Objectives:

In this assignment, you are to make use of what you have learnt in this module to design and develop a Movie Viewer application on the Android platform.

Scenario:

PopCornMovie is a company that allow their users to view movies details. They are looking for a mobile application that allows users to view top rated and popular. They have decided to hire you to develop this application on the Android platform.

Deadline

- 28th Jan 2024, 23:59

This assignment holds a total of 30% of your final ICA. Listed below are the deliverables that is expected from you.

Deliverables:

- Zipped file with source codes that fulfils the assignment requirements.

Format of file name :

  - [Admin number]_PartA.zip
  - [Admin number]_PartB.zip

e.g. 21212APartA.zip

Instructions:

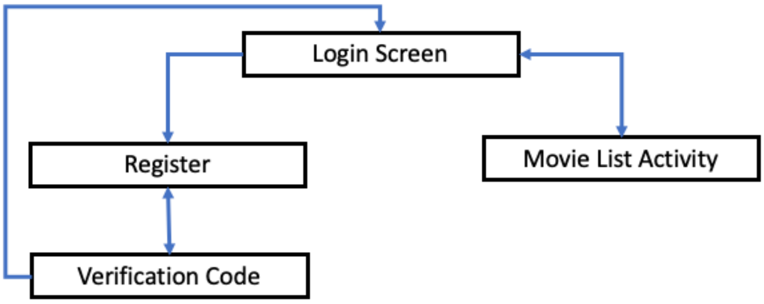
- This is an INDIVIDUAL assignment. Students are to submit their assignment to BrightSpace.
- Zip up the above deliverables and name it after your admin no.
- Marks will be deducted for the following conditions.
  - Applications that cannot run upon first time installation
  - Late submissions
  - Not 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.
- You will be given two starter projects. You are NOT allowed to change the version of the API levels.

Part A: Basic [75%]

For this part, you are to make use of the MovieViewerPartA_Starter project provided for you in BrightSpace.

Login & Registration [25%]

Create a login sequence as stated below



Registration requires the following information:

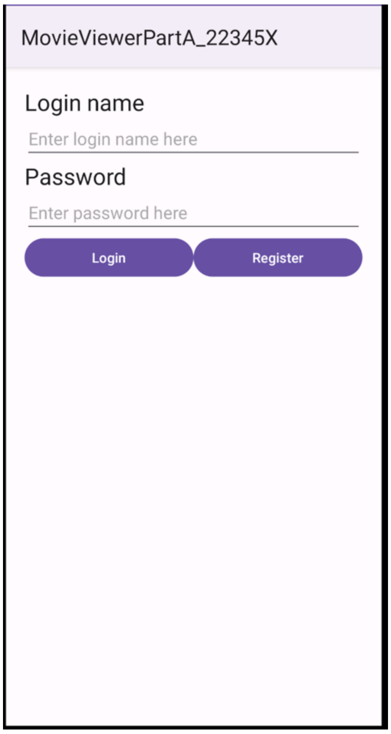
- User ID
- Password
- Email address
- Admin number
- Pem Group

User can choose to sign out via an options menu in ViewListOfMoviesActivity.

Note :

- You can assume that verification code is sent to you is 1234.
- You may hardcode the login (testuser),password (testuser) and verification code (1234).
- You do not have to save the registered password in your application.

