FIT2081 Mobile Application Development

WEEK 9

Dr. Lim Chern Hong

Semester 1, 2023

Monash University Malaysia

Announcement for Week 9

- Monday is holiday (Labour day), forum session will not be replaced (Please refer to the PPT videos for the topics)

- Please complete your pre-reading quiz

- You will have to complete and submit the workshop quiz which will make available on Monday

- Please complete your lab tasks before joining your lab session. Your lab solution **must be submitted to moodle by Friday, 11.55pm.**

- **Thursday labs are cancelled due to public holiday and students have to submit an explanation video and submit with the code by Friday.**

- Pre-reading quiz and workshop quiz submission deadline extended to Friday 11.55pm (5 May).

Learning Outcomes for Week 9

Mobile sensors:

- Google Maps
- WebView
- Concurrency

Activities and Checklist for week 9

| Activity	Notes	Checked?
Study the slide "FIT2081_Week9_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 Friday 11.55pm.	
Complete Workshop quiz	Workshop quiz questions will be uploaded on Monday. Submit by Friday 11.55pm.	
Complete lab task	Please refer to the complete section in week 9 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!
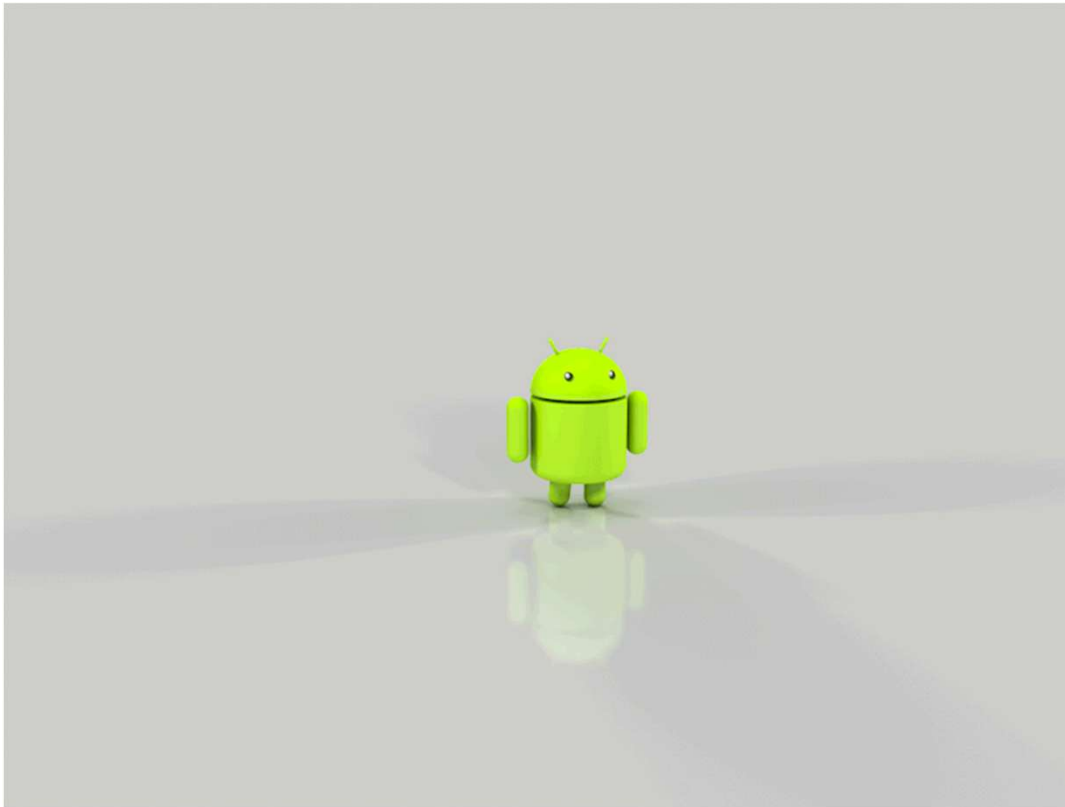
Gif retrieved from http://www.lowgif.com

