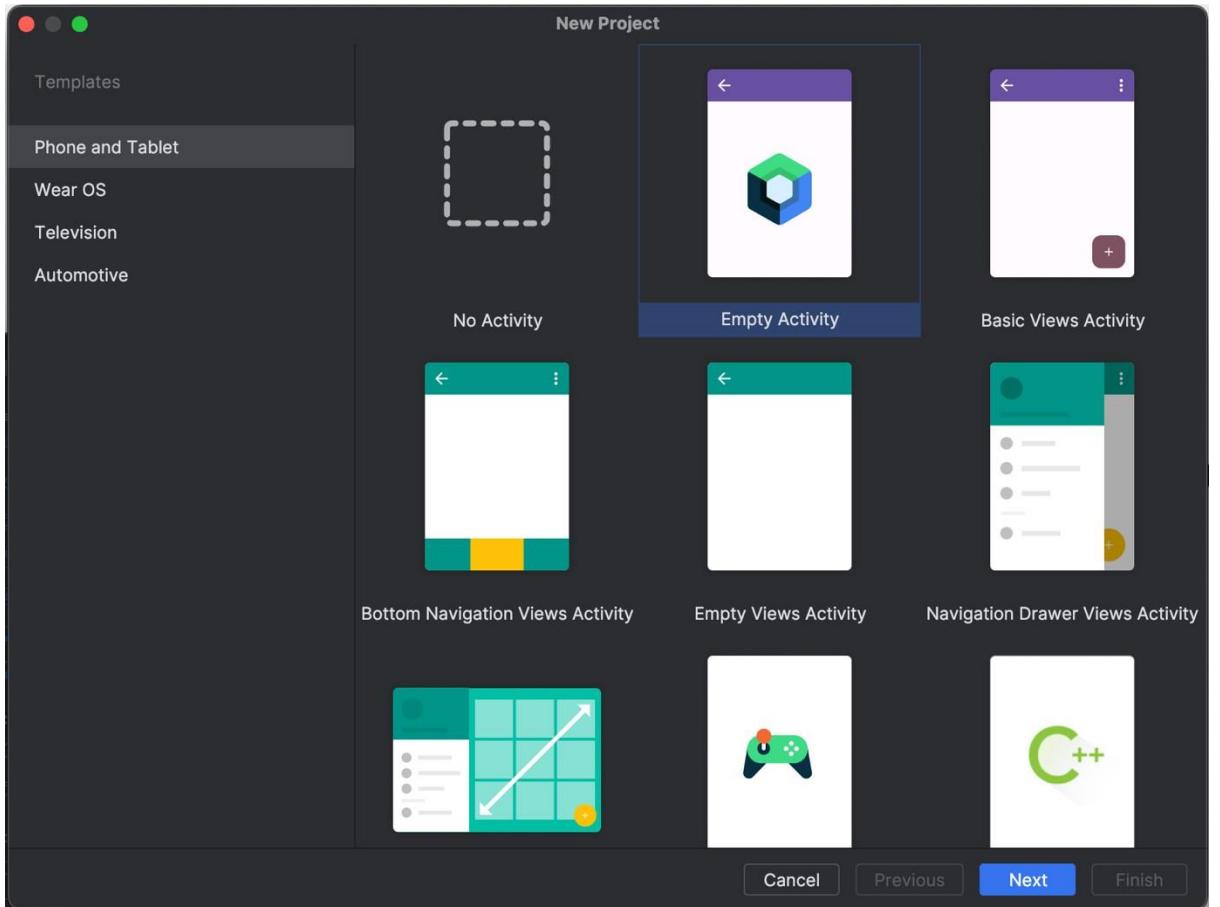
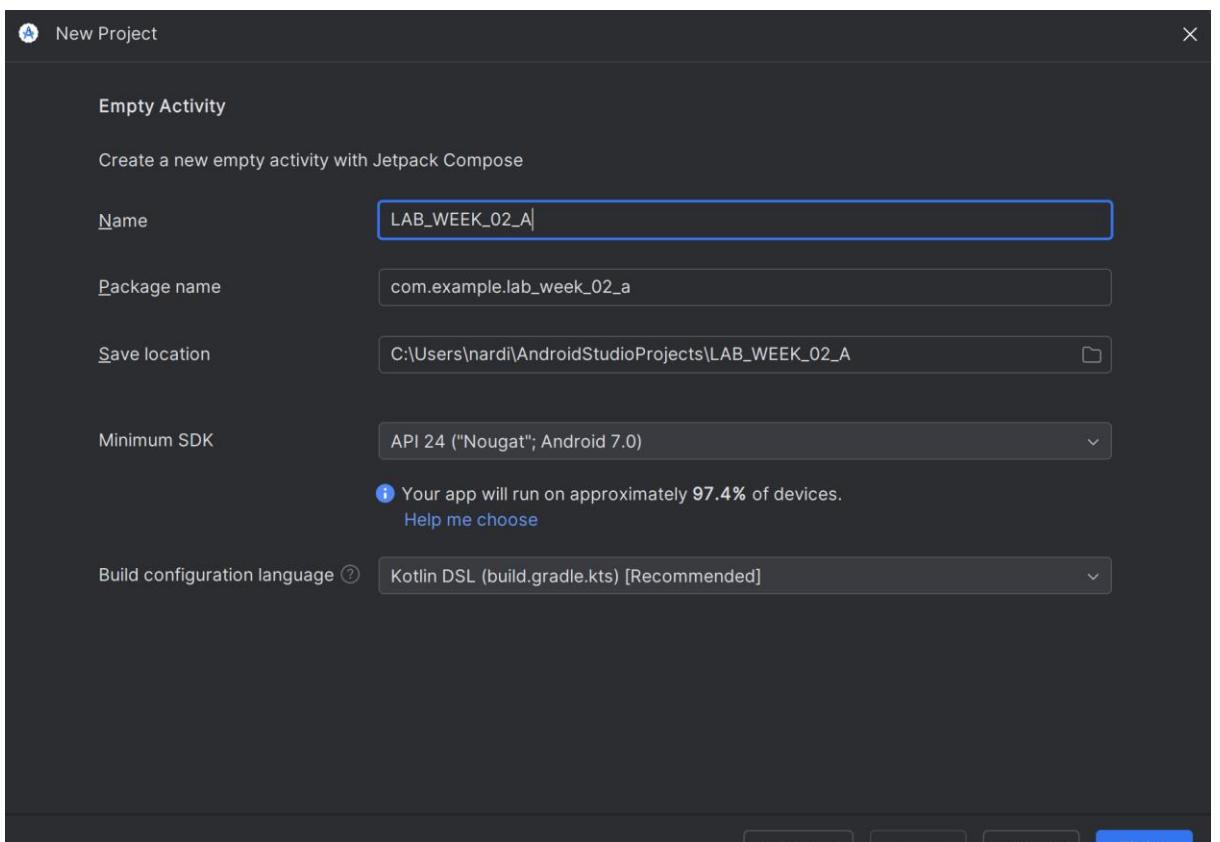


LANGKAH LANGKAH PENGERJAAN LAB WEEK 02 A

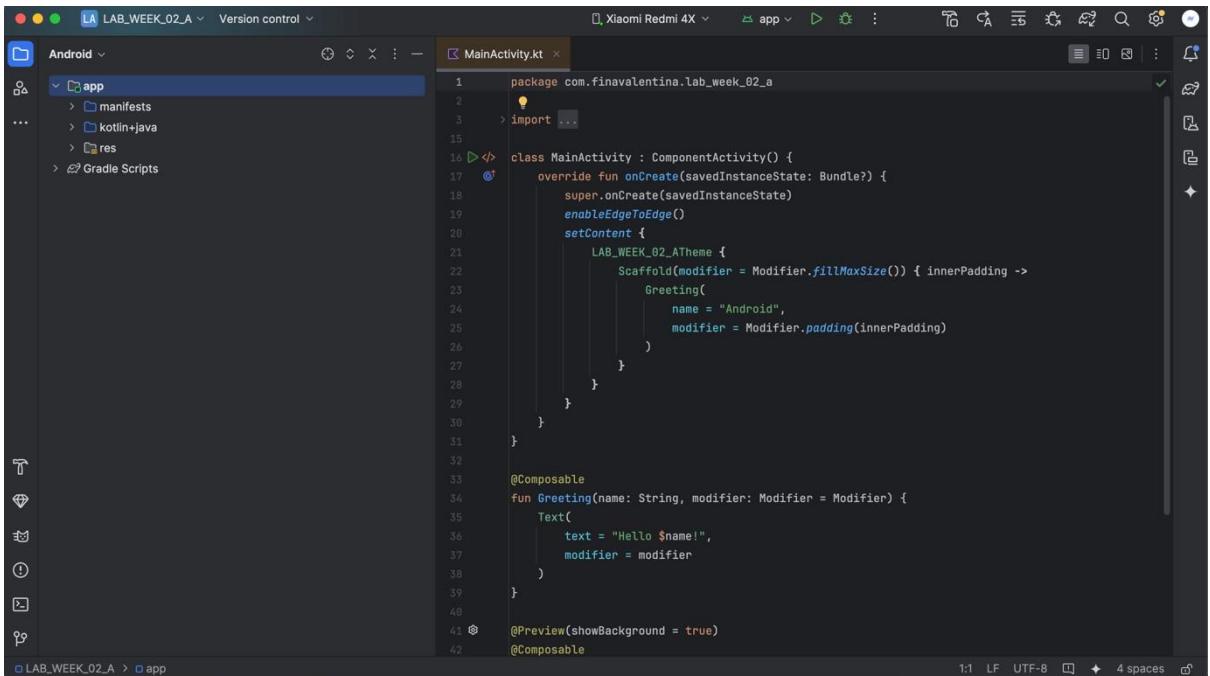
- Buat Project, dan pilih Empty Activity dan klik "Next"



- Masukan nama project dan atur SDK dll, lalu klik "Finisih"



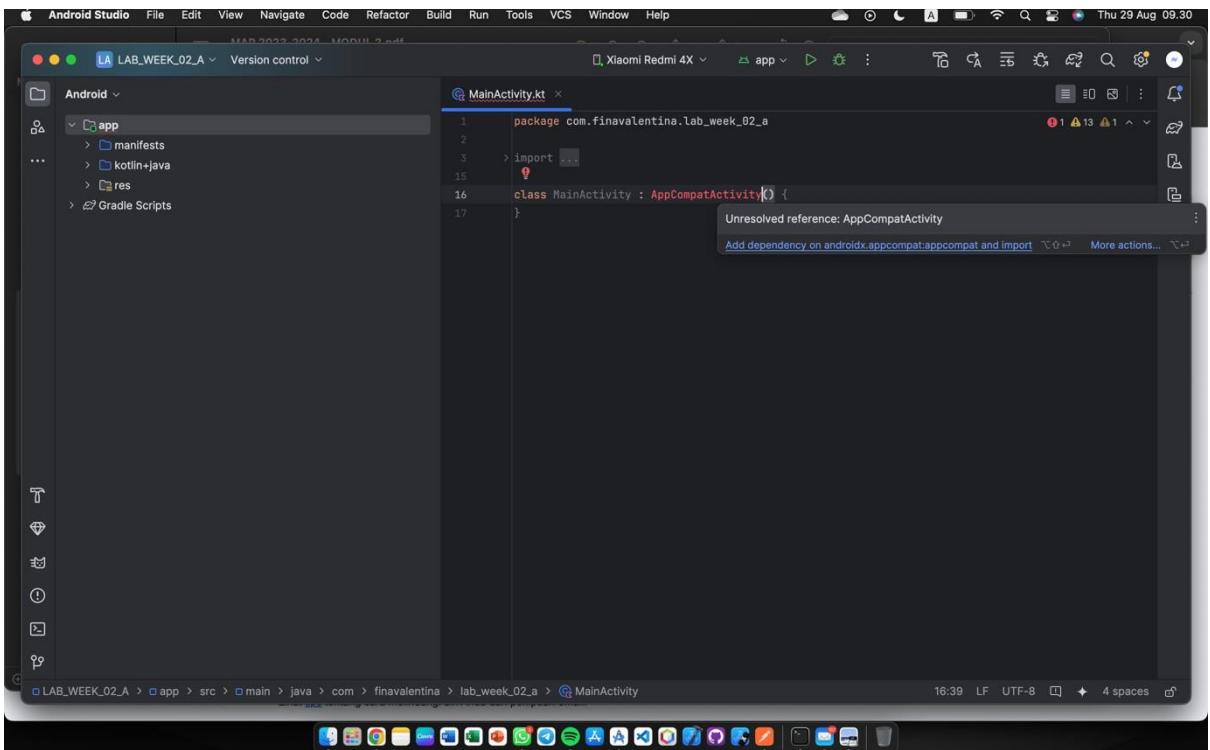
3. Maka akan tampil editor yang menampilkan MainActivity



The screenshot shows the Android Studio interface with the project navigation bar at the top. The main area displays the `MainActivity.kt` file. The code is as follows:

```
1 package com.finavalevina.lab_week_02_a
2
3 > import ...
4
5
6 class MainActivity : ComponentActivity() {
7     override fun onCreate(savedInstanceState: Bundle?) {
8         super.onCreate(savedInstanceState)
9         enableEdgeToEdge()
10        setContent {
11            LAB_WEEK_02_ATheme {
12                Scaffold(modifier = Modifier.fillMaxSize()) { innerPadding ->
13                    Greeting(
14                        name = "Android",
15                        modifier = Modifier.padding(innerPadding)
16                    )
17                }
18            }
19        }
20    }
21
22 @Composable
23 fun Greeting(name: String, modifier: Modifier) {
24     Text(
25         text = "Hello $name!",
26         modifier = modifier
27     )
28 }
29
30 @Preview(showBackground = true)
31 @Composable
```

4. Ubah code MainAcCvity dan import AppCompatAcCvity, untuk pertama kali pilih “Add dependency on androidx ...”

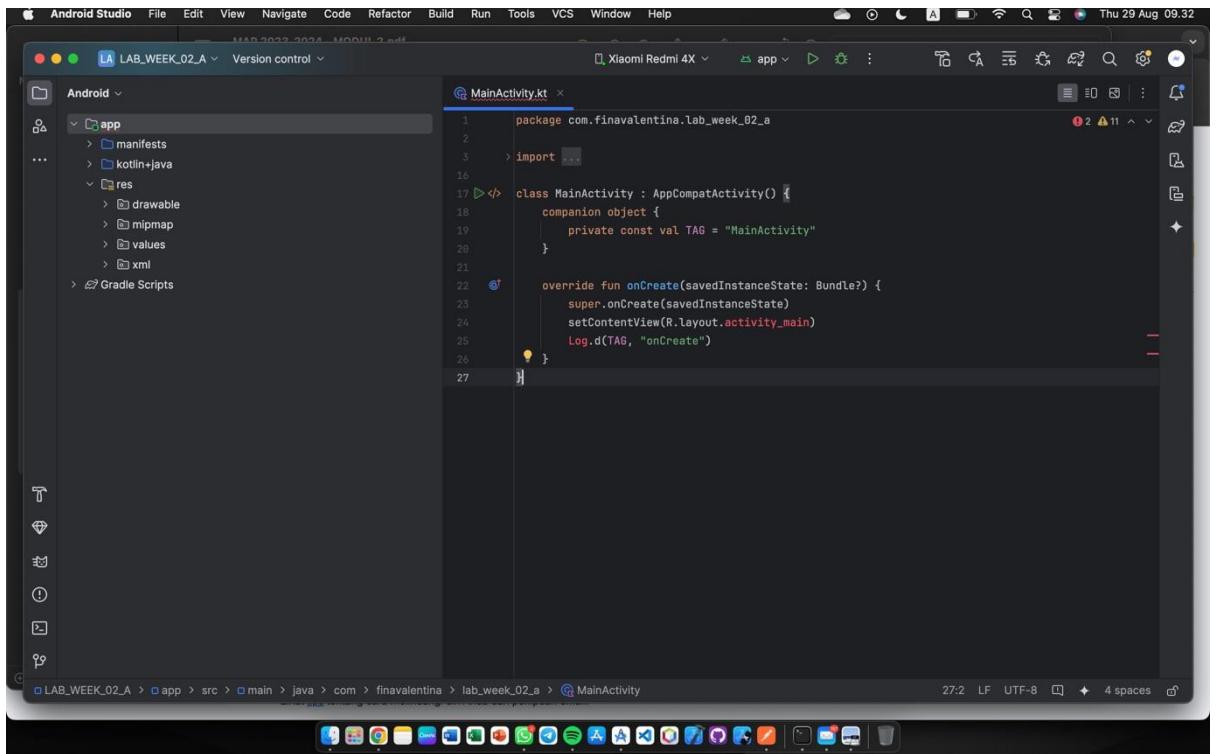


The screenshot shows the Android Studio interface with the project navigation bar at the top. The main area displays the `MainActivity.kt` file. The code is as follows:

```
1 package com.finavalevina.lab_week_02_a
2
3 > import ...
4
5
6 class MainActivity : AppCompatActivity() {
7 }
```

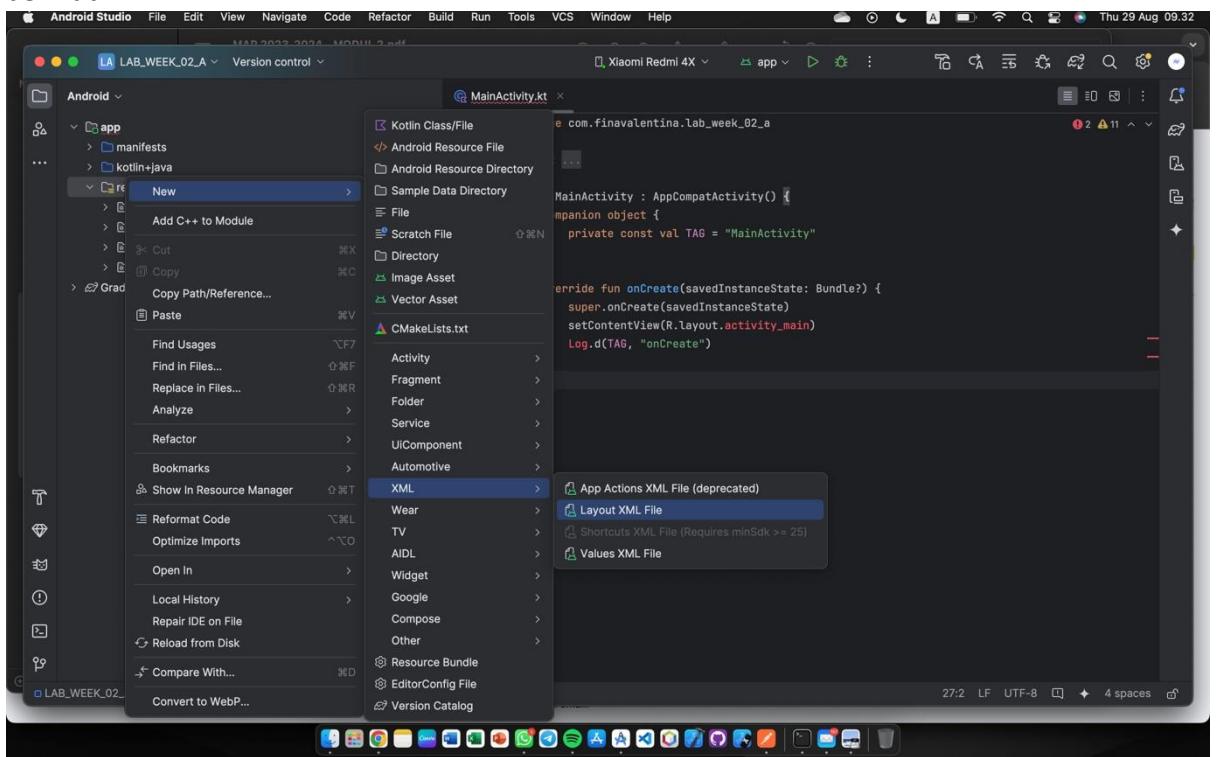
A tooltip appears over the `AppCompatActivity()` call, stating: "Unresolved reference: AppCompatActivity". Below the tooltip, there is a link: "Add dependency on androidx.appcompat:appcompat and import".