Login/Registration/Verification Screenshots

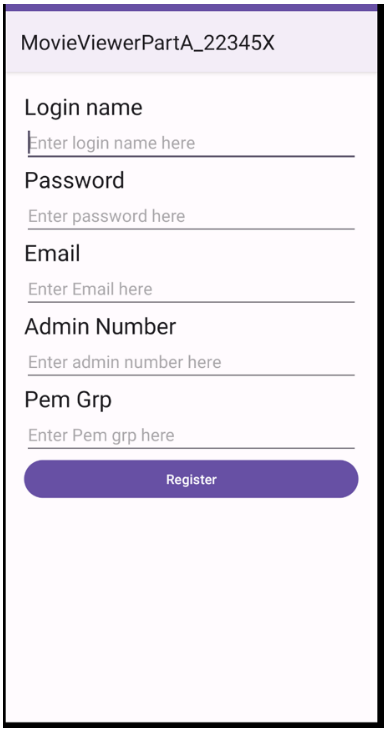

MovieViewerPartA_22345X

Login name

Enter login name here

Password

Enter password here


MovieViewerPartA_22345X

Login name

Enter login name here

Password

Enter password here

Email

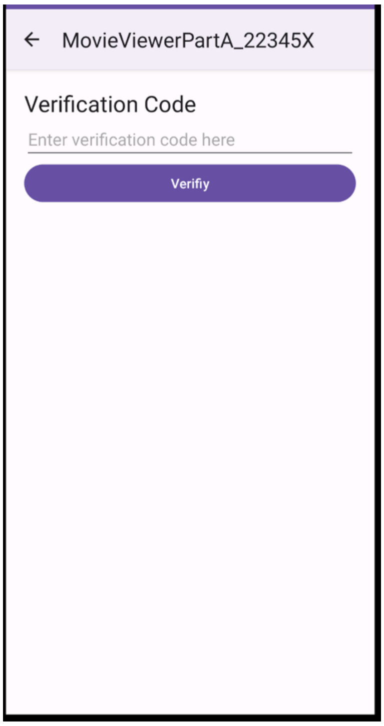
Enter Email here

Admin Number

Enter admin number here

Pem Grp

Enter Pem grp here

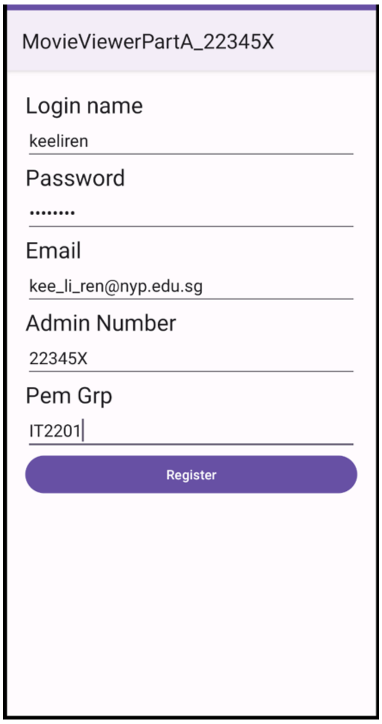

MovieViewerPartA_22345X

Verification Code

Enter verification code here

Registration Sequence

- Error check for empty field only.
- Password to be masked.