Video 1: Implement concurrency thread to run heavy duty task in background

1) Please play the video (19 minutes 42 seconds)
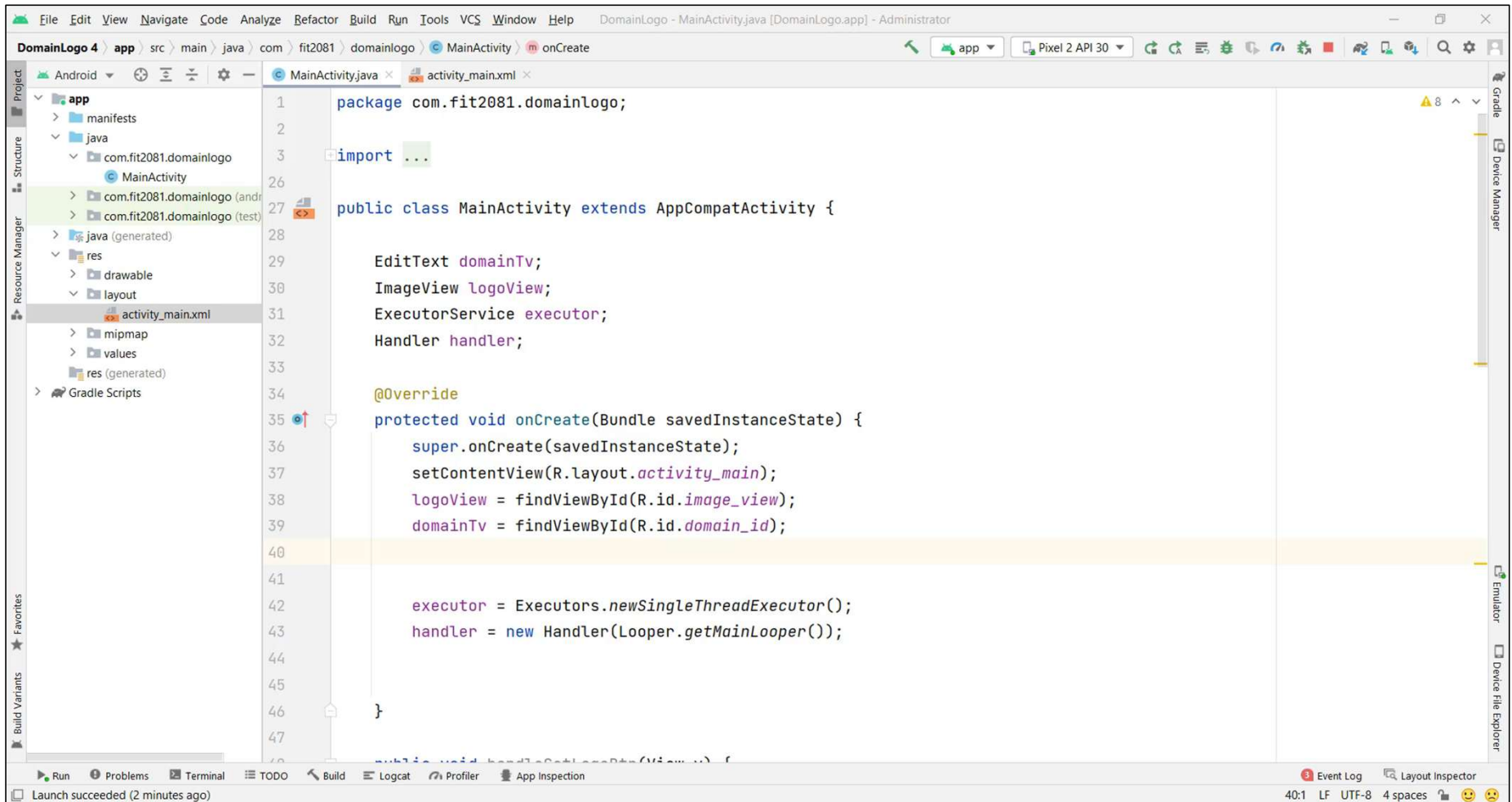
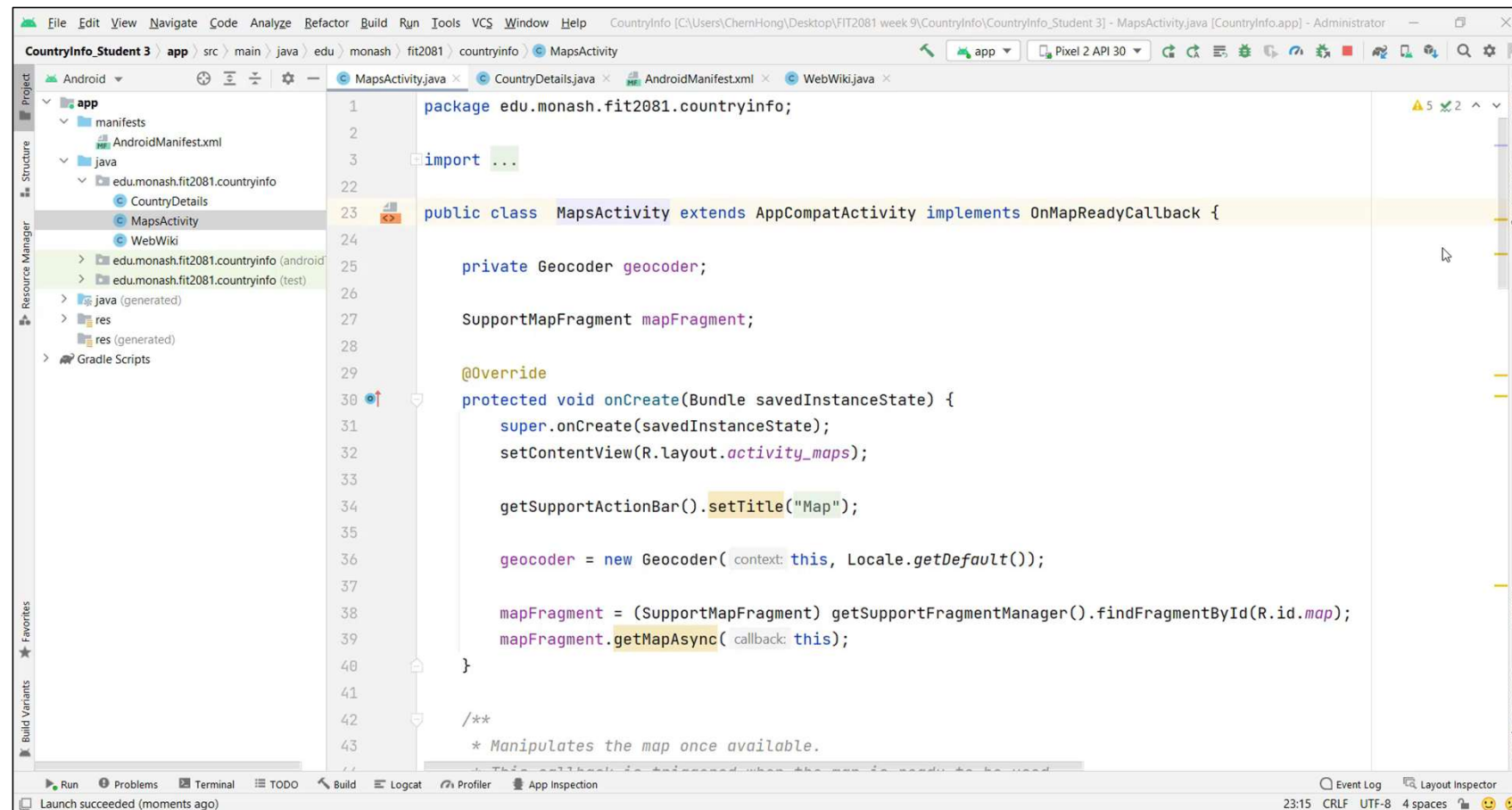# Video 2: Integration of Google map in android application

