BAIT2073 Mobile Application Development
Academic Year 2023/2024
Practical Test (Set B)

Instruction:

1. Create a new Android project using the **Empty Views Activity** template.
2. Name the **project**, **package** and **folder** following the pattern below:

   Set[SetNumber][FullName]

	Example
Project Name	**SetBLiawChunVoon**
Package Name	com.example.**setbliawchunvoon**
Folder Name	**SetBLiawChunVoon**

3. Delete unused testing folders/packages.
4. Delete testing related lines in module-level gradle file.
5. Enable **view-binding**. You must use view-binding in your codes.
6. Use meaningful variable and component names.
7. Follow the programming conventions as in the practical.

Submission:

1. Generate, copy and paste the **APK** file into the project root folder.
   [Build] > [Build Bundle(s) / APK(s)] > [Build APK(s)]

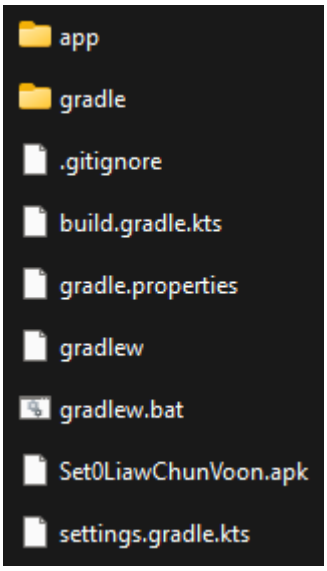
2. Name the **APK** file following the pattern below:

   Set[SetNumber][FullName].apk

	Example
APK File	**SetBLiawChunVoon**.apk

3. Clean the project to reduce file size.
4. Close the project.
5. Delete the following machine-dependent folders/files:
   - **.gradle** folder
   - **.idea** folder
   - **local.properties** file

6. **Compress** the project folder (**zip** format), **upload** to Google Classroom and **turn-in** your work.

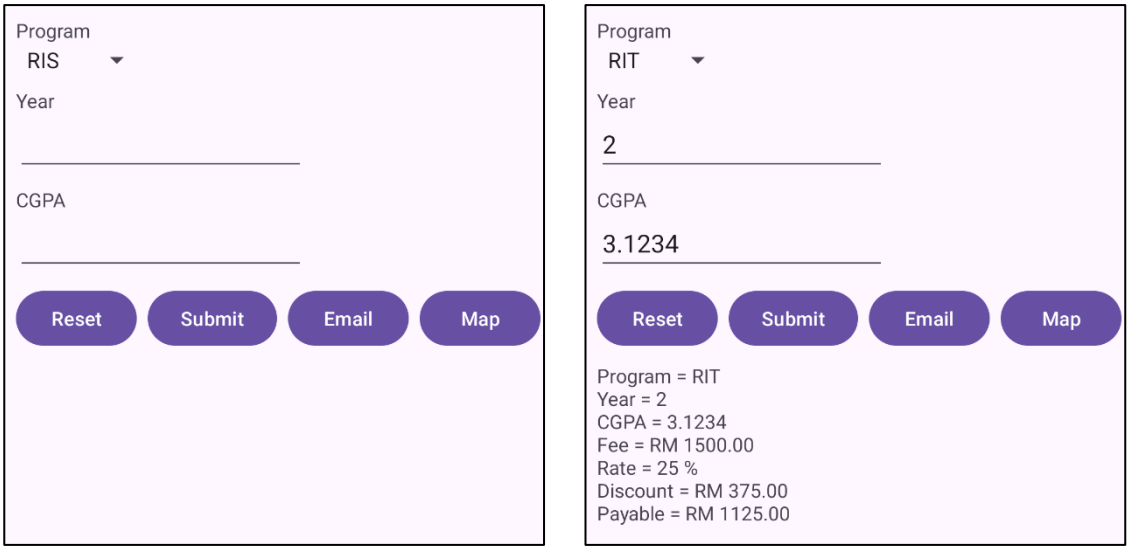


Sample project folder (final)

Question:

Create a mobile app to calculate semester fee, discount rate, discount and payable based on inputs.

Main Activity



Sample layout (your layout can be different)

Cursor focus should be default to the **first** input when the mobile app is started.

(A) Reset Button

Reset all input and output components. Place **cursor focus** on the **first** input.

(B) Submit Button

Obtain 3 inputs from the user, which include:

Input	Data Type	Remark	Input Validation
Program	String	Spinner with 4 entries: • RIS (default) • RIT • RSD • RSW	-
Year	Int	Max length = 1. Number. Default 0.	Cannot < 1 or > 3.
CGPA	Double	Max length = 6. Number (decimal). Default -1.0.	Cannot < 0.0 or > 4.0.

Perform **simple input validation** on the following 2 inputs. Use **Toast** to show simple error message:

- **Year**
- **CGPA**

Then, calculate the **Fee** (Double), discount **Rate** (Double), **Discount** (Double) and **Payable** (Double):

Program	Year	**Fee**
RIS	1	1100.00
	2	1200.00
	3	1300.00
RIT	1	1400.00
	2	1500.00
	3	1600.00
RSD, RSW	1	1700.00
	2	1800.00
	3	1900.00

CGPA	**Rate**
>= 3.75	1.00
>= 3.50	0.75
>= 3.25	0.50
>= 3.00	0.25
Below	0.00

Discount = Fee * Rate

Payable = Fee - Discount

Finally, display the outputs based on the following formats:

Value	Format
Program	-
Age	-
CGPA	4 decimal places.
Fee	2 decimal places, prefix with “RM”.
Rate	Percentage (multiply 100, 0 decimal place, postfix with “%”).
Discount	2 decimal places, prefix with “RM”.
Payable	2 decimal places, prefix with “RM”.

(C) Email and Map Button

By using **implicit intent**:

- Send email to **someone@example.com**.
- Open map at geolocation **3.215515,101.728186**.