



# **FIT2081 Mobile Application Development**

## **WEEK 5**

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Semester 1, 2023

Monash University Malaysia



# Announcement for Week 5

- Please complete your pre-reading quiz and submit by Monday 4pm. You can find the pre-reading quiz link at moodle “assessment” section.
- You will have to complete and submit the workshop quiz which will make available after the forum by Wednesday 11.55pm.
- Please complete your lab tasks before joining your lab session. Your lab solution must be submitted to moodle by Friday 11.55pm.

# Learning Outcomes for Week 5

- Advanced UI Design
- Examine more complex UI options available
- Understand how to correctly display lists of data (using listView)

# Activities and Checklist for week 5

Activity	Notes	Checked?
Study the slide “FIT2081_Week4_Malaysia” & All the reading material in the moodle	Useful to complete your lab tasks.	
Complete the pre-reading quiz	Access it from the “assessment section” in moodle. Submit by Monday 4pm.	
Attend Forum	Online, for topics wrap-up.	
Complete Workshop quiz	Workshop quiz questions will be uploaded after the Forum on Monday. Submit by Wednesday 11.55pm.	
Complete lab task	Please refer to the complete section in week 5 moodle	
Attend tutorial	OPTIONAL – if you have issue regarding the lab tasks	
Attend Lab	COMPULSORY – You have to complete the lab tasks before coming to the lab. Submit your lab tasks (including the extra task) on Friday 11.55pm	

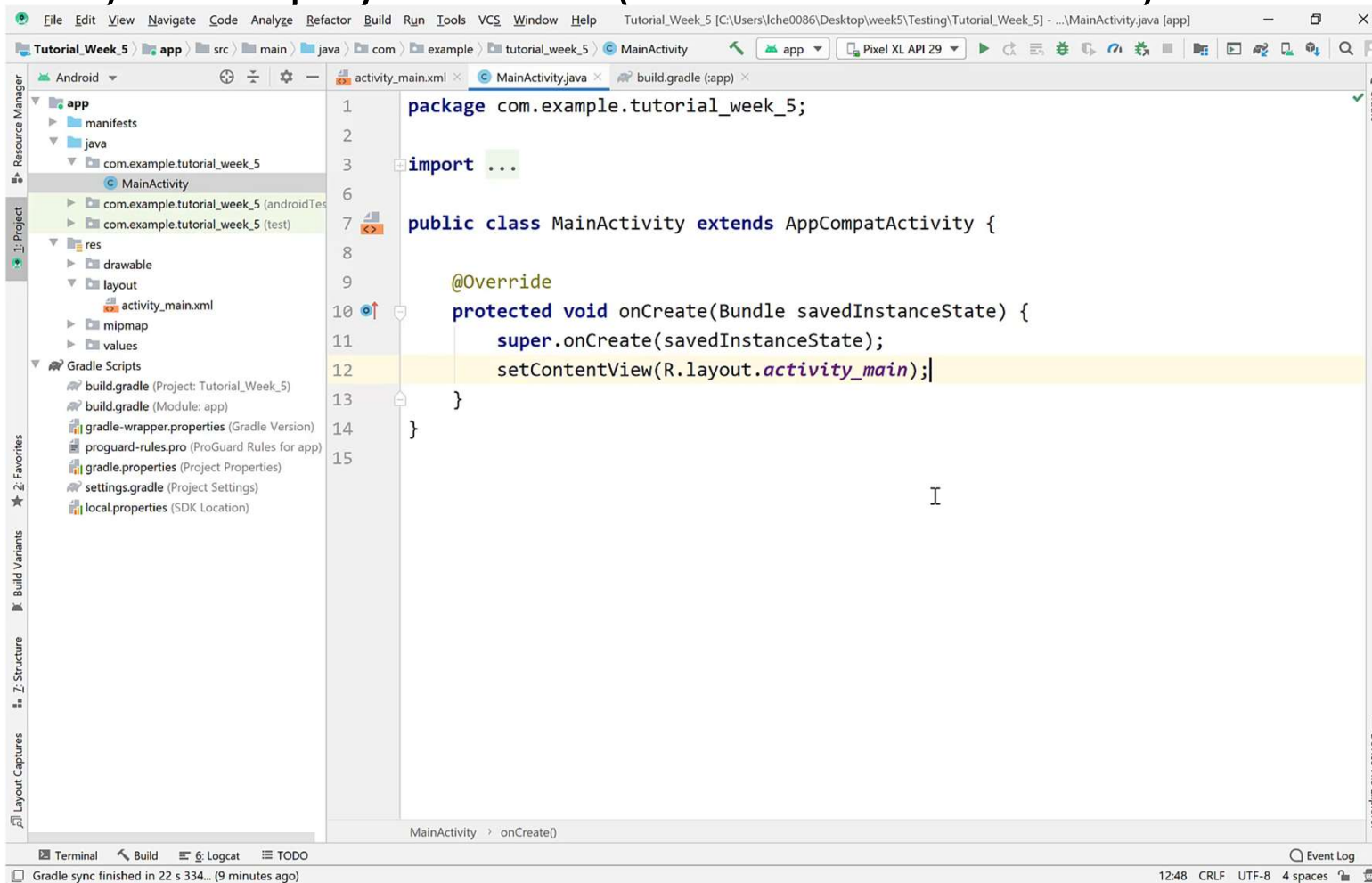
# Tutorial time!



