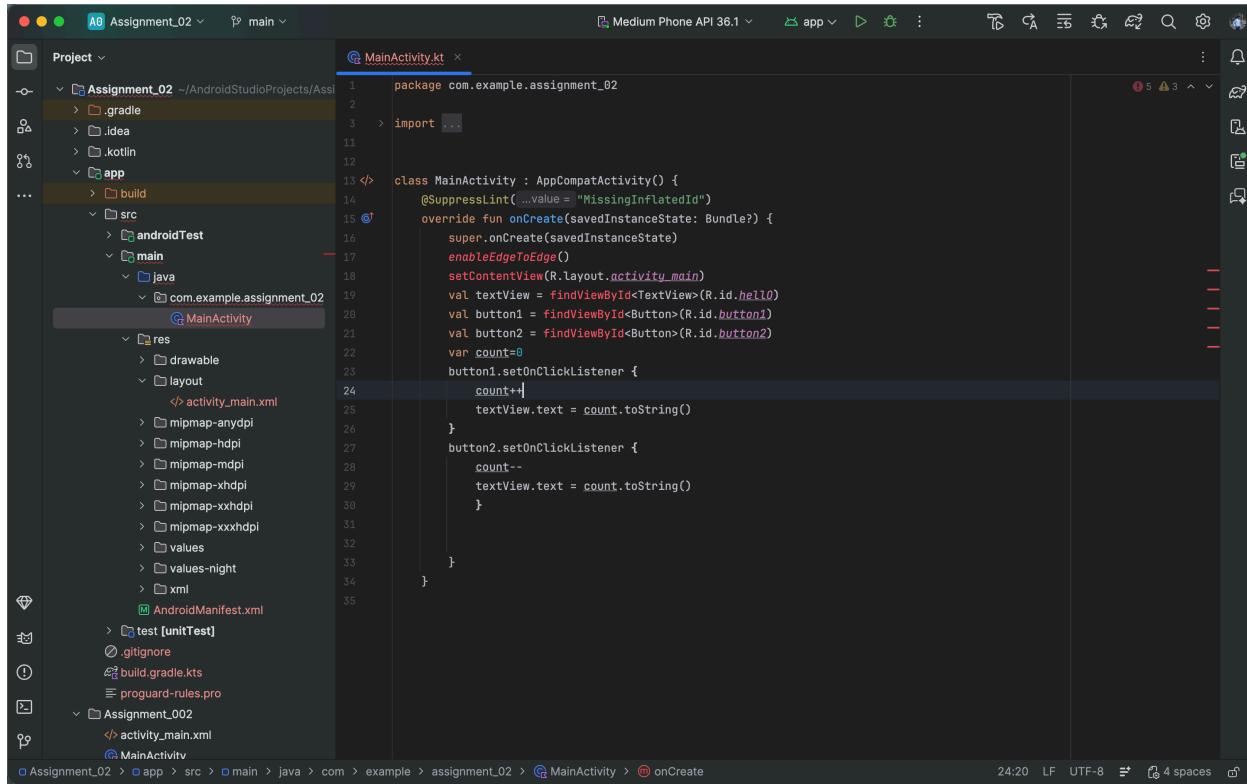
The screenshot shows the Android Studio interface with the project structure on the left and the XML code for `activity_main.xml` on the right. The code defines a linear layout with a text view and two buttons.

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

    <TextView
        android:id="@+id/hello"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:gravity="center"
        android:text=""
        android:textSize="100sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <Button
        android:id="@+id/button1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:text="INCREMENT THE NUMBER"
        android:textSize="20sp" />
    <Button
        android:id="@+id/button2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:text="DECREMENT THE NUMBER"
        android:textSize="20sp" />
</LinearLayout>
```

MainActivity.kt



The screenshot shows the Android Studio interface with the following details:

- Project Bar:** Assignment_02
- Toolbars:** Medium Phone API 36.1, app, etc.
- Code Editor:** MainActivity.kt (Kotlin)
- Code Content:**

```
1 package com.example.assignment_02
2
3 import ...
4
5
6 class MainActivity : AppCompatActivity() {
7     @SuppressLint("MissingInflatedId")
8     override fun onCreate(savedInstanceState: Bundle?) {
9         super.onCreate(savedInstanceState)
10        enableEdgeToEdge()
11        setContentView(R.layout.activity_main)
12
13        val textView = findViewById<TextView>(R.id.hello)
14        val button1 = findViewById<Button>(R.id.button1)
15        val button2 = findViewById<Button>(R.id.button2)
16
17        var count=0
18        button1.setOnClickListener {
19            count++
20            textView.text = count.toString()
21        }
22        button2.setOnClickListener {
23            count--
24            textView.text = count.toString()
25        }
26    }
27
28
29
30
31
32
33
34
35 }
```
- Project Structure:** Assignment_02 (gradle, .idea, kotlin, app, build, src, androidTest, main, java, com.example.assignment_02, MainActivity, res, drawable, layout, activity_main.xml, mipmap-anydpi, mipmap-hdpi, mipmap-mdpi, mipmap-xhdpi, mipmap-xxhdpi, mipmap-xxxhdpi, values, values-night, xml, AndroidManifest.xml, test [unitTest], .gitignore, build.gradle.kts, proguard-rules.pro)
- Bottom Status Bar:** Assignment_02 > app > src > main > java > com > example > assignment_02 > MainActivity > onCreate, 24:20, LF, UTF-8, 4 spaces

Output : Result: Successfully Done