MovieViewerPartA_22345X

Login name

keeliren

Password

••••••••

Email

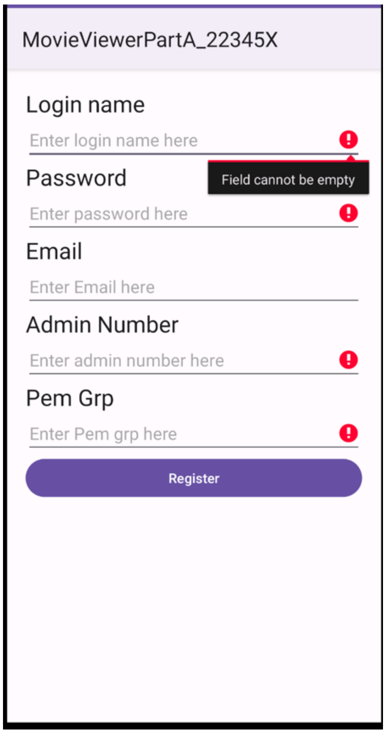
kee_li_ren@nyp.edu.sg

Admin Number

22345X

Pem Grp

IT2201


MovieViewerPartA_22345X

Login name

Enter login name here

Field cannot be empty

Password

Enter password here

Email

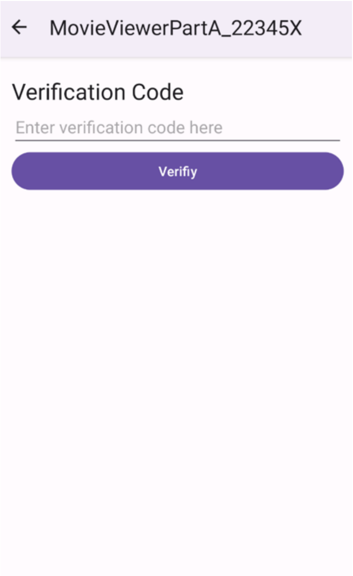
Enter Email here

Admin Number

Enter admin number here

Pem Grp

Enter Pem grp here

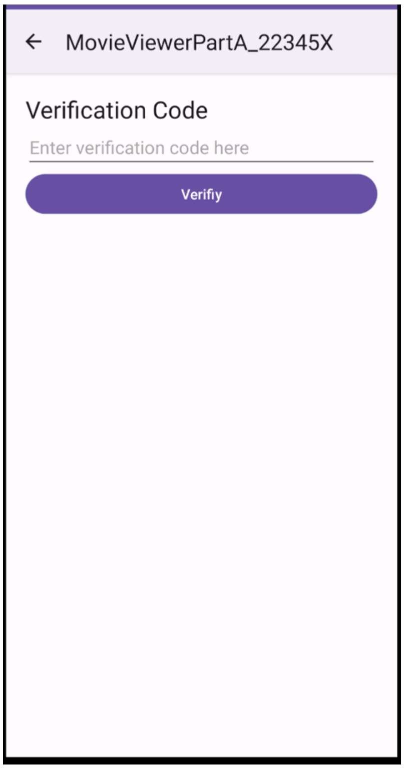

MovieViewerPartA_22345X

Verification Code

Enter verification code here

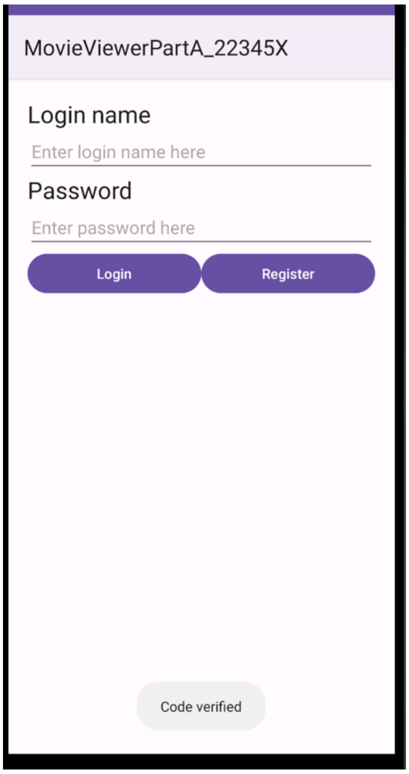
Verification sequence

- Error check for empty field only.
- Verification code field only accepts numbers
- Navigates to login screen when verification code is correct.


