

Objectives:

Make use of what was taught in this module to design and develop a *Movie Review Application* on the Android platform.

Scenario:

PopCornMovie is a company that rates movies. They are looking for a mobile application that allows users to rate movies they have watched.

Deadline

Week 7 Friday 23:59 – **2 Dec 2022**

Weightage

This assignment comprises **20%** of the final ICA.

Deliverables:

Listed below are the deliverables that is expected.

1. Zipped file with source codes that fulfills the Basic requirements.
2. Zipped file with source codes that fulfills the Intermediate requirements.
3. Zipped file with source codes that fulfills the Advanced requirements.

Format of file name:

[admin_number]_[Advanced/Intermediate/Basic].zip e.g. *201234A_Advanced.zip*

Instructions:

- This is an INDIVIDUAL assignment. Students are to submit their assignment online.
- Marks will be deducted for the following conditions:
 - Applications that cannot run upon first time installation
 - Late submissions
 - Not submitting work based on instructions given in the assignment
- Students caught plagiarizing from other source (Internet, friends, etc..) will cause their submission to be voided.
- The application should be able to run in the following environment
 - Emulator: *Pixel 2*
 - Minimal SDK: *API 27: Android 8.1* (Google API)

Note:

- Paddings and margins are not allowed to be used to move the view into position.
- Unless specified, all view sizes should only be either *wrap_content* or *match_parent*.

Part 1 Basic [30 marks]

For Basic, there is NO need to implement screen navigation.

Add Movie [AddMovieActivity]

This activity will assist the user to add in a new movie that s/he has just watched.

- a) Create an activity to include all the fields shown in the screenshot.

The screenshot shows a mobile app interface titled "MovieRater". It contains the following fields and controls:

- Name:** A text input field containing "Venom".
- Description:** A text input field containing "When Eddie Brock acquires the powers of a symbiote, he will have to release his alter-ego 'Venom' to save his life".
- Language:** A group of radio buttons with labels "English", "Chinese", "Malay", and "Tamil". The "English" button is selected.
- Release date:** A text input field containing "03-10-2018".
- Checkboxes:** Three checkboxes are present: "Not suitable for all audience" (checked), "Violence" (checked), and "Language used" (checked).
- Buttons:** A large grey button labeled "ADD MOVIE" is at the bottom.

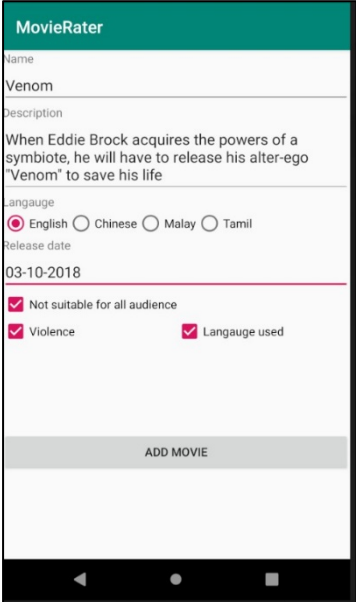
After clicking on the "Add Movie" button, display the details using a toast control.

This screenshot shows the same "MovieRater" form as the previous one, but with a toast message displayed at the bottom. The toast message contains the following details:

- Title = Venom
- Overview = When Eddie Brock acquires the powers of a symbiote, he will have to release his alter-ego "Venom" to save his life
- Release date = 03-10-2018
- Language = English
- Not suitable for all ages = true
- Reason: Language, Violence

(10 marks)

- b) On selecting “Not suitable for all audience” check box, the “violence” and “language used” check box will appear. The two check boxes will disappear when the “Not suitable for all audience” is unchecked.



The screenshot shows the MovieRater app interface. The movie 'Venom' is entered. The description is 'When Eddie Brock acquires the powers of a symbiote, he will have to release his alter-ego "Venom" to save his life'. The language is set to English. The release date is 03-10-2018. The checkboxes for 'Not suitable for all audience', 'Violence', and 'Language used' are all checked. Below the form is an 'ADD MOVIE' button.