5. Lanjutkan edit file MainAcCvity seperC ini

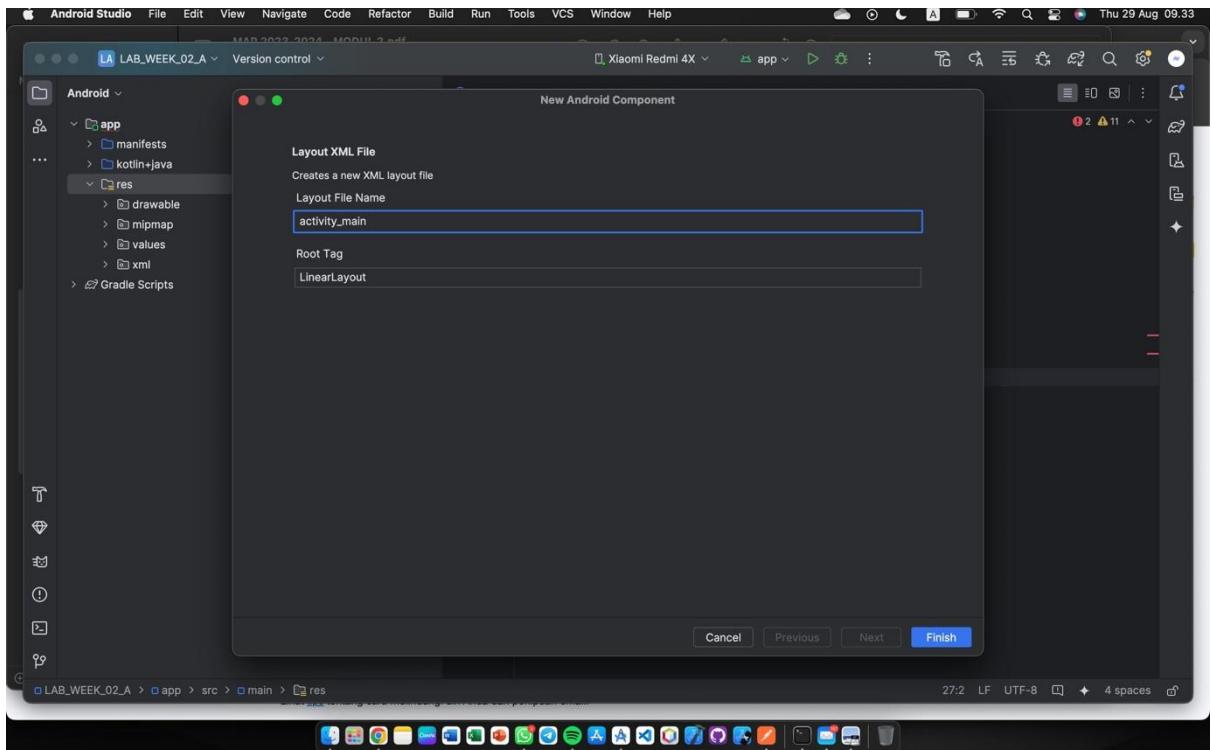


```
package com.finaventolina.lab_week_02_a
import ...
class MainActivity : AppCompatActivity() {
    companion object {
        private const val TAG = "MainActivity"
    }
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)
        Log.d(TAG, "onCreate")
    }
}
```

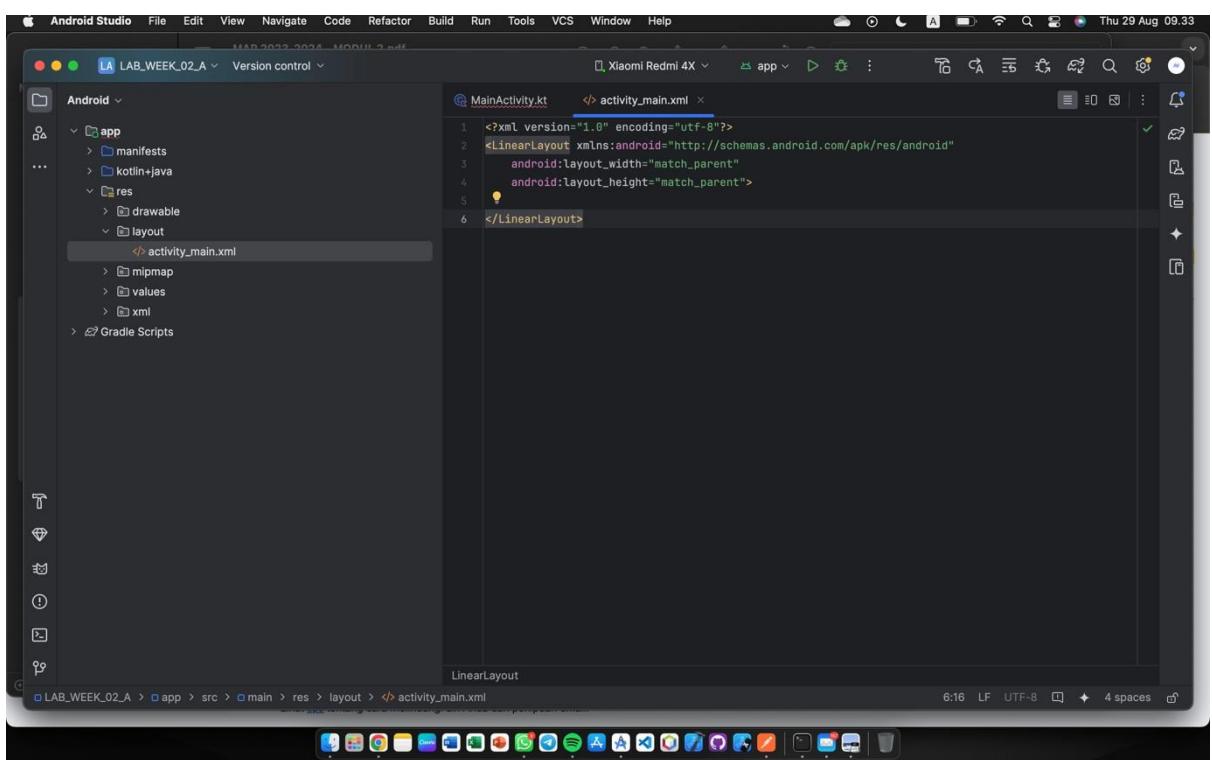
6. Lalu buat layout “acCvity_main” dengan klik kanan pada folder res dan ikuC gambar berikut



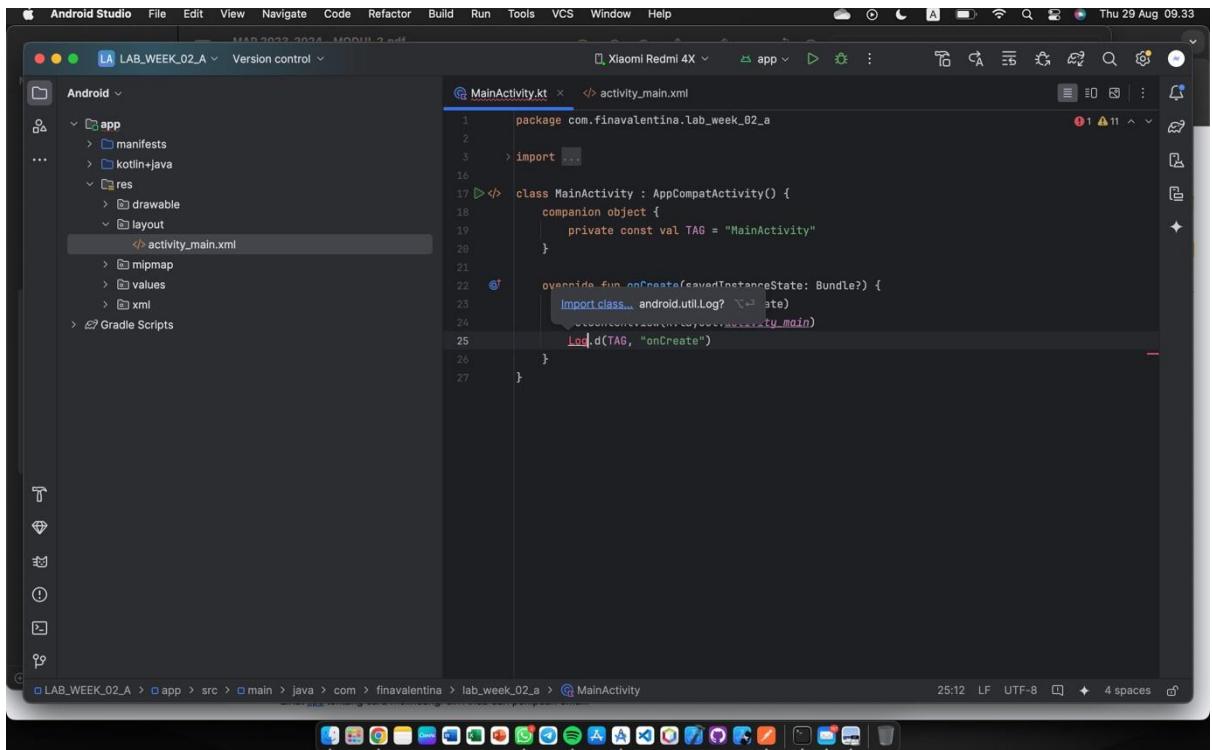
7. Masukan nama “acCvity_main” pada dialog, lalu klik “Finish”



8. Maka akan tampil editor yang menampilkan “activity_main.xml”



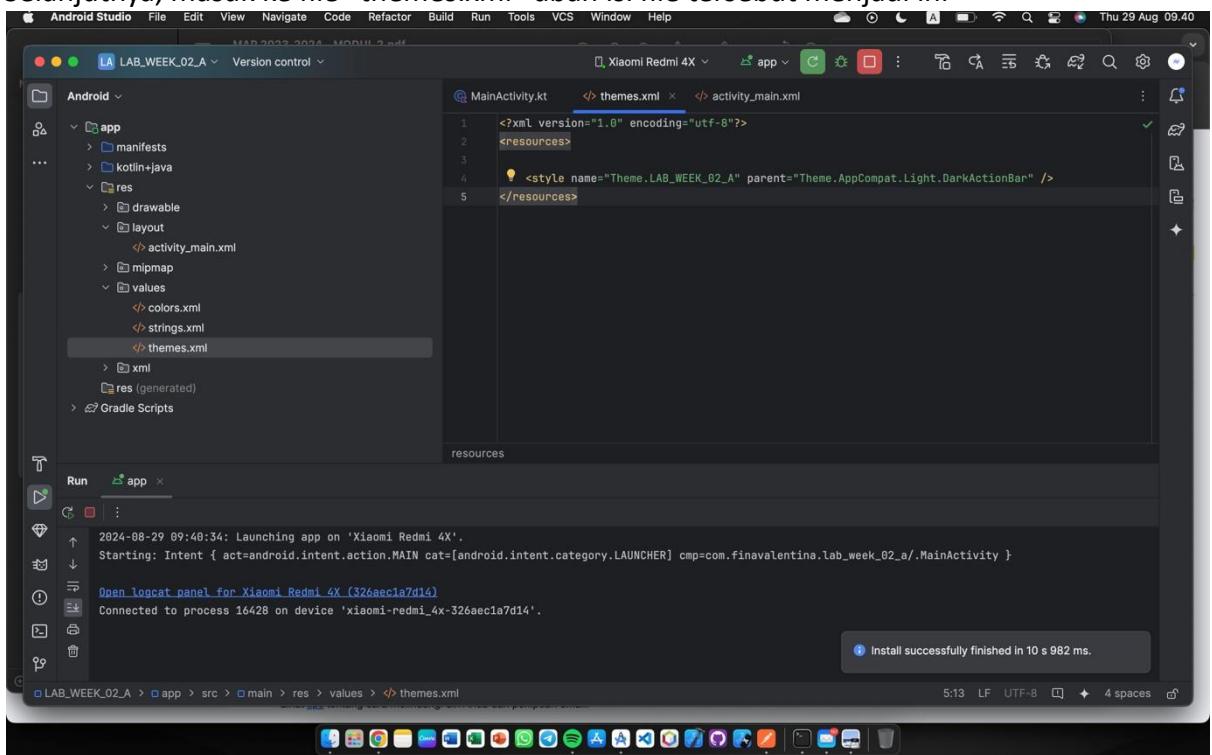
9. Pada file MainActivity, import Log, arahkan cursor mouse ke bagian yang merah lalu klik import class



The screenshot shows the Android Studio interface with the project 'LAB_WEEK_02_A' open. The code editor displays the `MainActivity.kt` file, which contains the following Java code:

```
1 package com.finavalevina.lab_week_02_a
2
3 import ...
4
5 class MainActivity : AppCompatActivity() {
6     companion object {
7         private const val TAG = "MainActivity"
8     }
9
10    override fun onCreate(savedInstanceState: Bundle?) {
11        super.onCreate(savedInstanceState)
12        setContentView(R.layout.activity_main)
13        Log.d(TAG, "onCreate")
14    }
15}
```

10. Selanjutnya, masuk ke file “themes.xml” ubah isi file tersebut menjadi ini



The screenshot shows the Android Studio interface with the project 'LAB_WEEK_02_A' open. The code editor displays the `themes.xml` file, which contains the following XML code:

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <style name="Theme.LAB_WEEK_02_A" parent="Theme.AppCompat.Light.DarkActionBar" />
</resources>
```

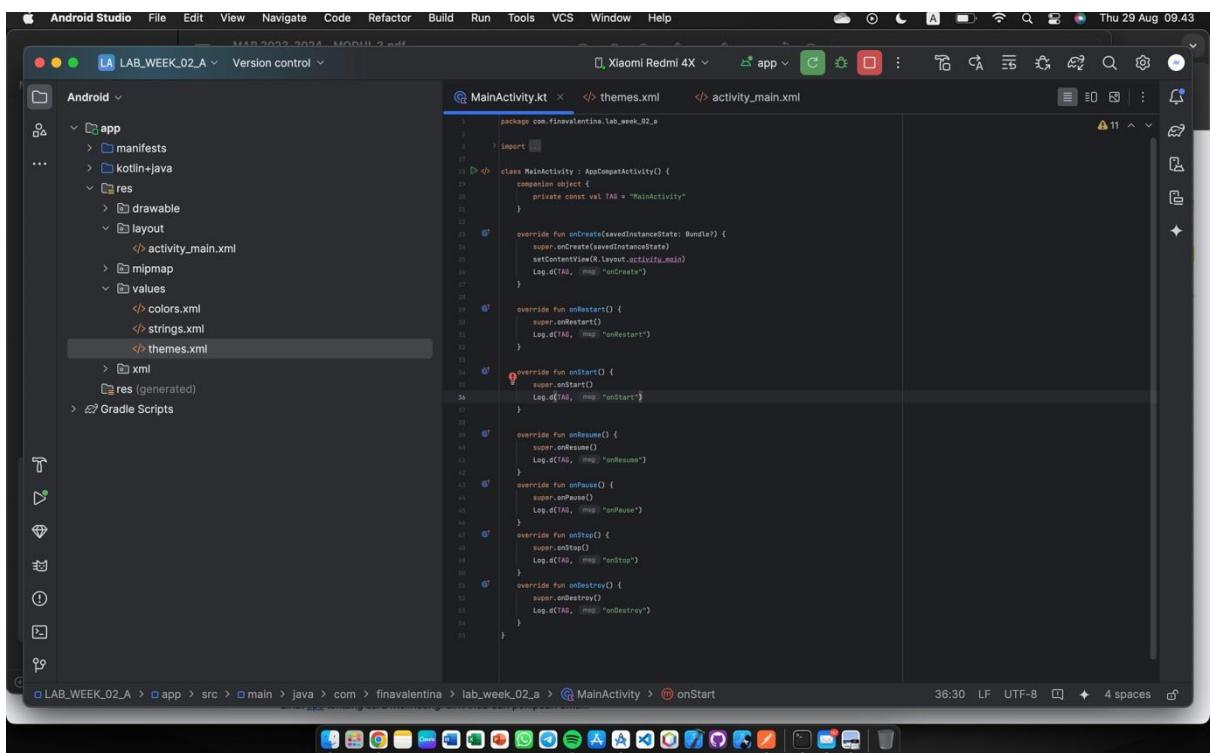
11. Coba jalankan aplikasinya dan lihat Logcat