MovieViewerPartA_22345X

Verification Code

Enter verification code here


MovieViewerPartA_22345X

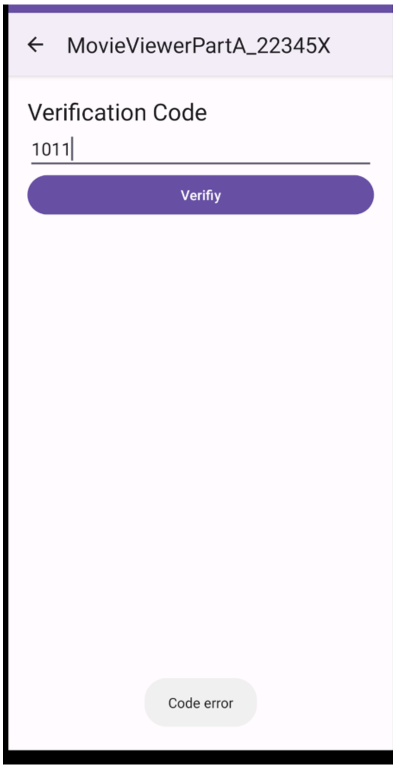
Login name

Enter login name here

Password

Enter password here

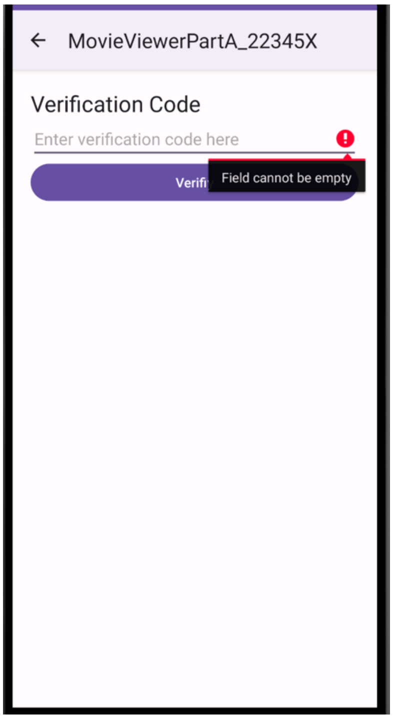
Code verified


MovieViewerPartA_22345X

Verification Code

1011

Code error


MovieViewerPartA_22345X

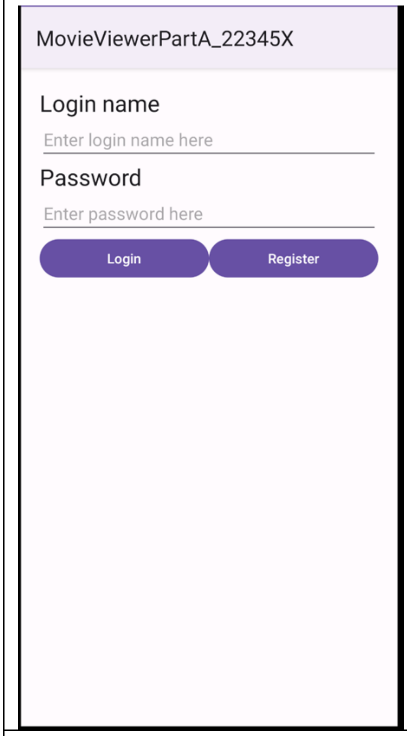
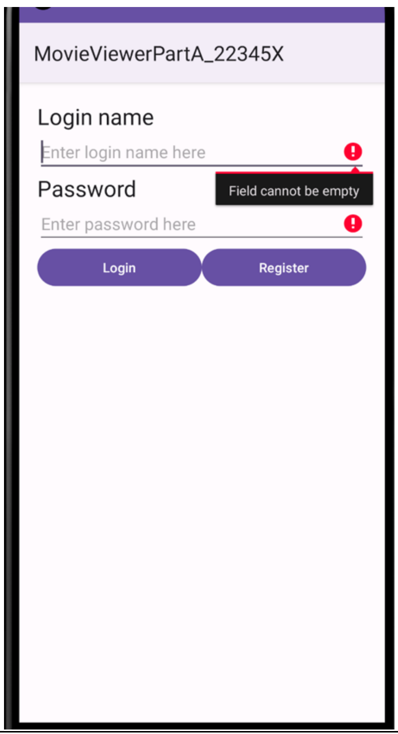
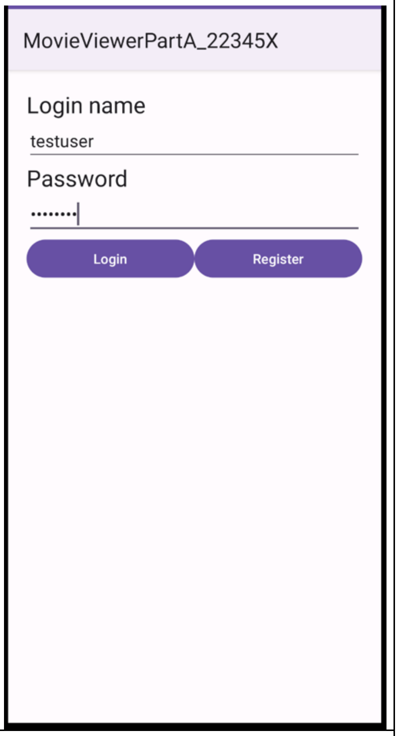
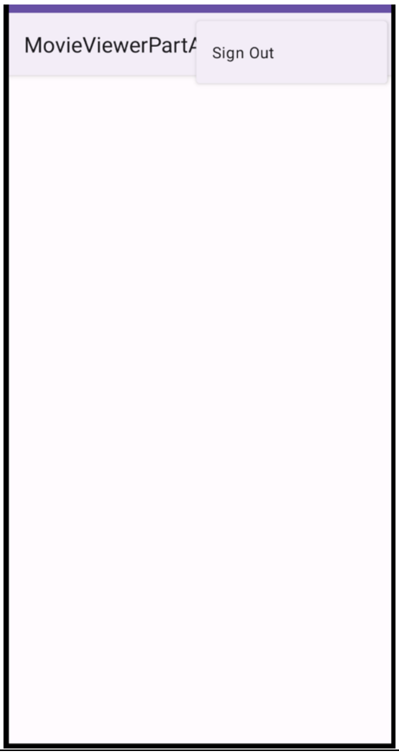
Verification Code