1) Please play the video (22 minutes 27 Seconds)

***Google API key is necessary for the application to access the googlemap service: https://developers.google.com/maps/documentation/javascript/get-api-key

The demo application is already comes with the an API Key.

Video 3: Webview setting

1) Please play the video (6 minutes 31 Seconds)
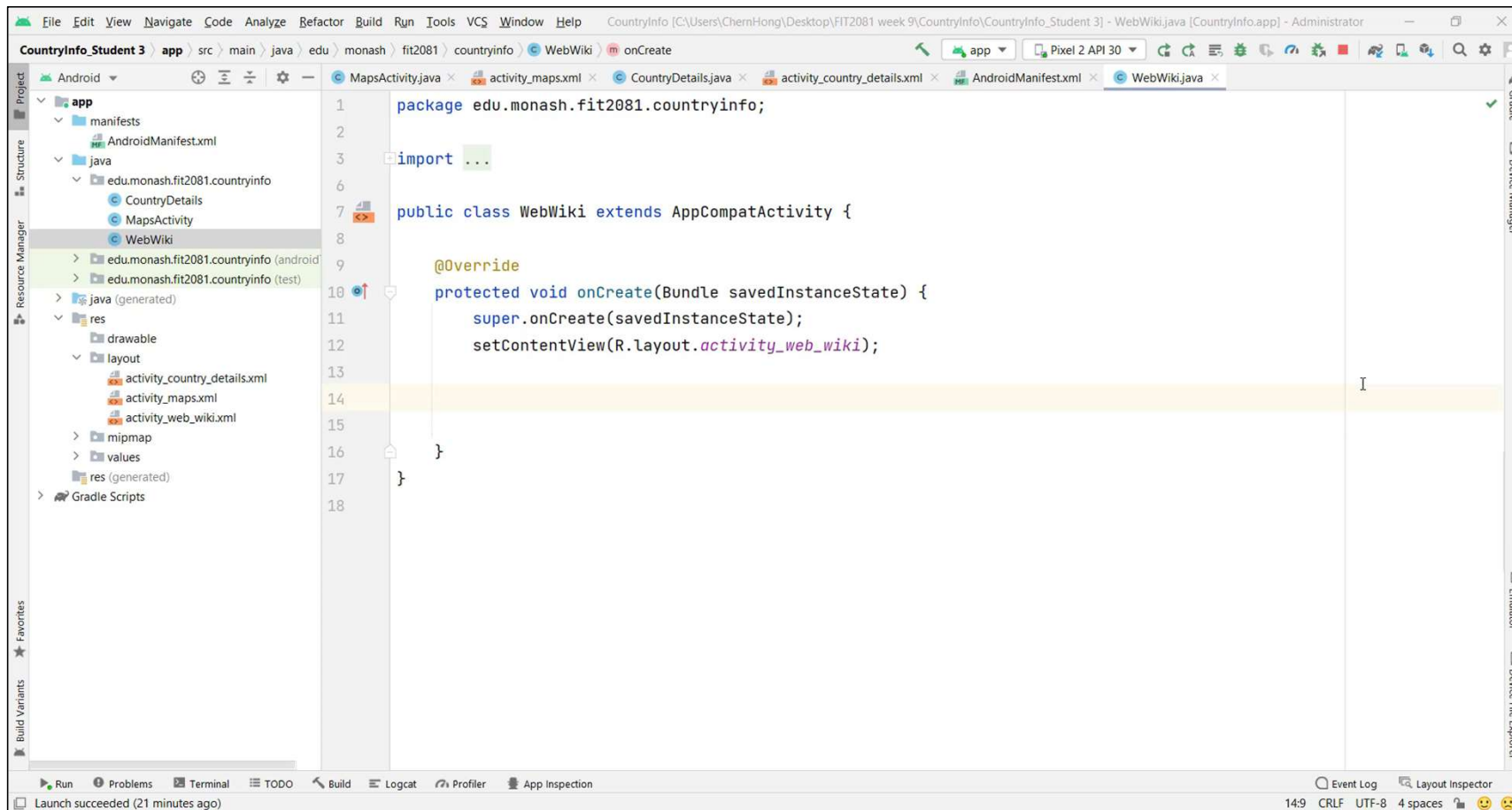
***Note: If you do not set the WebViewClient, it will navigate to the default browser of your device and open the webpage.

Extra: Set a home button

1. Set up these two lines in your activity

```
getSupportActionBar().setTitle("WIKI");
getSupportActionBar().setDisplayHomeAsUpEnabled(true);
```

2. Setup the parent of the current activity in your androidManifest.xml

```xml
<activity
    android:name=".WebWiki"
    android:parentActivityName=".CountryDetails">
    <meta-data
        android:name="android.support.PARENT_ACTIVITY"
        android:value=".CountryDetails" />
</activity>
```

3. Set up "android:launchMode="singleTop"" in your parent activity

```xml
<activity
    android:name=".CountryDetails"
    android:parentActivityName=".MapsActivity"
    android:launchMode="singleTop">
    <meta-data
        android:name="android.support.PARENT_ACTIVITY"
        android:value=".MapsActivity" />
</activity>
```

This is to ensure that the data in the intent still pass back to the parent activity.

Lab time!

Lab Instructions

Lab Specifications
Be aware that using the output from AI models without appropriate acknowledgement may constitute academic misconduct.