```
2024-08-29 09:41:44.985 16669-16669 ResourceType com.finavalentina.lab_week_02_a
2024-08-29 09:41:45.017 16669-16669 art
2024-08-29 09:41:45.025 16669-16669 AccessibilityManager com.finavalentina.lab_week_02_a
2024-08-29 09:41:45.051 16669-16669 BoostFramework com.finavalentina.lab_week_02_a
2024-08-29 09:41:45.087 16669-16669 TypefaceUtils com.finavalentina.lab_week_02_a
2024-08-29 09:41:45.094 16669-16669 MainActivity com.finavalentina.lab_week_02_a
2024-08-29 09:41:45.135 16669-16698 Adreno com.finavalentina.lab_week_02_a

W No package identifier when getting name for resource number 0x6
W Before Android 4.1, method android.graphics.PorterDuffColorFilter
D current package=com.finavalentina.lab_week_02_a, accessibility
V BoostFramework() : mPerf = com.qualcomm.qti.Performance@ccce14c
V BoostFramework() : mPerf = com.qualcomm.qti.Performance@e76d22c
I Typeface has no familyName field
D onCreate
I QUALCOMM build : dd15ef5, Ic280a69317
28:2 LF UTF-8 ↻ + 4 spaces ↽
```

12. Lengkapi file MainAcCvity menjadi seperC ini



```
package com.finavalentina.lab_week_02_a
import android.os.Bundle
import androidx.appcompat.app.AppCompatActivity
import com.finavalentina.lab_week_02_a.R

class MainActivity : AppCompatActivity() {
    companion object {
        private const val TAG = "MainActivity"
    }

    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)
        Log.d(TAG, "onCreate")
    }

    override fun onRestart() {
        super.onRestart()
        Log.d(TAG, "onRestart")
    }

    override fun onStart() {
        super.onStart()
        Log.d(TAG, "onStart")
    }

    override fun onResume() {
        super.onResume()
        Log.d(TAG, "onResume")
    }

    override fun onPause() {
        super.onPause()
        Log.d(TAG, "onPause")
    }

    override fun onStop() {
        super.onStop()
        Log.d(TAG, "onStop")
    }

    override fun onDestroy() {
        super.onDestroy()
        Log.d(TAG, "onDestroy")
    }
}
```

13. Lalu jalankan ulang dan lihat Logcat

```

2024-08-29 09:44:09.582 17865-17865 [  ] com.finaventina.lab_week_02_a
2024-08-29 09:44:09.663 17865-17865 [  ] com.finaventina.lab_week_02_a
2024-08-29 09:44:09.664 17865-17865 [  ] com.finaventina.lab_week_02_a
2024-08-29 09:44:09.669 17865-17865 [  ] com.finaventina.lab_week_02_a
2024-08-29 09:44:09.703 17865-17865 [  ] com.finaventina.lab_week_02_a
2024-08-29 09:44:09.716 17865-17865 [  ] com.finaventina.lab_week_02_a
2024-08-29 09:44:09.739 17865-17865 [  ] com.finaventina.lab_week_02_a
2024-08-29 09:44:09.746 17865-17865 [  ] com.finaventina.lab_week_02_a
2024-08-29 09:44:09.775 17865-17865 [  ] com.finaventina.lab_week_02_a
2024-08-29 09:44:09.781 17865-17865 [>MainActivity] com.finaventina.lab_week_02_a
2024-08-29 09:44:09.785 17865-17865 [MainActivity] com.finaventina.lab_week_02_a
2024-08-29 09:44:09.793 17865-17865 [MainActivity] com.finaventina.lab_week_02_a
2024-08-29 09:44:09.895 17865-17913 [Adreno] com.finaventina.lab_week_02_a
2024-08-29 09:44:09.947 17865-17913 [OpenGLRenderer] com.finaventina.lab_week_02_a
2024-08-29 09:44:09.947 17865-17913 [OpenGLRenderer] com.finaventina.lab_week_02_a
2024-08-29 09:44:15.257 17865-18057 [ProfileInstaller] com.finaventina.lab_week_02_a
2024-08-29 09:44:24.434 17865-17872 [  ] com.finaventina.lab_week_02_a
2024-08-29 09:44:24.434 17865-17872 [  ] com.finaventina.lab_week_02_a
2024-08-29 09:44:34.533 17865-17865 [MainActivity] com.finaventina.lab_week_02_a
2024-08-29 09:44:34.577 17865-17865 [MainActivity] com.finaventina.lab_week_02_a

```

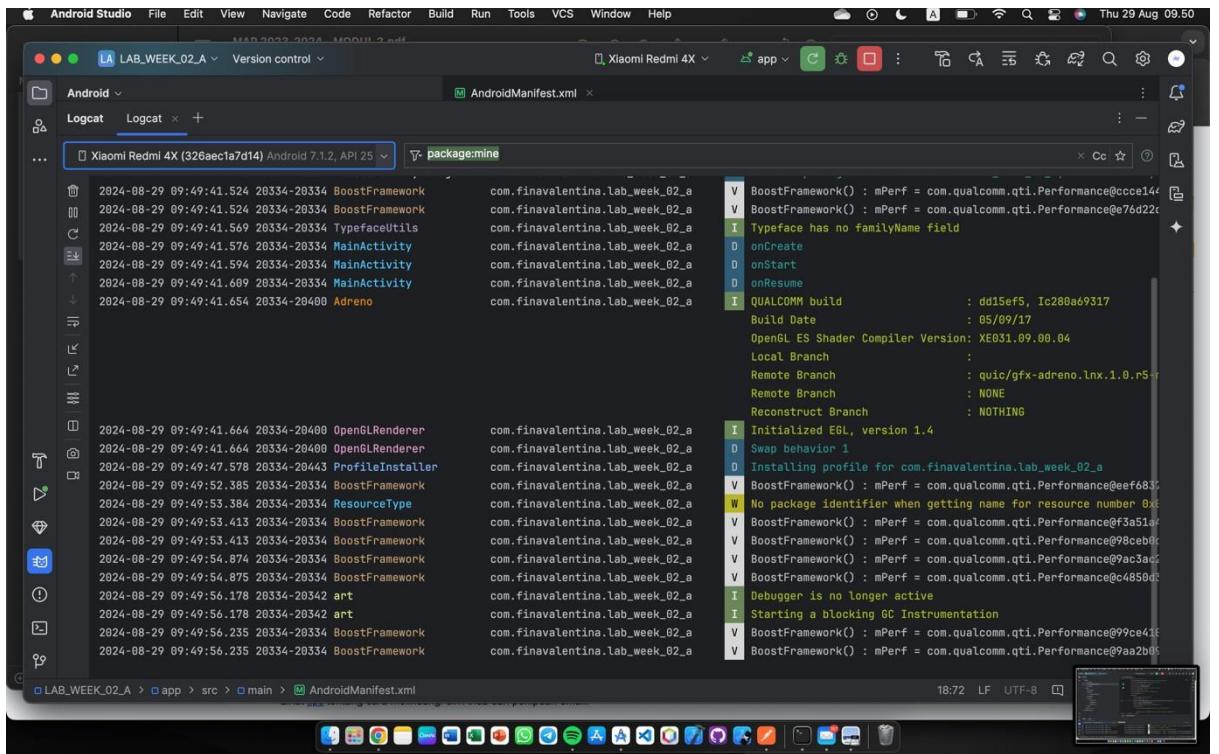
14. Ubah file AndroidManifest.xml menjadi seperti ini untuk mencegah Pemanggilan berulang ketika layar di ubah rotasinya

```

<activity android:name=".MainActivity"
          android:exported="true"
          android:configChanges="orientation|screenSize|screenLayout"
          android:label="@string/app_name"
          android:theme="@style/Theme.LAB_WEEK_02_A"/>

```

15. Jalankan kembali dan lihat Logcat



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

- File Menu:** File, Edit, View, Navigate, Code, Refactor, Build, Run, Tools, VCS, Window, Help.
- Toolbar:** Version control, Device (Xiaomi Redmi 4X), App, Logcat, Logcat (selected), package:mine.
- Logcat Tab:** Shows log entries for "Xiaomi Redmi 4X (326aec1a/d14) Android 7.1.2, API 25".
- Code Editor:** Displays the `AndroidManifest.xml` file with code related to the application's manifest.
- Bottom Status Bar:** Shows the time as 18:72, LF, and UTF-8 encoding.

The Logcat output includes:

```
2024-08-29 09:49:41.524 20334-20334 BoostFramework com.finaventina.lab_week_02_a
2024-08-29 09:49:41.524 20334-20334 BoostFramework com.finaventina.lab_week_02_a
2024-08-29 09:49:41.569 20334-20334 TypefaceUtils com.finaventina.lab_week_02_a
2024-08-29 09:49:41.576 20334-20334 MainActivity com.finaventina.lab_week_02_a
2024-08-29 09:49:41.594 20334-20334 MainActivity com.finaventina.lab_week_02_a
2024-08-29 09:49:41.609 20334-20334 MainActivity com.finaventina.lab_week_02_a
2024-08-29 09:49:41.654 20334-20400 Adreno com.finaventina.lab_week_02_a
2024-08-29 09:49:41.664 20334-20400 OpenGLRenderer com.finaventina.lab_week_02_a
2024-08-29 09:49:41.664 20334-20400 OpenGLRenderer com.finaventina.lab_week_02_a
2024-08-29 09:49:47.578 20334-20443 ProfileInstaller com.finaventina.lab_week_02_a
2024-08-29 09:49:52.385 20334-20334 BoostFramework com.finaventina.lab_week_02_a
2024-08-29 09:49:53.384 20334-20334 ResourceType com.finaventina.lab_week_02_a
2024-08-29 09:49:53.413 20334-20334 BoostFramework com.finaventina.lab_week_02_a
2024-08-29 09:49:53.413 20334-20334 BoostFramework com.finaventina.lab_week_02_a
2024-08-29 09:49:54.874 20334-20334 BoostFramework com.finaventina.lab_week_02_a
2024-08-29 09:49:54.875 20334-20334 BoostFramework com.finaventina.lab_week_02_a
2024-08-29 09:49:56.178 20334-20342 art com.finaventina.lab_week_02_a
2024-08-29 09:49:56.178 20334-20342 art com.finaventina.lab_week_02_a
2024-08-29 09:49:56.235 20334-20334 BoostFramework com.finaventina.lab_week_02_a
2024-08-29 09:49:56.235 20334-20334 BoostFramework com.finaventina.lab_week_02_a
```

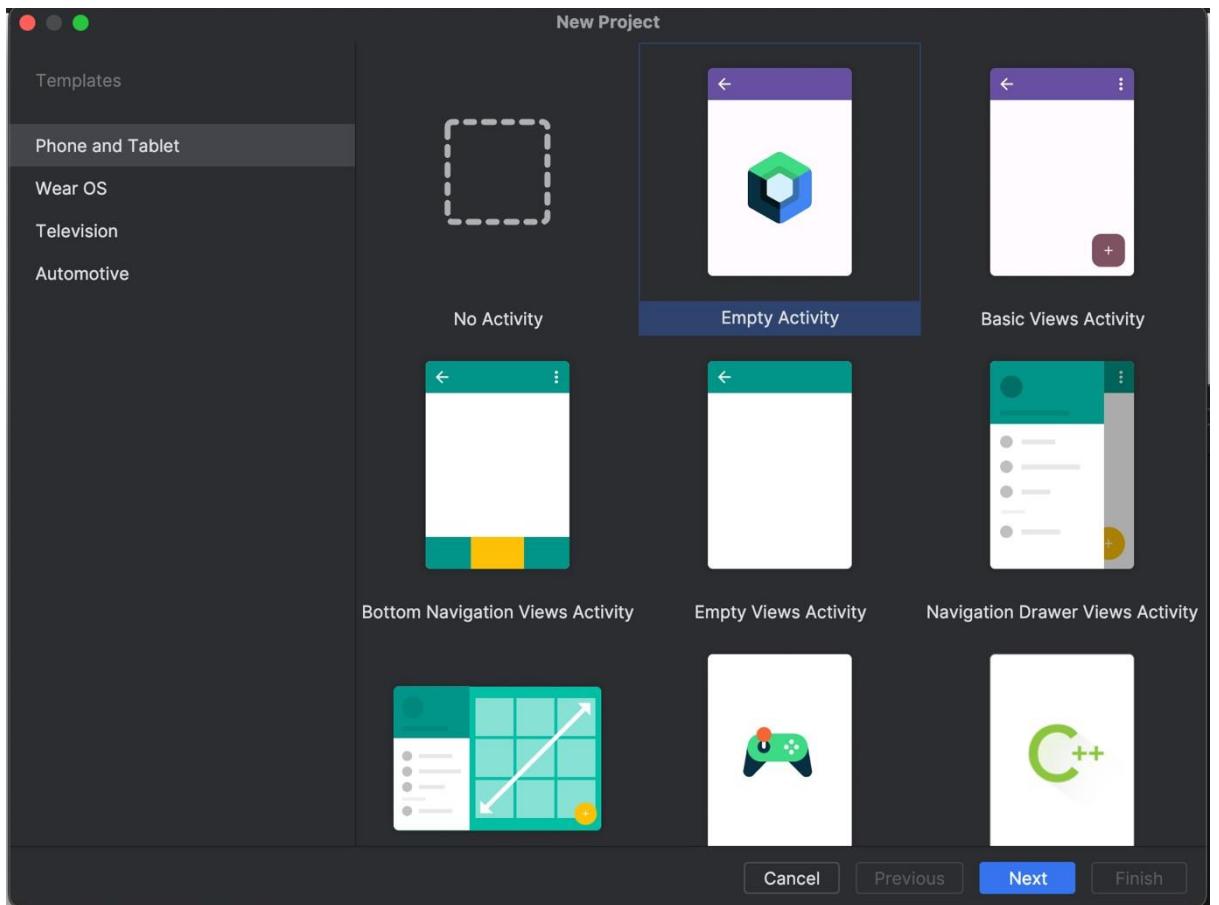
Right-hand panel (Java code for `AndroidManifest.xml`):

