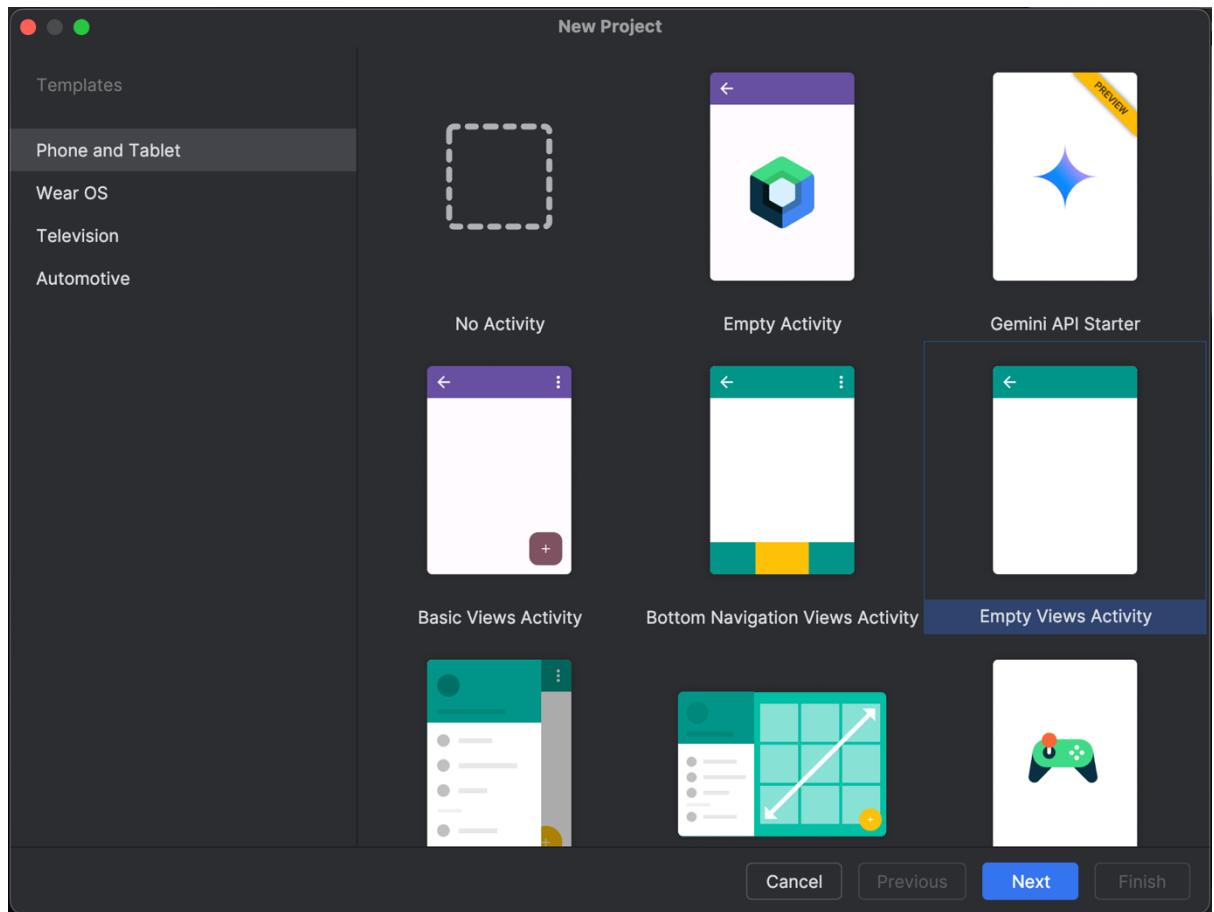


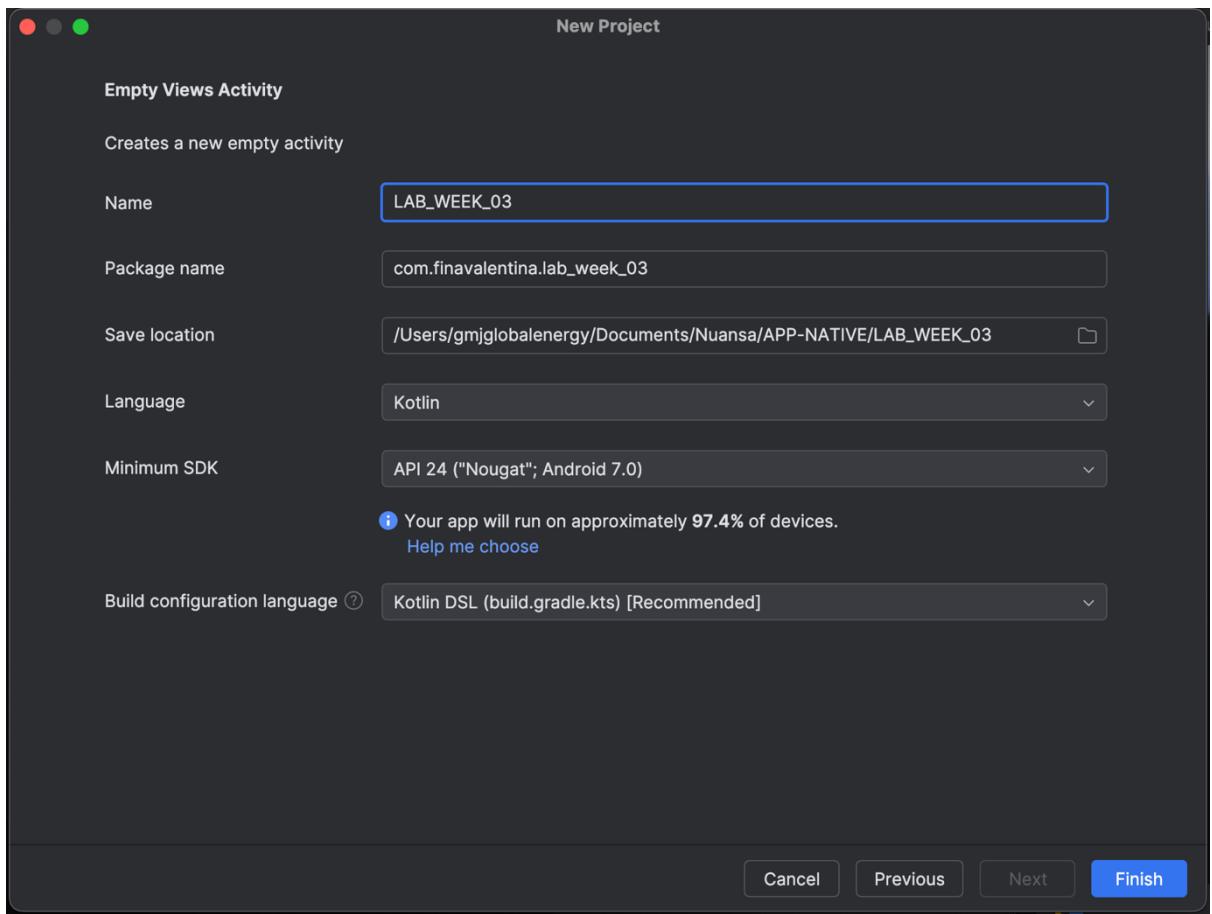
## LANGKAH LANGKAH PENGERJAAN LAB WEEK 03

### PART 01 – Fragment Lifecycle

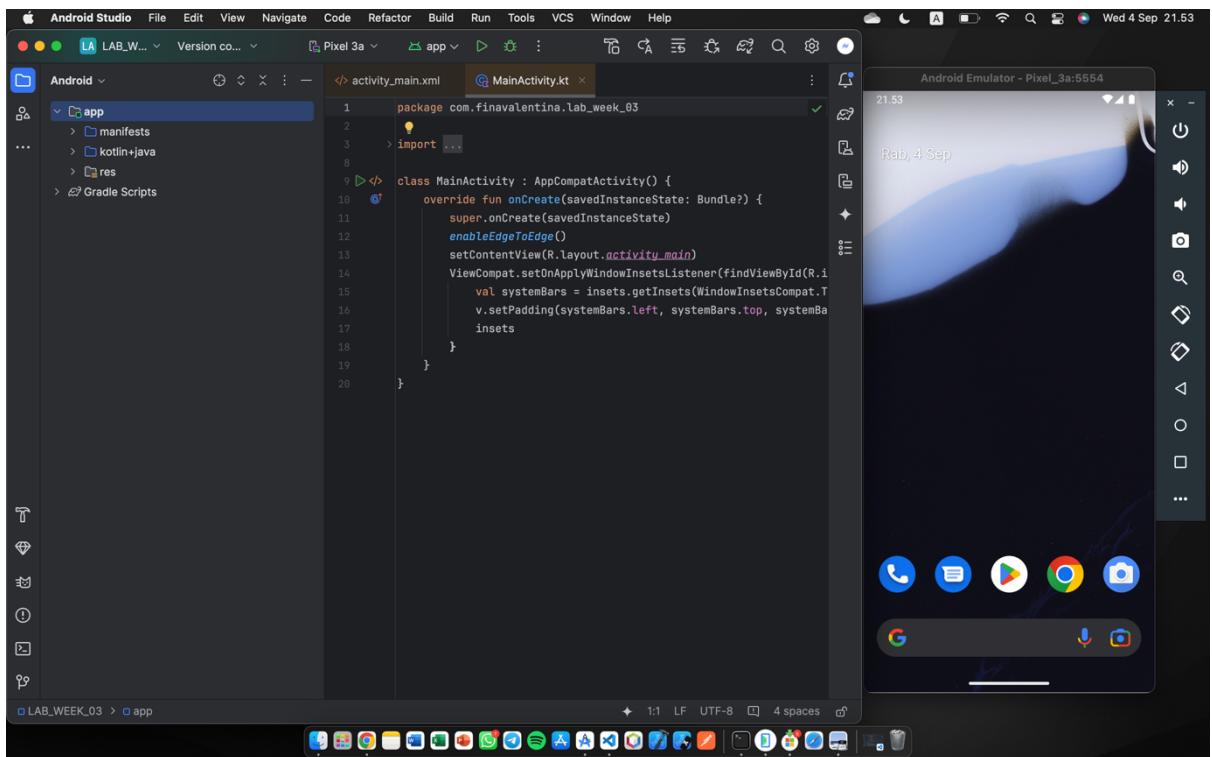
1. Buat Project di Android Studio, pilih Empty Views Activity lalu klik “Next”



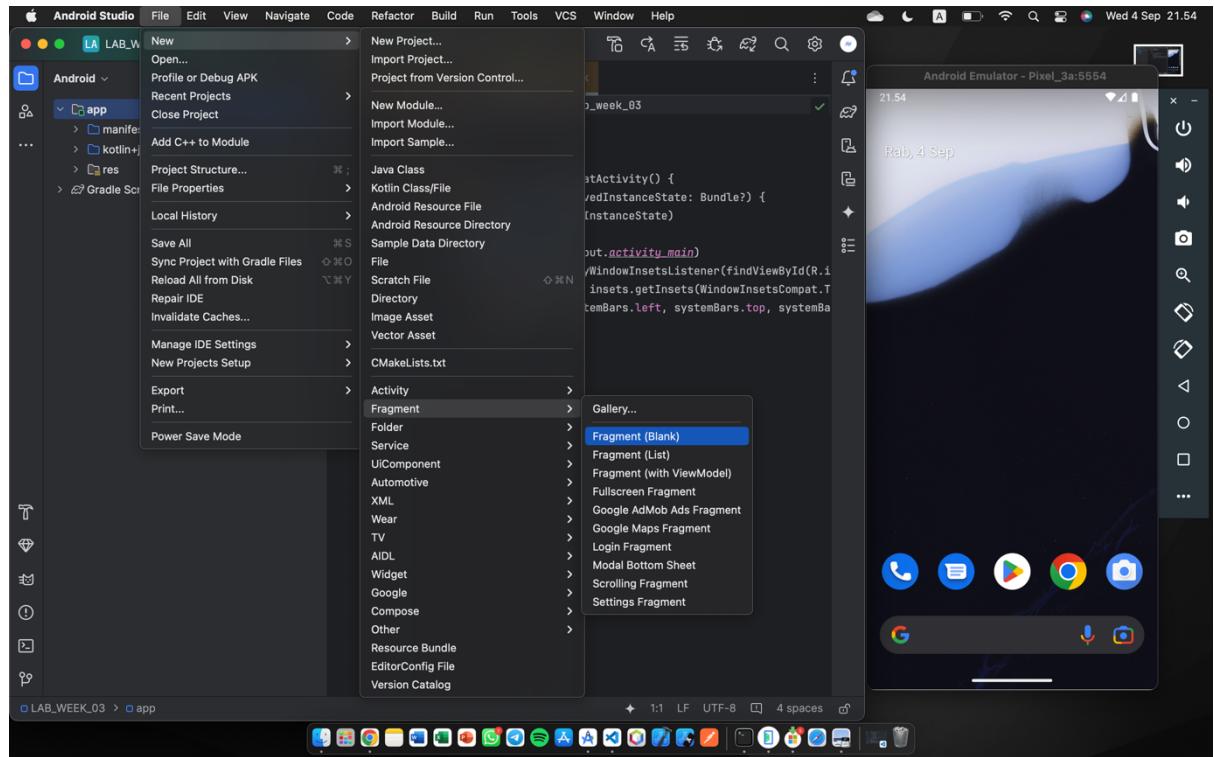
2. Atur Nama Project dan Lokasi Project, lalu klik “Finish”