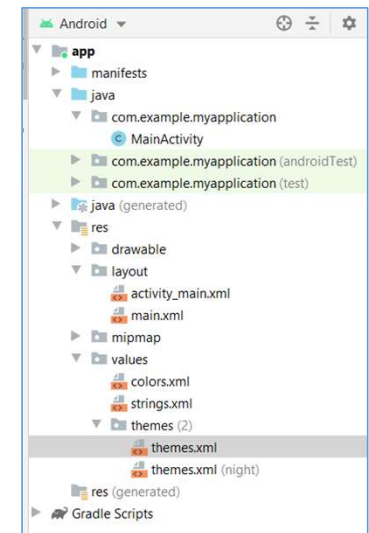
GIF retrieved from <https://giphy.com>

# Video 1: Setup Layout, Toolbar and FAB button

## 1) Please play the video (12 minutes 40 seconds)



Note: In the latest Android Studio, the style.xml has been renamed as themes, but it works the same

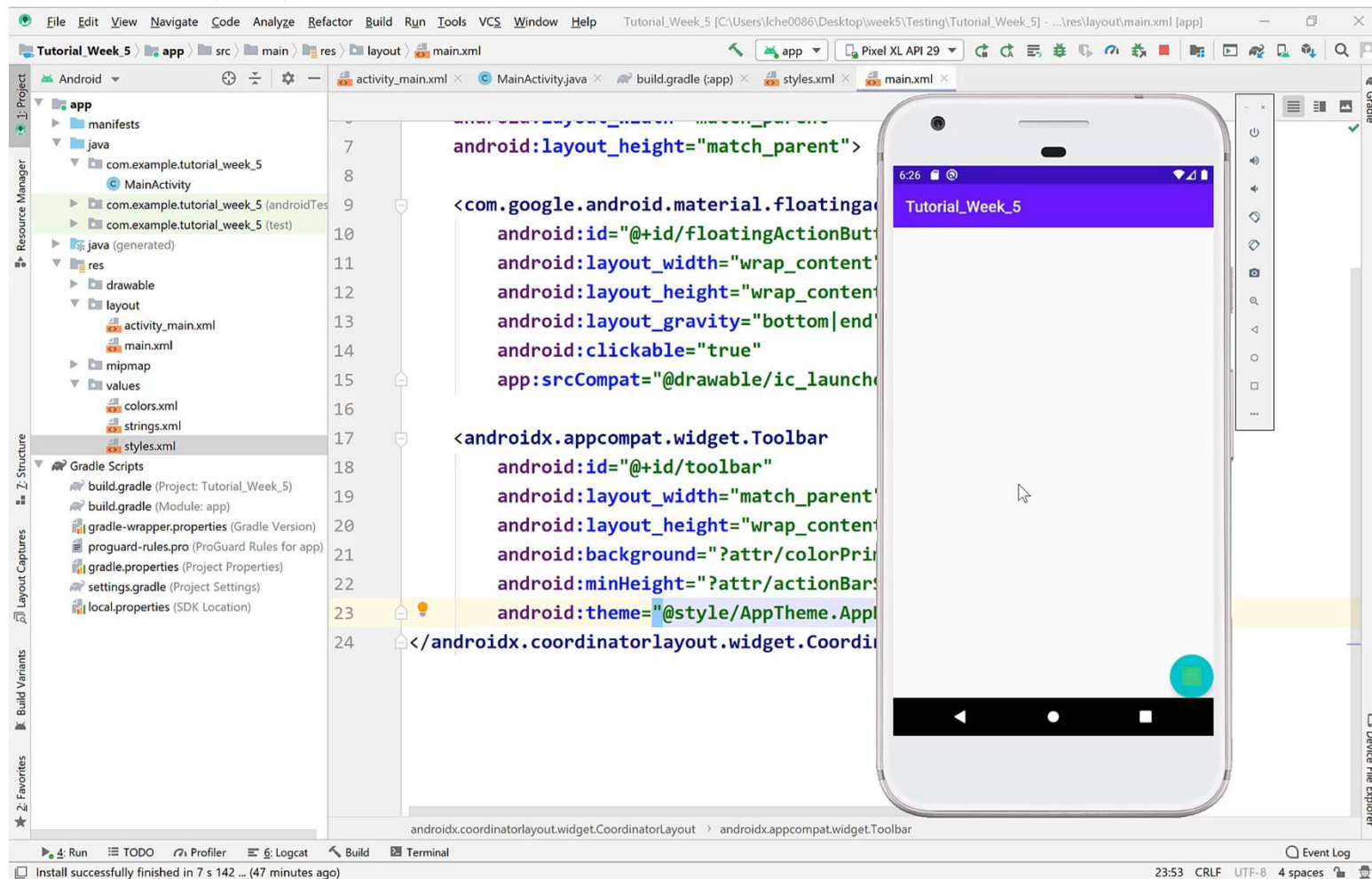


```
<?xml version="1.0" tools="http://schemas.android.com/tools">
<!-- Base application theme. -->
<style name="Theme.MyApplication" parent="Theme.MaterialComponents.DayNight.NoActionBar">
    <!-- Primary brand color. -->
    <item name="colorPrimary">@color/purple_500</item>
    <item name="colorPrimaryVariant">@color/purple_700</item>
    <item name="colorOnPrimary">@color/white</item>
    <!-- Secondary brand color. -->
    <item name="colorSecondary">@color/teal_200</item>
    <item name="colorSecondaryVariant">@color/teal_700</item>
    <item name="colorOnSecondary">@color/black</item>
    <!-- Status bar color. -->
    <item name="android:statusBarColor" tools:targetApi="1">@attr/colorPrimaryVariant</item>
    <!-- Customize your theme here. -->
</style>

<style name="AppTheme.AppBarOverlay" parent="ThemeOverlay.AppCompat.Dark.ActionBar">
</resources>
```