Download the CountryInfo App from the supplementary Material and do the following tasks:

Task 1:
Display the list of currencies and languages for the selected country separated by a comma.

Task 2:
Retrieve the image of the selected country flag from https://flagcdn.com and display it in an image view that should be located in the Country Details activity. (see DomainLogo App in the supplementary material for support)

Task 3:
Add a button to the country details UI with the text: WIKI + selected country name (e.g. WIKI MEXICO). Launch another Activity containing a WebView that displays the Wikipedia page for the selected country when this button is clicked. Include a home button back to the Country Details Activity.

Lab Instructions

Hints for Task 2

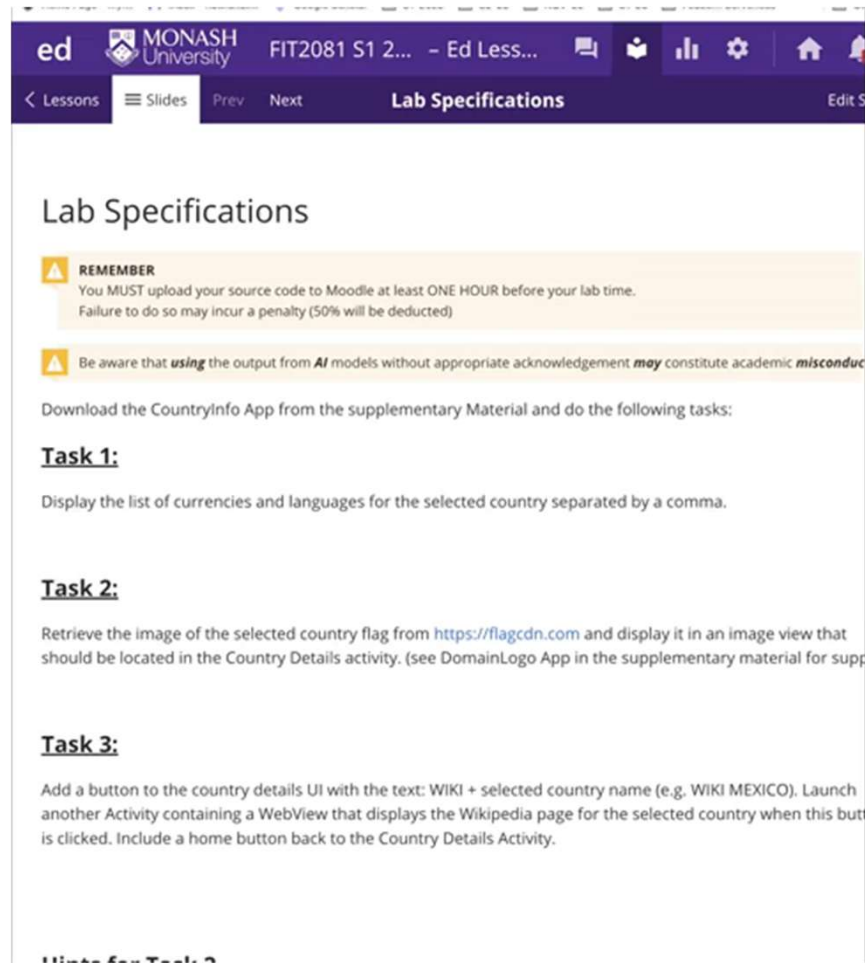The syntax of https://flagcdn.com web service is:
https://flagcdn.com/160x120/**COUNYTRY-CODE**.png"
Where **COUNTRYCODE** is the 2-letter code of the selected country in lowercase

Examples:
- United States: Code (us):https://flagcdn.com/160x120/us.png
- Italy: Code (it): https://flagcdn.com/160x120/it.png
- France: Code (fr): https://flagcdn.com/160x120/fr.png

You can get the two-letter code from the JSON file that is retrieved from https://restcountries.eu/ as presented in CoutnryDetails_student App/File: CountryDetails.java/ Class: GetCountryDetails

Expected outcome

Lab Specifications

Lab Specifications

⚠ **REMEMBER**
You MUST upload your source code to Moodle at least ONE HOUR before your lab time.
Failure to do so may incur a penalty (50% will be deducted)

⚠ Be aware that *using* the output from *AI* models without appropriate acknowledgement *may* constitute academic *misconduc*

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is clicked. Include a home button back to the Country Details Activity.

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

Thank you!