Enter verification code here

Field cannot be empty

Login Screenshots

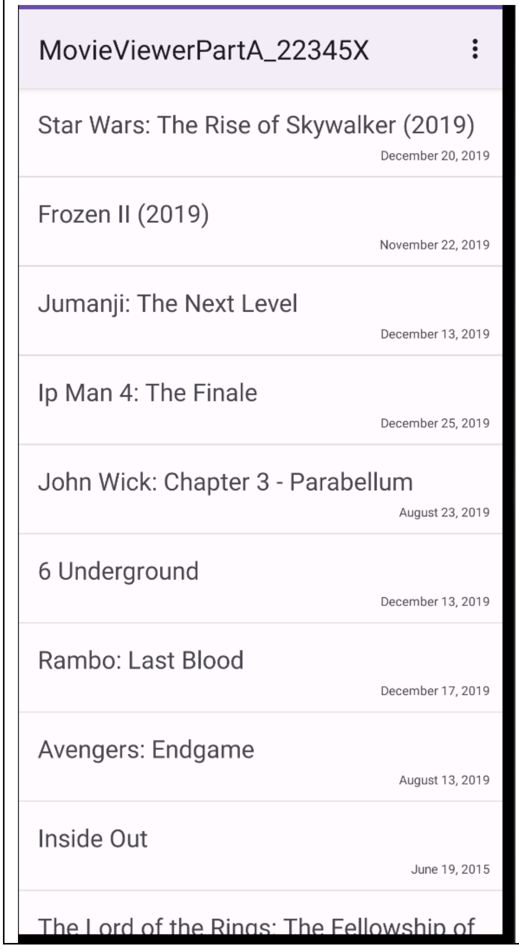
- Error check for empty field only.
- Password is masked.
- Navigates to SimpleViewListOfMoviesActivity when login successful.
- Logout at SimpleViewListOfMoviesActivity will navgiate back to Login screen

 MovieViewerPartA_22345X Login name Enter login name here Password Enter password here Login Register	 MovieViewerPartA_22345X Login name Enter login name here Password Field cannot be empty Enter password here Login Register	 MovieViewerPartA_22345X Login name testuser Password •••••••• Login Register
 MovieViewerPartA Sign Out		

Database and customized listview[30%]

Modify the project to retrieve the movie data from the device's local database. To facilitate the usage of database, you will need to make use of a customized Listview adapter. As there is no UI to add in movie item, you will also need to populate the database with the data provided from SimpleMovieSampleData.

Note : Movie details should NOT be retrieved from the sample data array. **<u>But you can retrieve from an array that was populated from the database</u>**.