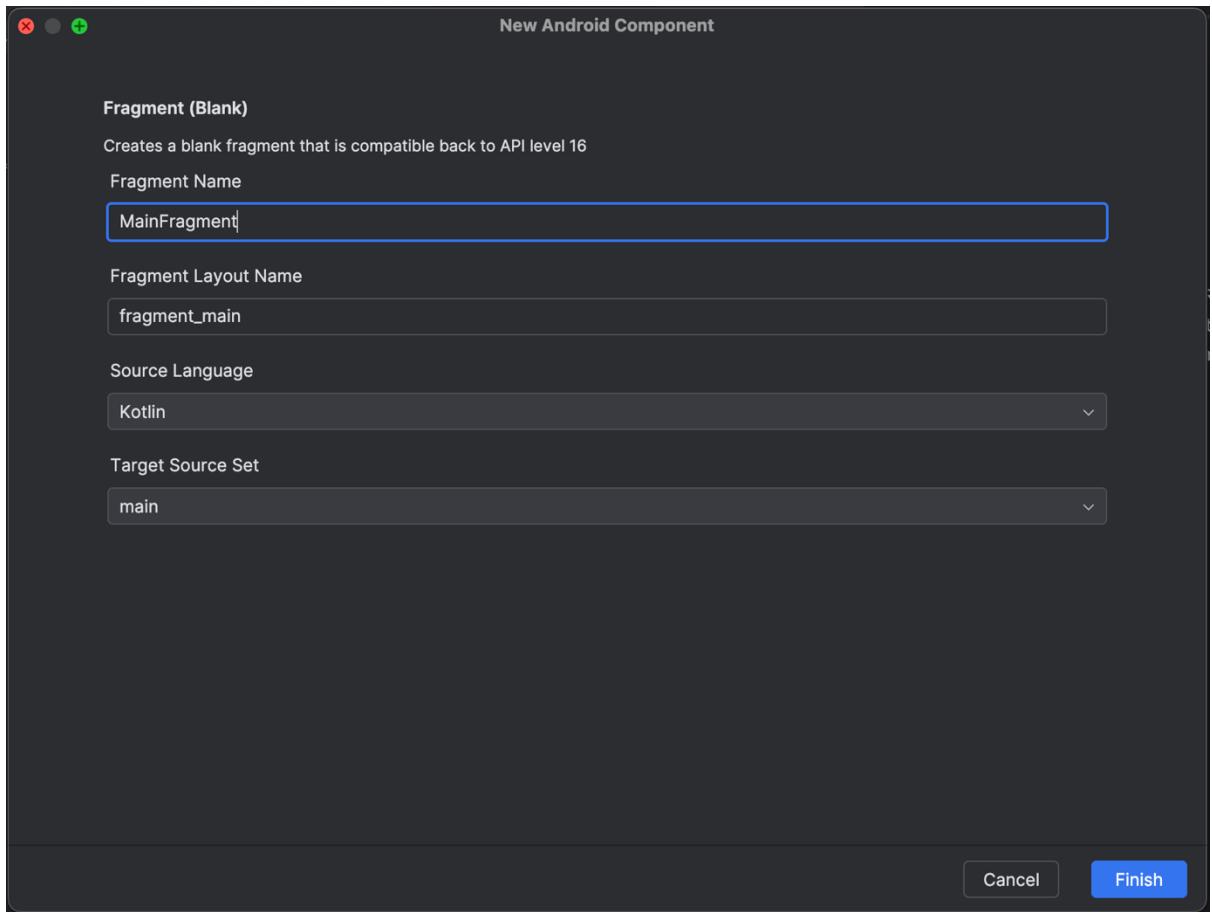
3. Akan terbuka sebuah editor yang menampilkan code MainActivity.kt



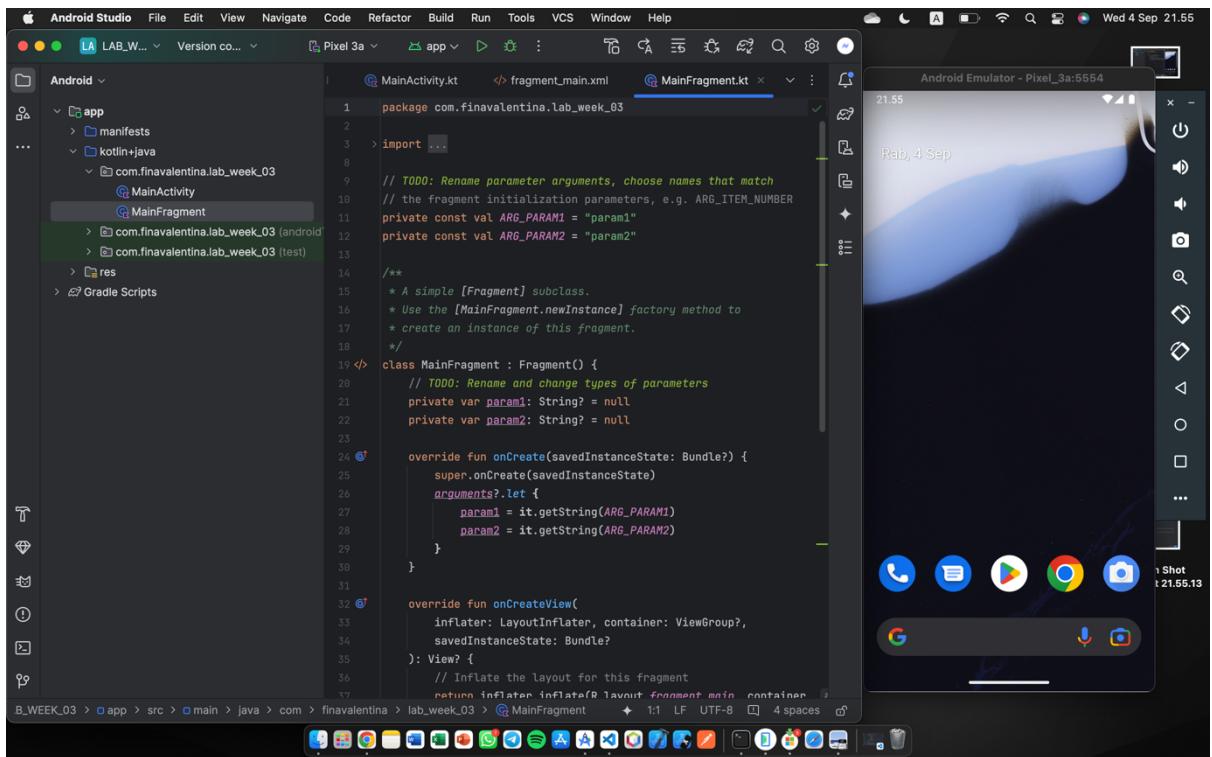
4. Buat sebuah fragment dengan memilih menu File > New > Fragment > Fragment (Blank)



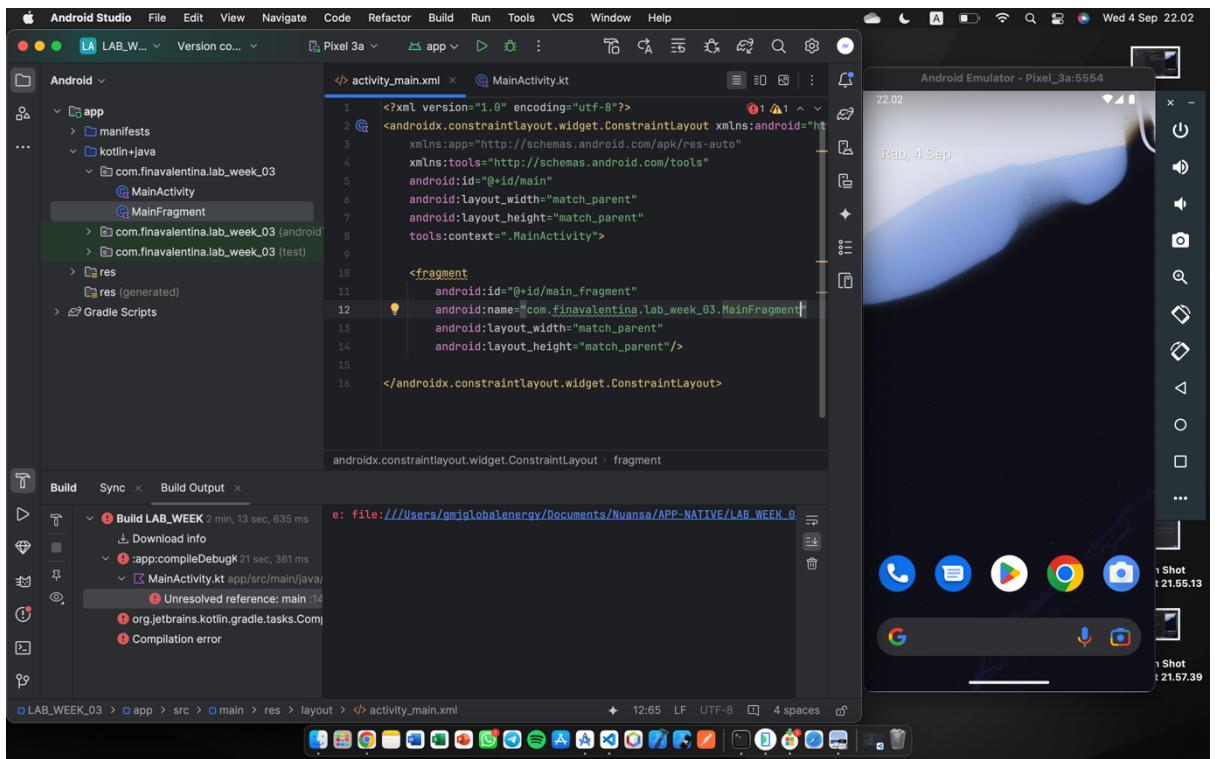
5. Isi nama fragment dan layout fragment, lalu klik "Finish"



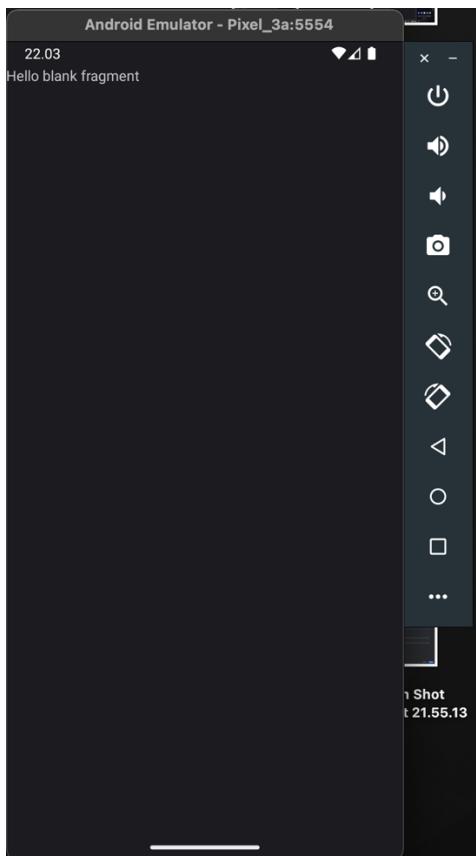
## 6. Maka akan terbuka code baru di editor