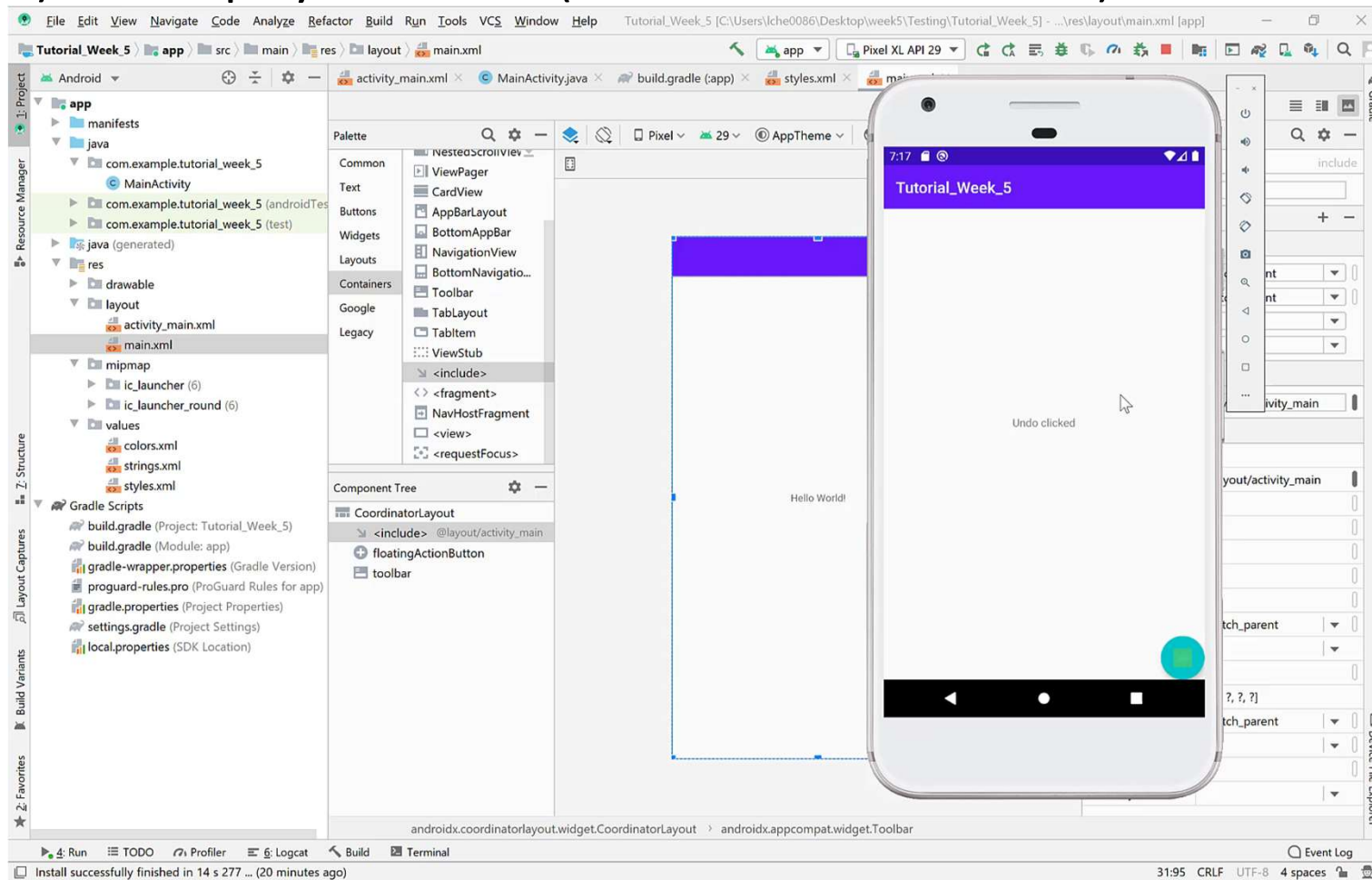
# Video 2: Listen to FAB Events and Making a Snackbar

1) Please play the video (12 minutes 42 Seconds)