MovieViewerPartA_22345X

Star Wars: The Rise of Skywalker (2019)
December 20, 2019

Frozen II (2019)
November 22, 2019

Jumanji: The Next Level
December 13, 2019

Ip Man 4: The Finale
December 25, 2019

John Wick: Chapter 3 - Parabellum
August 23, 2019

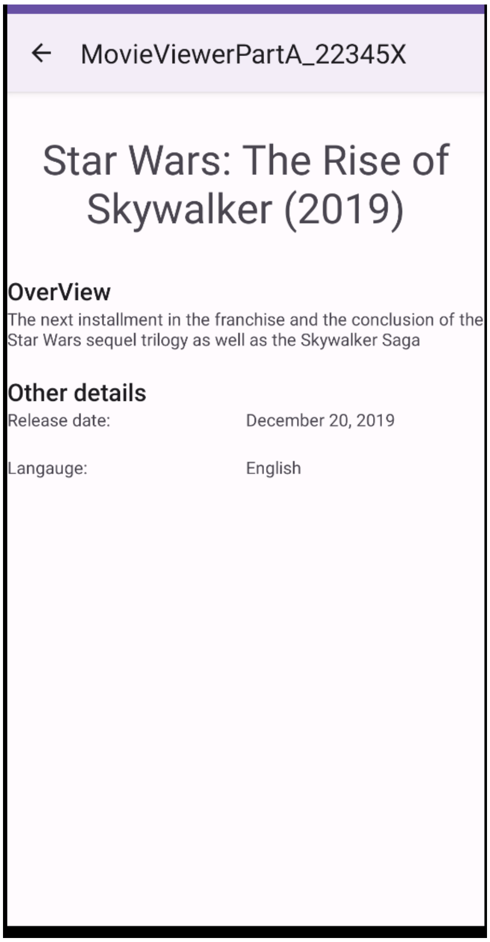
6 Underground
December 13, 2019

Rambo: Last Blood
December 17, 2019

Avengers: Endgame
August 13, 2019

Inside Out
June 19, 2015

The Lord of the Rings: The Fellowship of



MovieViewerPartA_22345X

Star Wars: The Rise of Skywalker (2019)

OverView

The next installment in the franchise and the conclusion of the Star Wars sequel trilogy as well as the Skywalker Saga

Other details

Release date: December 20, 2019

Langauge: English

[Database completion: 20 marks]

[Custom ListView: 10 marks]

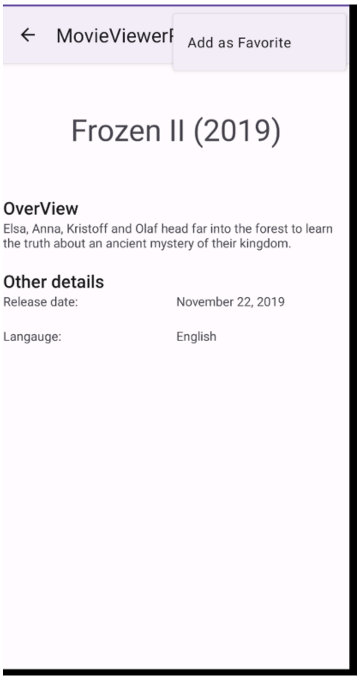
Save Favorite [20%]

In detail view activity, add an action button that allows users to save the movie item as a favorite into database.

Create a favorite screen that will display all the movie items that was saved as favorite in a list format. The interface will look similar to the **ViewListOfMoviesActivity** interface.

This activity is accessible via a options menu item in **ViewListOfMoviesActivity.**

Note :



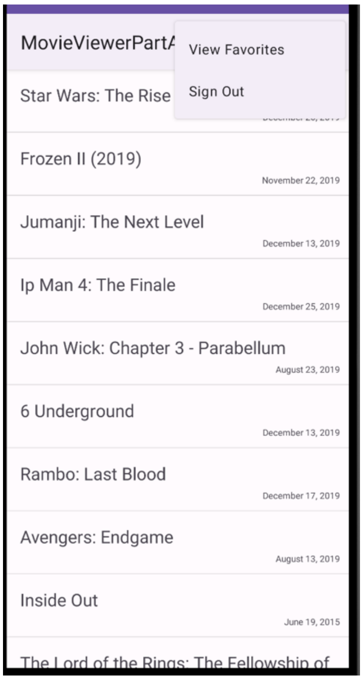
Frozen II (2019)

OverView

Elsa, Anna, Kristoff and Olaf head far into the forest to learn the truth about an ancient mystery of their kingdom.