```
V BoostFramework() : mPerf = com.qualcomm.qti.Performance@ccc14c
V BoostFramework() : mPerf = com.qualcomm.qti.Performance@e76d22c
I Typeface has no familyName field
D onCreate
D onStart
D onResume
I QUALCOMM build : dd15ef5, Ic280a69317
Build Date : 05/09/17
OpenGL ES Shader Compiler Version: XE031.09.00.04
Local Branch :
Remote Branch : quic/gfx-adreno.lnx.1.0.r5-
Remote Branch : NONE
Reconstruct Branch : NOTHING
I Initialized EGL, version 1.4
D Swap behavior 1
V Installing profile for com.finaventina.lab_week_02_a
V BoostFramework() : mPerf = com.qualcomm.qti.Performance@ef683c
W No package identifier when getting name for resource number 0x
V BoostFramework() : mPerf = com.qualcomm.qti.Performance@f3a51a
V BoostFramework() : mPerf = com.qualcomm.qti.Performance@98cebd0
V BoostFramework() : mPerf = com.qualcomm.qti.Performance@9ac3ae
V BoostFramework() : mPerf = com.qualcomm.qti.Performance@c4850d
I Debugger is no longer active
I Starting a blocking GC Instrumentation
V BoostFramework() : mPerf = com.qualcomm.qti.Performance@99ce41c
V BoostFramework() : mPerf = com.qualcomm.qti.Performance@9aa2b0
```

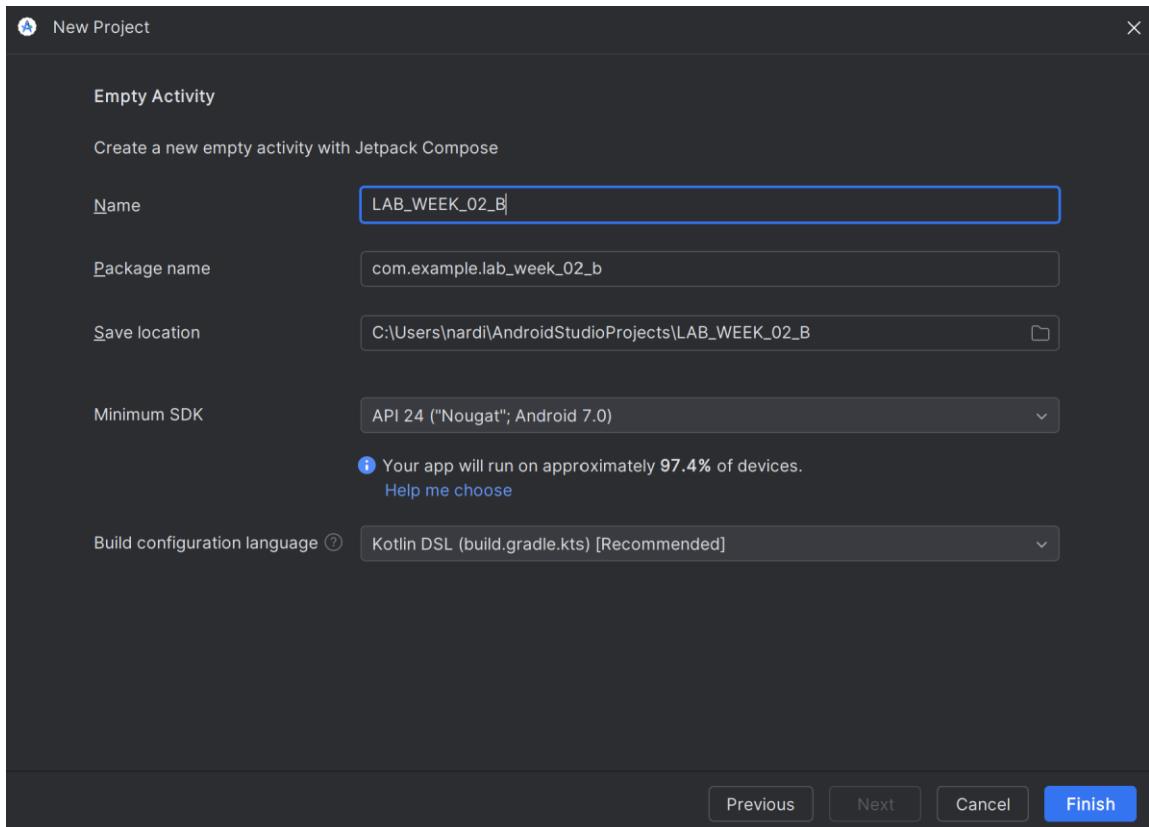
16. Selesai

LANGKAH LANGKAH PENGERJAAN LAB WEEK 02 B

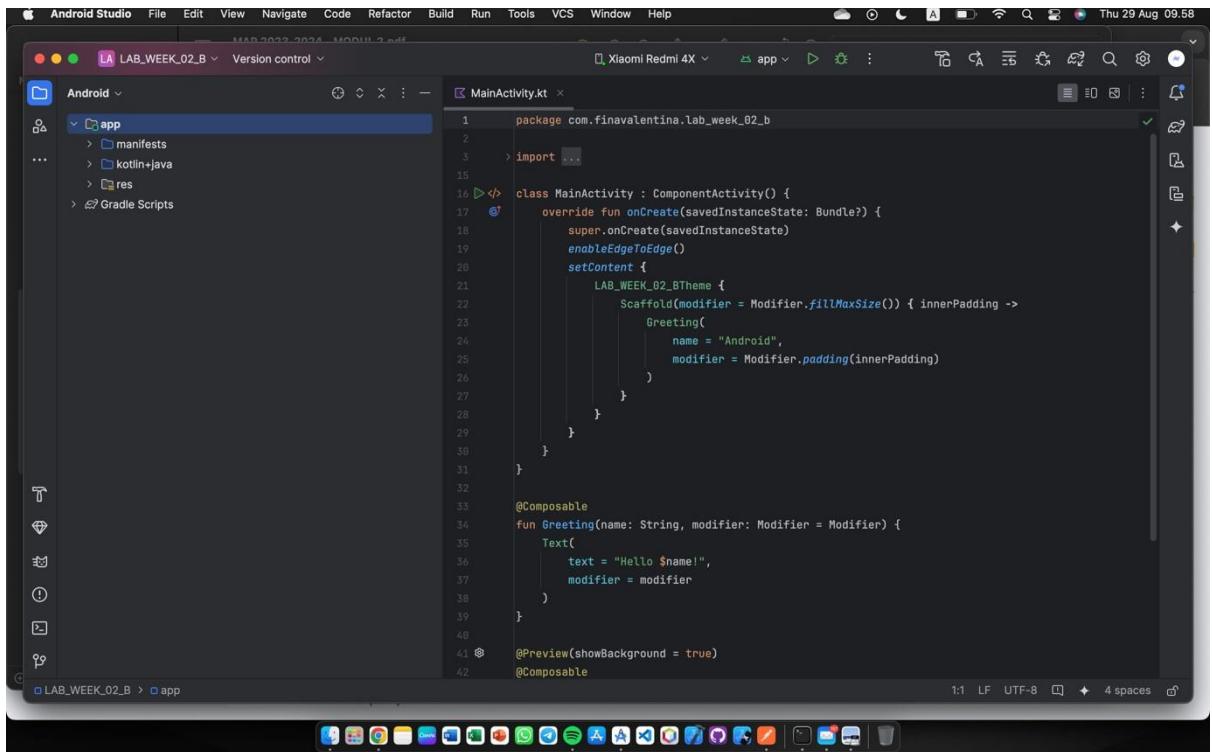
- Buat project , dan pilih Empty AcCvity lalu klik “Next”



2. Isi nama project dan package name , sdk dll, lalu klik “Finisih”



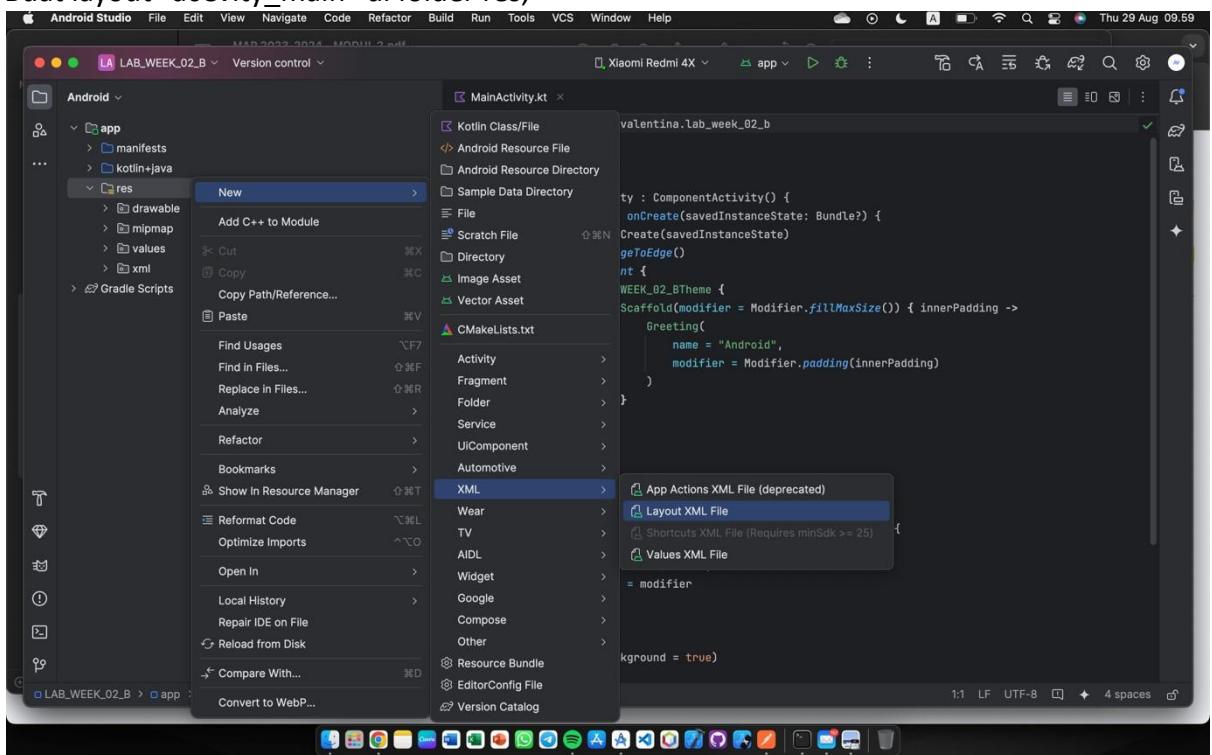
3. Maka akan tampil editor yang menampilkan MainAcCvity



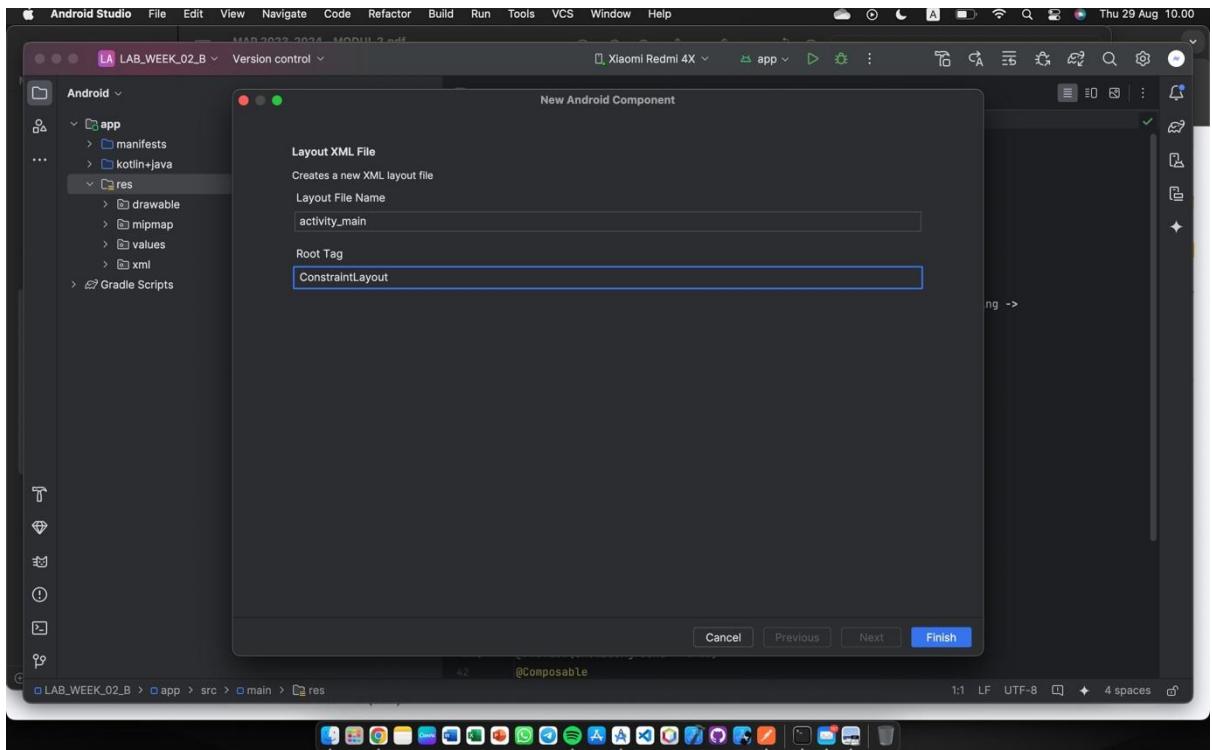
The screenshot shows the Android Studio interface with the code editor open. The file is MainActivity.kt, which contains the following code:

```
1 package com.finavaleNTINA.lab_week_02_b
2
3 > import ...
4
5 >< class MainActivity : ComponentActivity() {
6     override fun onCreate(savedInstanceState: Bundle?) {
7         super.onCreate(savedInstanceState)
8         enableEdgeToEdge()
9         setContent {
10             LAB_WEEK_02_BTheme {
11                 Scaffold(modifier = Modifier.fillMaxSize()) { innerPadding ->
12                     Greeting(
13                         name = "Android",
14                         modifier = Modifier.padding(innerPadding)
15                     )
16                 }
17             }
18         }
19     }
20 }
21
22 @Composable
23 fun Greeting(name: String, modifier: Modifier = Modifier) {
24     Text(
25         text = "Hello $name!",
26         modifier = modifier
27     )
28 }
29
30 @Preview(showBackground = true)
31 @Composable
```

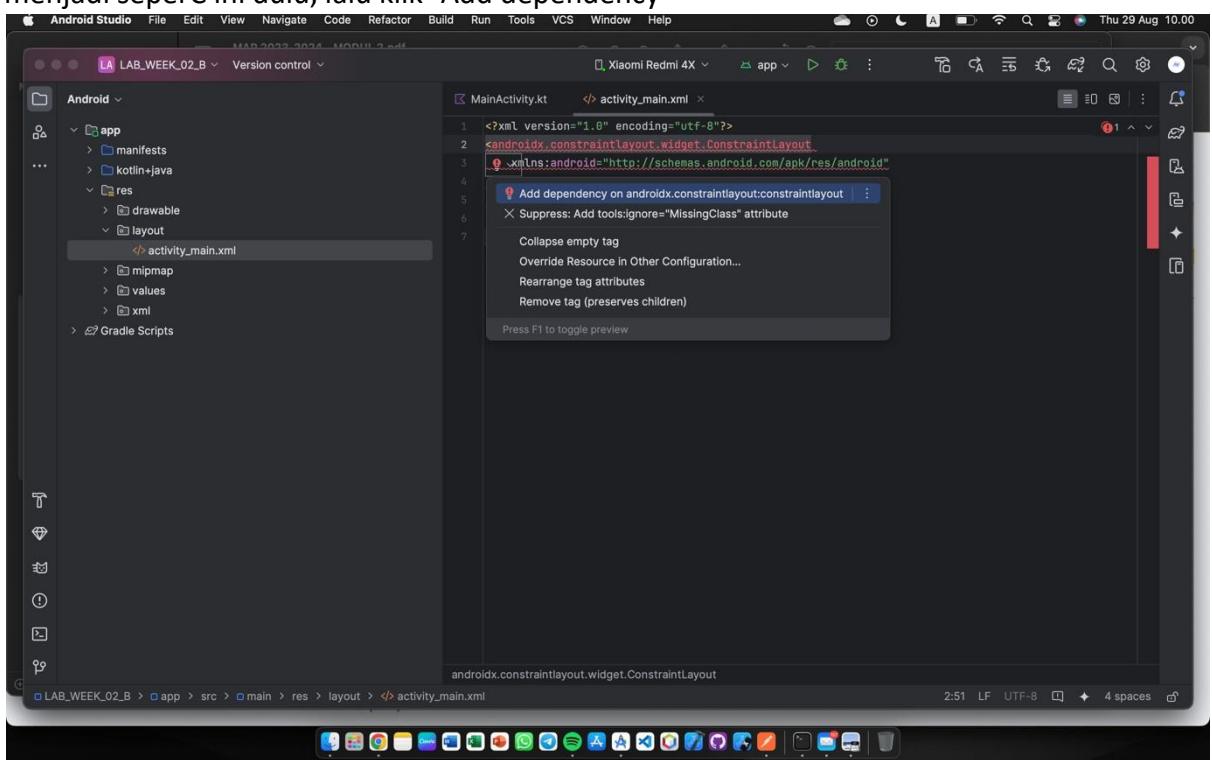
4. Buat layout “acCvity_main” di folder res,



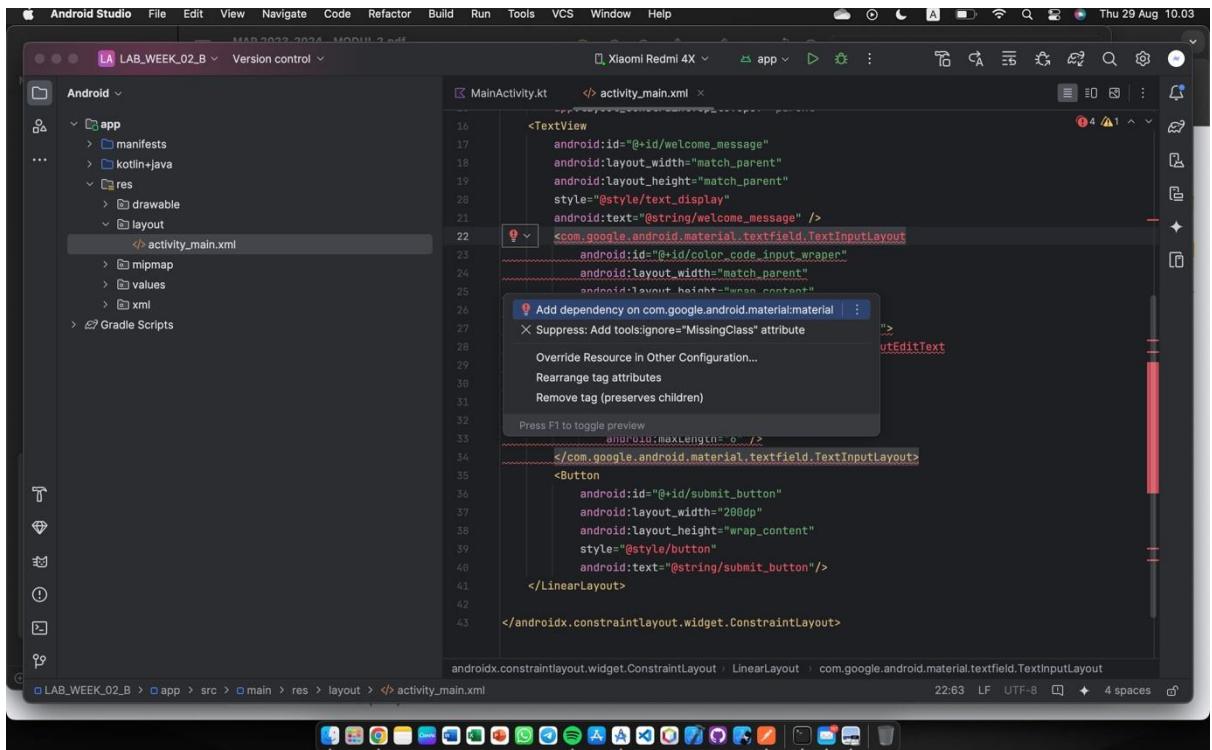
5. Masukan nama file “acCvity_main” pada dialog, lalu klik “Finish”



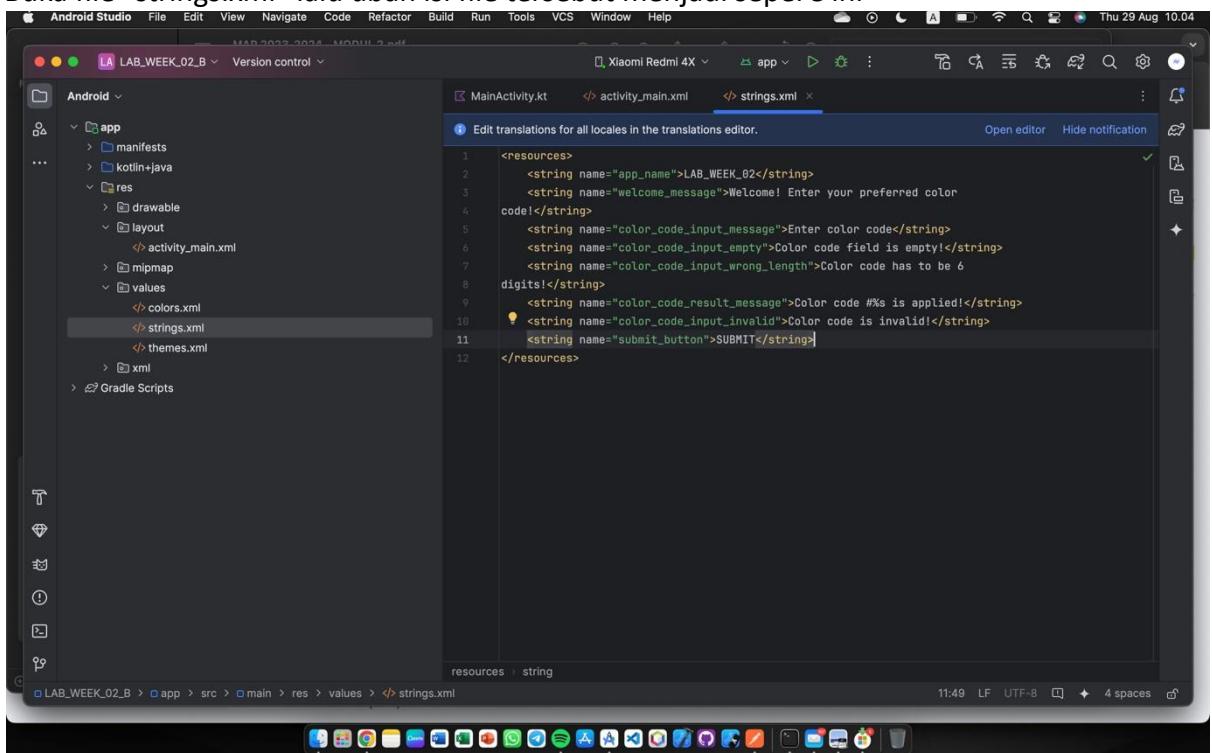
6. Maka akan tampil editor yang menampilkan "activity_main.xml" lalu ubah file itu menjadi seperti ini dulu, lalu klik "Add dependency"



7. Copy paste code yang ada di modul, lalu Add dependency pada baris yang berwarna merah



8. Buka file "strings.xml" lalu ubah isi file tersebut menjadi seperC ini



9. Lalu masuk ke file "themes.xml" dan ubah isi file tersebut menjadi seperC ini