# Video 3: Create a listview

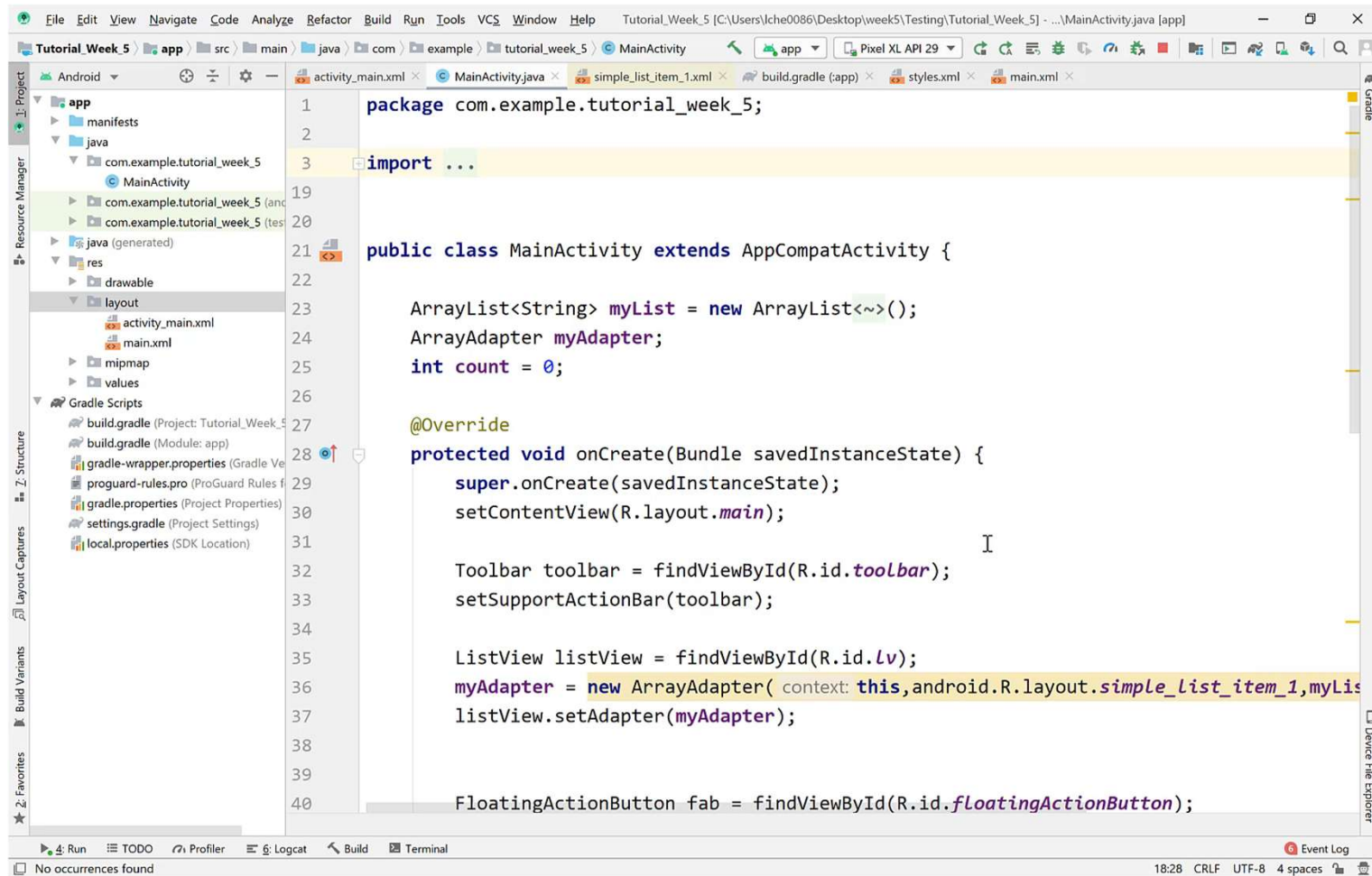
1) Please play the video (10 minutes 03 Seconds)