## 7. Masuk ke file fragment\_main.xml lalu ubah isinya menjadi seperti ini



8. Lalu, jalankan aplikasi tersebut. Maka tampilannya akan seperti ini.



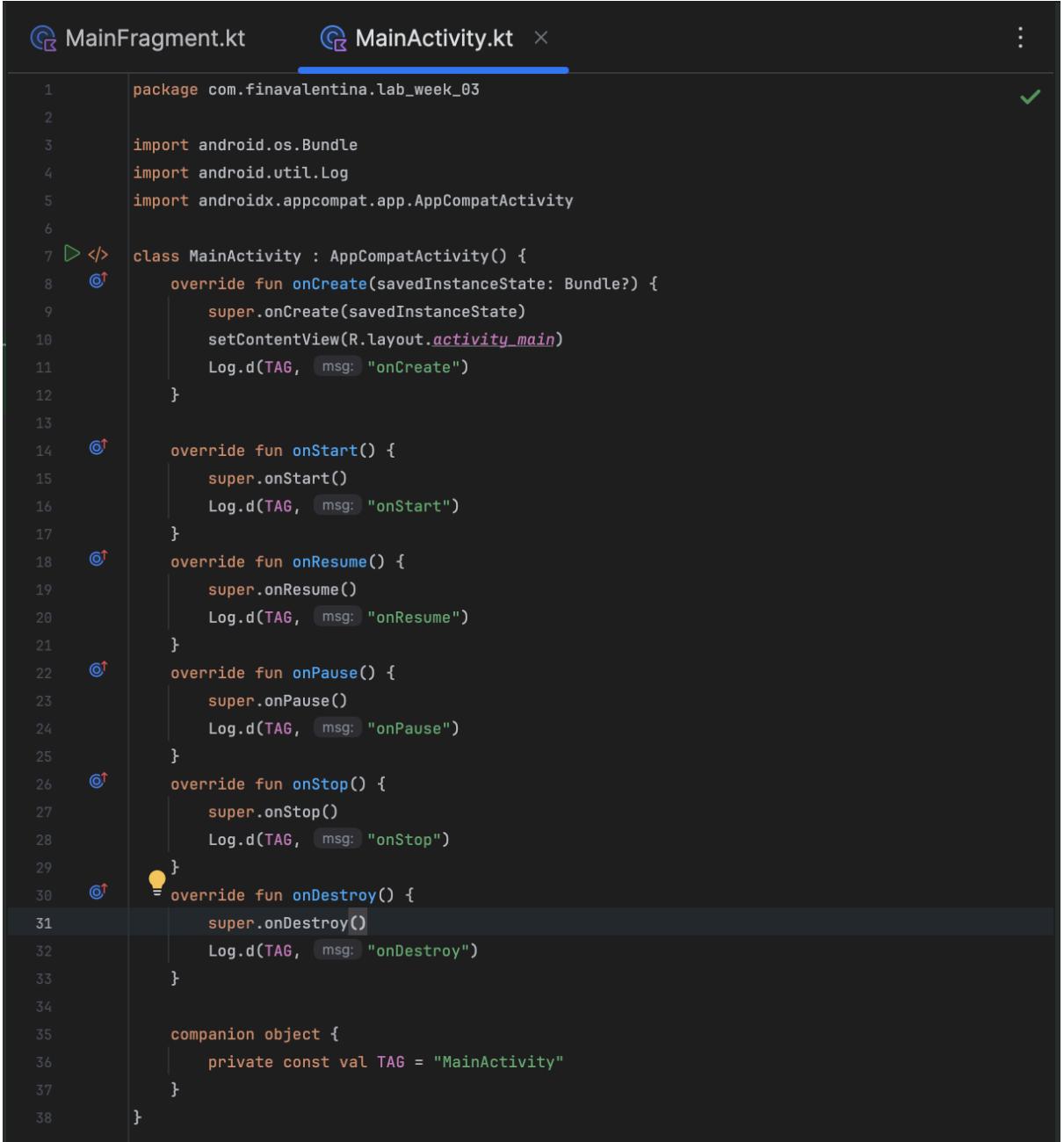
9. Selanjutnya, masuk ke MainFragment.kt lalu sesuaikan isinya menjadi seperti ini

```
>MainFragment.kt
```

```
1 package com.finavalentina.lab_week_03
2
3 import android.content.Context
4 import android.os.Bundle
5 import android.util.Log
6 import androidx.fragment.app.Fragment
7 import android.view.LayoutInflater
8 import android.view.View
9 import android.view.ViewGroup
10
11 // TODO: Rename parameter arguments, choose names that match
12 // the fragment initialization parameters, e.g. ARG_ITEM_NUMBER
13 private const val ARG_PARAM1 = "param1"
14 private const val ARG_PARAM2 = "param2"
15
16 /**
17 * A simple [Fragment] subclass.
18 * Use the [MainFragment.newInstance] factory method to
19 * create an instance of this fragment.
20 */
21 </> class MainFragment : Fragment() {
22     // TODO: Rename and change types of parameters
23     private var param1: String? = null
24     private var param2: String? = null
25
26     @Override
27     override fun onAttach(context: Context) {
28         super.onAttach(context)
29         Log.d(TAG, msg: "onAttach")
30     }
31
32     @Override
33     override fun onCreate(savedInstanceState: Bundle?) {
34         super.onCreate(savedInstanceState)
35         Log.d(TAG, msg: "onCreate")
36         arguments?.let {
37             param1 = it.getString(ARG_PARAM1)
38             param2 = it.getString(ARG_PARAM2)
39         }
40     }
41 }
```

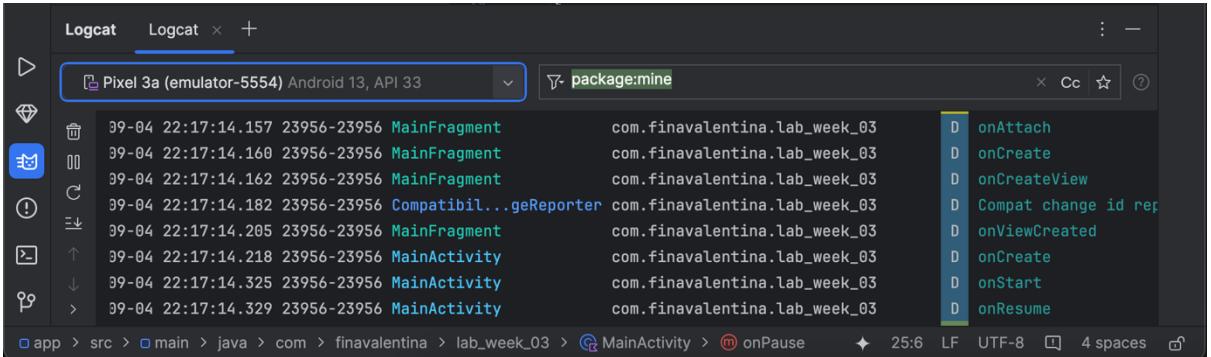
```
40     @Override
41     override fun onCreateView(
42         inflater: LayoutInflater, container: ViewGroup?,
43         savedInstanceState: Bundle?
44     ): View? {
45         // Inflate the layout for this fragment
46         Log.d(TAG, msg: "onCreateView")
47         return inflater.inflate(R.layout.fragment_main, container, attachToRoot: false)
48     }
49
50     @Override
51     override fun onViewCreated(view: View, savedInstanceState: Bundle?) {
52         super.onViewCreated(view, savedInstanceState)
53         Log.d(TAG, msg: "onViewCreated")
54     }
55     @Override
56     override fun onPause() {
57         super.onPause()
58         Log.d(TAG, msg: "onPause")
59     }
60     @Override
61     override fun onStop() {
62         super.onStop()
63         Log.d(TAG, msg: "onStop")
64     }
65     @Override
66     override fun onDestroyView() {
67         super.onDestroyView()
68         Log.d(TAG, msg: "onDestroyView")
69     }
70
71     @Override
72     override fun onDestroy() {
73         super.onDestroy()
74         Log.d(TAG, msg: "onDestroy")
75     }
76
77     companion object {
78         /**
79          * Use this factory method to create a new instance of
80          * this fragment using the provided parameters.
81          *
82          * @param param1 Parameter 1.
83          * @param param2 Parameter 2.
84          *
85          * @return A new instance of fragment MainFragment.
86          */
87         // TODO: Rename and change types and number of parameters
88         @JvmStatic
89         fun newInstance(param1: String, param2: String) =
90             MainFragment().apply {
91                 arguments = Bundle().apply {
92                     putString(ARG_PARAM1, param1)
93                     putString(ARG_PARAM2, param2)
94                 }
95             }
96
97     }
98 }
```

10. Selanjutnya, masuk ke MainActivity.kt lalu sesuaikan isinya menjadi seperti ini.



```
1 package com.finaventina.lab_week_03
2
3 import android.os.Bundle
4 import android.util.Log
5 import androidx.appcompat.app.AppCompatActivity
6
7 class MainActivity : AppCompatActivity() {
8     override fun onCreate(savedInstanceState: Bundle?) {
9         super.onCreate(savedInstanceState)
10        setContentView(R.layout.activity_main)
11        Log.d(TAG, "msg: " + msg)
12    }
13
14    override fun onStart() {
15        super.onStart()
16        Log.d(TAG, "msg: " + msg)
17    }
18    override fun onResume() {
19        super.onResume()
20        Log.d(TAG, "msg: " + msg)
21    }
22    override fun onPause() {
23        super.onPause()
24        Log.d(TAG, "msg: " + msg)
25    }
26    override fun onStop() {
27        super.onStop()
28        Log.d(TAG, "msg: " + msg)
29    }
30    override fun onDestroy() {
31        super.onDestroy()
32        Log.d(TAG, "msg: " + msg)
33    }
34
35    companion object {
36        private const val TAG = "MainActivity"
37    }
38}
```

11. Lalu, jalankan kembali aplikasinya dan lihat informasinya di Logcat.



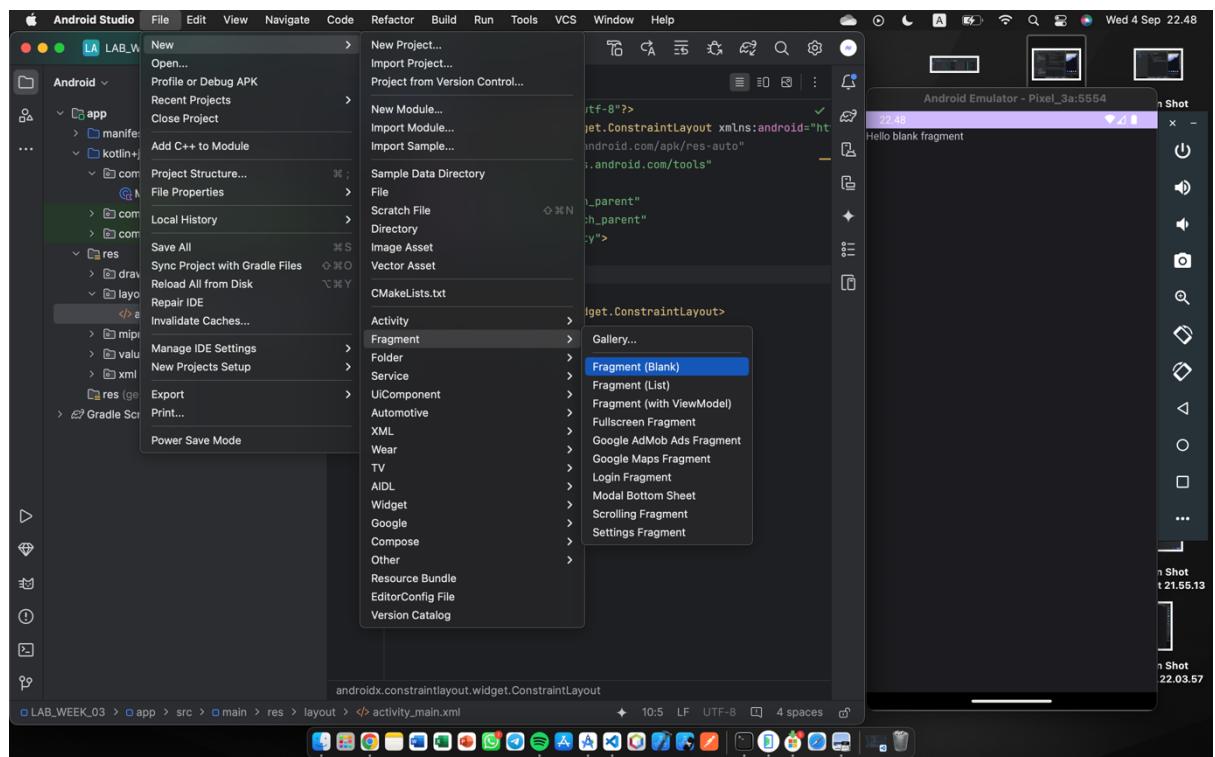
Time	Process	Log
09-04 22:17:14.157	MainFragment	com.finaventina.lab_week_03 D onAttach
09-04 22:17:14.160	MainFragment	com.finaventina.lab_week_03 D onCreate
09-04 22:17:14.162	MainFragment	com.finaventina.lab_week_03 D onCreateView
09-04 22:17:14.182	Compatibil...geReporter	com.finaventina.lab_week_03 D Compat change id report
09-04 22:17:14.205	MainFragment	com.finaventina.lab_week_03 D onViewCreated
09-04 22:17:14.218	MainActivity	com.finaventina.lab_week_03 D onCreate
09-04 22:17:14.325	MainActivity	com.finaventina.lab_week_03 D onStart
09-04 22:17:14.329	MainActivity	com.finaventina.lab_week_03 D onResume