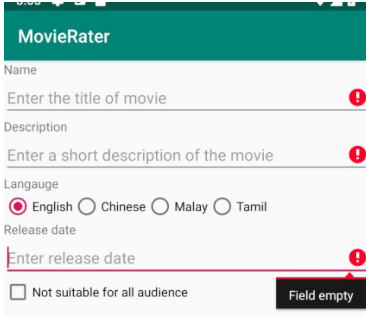
Detached view of the checkbox logic:

☒ Not suitable for all audience
☐ Violence ☐ Language used

☐ Not suitable for all audience

(5 marks)

- c) Validate all fields to ensure it is not empty.



The screenshot shows the MovieRater app interface with validation errors. The fields 'Name', 'Description', and 'Release date' are empty and have red exclamation mark icons next to them. The 'Language' field is set to English. The 'Not suitable for all audience' checkbox is unchecked. A 'Field empty' message is displayed at the bottom right.

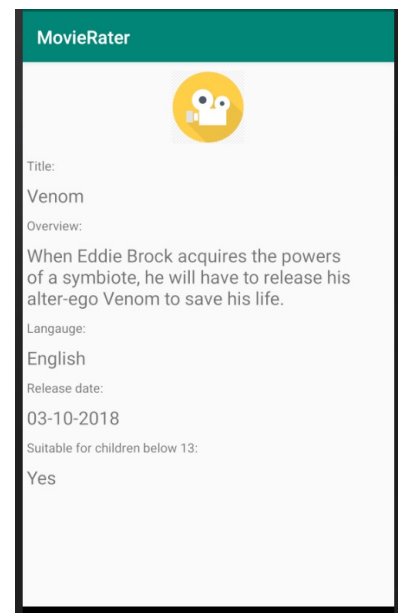
(5 marks)

View Movie Details [MovieDetail]

Allow user to view the details of a movie.
Create an Activity to include all the fields shown in the screenshot.

Note: Values displayed are read from a Movie Entity class.

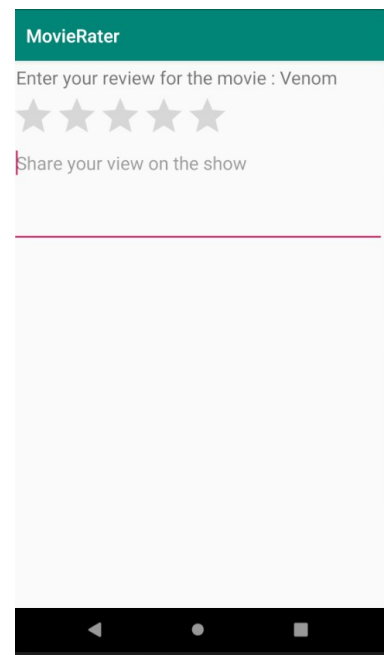
(5 marks)



Rate Movie [RatingActivity]

Allow user to rate a movie.
Create an Activity to include all the fields shown in the screenshot.
The name of the movie is to be set to "Venom" on creation of the Activity.

(5 marks)



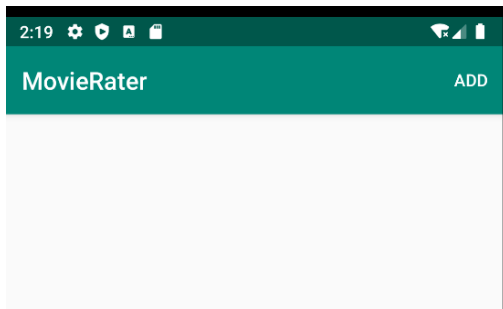
Part 2 Intermediate [40 marks]

Landing Page [MainActivity]

This activity will be the landing page of the application.

- Create/modify an Activity to include all the fields shown in the screenshot.