Other details

Release date:	November 22, 2019
Langauge:	English



Star Wars: The Rise

Frozen II (2019)
November 22, 2019

Jumanji: The Next Level
December 13, 2019

Ip Man 4: The Finale
December 25, 2019

John Wick: Chapter 3 - Parabellum
August 23, 2019

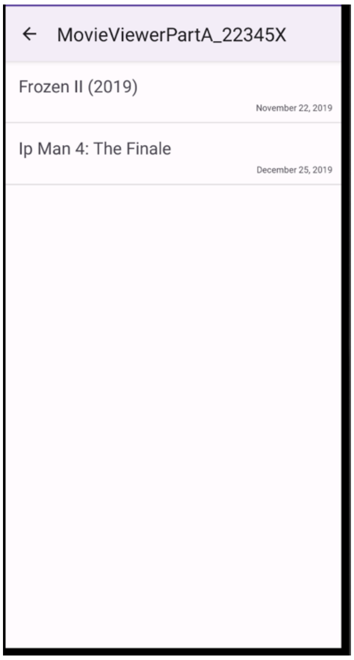
6 Underground
December 13, 2019

Rambo: Last Blood
December 17, 2019

Avengers: Endgame
August 13, 2019

Inside Out
June 19, 2015

The Lord of the Rings: The Fellowship of



Frozen II (2019)
November 22, 2019

Ip Man 4: The Finale
December 25, 2019

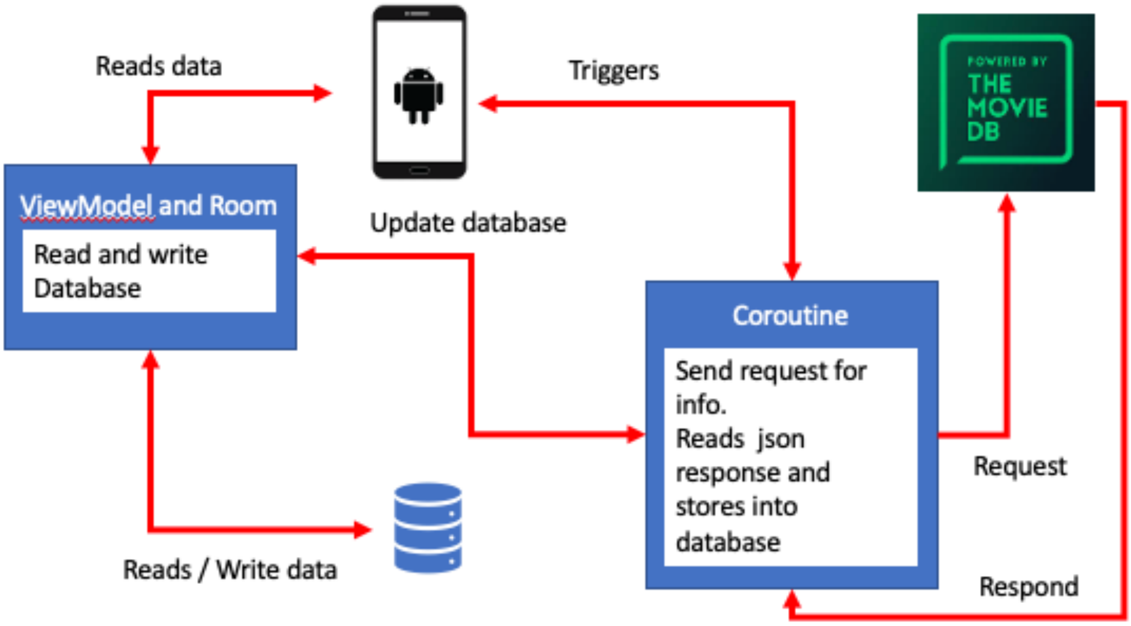
[Save to database: 10 marks]

[Custom ListView, Menu, Activity : 10 marks]

Part B : Advanced [25%]

For this part, you are to make use of the MovieViewer_Advanced_Starter project provided for you in Blackboard.