```

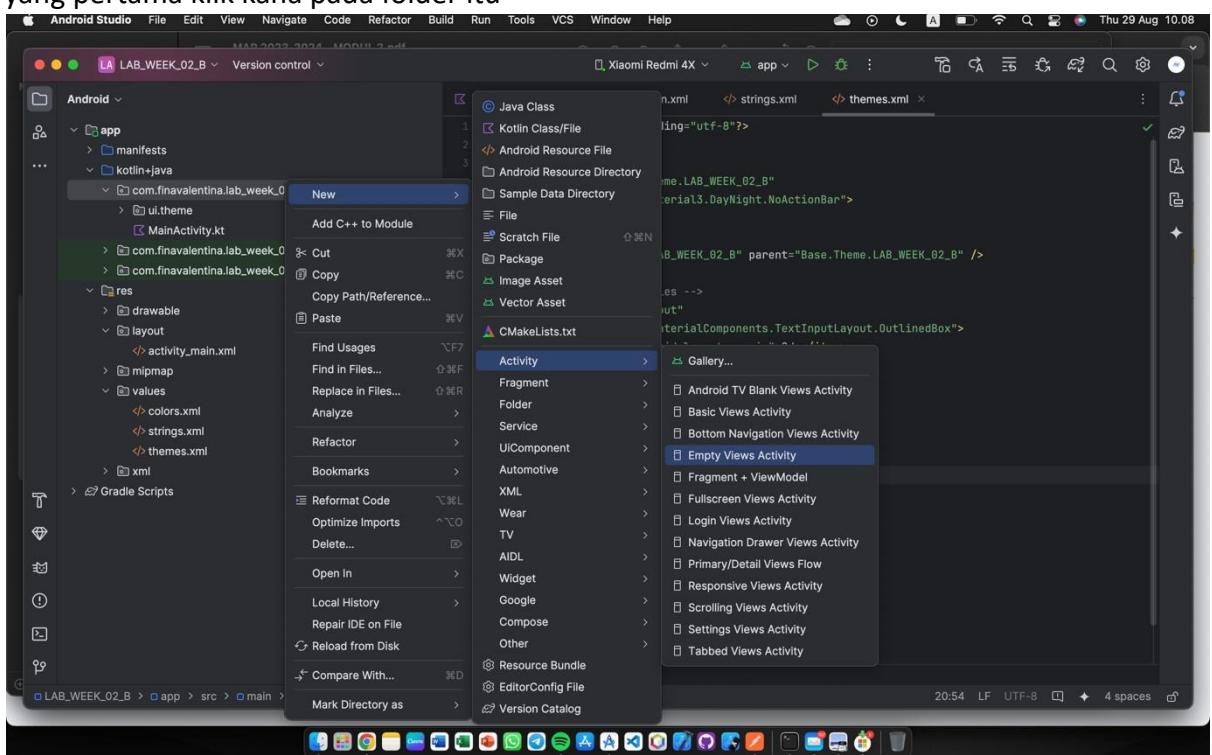
<resources>
    <style name="Base.Theme.LAB_WEEK_02_B"
        parent="Theme.Material3.DayNight.NoActionBar">
    </style>

    <style name="Theme.LAB_WEEK_02_B" parent="Base.Theme.LAB_WEEK_02_B" />

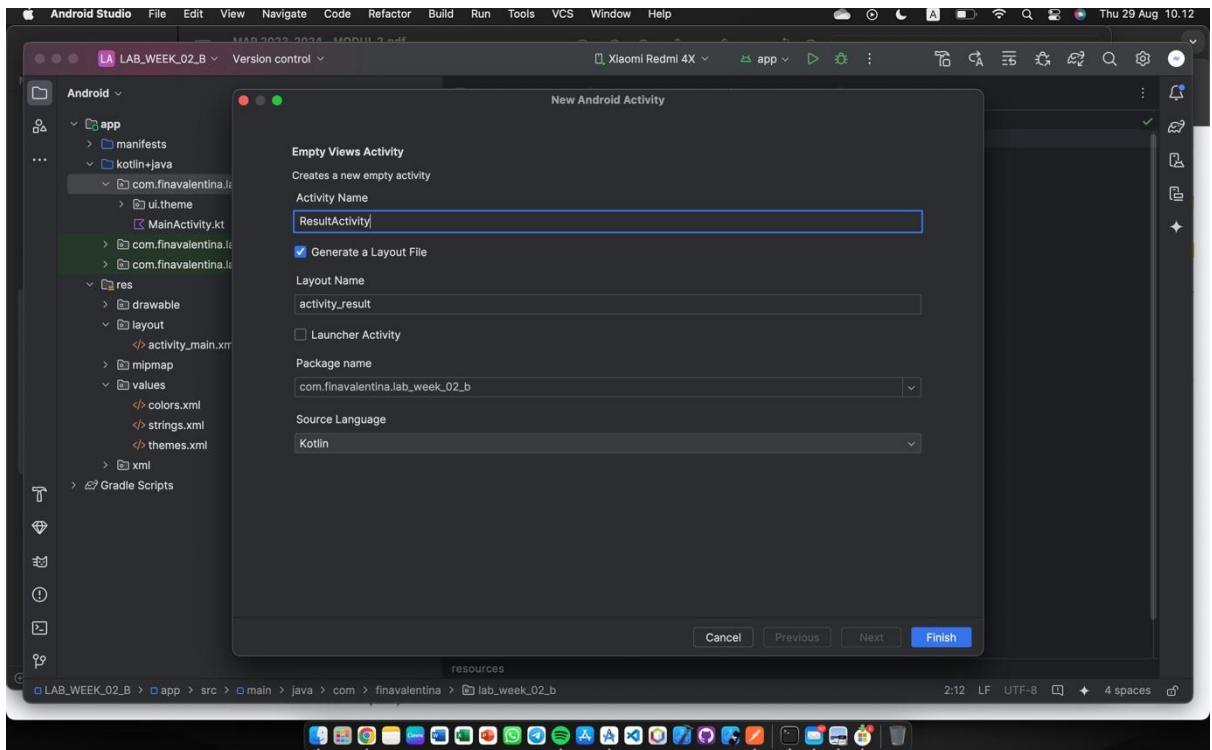
    <!-- Your custom styles -->
    <style name="text_input"
        parent="Widget.MaterialComponents.TextInputLayout.OutlinedBox">
        <item name="android:layout_margin">8dp</item>
    </style>
    <style name="button">
        <item name="android:layout_margin">8dp</item>
        <item name="android:layout_gravity">center</item>
    </style>
    <style name="text_display">
        <item name="android:layout_margin">8dp</item>
        <item name="android:gravity">center</item>
        <item name="android:layout_height">40dp</item>
    </style>
    <style name="screen_margin">
        <item name="android:layout_margin">12dp</item>
    </style>
</resources>

```

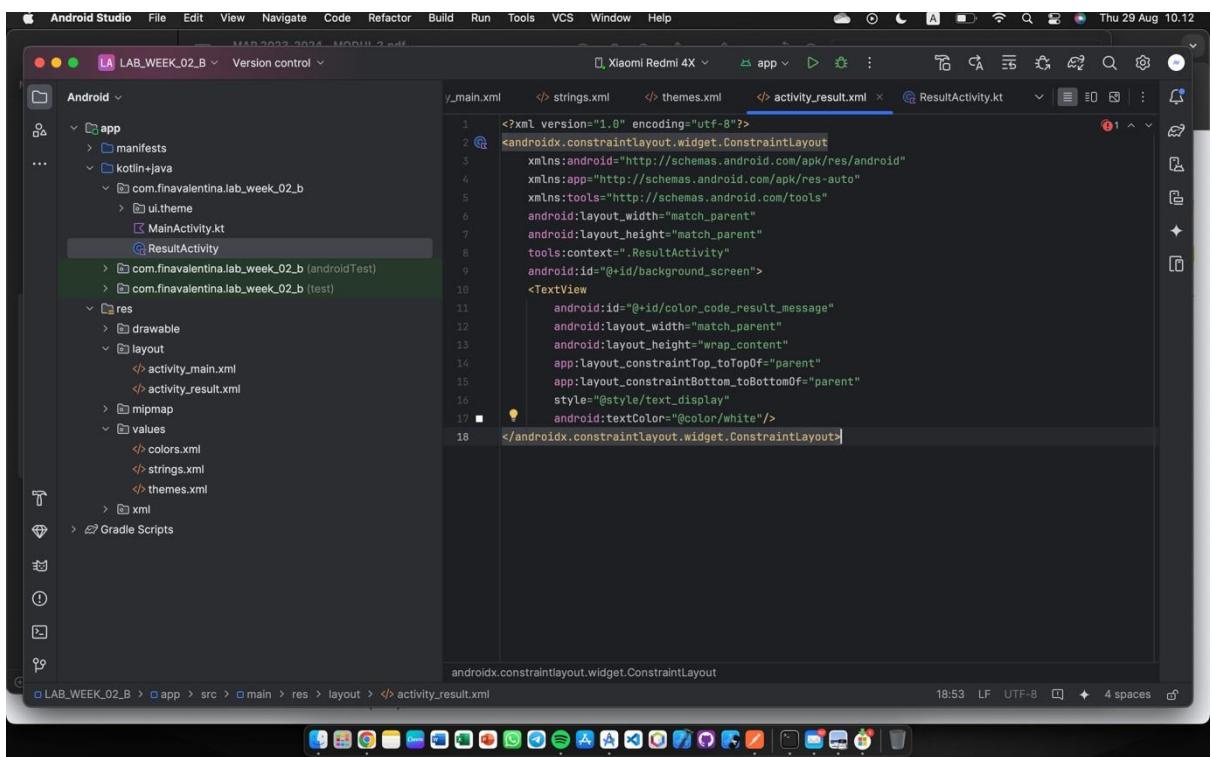
10. Selanjutnya buat AcCvity baru di folder kotlin+java, dan pilih com. **packagename** yang pertama klik kana pada folder itu



11. Masukan "ResultAcCvity" dan layout name "accCvity_result", lalu klik "Finish"



12. Ubah file "activity_result" menjadi seperti ini



13. Buka file MainAcCvity dan Copy Paste code dari Modul, dan lakukan import satu persatu di baris yang ditandai merah

The screenshot shows the Android Studio interface with the code editor open to MainActivity.kt. The code handles the onCreate method of the MainActivity. It checks if the color code input field is not empty and has a length less than 6. If so, it shows a long toast message with an error message. If the color code is empty, it shows a long toast message with another error message. The code also handles the case where the Intent is null by showing a long toast message with a different message.

```
1 package com.finavalentina.lab_week_02_b
2
3 import ...
4
5 class MainActivity : AppCompatActivity() {
6     companion object {
7         private const val COLOR_KEY = "COLOR_KEY"
8     }
9
10 private val submitButton: Button
11     get() = findViewById(R.id.submit_button)
12
13 override fun onCreate(savedInstanceState: Bundle?) {
14     super.onCreate(savedInstanceState)
15     setContentView(R.layout.activity_main)
16     submitButton.setOnClickListener { v: View? ->
17         val colorCode =
18             findViewById<EditText>(R.id.color_code_input_field).text.toString()
19         if (colorCode.isNotEmpty() && colorCode.length < 6) {
20             Toast.makeText(
21                 context,
22                 getString(R.string.color_code_input_wrong_length),
23                 Toast.LENGTH_LONG
24             ).show()
25         } else if (IntentResultIntent = Intent(packageContext: this, ResultActivity::class.java)
26             .putExtra(COLOR_KEY, colorCode)
27             .startActivityForResult(IntentResultIntent)
28         ) else {
29             Toast.makeText(
30                 context,
31                 getString(R.string.color_code_input_empty),
32                 Toast.LENGTH_LONG
33             ).show()
34         }
35     }
36 }
37
38 }
```

14. Buka file ResultActivity dan ubah isi code nya menjadi seperC ini dan lakukan import satu persatu jika terjadi error

The screenshot shows the Android Studio interface with the code editor open to ResultActivity.kt. The code defines the onCreate method of the ResultActivity. It checks if the Intent is not null and retrieves the color code from the Intent extra. It then sets the background screen color to the retrieved color code and displays a result message in a toast.

```
1 package com.finavalentina.lab_week_02_b
2
3 import android.os.Bundle
4 import android.widget.TextView
5 import androidx.activity.enableEdgeToEdge
6 import androidx.appcompat.app.AppCompatActivity
7 import android.graphics.Color
8 import androidx.constraintlayout.widget.ConstraintLayout
9 import android.core.view.ViewCompat
10 import android.core.view.WindowInsetsCompat
11
12 class ResultActivity : AppCompatActivity() {
13     companion object {
14         private const val COLOR_KEY = "COLOR_KEY"
15     }
16
17     override fun onCreate(savedInstanceState: Bundle?) {
18         super.onCreate(savedInstanceState)
19         setContentView(R.layout.activity_result)
20         if(intent != null){
21             val colorCode = intent.getStringExtra(COLOR_KEY)
22             val backgroundScreen =
23                 findViewById<ConstraintLayout>(R.id.background_screen)
24             backgroundScreen.setBackgroundColor(Color.parseColor("#$colorCode"))
25             val resultMessage =
26                 findViewById<TextView>(R.id.color_code_result_message)
27             resultMessage.text = getString(R.string.color_code_result_message,
28                 colorCode?.uppercase())
29         }
30     }
31 }
```

15. Lalu, coba jalankan aplikasi dan tampilan aplikasinya seperC ini

10:25

0,1KB/d

Welcome! Enter your preferred color code!

Enter color code

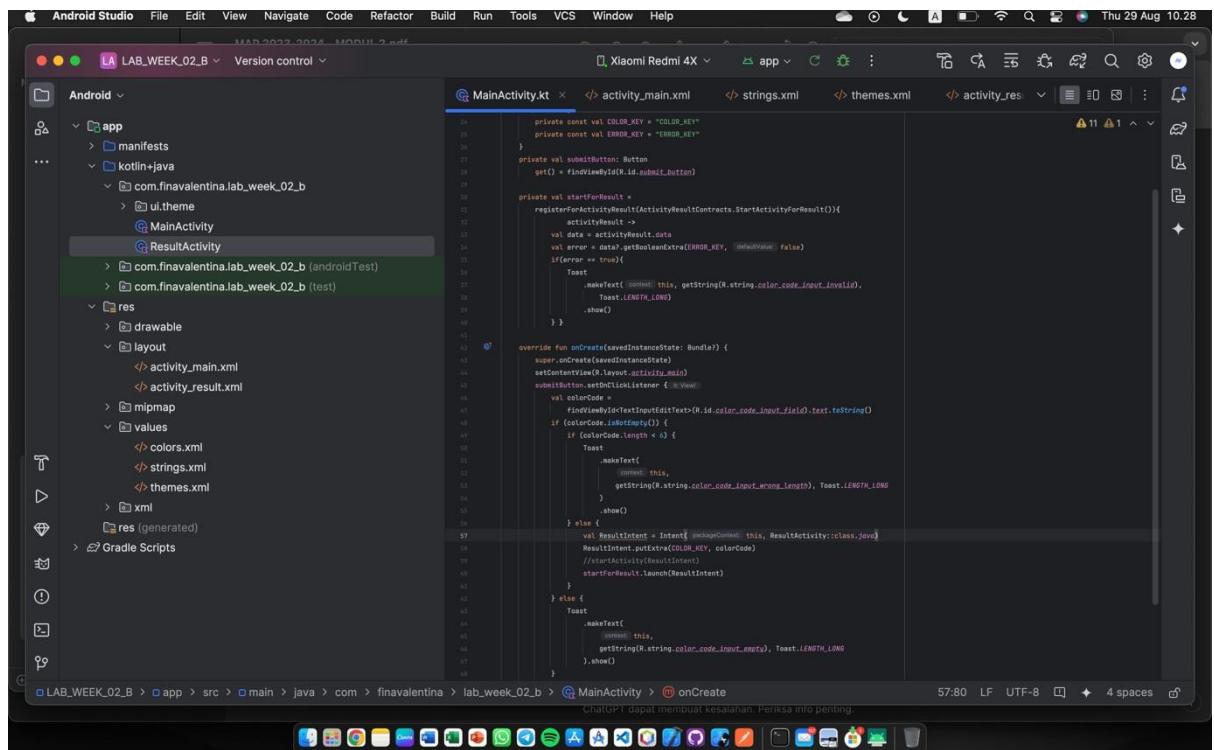
SUBMIT

10:25

0,2KB/d

Color code #213718 is applied!

16. Perbaiki file MainActivity untuk mencegah error ketika kembali dari halaman result



The screenshot shows the Android Studio interface with the project structure on the left and the code editor on the right. The code editor displays the `MainActivity.kt` file. The code handles the `onCreate` method, specifically dealing with color code input validation and result transmission.

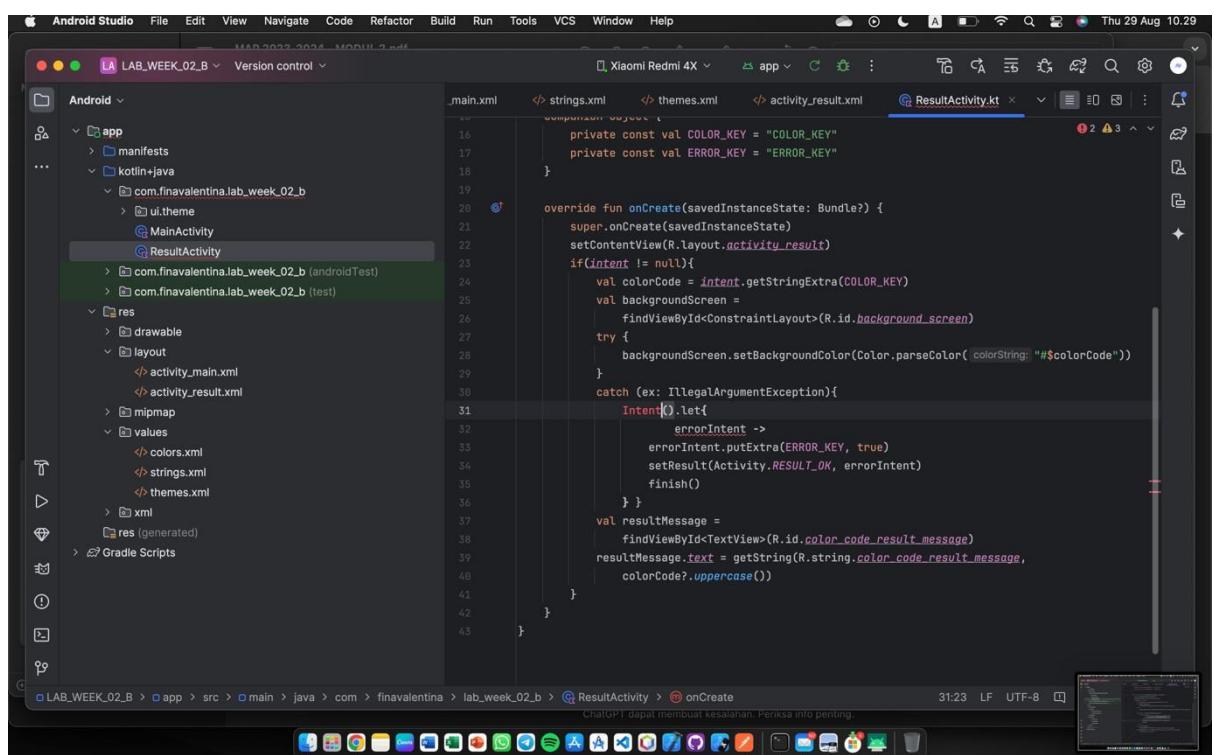
```
private const val COLOR_KEY = "COLOR_KEY"
private const val ERROR_KEY = "ERROR_KEY"