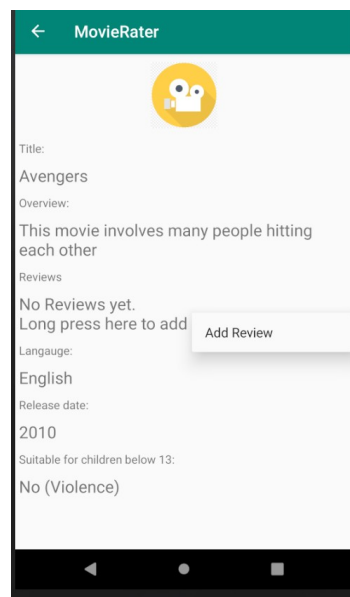
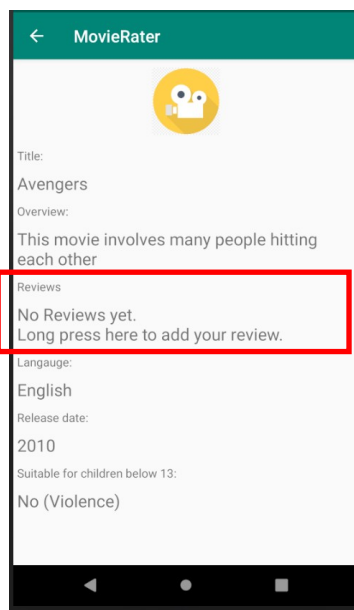
(5 marks)



View Movie Details and Add Movie Review [MovieDetail]

- Add in the new UI controls to reflect user's review on the movie.
- Long press triggers a menu that allows the user to add a review for the movie.

(10 marks)



Edit Movie Details [EditMovieActivity]

Allow user to edit the details of a movie.

Create an Activity to include all the fields shown in the screenshot.

Note: Values are to be read from a Movie Entity class.

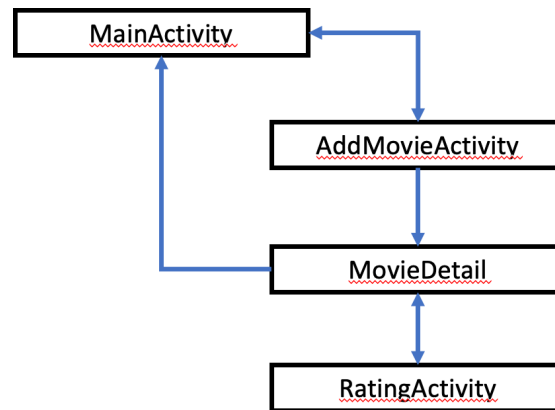
(5 marks)

Add Movie [AddMovieActivity]

- Remove the “Add Movie” button and replace it with a menu item in the app bar.
- Add in another menu item at the overflow to “reset” all the entries by the user.

(5 marks)

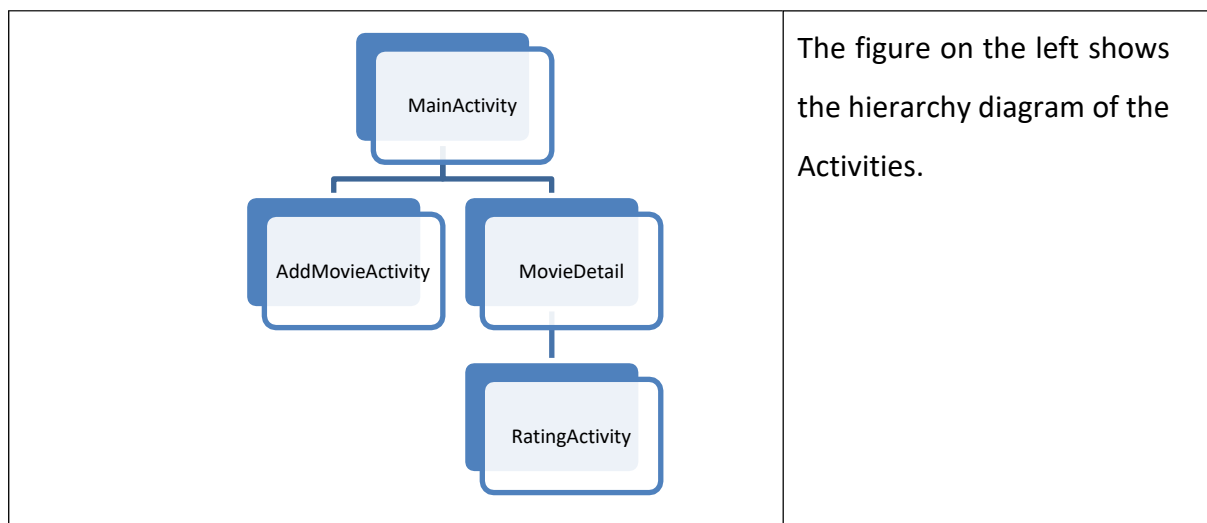
Use Intents to link up Activities and Pass Information