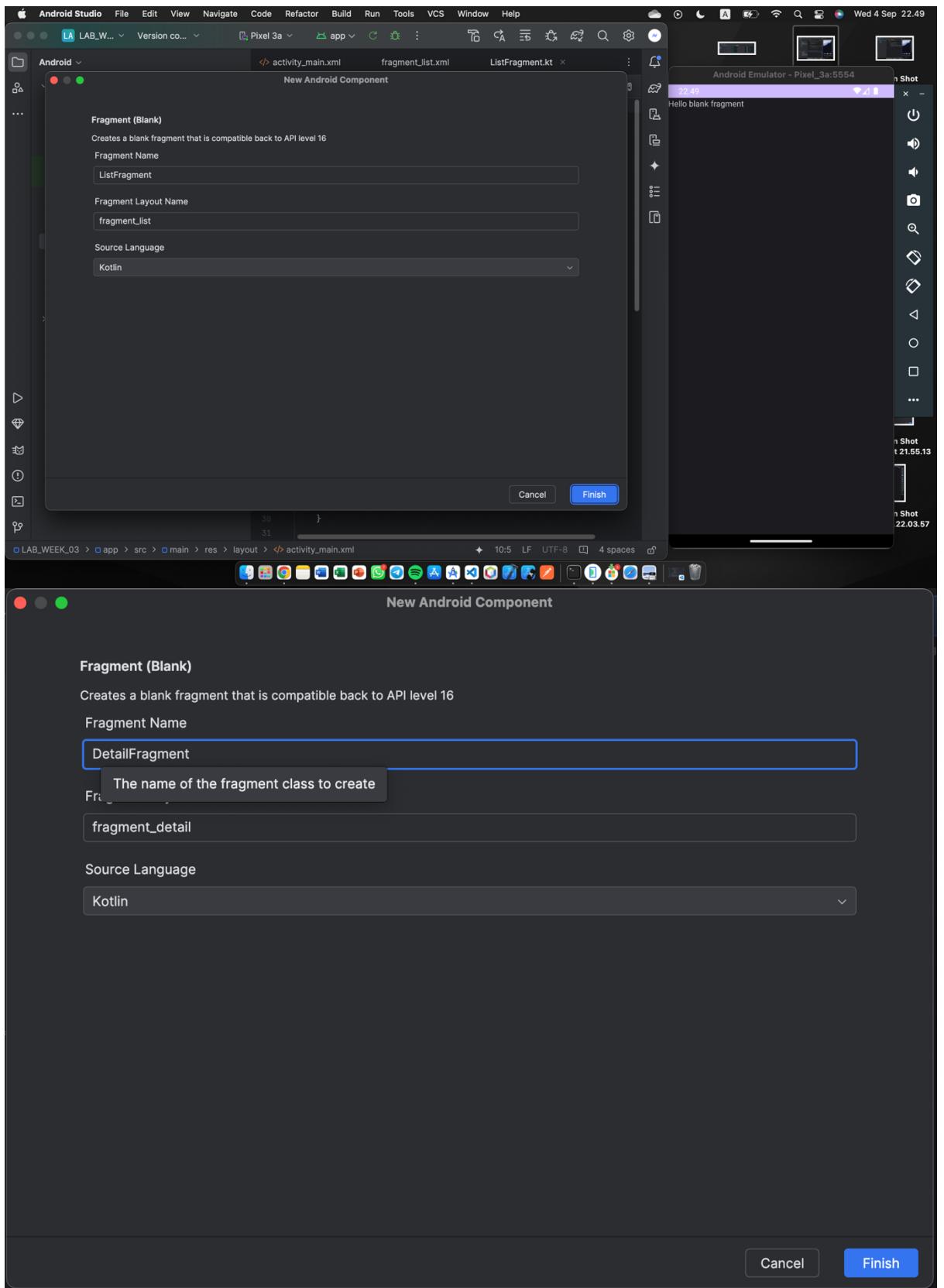
12. Selanjutnya, rotasi layar dan lihat perubahan informasi di Logcat.

```
Logcat Logcat +  
Pixel 3a (emulator-5554) Android 13, API 33  
package:mine  
2024-09-04 22:18:03.899 23956-23956 MainFragment com.finavalentina.lab_week_03 D onPause  
2024-09-04 22:18:03.900 23956-23956 MainActivity com.finavalentina.lab_week_03 D onPause  
2024-09-04 22:18:03.901 23956-23956 MainFragment com.finavalentina.lab_week_03 D onStop  
2024-09-04 22:18:03.901 23956-23956 MainActivity com.finavalentina.lab_week_03 D onDestroyView  
2024-09-04 22:18:03.916 23956-23956 MainFragment com.finavalentina.lab_week_03 D onDestroy  
2024-09-04 22:18:03.918 23956-23956 MainFragment com.finavalentina.lab_week_03 D onDetach  
2024-09-04 22:18:03.918 23956-23956 MainActivity com.finavalentina.lab_week_03 D onDestroy
```

## Part 02 – Static Fragments

13. Hapus file MainFragment.kt dan fragment\_main.xml, selanjutnya buat 2 Blank Fragment, beri nama ListFragment dan DetailFragment





14. Selanjutnya, masuk ke strings.xml dan sesuaikan isinya menjadi seperti ini

The screenshot shows the Android Studio interface with the strings.xml file open. The title bar indicates the file is 'strings.xml'. A notification at the top says 'Edit translations for all locales in the translations ed...' with options to 'Open editor' or 'Hide notification'. The code in the editor is as follows:

```
<resources>
    <string name="app_name">LAB_WEEK_03</string>
    <string name="affogato_title">AFFOGATO</string>
    <string name="affogato_desc">Espresso poured on a vanilla ice cream. Served in a cappuccino cup.</string>
    <string name="americano_title">AMERICANO</string>
    <string name="americano_desc">Espresso with added hot water (100-150 mL). Often served in a cappuccino cup. (The espresso is added into the hot water rather than all the water being flowed through the coffee that would lead to over extraction.)</string>
    <string name="latte_title">CAFFE LATTE</string>
    <string name="latte_desc">A tall, mild 'milk coffee' (about 150-300 mL). An espresso with steamed milk and only a little milk foam poured over it. Serve in a latte glass or a coffee cup. Flavored syrup can be added.</string>
    <string name="coffee_list">Coffee List</string>
</resources>
```

15. Masuk ke file fragment\_list.xml dan perbarui isinya menjadi seperti ini

The screenshot shows the Android Studio code editor with three tabs at the top: 'fragment\_list.xml', 'fragment\_detail.xml', and 'activity\_main.xml'. The 'fragment\_list.xml' tab is active, displaying the following XML code:

```
<?xml version="1.0" encoding="utf-8"?>
<ScrollView xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:padding="20dp"
    tools:context=".ListFragment">

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="vertical">
        <TextView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:textSize="30sp"
            android:text="Coffee List"/>
        <View
            android:layout_width="match_parent"
            android:layout_height="1dp"
            android:layout_marginVertical="20dp"
            android:background="?android:attr/dividerVertical" />
        <TextView
            android:id="@+id/affogato"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:padding="10dp"
            android:text="AFFOGATO"/>
        <TextView
            android:id="@+id/americano"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:padding="10dp"
            android:text="AMERICANO"/>
        <TextView
            android:id="@+id/latte"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:padding="10dp"
            android:text="CAFFE LATTE"/>
    </LinearLayout>
</ScrollView>
```

16. Selanjutnya, masuk ke fragment\_detail.xml dan ubah isinya menjadi seperti ini

The screenshot shows the Android Studio code editor with the tab for `fragment_detail.xml` selected. The code is an XML layout file for a fragment. It defines a vertical linear layout with padding of 20dp. Inside, there is a title `TextView` with bold text and center gravity, followed by a separator `View` with a height of 1dp and vertical margin of 20dp, and a description `TextView` with center gravity and text about espresso.

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="20dp"
    tools:context=".DetailFragment">

    <TextView
        android:id="@+id/coffee_title"
        android:textStyle="bold"
        android:gravity="center"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        tools:text="AFFOGATO"/>
    <View
        android:layout_width="match_parent"
        android:layout_height="1dp"
        android:layout_marginVertical="20dp"
        android:background="?android:attr/dividerVertical" />
    <TextView
        android:id="@+id/coffee_desc"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:gravity="center"
        tools:text="Espresso poured on a vanilla ice cream. Served in a cap..." />
</LinearLayout>
```

17. Lalu, pada activity\_main.xml ubah isinya menjadi seperti ini

The screenshot shows the Android Studio interface with the XML code for `activity_main.xml`. The code defines a `LinearLayout` with various child elements including `fragment`, `View`, and another `fragment`. A yellow lightbulb icon is visible near the second fragment definition, indicating a potential issue or suggestion.

```
<?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"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    tools:context=".MainActivity">

    <fragment
        android:id="@+id/fragment_list"
        android:layout_height="0dp"
        android:layout_width="match_parent"
        android:layout_weight="2"
        android:name="com.finavalevina.lab_week_03.ListFragment"/>
    <View
        android:layout_width="match_parent"
        android:layout_height="1dp"
        android:layout_marginHorizontal="20dp"
        android:background="?android:attr/dividerVertical" />
    <fragment
        android:id="@+id/fragment_detail"
        android:layout_height="0dp"
        android:layout_width="match_parent"
        android:layout_weight="1"
        android:name="com.finavalevina.lab_week_03.DetailFragment"/>
</LinearLayout>
```

18. Selanjutnya, buka file `ListFragment.kt` lalu perbarui isinya menjadi seperti ini

The screenshot shows the Android Studio code editor with three tabs at the top: ListFragment.kt (selected), DetailFragment.kt, and MainActivity.kt. The ListFragment.kt tab has a blue bar above it. The code editor displays the following Java code:

```
1 package com.finavalentina.lab_week_03
2
3 import android.content.Context
4 import android.os.Bundle
5 import android.view.LayoutInflater
6 import androidx.fragment.app.Fragment
7 import android.view.View
8 import android.view.ViewGroup
9
10 // TODO: Rename parameter arguments, choose names that match
11 // the fragment initialization parameters, e.g. ARG_ITEM_NUMBER
12 private const val ARG_PARAM1 = "param1"
13 private const val ARG_PARAM2 = "param2"
14
15 /**
16 * A simple [Fragment] subclass.
17 * Use the [ListFragment.newInstance] factory method to
18 * create an instance of this fragment.
19 */
20 </> class ListFragment : Fragment(), View.OnClickListener {
21     // TODO: Rename and change types of parameters
22     private var param1: String? = null
23     private var param2: String? = null
24
25     private lateinit var coffeeListener: CoffeeListener;
26     @Override fun onAttach(context: Context) {
27         super.onAttach(context)
28         if(context is CoffeeListener){
29             coffeeListener = context
30         }
31         else{
32             throw RuntimeException("Must implement CoffeeListener")
33         }
34     }
35
36     @Override fun onCreate(savedInstanceState: Bundle?) {...}
37
38     @Override fun onCreateView(
39         inflater: LayoutInflater, container: ViewGroup?,
40         savedInstanceState: Bundle?
41     ): View? {...}
```

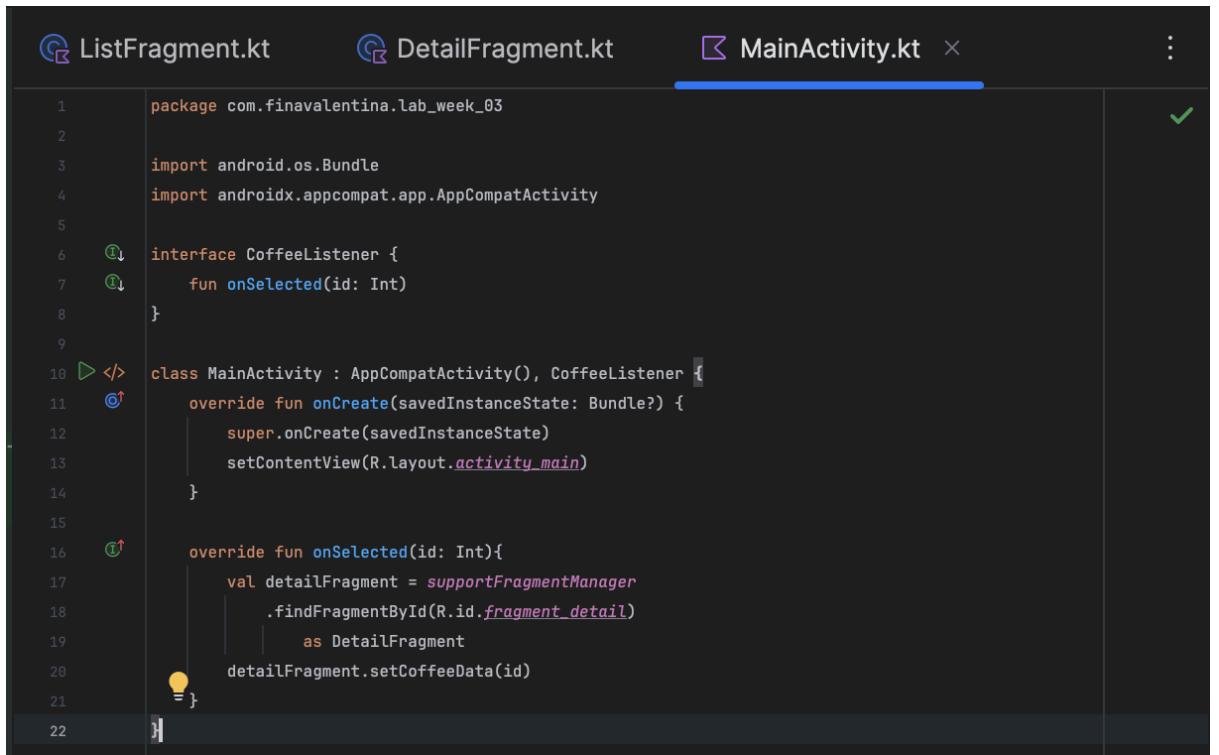
```
52  ⚡    override fun onViewCreated(view: View, savedInstanceState: Bundle?) {
53      super.onViewCreated(view, savedInstanceState)
54      val coffeeList = listOf<View>(
55          view.findViewById(R.id.affogato),
56          view.findViewById(R.id.americano),
57          view.findViewById(R.id.latte)
58      )
59      coffeeList.forEach{
60          it.setOnClickListener(this)
61      }
62  }
63
64  ⓘ    override fun onClick(v: View?) {
65      v?.let{
66          coffee -> coffeeListener.onSelected(coffee.id)
67      }
68  }
69
70  companion object {
71      /**
72      * Use this factory method to create a new instance of
73      * this fragment using the provided parameters.
74      *
75      * @param param1 Parameter 1.
76      * @param param2 Parameter 2.
77      * @return A new instance of fragment ListFragment.
78      */
79      // TODO: Rename and change types and number of parameters
80      @JvmStatic
81      fun newInstance(param1: String, param2: String) =
82          ListFragment().apply {
83              arguments = Bundle().apply {
84                  putString(ARG_PARAM1, param1)
85                  putString(ARG_PARAM2, param2)
86              }
87          }
88      }
89  }
```

19. Selanjutnya, masuk ke DetailFragment.kt lalu perbarui isinya menjadi seperti ini

```
1 package com.finavaleNTINA.lab_week_03
2
3 import android.os.Bundle
4 import androidx.fragment.app.Fragment
5 import android.view.LayoutInflater
6 import android.view.View
7 import android.view.ViewGroup
8 import android.widget.TextView
9
10 // TODO: Rename parameter arguments, choose names that match
11 // the fragment initialization parameters, e.g. ARG_ITEM_NUMBER
12 private const val ARG_PARAM1 = "param1"
13 private const val ARG_PARAM2 = "param2"
14
15 /**
16 * A simple [Fragment] subclass.
17 * Use the [DetailFragment.newInstance] factory method to
18 * create an instance of this fragment.
19 */
20 </> class DetailFragment : Fragment() {
21     // TODO: Rename and change types of parameters
22     private var param1: String? = null
23     private var param2: String? = null
24
25     private val coffeeTitle: TextView?
26         get() = view?.findViewById(R.id.coffee_title)
27     private val coffeeDesc: TextView?
28         get() = view?.findViewById(R.id.coffee_desc)
29
30     @+> override fun onCreate(savedInstanceState: Bundle?) { ... }
31
32     @+> override fun onCreateView(
33         inflater: LayoutInflater, container: ViewGroup?,
34         savedInstanceState: Bundle?
35     ): View? { ... }
```

```
46     fun setCoffeeData(id: Int){
47         when(id){
48             R.id.affogato -> {
49                 coffeeTitle?.text = getString(R.string.affogato_title)
50                 coffeeDesc?.text = getString(R.string.affogato_desc)
51             }R.id.americano -> {
52                 coffeeTitle?.text = getString(R.string.americano_title)
53                 coffeeDesc?.text = getString(R.string.americano_desc)
54             }R.id.latte -> {
55                 coffeeTitle?.text = getString(R.string.latte_title)
56                 coffeeDesc?.text = getString(R.string.latte_desc)
57             } }
58     }
59
60     companion object {
61         /**
62          * Use this factory method to create a new instance of
63          * this fragment using the provided parameters.
64          *
65          * @param param1 Parameter 1.
66          * @param param2 Parameter 2.
67          * @return A new instance of fragment DetailFragment.
68          */
69         // TODO: Rename and change types and number of parameters
70         @JvmStatic
71         fun newInstance(param1: String, param2: String) =
72             DetailFragment().apply {
73                 arguments = Bundle().apply {
74                     putString(ARG_PARAM1, param1)
75                     putString(ARG_PARAM2, param2)
76                 }
77             }
78     }
79 }
```

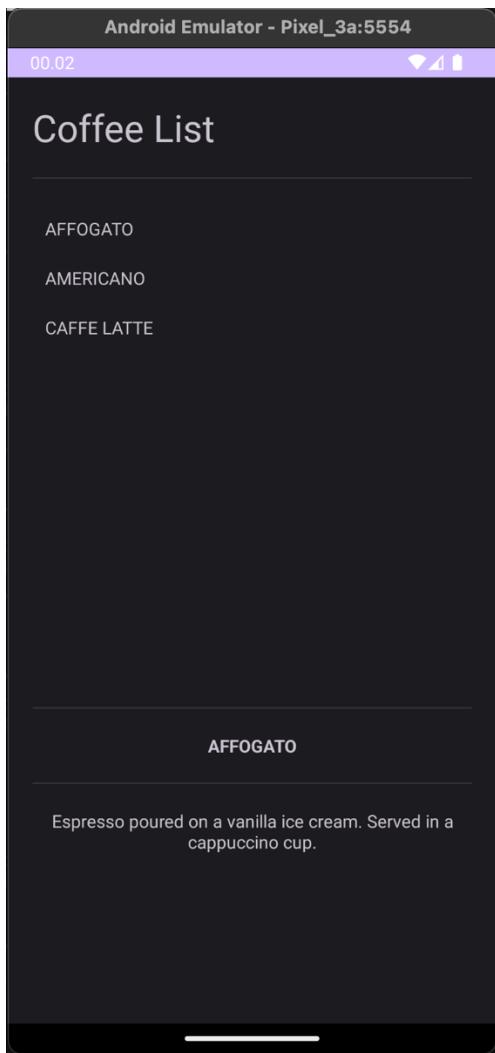
20. Selanjutnya masuk ke MainActivity.kt lalu ubah isinya menjadi seperti ini



The screenshot shows the Android Studio interface with three tabs at the top: 'ListFragment.kt', 'DetailFragment.kt', and 'MainActivity.kt'. The 'MainActivity.kt' tab is selected, indicated by a blue underline. The code in the editor is as follows:

```
1 package com.finavalentina.lab_week_03
2
3 import android.os.Bundle
4 import androidx.appcompat.app.AppCompatActivity
5
6 interface CoffeeListener {
7     fun onSelected(id: Int)
8 }
9
10 class MainActivity : AppCompatActivity(), CoffeeListener {
11     override fun onCreate(savedInstanceState: Bundle?) {
12         super.onCreate(savedInstanceState)
13         setContentView(R.layout.activity_main)
14     }
15
16     override fun onSelected(id: Int) {
17         val detailFragment = supportFragmentManager
18             .findFragmentById(R.id.fragment_detail)
19             as DetailFragment
20         detailFragment.setCoffeeData(id)
21     }
22 }
```

21. Lalu, jalankan aplikasinya dan akan tampil seperti ini

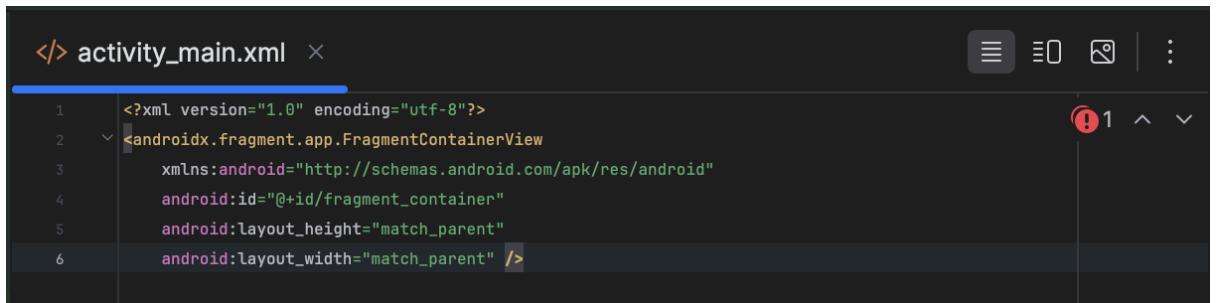


### Part 03 – Dynamic Fragments

22. Masuk ke file build.gradle.kts (Module:app), lalu tambahkan dependencies berikut, lalu Sync Now

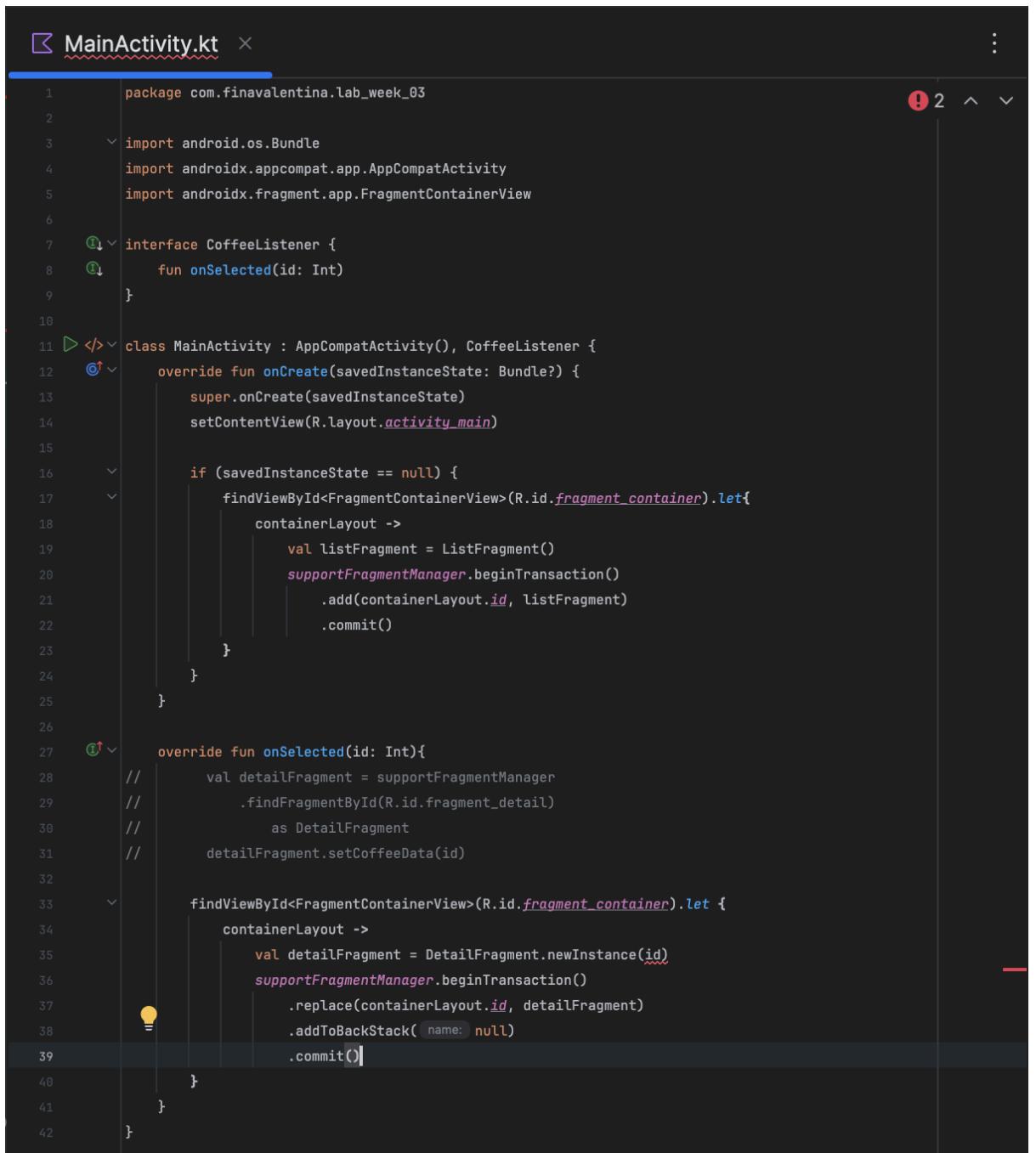
```
38     dependencies {  
39  
40         implementation(libs.androidx.core.ktx)  
41         implementation(libs.androidx.appcompat)  
42         implementation("androidx.navigation:navigation-fragment-ktx:2.5.3")  
43         implementation(libs.material)  
44         implementation(libs.androidx.activity)  
45         implementation(libs.androidx.constraintlayout)  
46         testImplementation(libs.junit)  
47         androidTestImplementation(libs.androidx.junit)  
48         androidTestImplementation(libs.androidx.espresso.core)  
49     }
```

23. Selanjutnya, masuk ke activity\_main.xml lalu ubah isinya menjadi seperti ini