private val submitButton: Button
    get() = findViewById(R.id.submit_button)

private val startForResult =
    registerForActivityResult(ActivityResultContracts.StartActivityForResult()) {
        activityResult ->
        val data = activityResult.data
        val error = data?.getBooleanExtra(ERROR_KEY, false)
        if(error == true){
            Toast.makeText(this, getString(R.string.color_code_input_invalid), Toast.LENGTH_LONG).show()
        }
    }

override fun onCreate(savedInstanceState: Bundle?) {
    super.onCreate(savedInstanceState)
    setContentView(R.layout.activity_main)
    submitButton.setOnClickListener {
        val colorCode = findViewById<EditText>(R.id.color_code_input_field).text.toString()
        if(colorCode.isEmpty() || colorCode.length < 3) {
            Toast.makeText(this, getString(R.string.color_code_input_empty), Toast.LENGTH_LONG).show()
        } else {
            val resultIntent = Intent(this, ResultActivity::class.java)
            resultIntent.putExtra(COLOR_KEY, colorCode)
            //startActivity(resultIntent)
            startForResult.launch(resultIntent)
        }
    }
}
```

17. Lakukan perubahan juga pada file ResultActivity



The screenshot shows the Android Studio interface with the project structure on the left and the code editor on the right. The code editor displays the `ResultActivity.kt` file. The code handles the `onCreate` method, receiving the color code from the previous activity and displaying it in a text view.

```
private const val COLOR_KEY = "COLOR_KEY"
private const val ERROR_KEY = "ERROR_KEY"

override fun onCreate(savedInstanceState: Bundle?) {
    super.onCreate(savedInstanceState)
    setContentView(R.layout.activity_result)
    if(intent != null){
        val colorCode = intent.getStringExtra(COLOR_KEY)
        val backgroundScreen =
            findViewById<ConstraintLayout>(R.id.background_screen)
        try {
            backgroundScreen.setBackgroundColor(Color.parseColor("#$colorCode"))
        } catch (ex: IllegalArgumentException){
            Intent().let{
                errorIntent ->
                errorIntent.putExtra(ERROR_KEY, true)
                setResult(Activity.RESULT_OK, errorIntent)
                finish()
            }
        }
        val resultMessage =
            findViewById<TextView>(R.id.color_code_result_message)
        resultMessage.text = getString(R.string.color_code_result_message,
            colorCode?.uppercase())
    }
}
```

18. TUGAS: Buka file “strings.xml” lalu sesuaikan code nya menjadi seperti ini

```
<resources>
    <string name="app_name">LAB_WEEK_02</string>
    <string name="welcome_message">Welcome! Enter your preferred color code!</string>
    <string name="color_code_input_message">Enter color code</string>
    <string name="color_code_input_empty">Color code field is empty!</string>
    <string name="color_code_input_wrong_length">Color code has to be 6 digits!</string>
    <string name="color_code_result_message">Color code #%s is applied!</string>
    <string name="color_code_input_invalid">Color code is invalid!</string>
    <string name="submit_button">SUBMIT</string>
    <string name="back_button">BACK</string>
</resources>
```

19. TUGAS: Lalu sesuaikan juga file “activity_result.xml” menjadi seperti ini

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".ResultActivity"
    android:id="@+id/background_screen">

    <TextView
        android:id="@+id/color_code_result_message"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintBottom_toBottomOf="parent"
        style="@style/text_display"
        android:textColor="@color/white"/>

    <Button
        android:id="@+id/back_button"
        android:layout_width="280dp"
        android:layout_height="wrap_content"
        style="@style/button"
        android:text="@string/back_button"
        app:layout_constraintTop_toBottomOf="@+id/color_code_result_message"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintBottom_toBottomOf="parent"
        tools:ignore="MissingConstraints" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

20. TUGAS: Lalu sesuaikan juga file “ResultActivity” menjadi seperti ini

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

- File Menu:** File, Edit, View, Navigate, Code, Refactor, Build, Run, Tools, VCS, Window, Help.
- Toolbar:** Includes icons for Run, Stop, Refresh, and others.
- Project Structure:** Shows the project tree under "Android".
 - app:** Contains manifest, kotlin+java, res, and Gradle Scripts.
 - kotlin+java:** Contains com.finavalentina.lab_week_02_b (androidTest) and com.finavalentina.lab_week_02_b (test).
 - res:** Contains drawable, layout, mipmap, values, and xml.
- Main Activity:** MainActivity.kt is open in the editor.
- Result Activity:** ResultActivity.kt is open in the editor, showing the following code:

```
import android.graphics.Color
import android.widget.Button
import android.constraintlayout.widget.ConstraintLayout
import android.core.view.ViewCompat
import android.core.view.WindowInsetsCompat

class ResultActivity : AppCompatActivity() {
    companion object {
        private const val COLOR_KEY = "COLOR_KEY"
        private const val ERROR_KEY = "ERROR_KEY"
    }

    private val backButton: Button
        get() = findViewById(R.id.back_button)