# Video 4: Create Drawer Navigation menu (including Navigation View Events Listener)

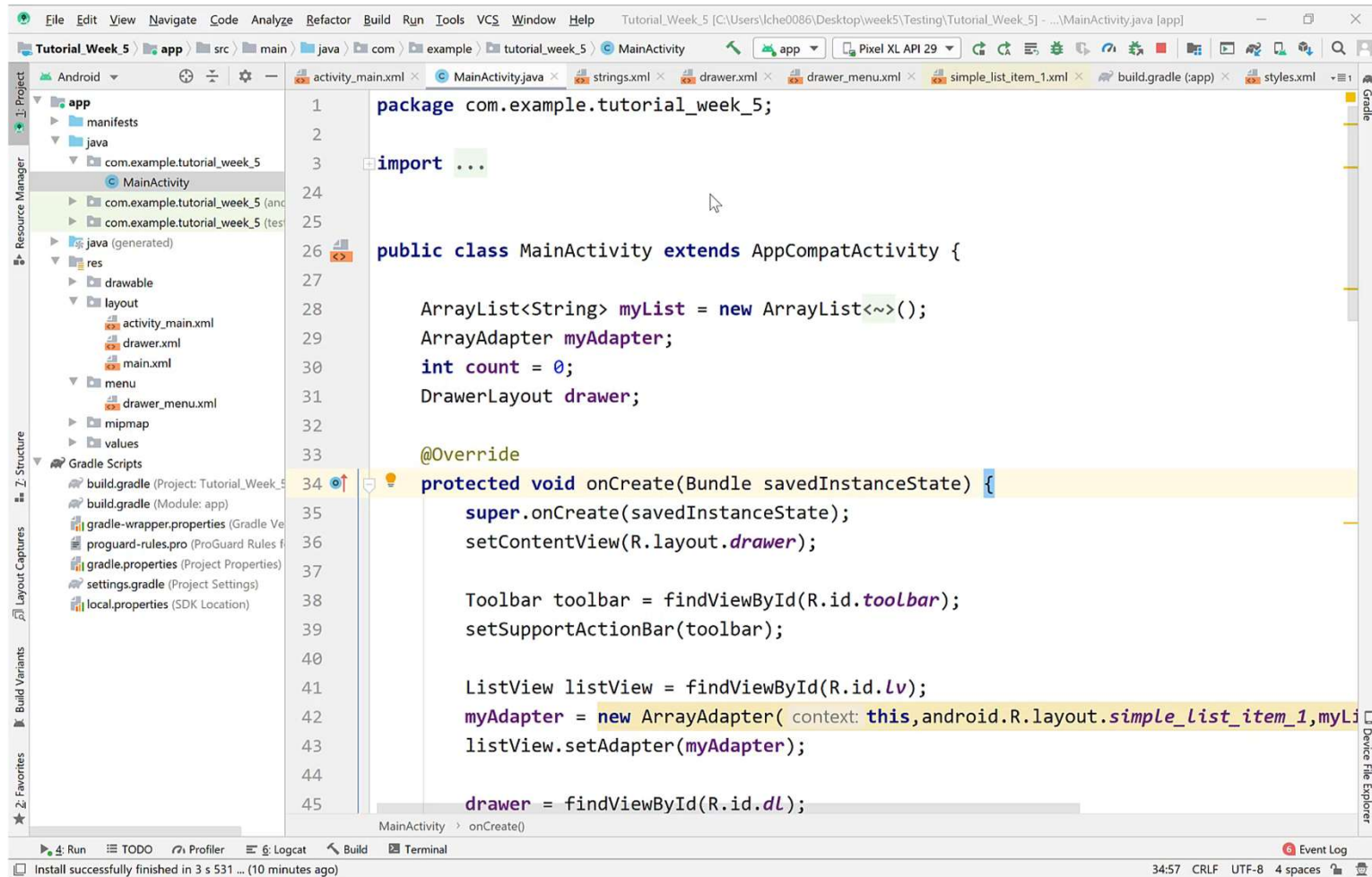
## 1) Please play the video (19 minutes 59 seconds)



```
1 package com.example.tutorial_week_5;
2
3 import ...
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21 public class MainActivity extends AppCompatActivity {
22
23     ArrayList<String> myList = new ArrayList<>();
24     ArrayAdapter myAdapter;
25     int count = 0;
26
27     @Override
28     protected void onCreate(Bundle savedInstanceState) {
29         super.onCreate(savedInstanceState);
30         setContentView(R.layout.main);
31
32         Toolbar toolbar = findViewById(R.id.toolbar);
33         setSupportActionBar(toolbar);
34
35         ListView listView = findViewById(R.id.lv);
36         myAdapter = new ArrayAdapter<String>(context: this, android.R.layout.simple_list_item_1, myList);
37         listView.setAdapter(myAdapter);
38
39
40         FloatingActionButton fab = findViewById(R.id.floatingActionButton);
```