```
<?xml version="1.0" encoding="utf-8"?>
<androidx.fragment.app.FragmentContainerView
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:id="@+id/fragment_container"
    android:layout_height="match_parent"
    android:layout_width="match_parent" />
```

24. Selanjutnya, masuk ke file MainActivity dan ubah isinya menjadi seperti ini



```
package com.finavalentina.lab_week_03

import android.os.Bundle
import androidx.appcompat.app.AppCompatActivity
import androidx.fragment.app.FragmentContainerView

interface CoffeeListener {
    fun onSelected(id: Int)
}

class MainActivity : AppCompatActivity(), CoffeeListener {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)

        if (savedInstanceState == null) {
            findViewById<FragmentContainerView>(R.id.fragment_container).let{
                containerLayout ->
                    val listFragment = ListFragment()
                    supportFragmentManager.beginTransaction()
                        .add(containerLayout.id, listFragment)
                        .commit()
            }
        }
    }

    override fun onSelected(id: Int){
        //        val detailFragment = supportFragmentManager
        //            .findFragmentById(R.id.fragment_detail)
        //            as DetailFragment
        //        detailFragment.setCoffeeData(id)

        findViewBy(R.id.fragment_container).let {
            containerLayout ->
                val detailFragment = DetailFragment.newInstance(id)
                supportFragmentManager.beginTransaction()
                    .replace(containerLayout.id, detailFragment)
                    .addToBackStack(null)
                    .commit()
        }
    }
}
```

```

60    companion object {
61        /**
62         * Use this factory method to create a new instance of
63         * this fragment using the provided parameters.
64         *
65         * @param param1 Parameter 1.
66         * @param param2 Parameter 2.
67         * @return A new instance of fragment DetailFragment.
68         */
69        private const val COFFEE_ID = "COFFEE_ID"
70
71        // TODO: Rename and change types and number of parameters
72        @JvmStatic
73        fun newInstance(coffeeId: Int) =
74            DetailFragment().apply {
75                arguments = Bundle().apply {
76                   .putInt(COFFEE_ID, coffeeId)
77                }
78            }
79        }
80    }

```

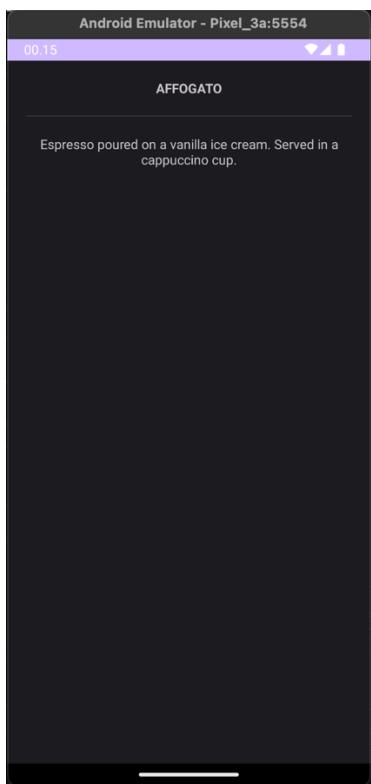
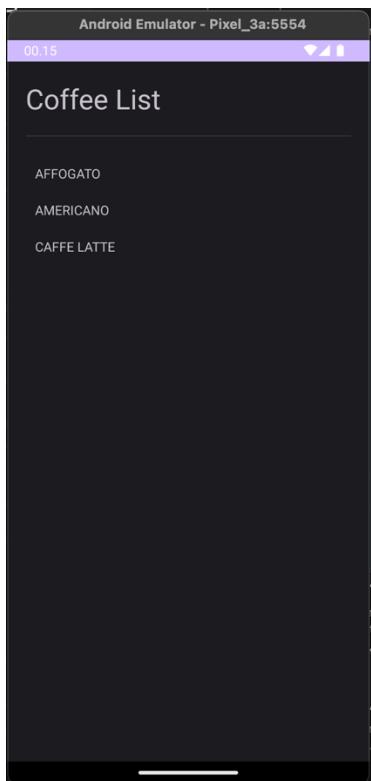
25. Tambahkan baris berikut sebelum override fun onSelected pada MainActivity.kt

```

46     override fun onViewCreated(view: View, savedInstanceState: Bundle?) {
47         super.onViewCreated(view, savedInstanceState)
48         val coffeeId = arguments?.getInt(COFFEE_ID, defaultValue: 0) ?: 0
49         setCoffeeData(coffeeId)
50     }
51
52     fun setCoffeeData(id: Int){
53         when(id){
54             R.id.affogato -> {
55                 coffeeTitle?.text = getString(R.string.affogato_title)
56                 coffeeDesc?.text = getString(R.string.affogato_desc)
57             }R.id.americano -> {
58                 coffeeTitle?.text = getString(R.string.americano_title)
59                 coffeeDesc?.text = getString(R.string.americano_desc)
60             }R.id.latte -> {
61                 coffeeTitle?.text = getString(R.string.latte_title)
62                 coffeeDesc?.text = getString(R.string.latte_desc)
63             } }
64     }

```

26. Selanjutnya, jalankan kembali aplikasi dan tampilannya akan seperti ini

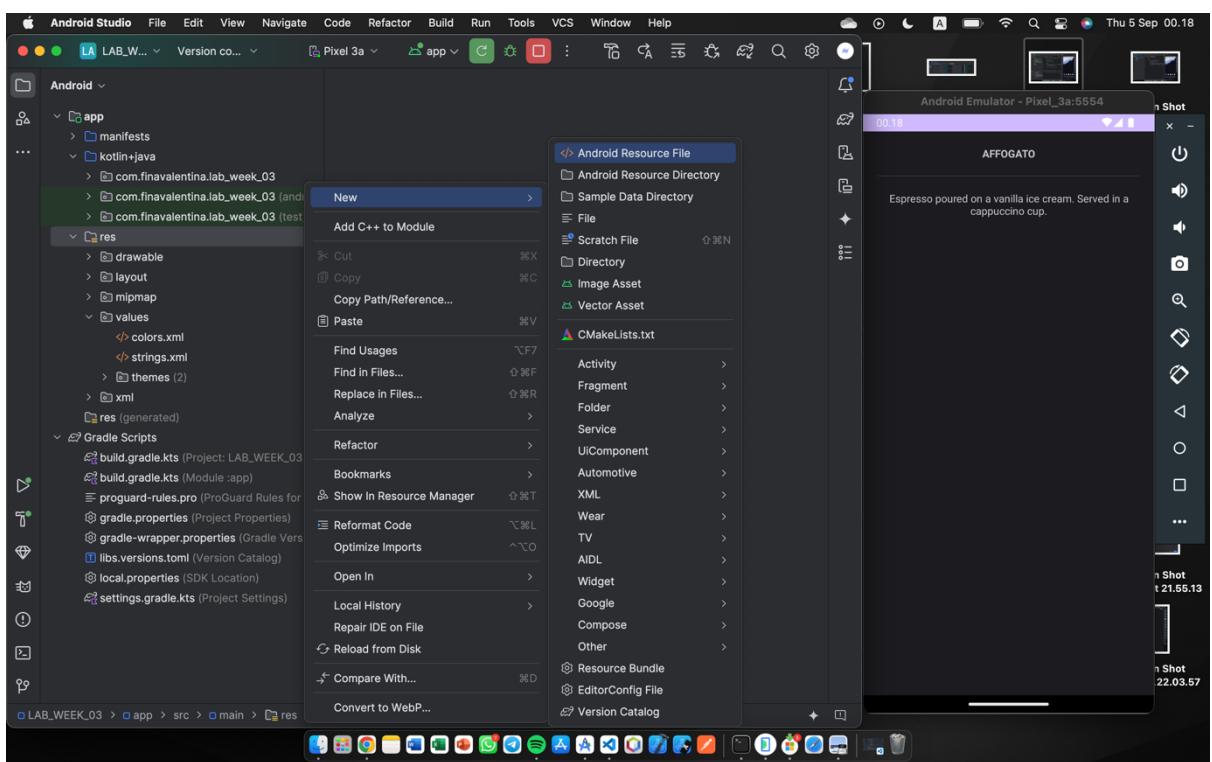


#### Part 04 – Jetpack Navigation

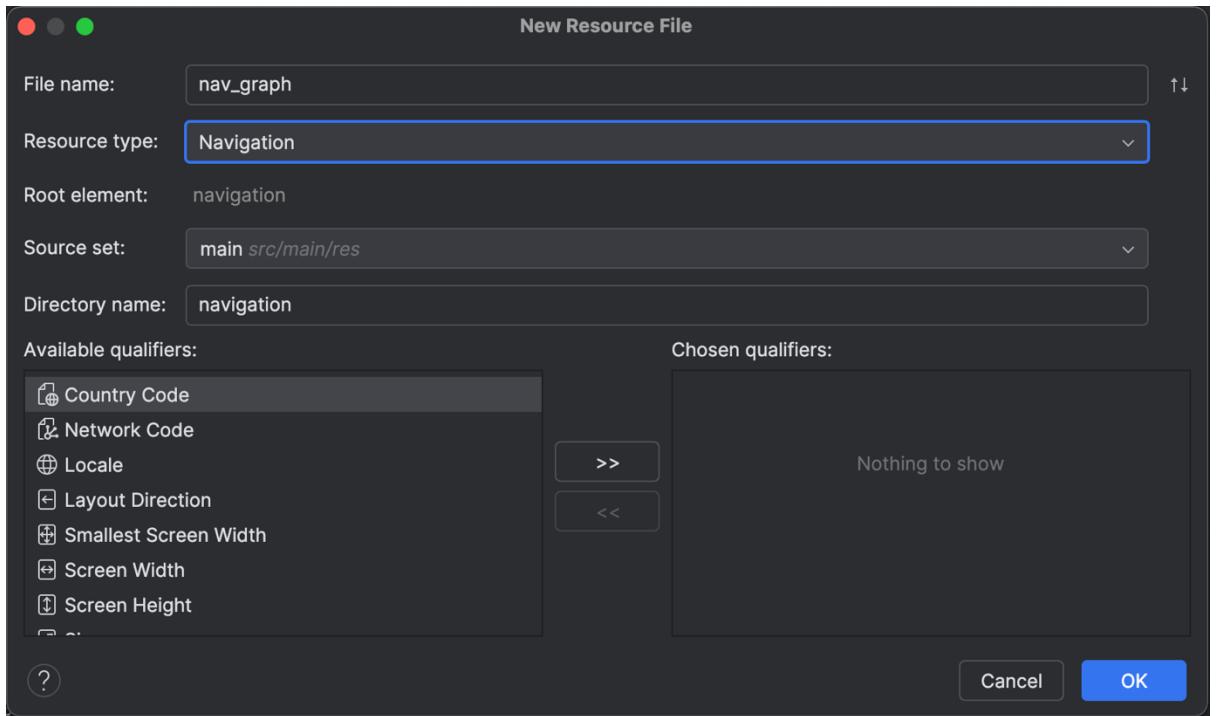
27. Masuk ke file build.gradle.kts (Module:app) dan tambahkan dependencies berikut, lalu Sync Now