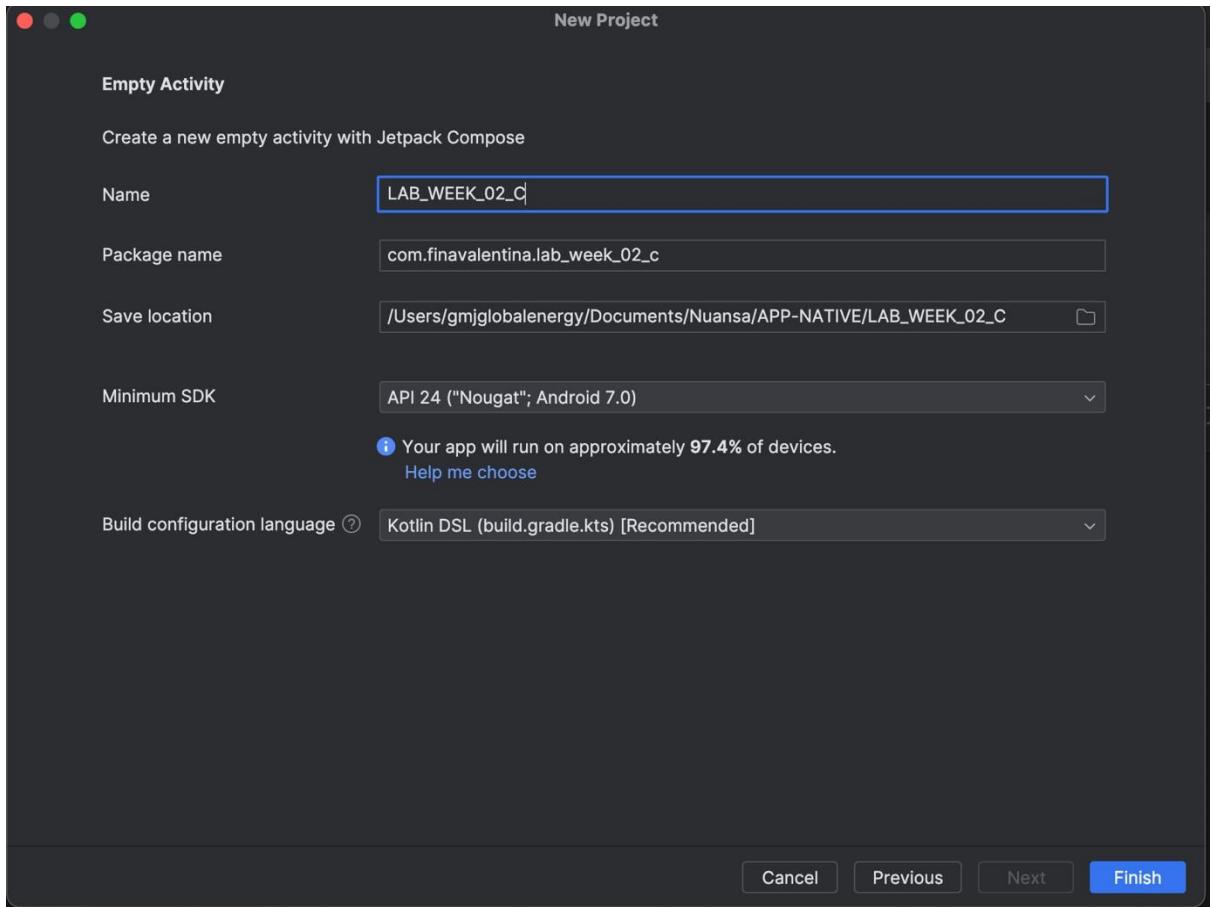
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_result)
        if(intent != null){
            val colorCode = intent.getStringExtra(COLOR_KEY)
            val backgroundScreen =
                findViewById(R.id.background_screen)
            try {
                backgroundScreen.setBackgroundColor(Color.parseColor(colorCode))
            } catch (ex: IllegalArgumentException){
                Intent().setFlags(Intent.FLAG_ACTIVITY_CLEAR_TASK or Intent.FLAG_ACTIVITY_NEW_TASK)
                ex.printStackTrace()
                setResult(Activity.RESULT_OK, Intent())
                finish()
            }
            val resultMessage =
                findViewById(R.id.color_code_result_message)
            resultMessage.text = getString(R.string.color_code_result_message,
                colorCode.toUpperCase())
        }
        backButton.setOnClickListener { view ->
            finish()
        }
    }
}
```

The code handles the creation of a ResultActivity from an Intent. It retrieves a color code from the intent, converts it to a hex value, and sets it as the background color of a ConstraintLayout. It also updates a TextView with the result message and finishes the activity.

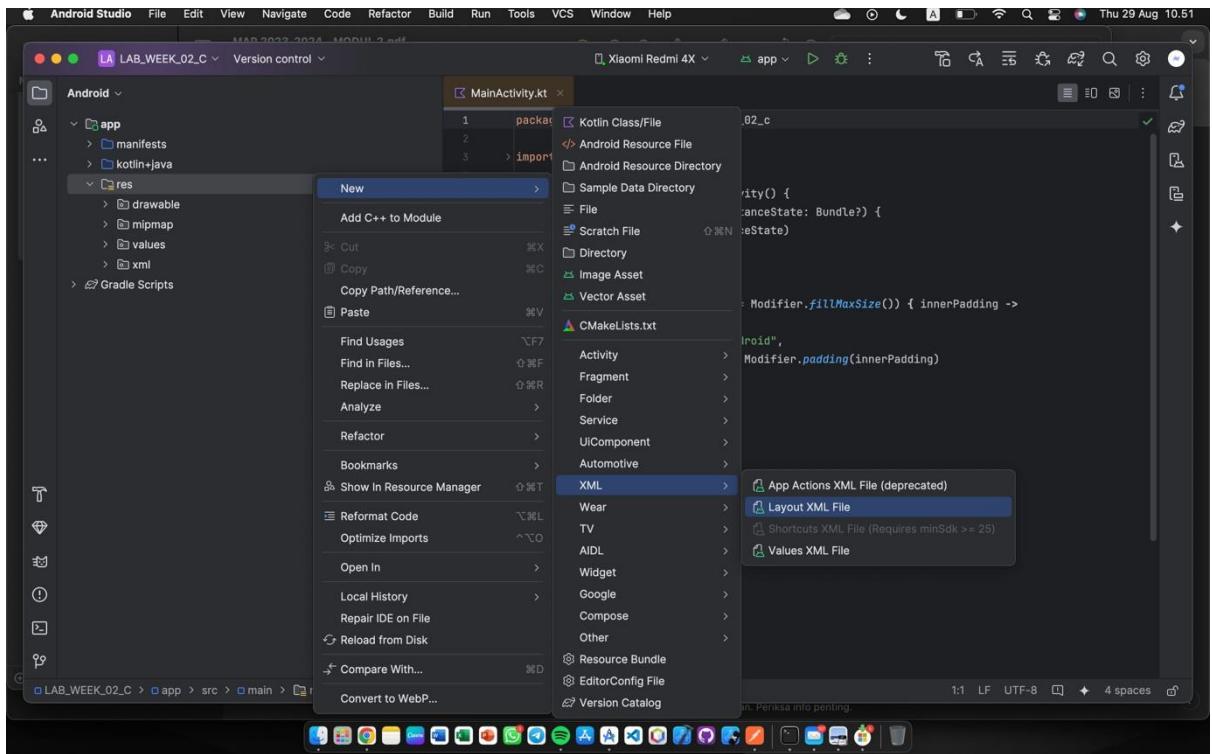
21. Selesai

LANGKAH LANGKAH PENGERJAAN LAB WEEK 02 C

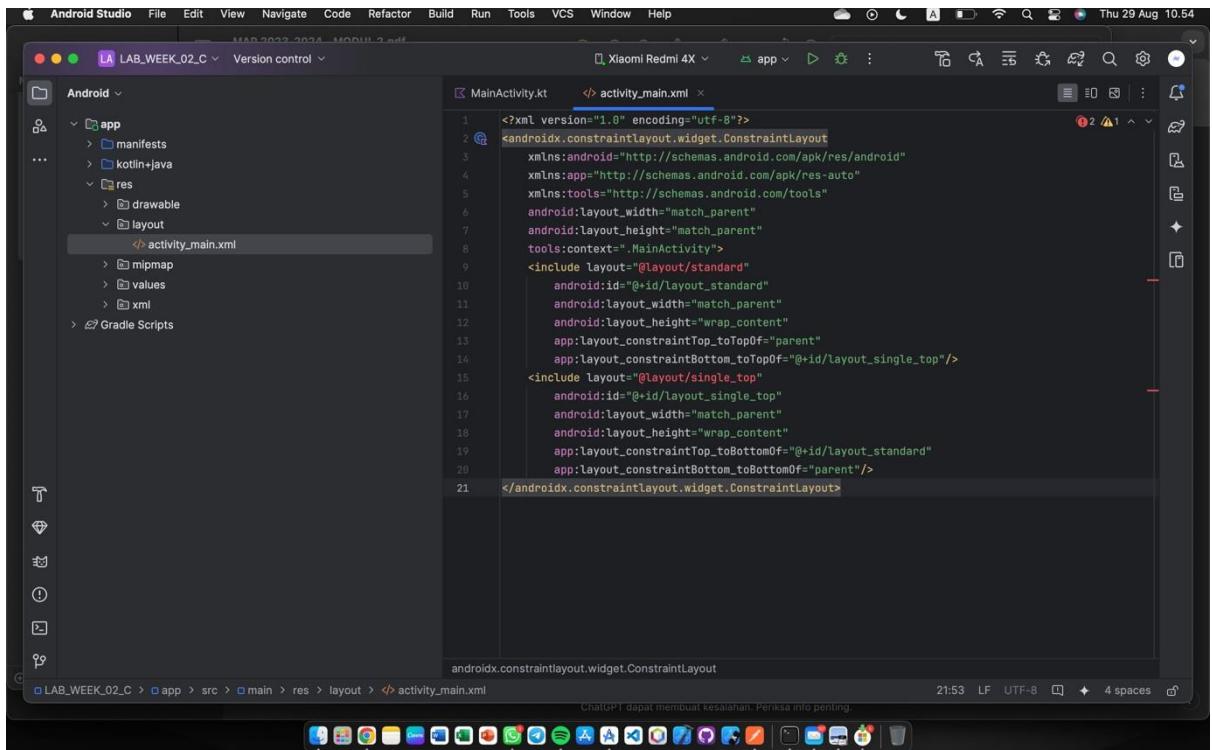
1. Buat project dan pilih “Empty AcCvity” lalu klik Next



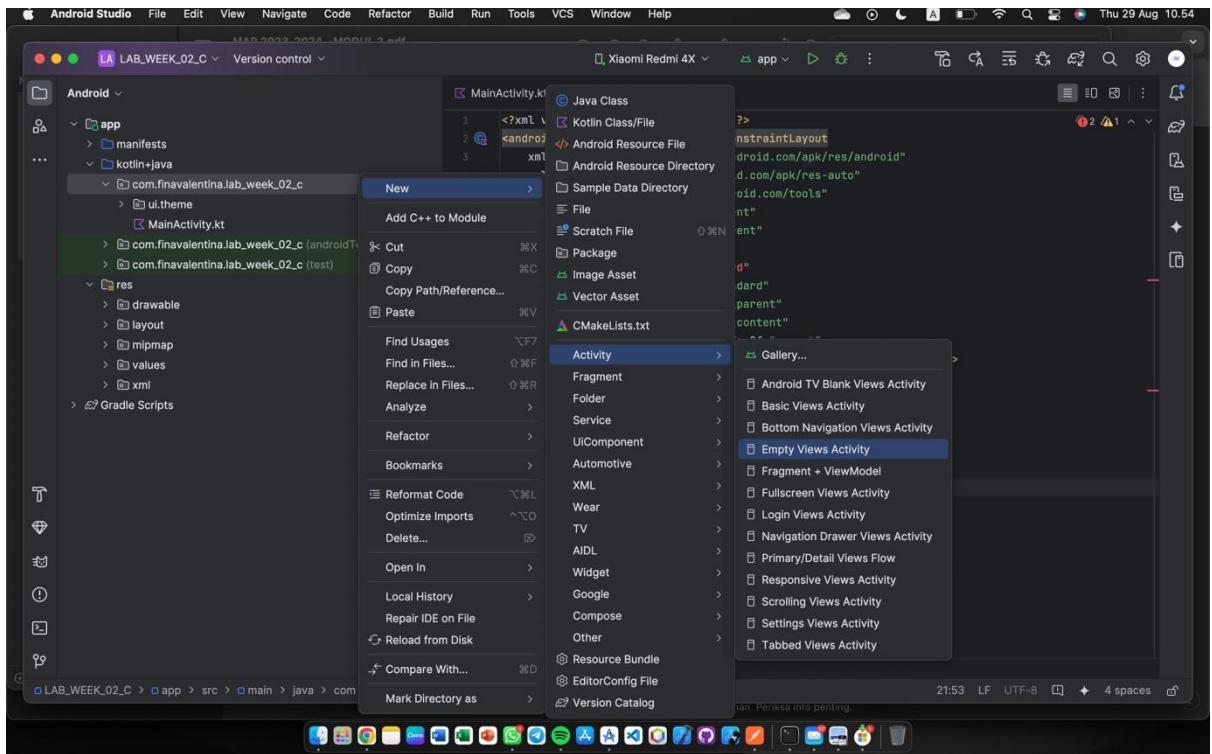
2. Buat layout “acCvity_main” di folder res



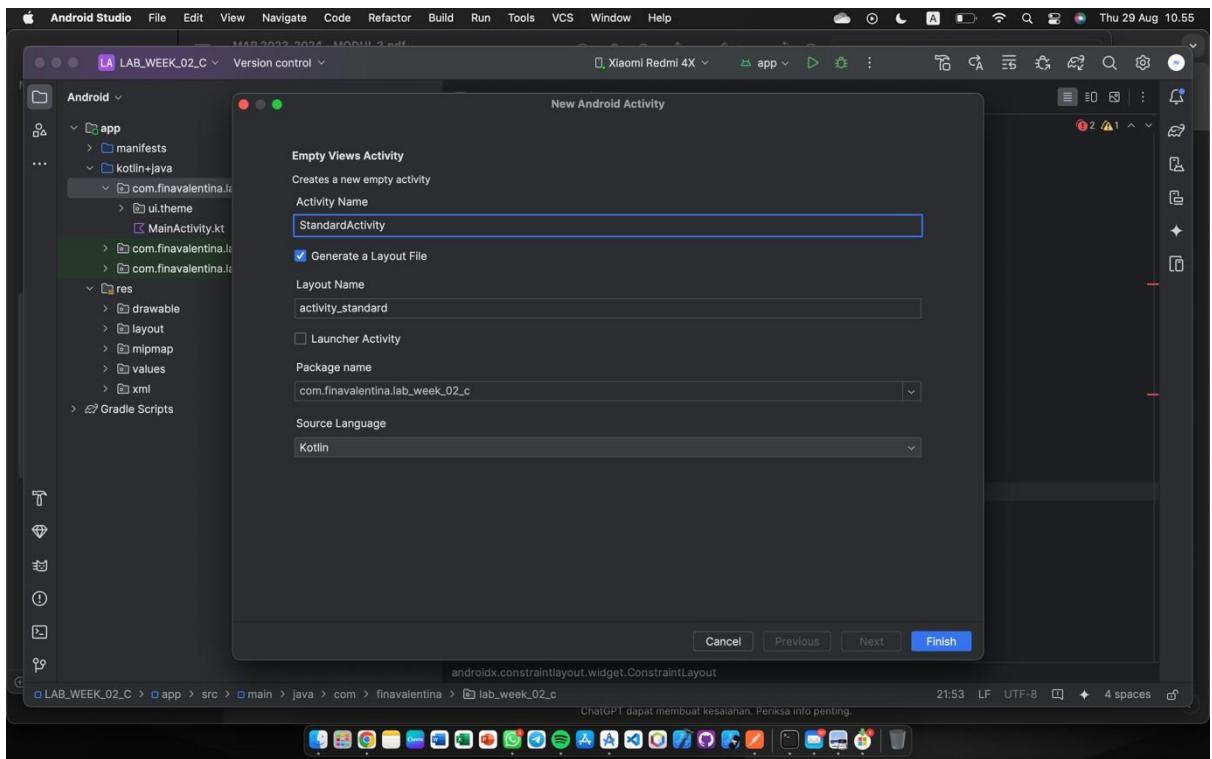
3. Sesuaikan `activity_main.xml` menjadi seperti ini, untuk pertama kali Add dependency terlebih dahulu pada `<androidx.constraintLayout....>`



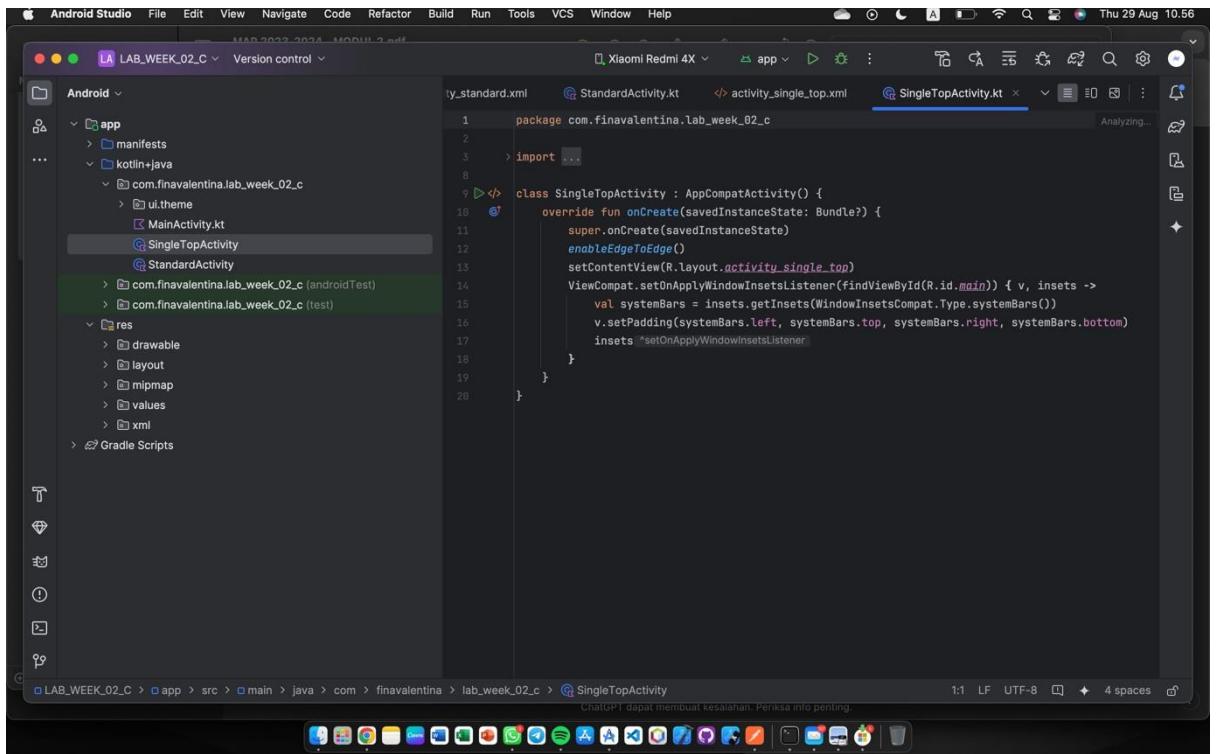
4. Buat AcCvity pada folder "kotlin+java" dan pilih folder pertama com.
packagename lalu klik kanan pada folder tersebut dan pilih Empty AcCvity



5. Masukan nama StandartAcCvty dan nama layout acCvty_standart lalu klik "Finish"

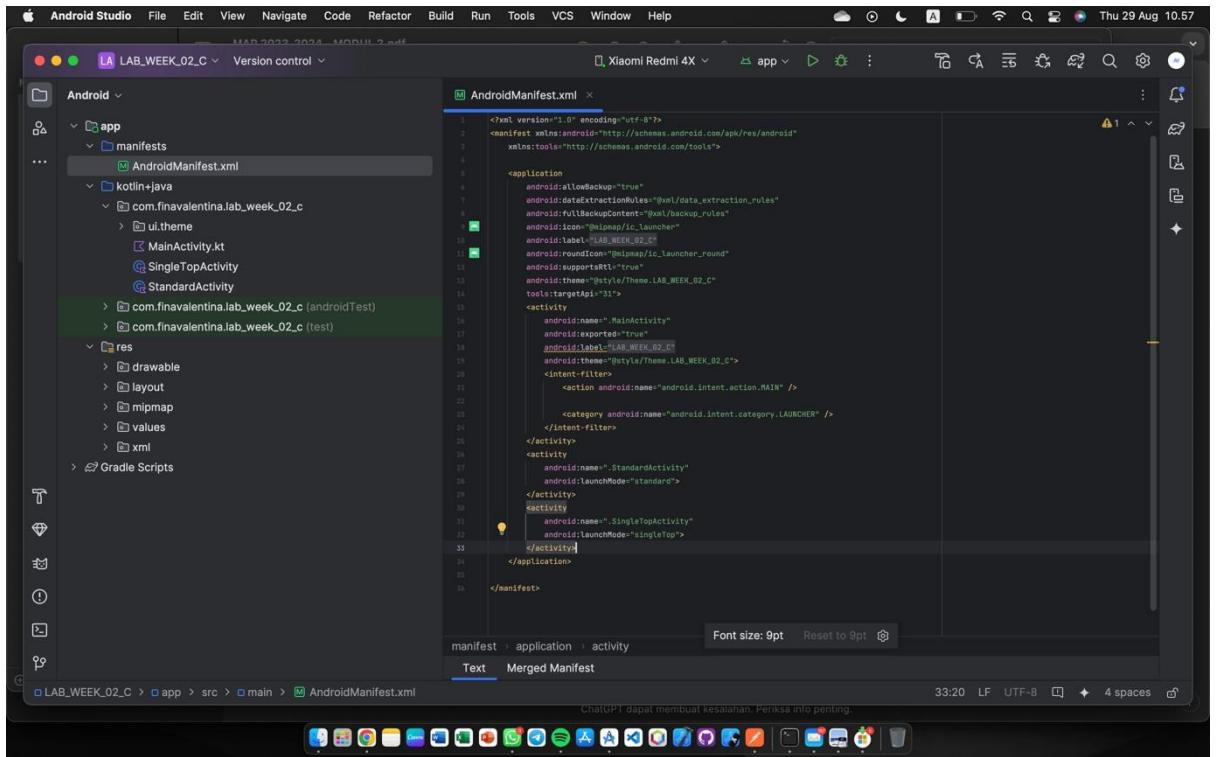


6. Ulangi langkah pembuatan AcCvty, dan beri nama AcCvty berikutnya SingleTopAcCvty dan layout acCvty_single_top



```
1 package com.finavalentina.lab_week_02_c
2
3 import ...
4
5 class SingleTopActivity : AppCompatActivity() {
6     override fun onCreate(savedInstanceState: Bundle?) {
7         super.onCreate(savedInstanceState)
8         enableEdgeToEdge()
9         setContentView(R.layout.activity_single_top)
10        ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main)) { v, insets ->
11            val systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars())
12            v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom)
13        }
14    }
15 }
```

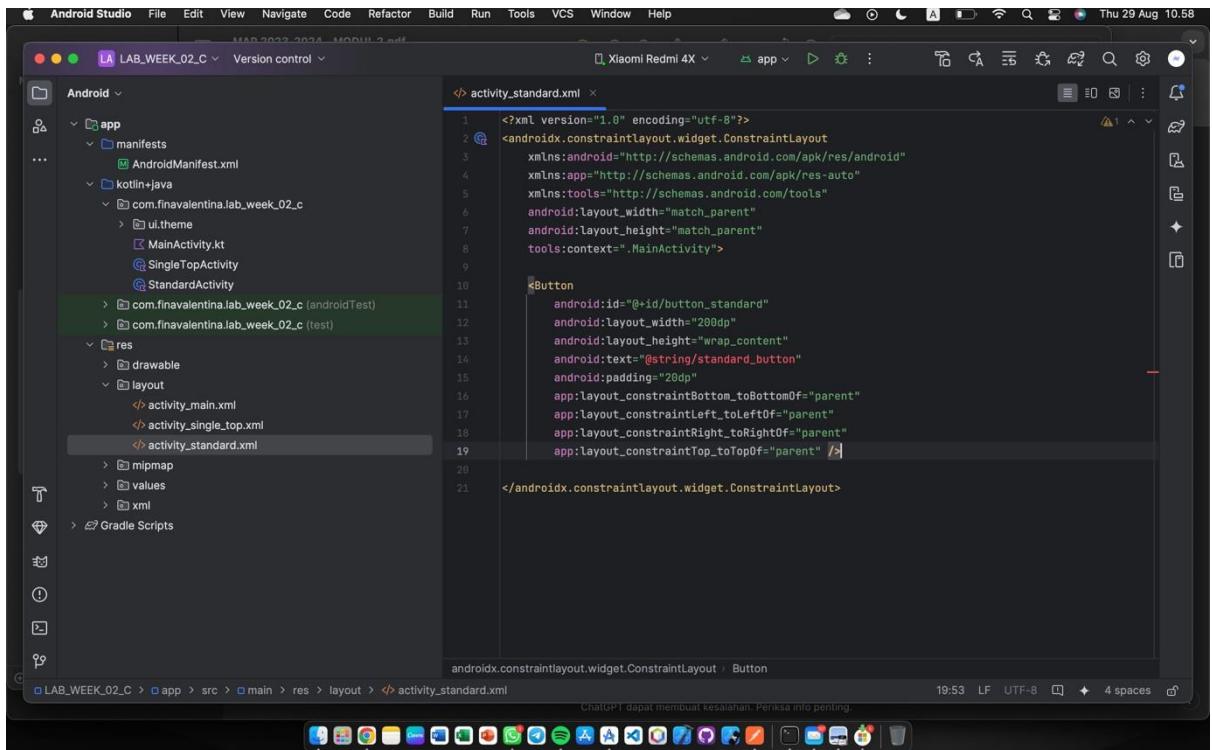
7. Ubah file AndroidManifest.xml menjadi seperC ini