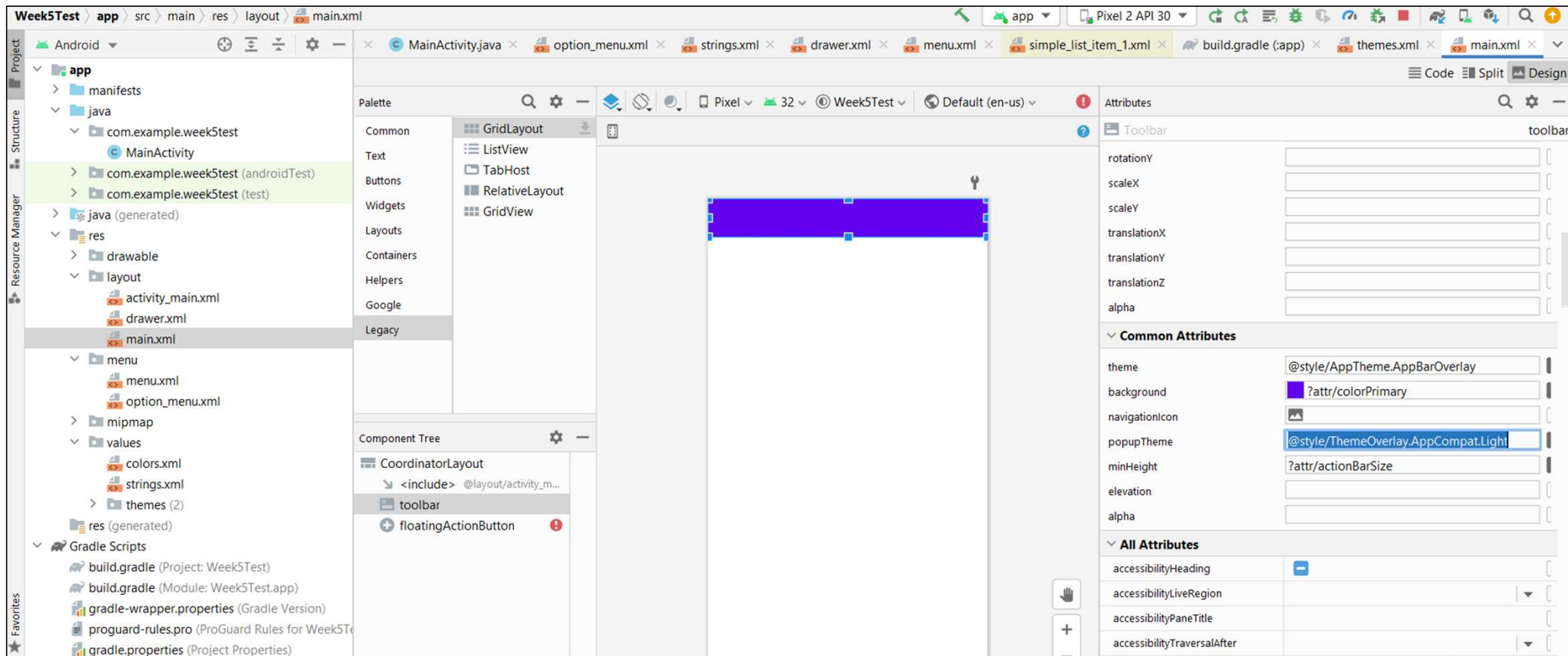
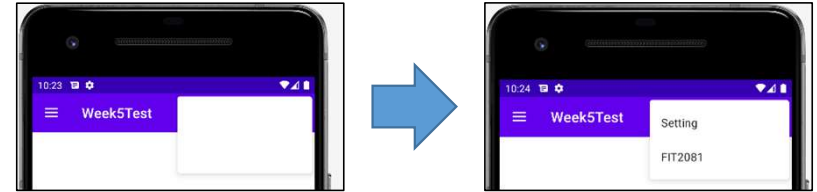
# Video 5: Create Option menu

1) Please play the video (12 minutes 28 seconds)



# Issue with Option menu

- 1) Unable to view the text in the option menu =(
  - Just change the popupTheme of the toolbar to @style/ThemeOverlay.AppCompat.Light



# Issue with ListView Scrolling

- 1) Unable to scroll the List view due to using a scrollable layout
  - Just add this line in the listView section in the xml file: `android:nestedScrollingEnabled="true"`

```
<ListView
    android:id="@+id/listview"
    android:layout_width="0dp"
    android:layout_height="0dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="@+id/guideline2"
    android:nestedScrollingEnabled="true"/>
```

# Lab time!



*Gif retrieved from <https://giphy.com/>*

# Lab 5 – Instructions

## Lab Specifications

Add the following features to the week 4 Books Library application:

**Task 1:** Add a navigation view (drawer layout) with the following items:

1. Add Books: Add a new Book to the list
2. Remove Last Book: remove the last Book added to the list (i.e. list view)
3. Remove All Books: remove all the Books (i.e. clear the list view)