```
38     dependencies {
39
40         implementation(libs.androidx.core.ktx)
41         implementation(libs.androidx.appcompat)
42         implementation("androidx.navigation:navigation-fragment-ktx:2.5.3")
43         implementation("androidx.navigation:navigation-ui-ktx:2.5.3")
44         implementation(libs.material)
45         implementation(libs.androidx.activity)
46         implementation(libs.androidx.constraintlayout)
47         testImplementation(libs.junit)
48         androidTestImplementation(libs.androidx.junit)
49         androidTestImplementation(libs.androidx.espresso.core)
50     }
```

28. Selanjutnya, buat Resource Android File. Dengan cara Klik kanan pada folder Res > New > Android Resource File.



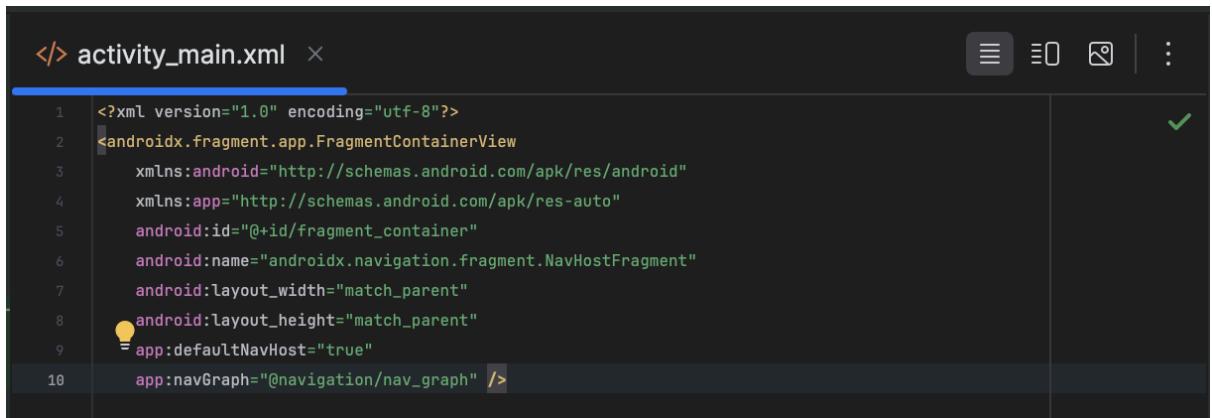
29. Isikan nama resource dan type nya, lalu klik "OK"



30. Selanjutnya ubah isi file nav\_graph.xml menjadi seperti ini

```
</> nav_graph.xml <-->
<?xml version="1.0" encoding="utf-8"?>
<navigation>
    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:id="@+id/nav_graph"
    app:startDestination="@+id/coffeeList">
    <fragment
        android:id="@+id/coffeeList"
        android:name="com.finavalentina.lab_week_03.ListFragment"
        android:label="List"
        tools:layout="@layout/fragment_list">
        <action
            android:id="@+id/coffee_id_action"
            app:destination="@+id/coffeeDetail">
        </action>
    </fragment>
    <fragment
        android:id="@+id/coffeeDetail"
        android:name="com.finavalentina.lab_week_03.DetailFragment"
        android:label="Detail"
        tools:layout="@layout/fragment_detail" />
</navigation>
```

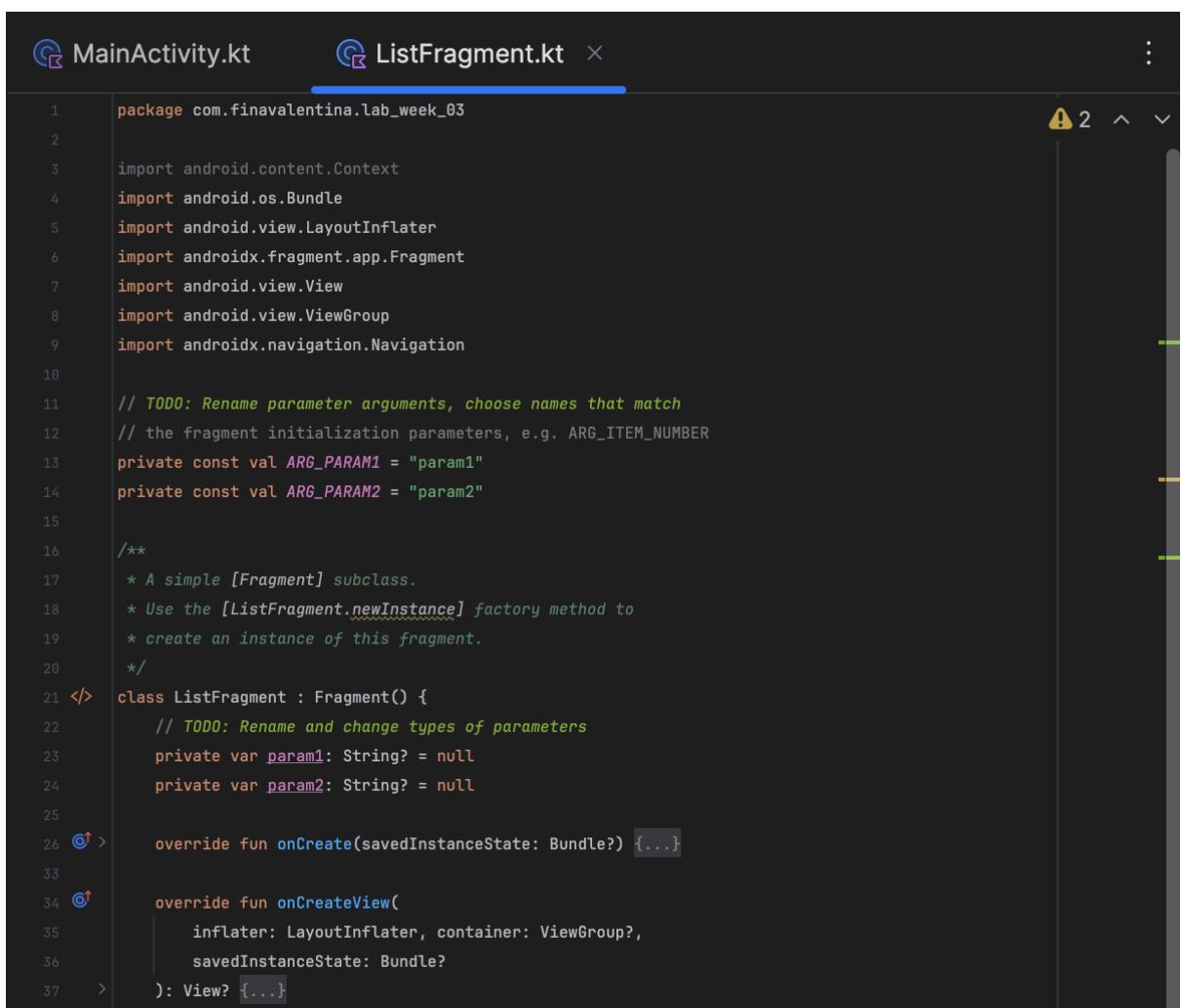
31. Selanjutnya, masuk ke activity\_main.xml lalu ubah isinya menjadi seperti ini



```
</> activity_main.xml × : ✓

1 <?xml version="1.0" encoding="utf-8"?>
2 <androidx.fragment.app.FragmentContainerView
3     xmlns:android="http://schemas.android.com/apk/res/android"
4     xmlns:app="http://schemas.android.com/apk/res-auto"
5     android:id="@+id/fragment_container"
6     android:name="androidx.navigation.fragment.NavHostFragment"
7     android:layout_width="match_parent"
8     android:layout_height="match_parent"
9     app:defaultNavHost="true"
10    app:navGraph="@navigation/nav_graph" />
```

32. Selanjutnya, masuk ke ListFragment.kt dan ubah isinya menjadi seperti ini



```
MainActivity.kt × : 2 ↗ ↗
ListFragment.kt × : 2 ↗ ↗

1 package com.finavalentina.lab_week_03
2
3 import android.content.Context
4 import android.os.Bundle
5 import android.view.LayoutInflater
6 import androidx.fragment.app.Fragment
7 import android.view.View
8 import android.view.ViewGroup
9 import androidx.navigation.Navigation
10
11 // TODO: Rename parameter arguments, choose names that match
12 // the fragment initialization parameters, e.g. ARG_ITEM_NUMBER
13 private const val ARG_PARAM1 = "param1"
14 private const val ARG_PARAM2 = "param2"
15
16 /**
17 * A simple [Fragment] subclass.
18 * Use the [ListFragment.newInstance] factory method to
19 * create an instance of this fragment.
20 */
21 </> class ListFragment : Fragment() {
22     // TODO: Rename and change types of parameters
23     private var param1: String? = null
24     private var param2: String? = null
25
26     @Override > override fun onCreate(savedInstanceState: Bundle?) {...}
27
28     @Override > override fun onCreateView(
29         inflater: LayoutInflater, container: ViewGroup?,
30         savedInstanceState: Bundle?
31     ): View? {...}
```

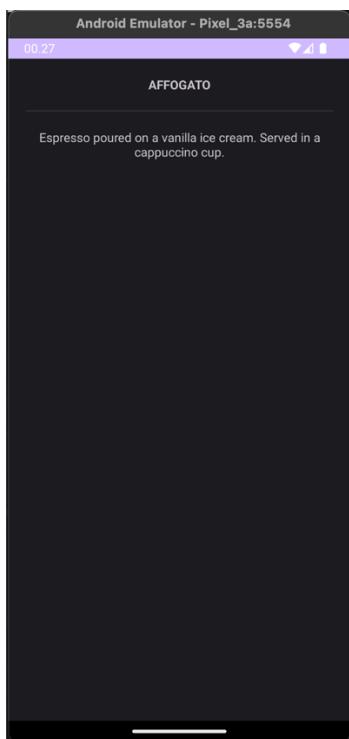
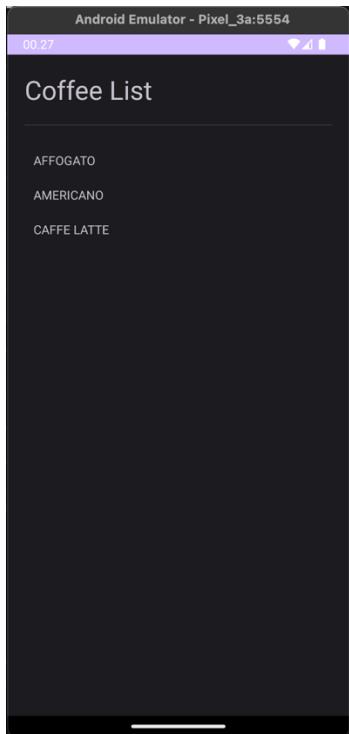
```
53  ⚡    override fun onViewCreated(view: View, savedInstanceState: Bundle?) {
54      super.onViewCreated(view, savedInstanceState)
55      val coffeeList = listOf<View>(
56          view.findViewById(R.id.affogato),
57          view.findViewById(R.id.americano),
58          view.findViewById(R.id.latte)
59      )
60      // coffeeList.forEach{
61      //     it.setOnClickListener(this)
62      //}
63
64      coffeeList.forEach { coffee ->
65          val fragmentBundle = Bundle()
66          fragmentBundle.putInt(COFFEE_ID, coffee.id)
67          coffee.setOnClickListener(
68              Navigation.createNavigateOnClickListener(
69                  R.id.coffee_id_action, fragmentBundle
70              )
71          )
72      }
73  }
74
75  //    override fun onClick(v: View?) {
76  //        v?.let{
77  //            coffee -> coffeeListener.onSelected(coffee.id)
78  //        }
79  //    }
80
81  companion object {
82      const val COFFEE_ID = "COFFEE_ID"
83  }
84 }
```

33. Selanjutnya, masuk ke file MainActivity.kt dan ubah isinya menjadi seperti ini