```
<?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="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportRtl="true"
        android:theme="@style/Theme.LAB_WEEK_02_C"
        tools:targetApi="31">
        <activity
            android:name=".MainActivity"
            android:exported="true"
            android:label="@string/app_name"
            android:theme="@style/Theme.LAB_WEEK_02_C">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
        <activity
            android:name=".StandardActivity"
            android:launchMode="standard">
        </activity>
        <activity
            android:name=".SingleTopActivity"
            android:launchMode="singleTop">
        </activity>
    </application>
</manifest>
```

8. Ubah file activity_standart.xml menjadi seperC ini

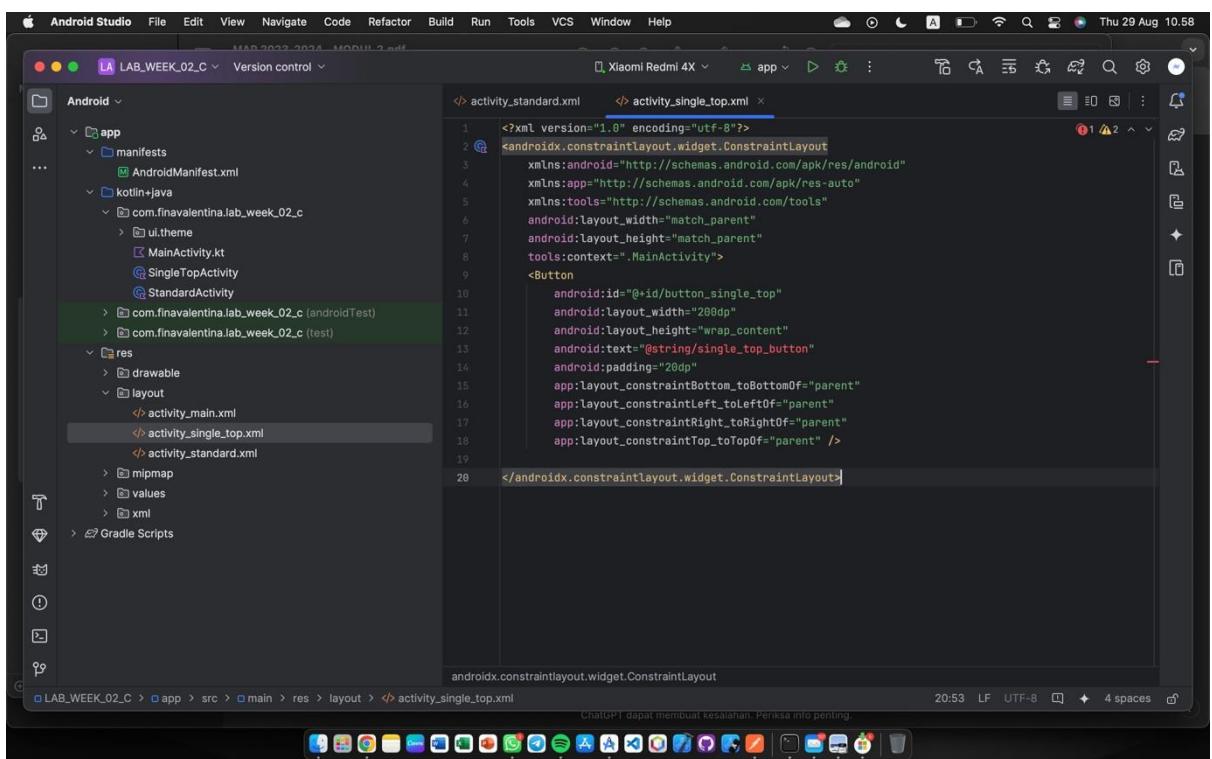


```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <Button
        android:id="@+id/button_standard"
        android:layout_width="200dp"
        android:layout_height="wrap_content"
        android:text="@string/standard_button"
        android:padding="20dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

9. Ubah file activity_single_top.xml menjadi seperti ini

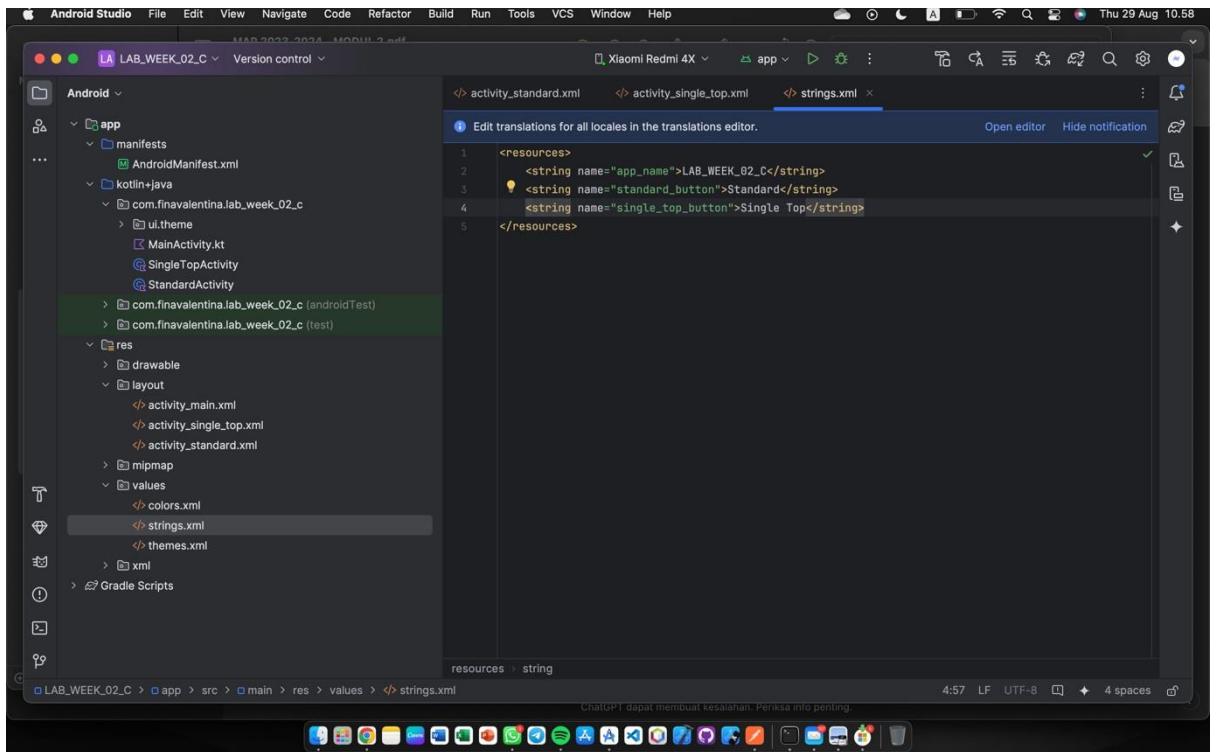


```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <Button
        android:id="@+id/button_single_top"
        android:layout_width="200dp"
        android:layout_height="wrap_content"
        android:text="@string/single_top_button"
        android:padding="20dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

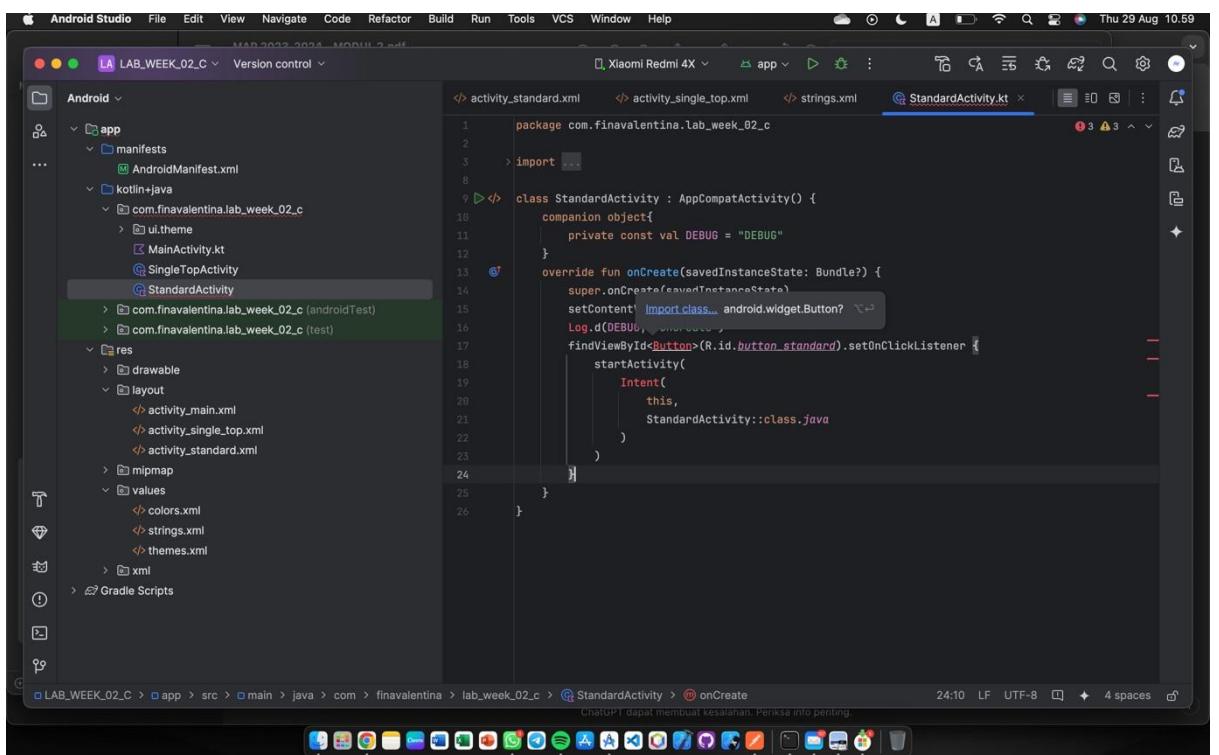
</androidx.constraintlayout.widget.ConstraintLayout>
```

10. Ubah file strings.xml menjadi seperti ini



```
<resources>
    <string name="app_name">LAB_WEEK_02_C</string>
    <string name="standard_button">Standard</string>
    <string name="single_top_button">Single Top</string>
</resources>
```

11. Buka file StandardActivity dan sesuaikan menjadi seperti ini lalu lakukan import terhadap baris yang berwarna merah



```
package com.finavalentina.lab_week_02_c

import ...

class StandardActivity : AppCompatActivity() {
    companion object{
        private const val DEBUG = "DEBUG"
    }

    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView( import.class... android.widget.Button? )
        Log.d(DEBUG, "onCreate")
        findViewById<Button>(R.id.button_standard).setOnClickListener {
            startActivity(
                Intent(
                    this,
                    StandardActivity::class.java
                )
            )
        }
    }
}
```

12. Lengkapi file StandardActivity menjadi seperti ini

The screenshot shows the Android Studio interface with the project 'LAB_WEEK_02_C' open. The code editor displays the 'StandardActivity.kt' file. The code defines a standard AppCompatActivity:

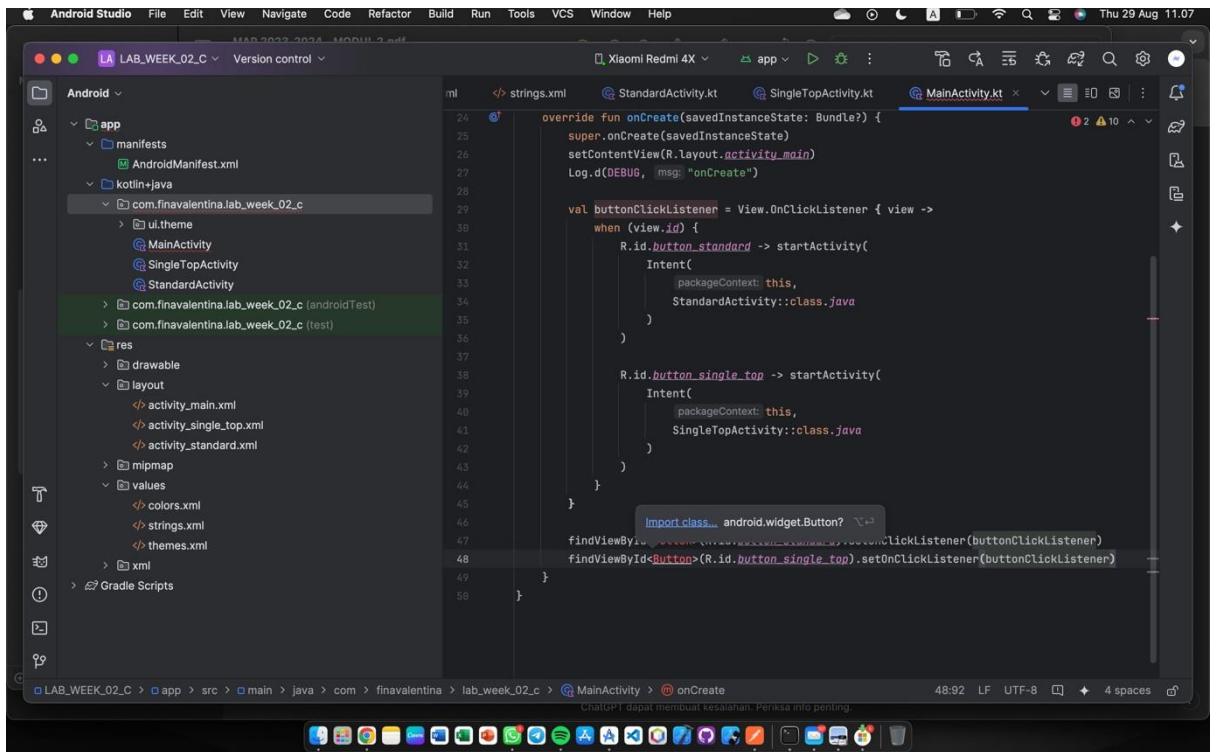
```
package com.finavalentina.lab_week_02_c
import ...
class StandardActivity : AppCompatActivity() {
    companion object{
        private const val DEBUG = "DEBUG"
    }
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_standard)
        Log.d(DEBUG, msg: "onCreate")
        findViewById<Button>(R.id.button_standard).setOnClickListener { it:View!
            startActivity(
                Intent(
                    packageContext: this,
                    StandardActivity::class.java
                )
            )
        }
    }
    override fun onNewIntent(intent: Intent) {
        super.onNewIntent(intent)
        Log.d(DEBUG, msg: "onNewIntent")
    }
}
```

13. Ubah file SingleAcCvity menjadi seperC ini

The screenshot shows the Android Studio interface with the project 'LAB_WEEK_02_C' open. The code editor displays the 'SingleTopActivity.kt' file. The code defines a single top AppCompatActivity:

```
package com.finavalentina.lab_week_02_c
import ...
class SingleTopActivity : AppCompatActivity() {
    companion object{
        private const val DEBUG = "DEBUG"
    }
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_single_top)
        Log.d(DEBUG, msg: "onCreate")
        findViewById<Button>(R.id.button_single_top).setOnClickListener { it:View!
            startActivity(
                Intent(
                    packageContext: this,
                    StandardActivity::class.java
                )
            )
        }
    }
    override fun onNewIntent(intent: Intent) {
        super.onNewIntent(intent)
        Log.d(DEBUG, msg: "onNewIntent")
    }
}
```

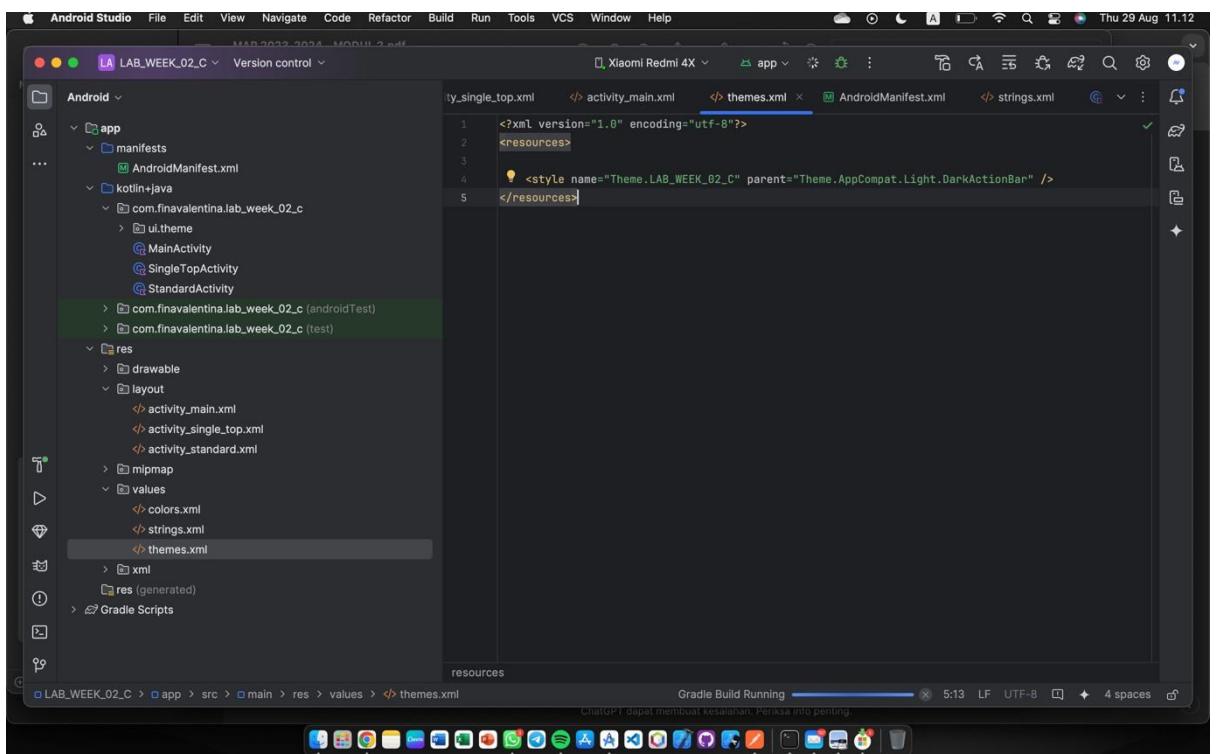
14. Ubah file MainAcCvity menjadi seperC ini mengikuC modul, dan lakukan import



```
override fun onCreate(savedInstanceState: Bundle?) {
    super.onCreate(savedInstanceState)
    setContentView(R.layout.activity_main)
    Log.d(DEBUG, "onCreate")

    val buttonClickListener = View.OnClickListener { view -
        when (view.id) {
            R.id.button_standard -> startActivity(
                Intent(
                    packageContext: this,
                    StandardActivity::class.java
                )
            )
            R.id.button_single_top -> startActivity(
                Intent(
                    packageContext: this,
                    SingleTopActivity::class.java
                )
            )
        }
    }
    findViewById(R.id.button_standard).setOnClickListener(buttonClickListener)
    findViewById(R.id.button_single_top).setOnClickListener(buttonClickListener)
}
```

15. Buka file themes.xml dan sesuaikan isi file nya seperC ini



```
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <style name="Theme.LAB_WEEK_02_C" parent="Theme.AppCompat.Light.DarkActionBar" />
</resources>
```

16. Jalankan aplikasinya dan lihat Logcat

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

- Project Structure:** The left sidebar shows the project tree under "Android".
- Code Editor:** The main area displays the contents of `res/values/themes.xml`. The XML code includes:

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <style name="Theme.LAB_WEEK_02_C" parent="Theme.AppCompat.Light.DarkActionBar" />
</resources>
```
- Logcat:** The bottom-left panel shows log entries from the device. A sample entry is:

```
2024-08-29 11:12:54.414 32265-32321 OpenGLRenderer
```
- Taskbar:** The bottom right shows the taskbar with various application icons.

17. Selesai