**Task 2:** Add a Toolbar with Material design specs to your app with an options menu that contains :

1. An option to clear all the items
2. An option that loads the saved values from the shared preferences

**Task 3:**

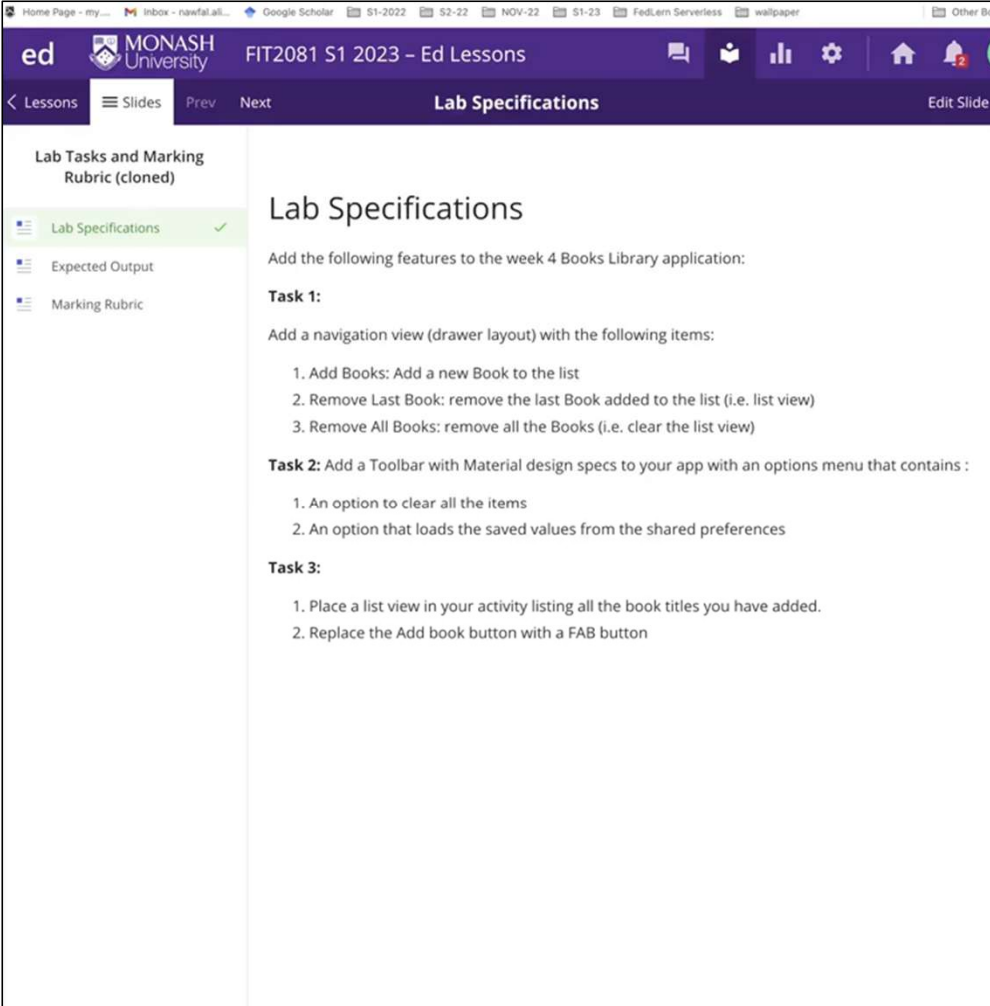
1. Place a list view in your activity listing all the book titles you have added.
2. Replace the Add book button with a FAB button

The expected output is depicted below:



# Lab 5 – Instructions

## Expected Output:



The screenshot shows a web interface for a Monash University course. The top navigation bar includes the 'ed' logo, the Monash University crest, and the course title 'FIT2081 S1 2023 - Ed Lessons'. Below this, a secondary navigation bar has tabs for 'Lessons', 'Slides', 'Prev', and 'Next'. The 'Slides' tab is active, and the slide title 'Lab Specifications' is displayed. On the left side of the slide, there is a sidebar titled 'Lab Tasks and Marking Rubric (cloned)' with three items: 'Lab Specifications' (highlighted with a green checkmark), 'Expected Output', and 'Marking Rubric'. The main content area of the slide is titled 'Lab Specifications' and contains the following text:

Add the following features to the week 4 Books Library application:

**Task 1:**

Add a navigation view (drawer layout) with the following items:

1. Add Books: Add a new Book to the list
2. Remove Last Book: remove the last Book added to the list (i.e. list view)
3. Remove All Books: remove all the Books (i.e. clear the list view)

**Task 2:** Add a Toolbar with Material design specs to your app with an options menu that contains :

1. An option to clear all the items
2. An option that loads the saved values from the shared preferences

**Task 3:**

1. Place a list view in your activity listing all the book titles you have added.
2. Replace the Add book button with a FAB button

\*\*\*Please join your tutorial class if you have any queries regarding the lab tasks.



Thank you!