Referring to the diagram above, use intents to link up all the activities and pass the necessary information to the receiving Activity.

For Intermediate, there is no need to pass information to **EditMovieActivity**.

There is no need to save the information into the database. All data is to be saved in necessary variables or data structures. E.g. After adding a movie in **AddMovieActivity**, the data should be passed to **MovieDetail** for display.



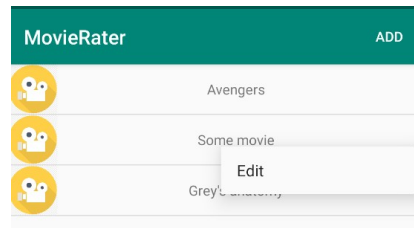
(15 marks)

Part 3 Advanced [30 marks]

Database & List Items

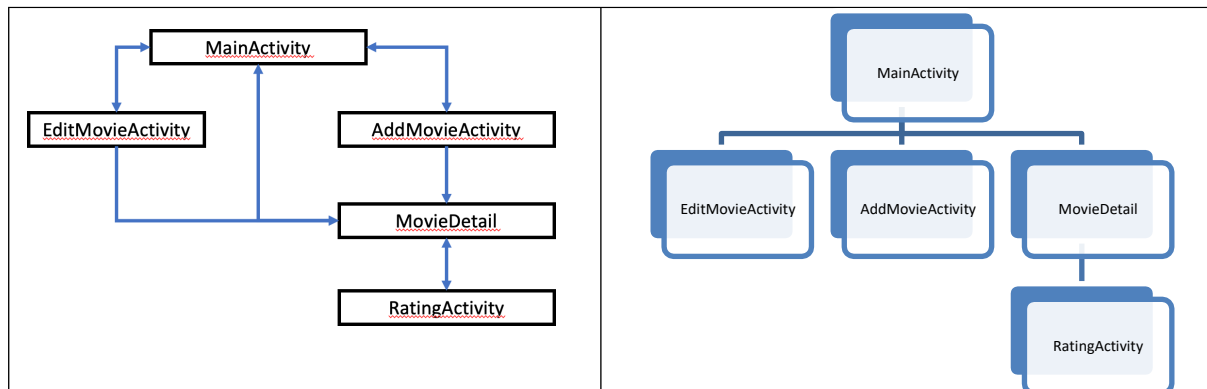
Making use of local database, save all the necessary data when a movie is added and edited. The new data will be displayed into the List View in **MainActivity**.

Long press of the List View item will open up a menu which allows the user to launch **EditMovieActivity**. The activity will retrieve and update the database with the updated data.



Tapping on the List View item will launch **MovieDetail** Activity. The activity will retrieve the correct data and display to the user.

The final navigation flow and hierarchy will look like the diagram below.



(15 marks)

Styles, Drawables and Animations

Making use of **styles**, **drawables** AND **animations** only, improve the user interface and experience of the application.

For this part of the assignment, marks are given to innovation and appropriate usage. Listed below are some learning references.

- <https://developer.android.com/codelabs/kotlin-android-training-styles-and-themes#0>
- <https://codelabs.developers.google.com/codelabs/material-motion-android#0>
- <https://developer.android.com/codelabs/motion-layout#10>

(15 marks)