```
>MainActivity.kt
```

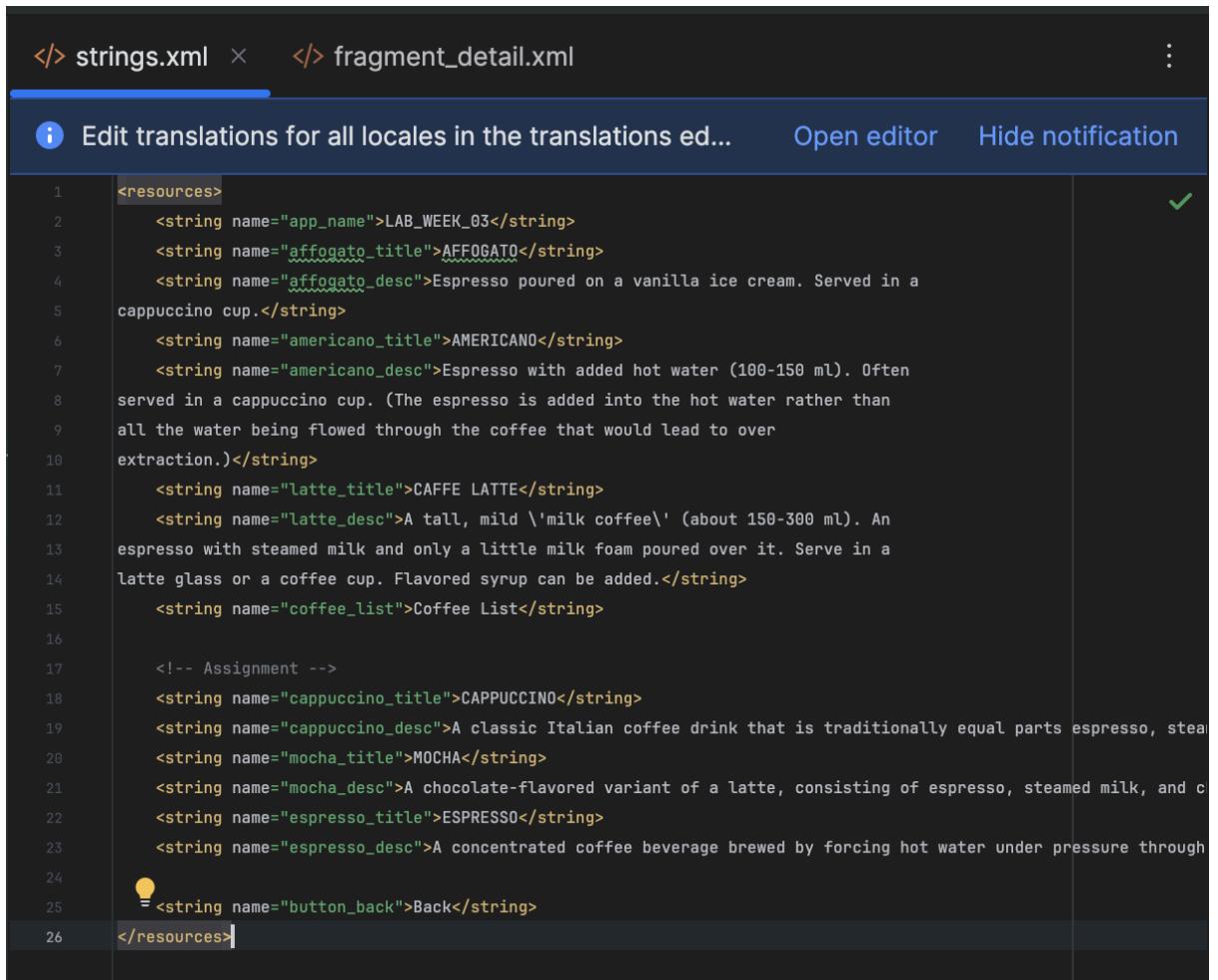
```
1 package com.finavalentina.lab_week_03
2
3 import android.os.Bundle
4 import androidx.appcompat.app.AppCompatActivity
5
6 class MainActivity : AppCompatActivity() {
7     override fun onCreate(savedInstanceState: Bundle?) {
8         super.onCreate(savedInstanceState)
9         setContentView(R.layout.activity_main)
10    }
11 }
```

34. Lalu, coba jalankan kembali aplikasinya. Tampilan aplikasinya akan seperti ini



### Assignment

35. Masuk ke strings.xml lalu tambahkan beberapa baris yang di berikan tanda <— Assignment -->



The screenshot shows the Android Studio code editor with the file `strings.xml` open. The code defines several strings for different coffee types and a back button label:

```
<resources>
    <string name="app_name">LAB_WEEK_03</string>
    <string name="affogato_title">AFFOGATO</string>
    <string name="affogato_desc">Espresso poured on a vanilla ice cream. Served in a cappuccino cup.</string>
    <string name="americano_title">AMERICANO</string>
    <string name="americano_desc">Espresso with added hot water (100-150 mL). Often served in a cappuccino cup. (The espresso is added into the hot water rather than all the water being flowed through the coffee that would lead to over extraction.)</string>
    <string name="latte_title">CAFFE LATTE</string>
    <string name="latte_desc">A tall, mild 'milk coffee' (about 150-300 mL). An espresso with steamed milk and only a little milk foam poured over it. Serve in a latte glass or a coffee cup. Flavored syrup can be added.</string>
    <string name="coffee_list">Coffee List</string>

    <!-- Assignment -->
    <string name="cappuccino_title">CAPPUCCINO</string>
    <string name="cappuccino_desc">A classic Italian coffee drink that is traditionally equal parts espresso, steamed milk, and foam.</string>
    <string name="mocha_title">MOCHA</string>
    <string name="mocha_desc">A chocolate-flavored variant of a latte, consisting of espresso, steamed milk, and chocolate syrup.</string>
    <string name="espresso_title">ESPRESSO</string>
    <string name="espresso_desc">A concentrated coffee beverage brewed by forcing hot water under pressure through ground coffee beans.</string>
    = <string name="button_back">Back</string>
</resources>
```

36. Masuk ke file fragment\_detail.xml, lalu ubah isinya menjadi seperti ini

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="20dp"
    tools:context=".DetailFragment">

    <TextView
        android:id="@+id/coffee_title"
        android:textStyle="bold"
        android:gravity="center"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        tools:text="@string/affogato_title"/>
    <View
        android:layout_width="match_parent"
        android:layout_height="1dp"
        android:layout_marginVertical="20dp"
        android:background="?android:attr/dividerVertical" />
    <TextView
        android:id="@+id/coffee_desc"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:gravity="center"
        tools:text="Espresso poured on a vanilla ice cream. Served in a cap..."/>
    <!-- Assignment -->
    <Button
        android:id="@+id/button_back"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:layout_marginTop="20dp"
        android:text="@string/button_back" />
</LinearLayout>
```

37. Selanjutnya, masuk ke fragment\_list.xml dan tambahkan baris berikut sebelum </LinearLayout>

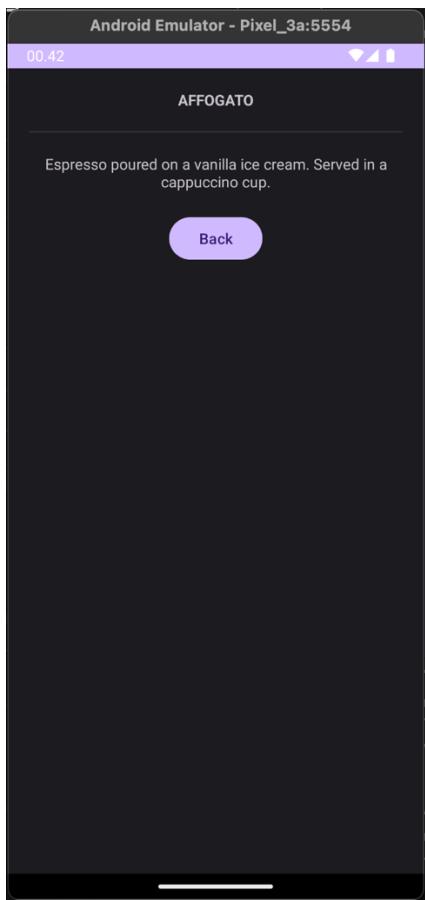
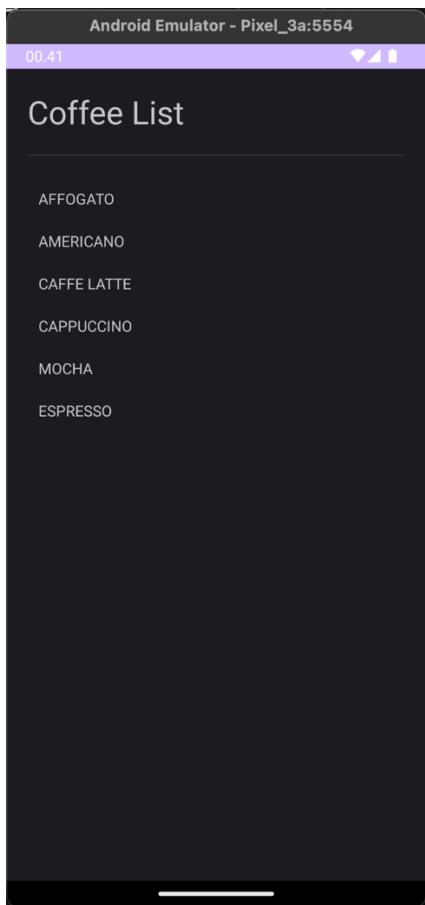
```
41
42         <!-- Assignment -->
43         <TextView
44             android:id="@+id/cappuccino"
45             android:layout_width="match_parent"
46             android:layout_height="wrap_content"
47             android:padding="10dp"
48             android:text="@string/cappuccino_title"/>
49
50         <TextView
51             android:id="@+id/mocha"
52             android:layout_width="match_parent"
53             android:layout_height="wrap_content"
54             android:padding="10dp"
55             android:text="@string/mocha_title"/>
56
57         <TextView
58             android:id="@+id/espresso"
59             android:layout_width="match_parent"
60             android:layout_height="wrap_content"
61             android:padding="10dp"
62             android:text="@string/espresso_title"/>
63
64     </LinearLayout>
65 </ScrollView>
```

38. Selanjutnya, masuk ke DetailFragment.kt dan ubah isinya menjadi seperti ini

```
1 package com.finavalentina.lab_week_03
2
3 import android.os.Bundle
4 import androidx.fragment.app.Fragment
5 import android.view.LayoutInflater
6 import android.view.View
7 import android.view.ViewGroup
8 import android.widget.Button
9 import android.widget.TextView
10
11 // TODO: Rename parameter arguments, choose names that match
12 // the fragment initialization parameters, e.g. ARG_ITEM_NUMBER
13 private const val ARG_PARAM1 = "param1"
14 private const val ARG_PARAM2 = "param2"
15
16 /**
17 * A simple [Fragment] subclass.
18 * Use the [DetailFragment.newInstance] factory method to
19 * create an instance of this fragment.
20 */
21 </> class DetailFragment : Fragment() {
22     // TODO: Rename and change types of parameters
23     private var param1: String? = null
24     private var param2: String? = null
25
26     private val coffeeTitle: TextView?
27         get() = view?.findViewById(R.id.coffee_title)
28     private val coffeeDesc: TextView?
29         get() = view?.findViewById(R.id.coffee_desc)
30     private val backButton: Button?
31         get() = view?.findViewById(R.id.button_back)
32
33     <@+> override fun onCreate(savedInstanceState: Bundle?) { ... }
34
35     <@+> override fun onCreateView(
36         inflater: LayoutInflater, container: ViewGroup?,
37         savedInstanceState: Bundle?
38     ): View? { ... }
39
40     <@+> override fun onViewCreated(view: View, savedInstanceState: Bundle?) {
41         super.onViewCreated(view, savedInstanceState)
42         val coffeeId = arguments?.getInt(COFFEE_ID, defaultValue: 0) ?: 0
43         setCoffeeData(coffeeId)
44
45         // Assignment
46         backButton?.setOnClickListener {
47             parentFragmentManager.popBackStack()
48     }
49
50
51
52
53
54
55
56
57 }
```

```
58    }
59
60    fun setCoffeeData(id: Int){
61        when(id){
62            R.id.affogato -> {
63                coffeeTitle?.text = getString(R.string.affogato_title)
64                coffeeDesc?.text = getString(R.string.affogato_desc)
65            }
66            R.id.americano -> {
67                coffeeTitle?.text = getString(R.string.americano_title)
68                coffeeDesc?.text = getString(R.string.americano_desc)
69            }
70            R.id.latte -> {
71                coffeeTitle?.text = getString(R.string.latte_title)
72                coffeeDesc?.text = getString(R.string.latte_desc)
73            }
74
75            // Assignment
76            R.id.cappuccino -> {
77                coffeeTitle?.text = getString(R.string.cappuccino_title)
78                coffeeDesc?.text = getString(R.string.cappuccino_desc)
79            }
80            R.id.mocha -> {
81                coffeeTitle?.text = getString(R.string.mocha_title)
82                coffeeDesc?.text = getString(R.string.mocha_desc)
83            }
84            R.id.espresso -> {
85                coffeeTitle?.text = getString(R.string.espresso_title)
86                coffeeDesc?.text = getString(R.string.espresso_desc)
87            }
88        }
89    }
```

39. Lalu, jalankan kembali aplikasinya maka tampilannya akan ada Tombol kembali di halaman Detail



40. Selesai