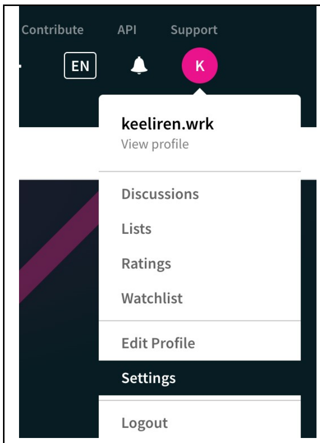
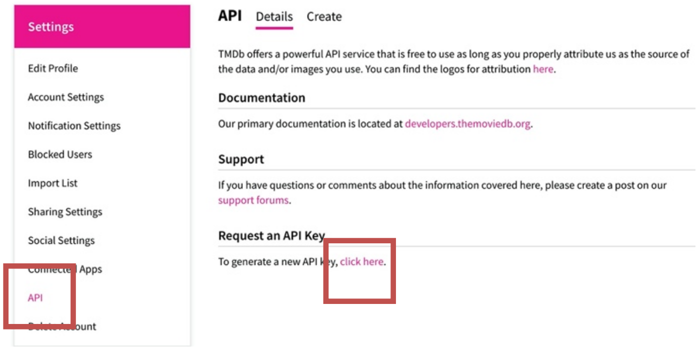
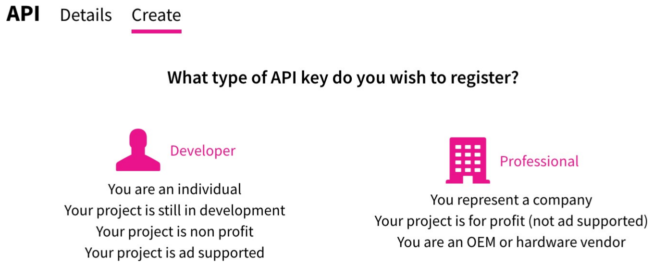
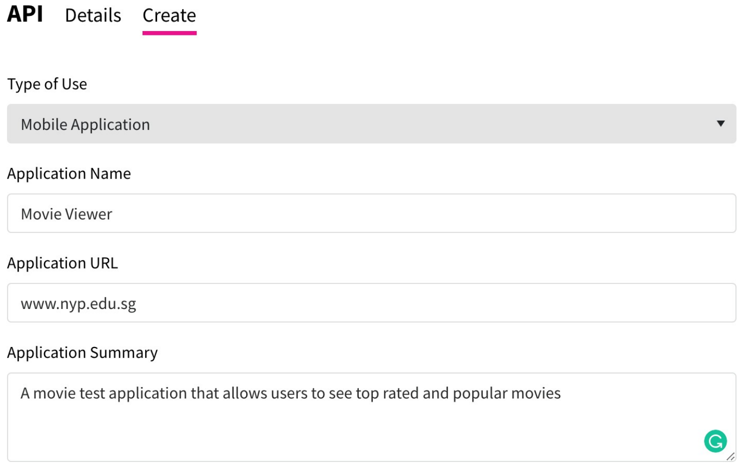
Overview



The application that you will be modifying will request from "TheMovieDB" the information that it requires. "TheMovieDB" will response with the data in JSON format. Your app should then make use of a coroutine to retrieve and store the data into the database using the view models and room.

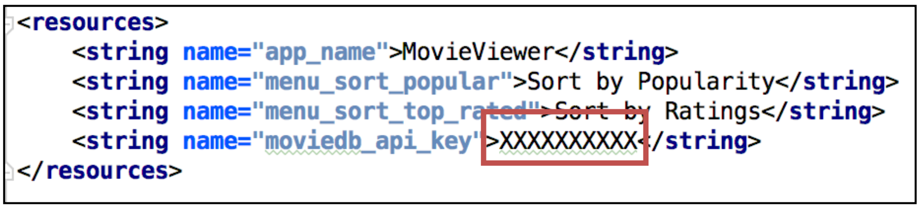
API Key

Head to the following website: http://www.themoviedb.org and register yourself.

 Contribute API Support EN K keeliren.wrk View profile Discussions Lists Ratings Watchlist Edit Profile Settings Logout	• Login and click on "Settings"
 Settings Edit Profile Account Settings Notification Settings Blocked Users Import List Sharing Settings Social Settings Connected Apps API Delete Account API Details Create TMDb offers a powerful API service that is free to use as long as you properly attribute us as the source of the data and/or images you use. You can find the logos for attribution here. **Documentation** Our primary documentation is located at developers.themoviedb.org. **Support** If you have questions or comments about the information covered here, please create a post on our support forums. **Request an API Key** To generate a new API key, click here.	• Click on "API" • Click on "click here" to request an API Key
 API Details Create **What type of API key do you wish to register?** Developer You are an individual Your project is still in development Your project is non profit Your project is ad supported Professional You represent a company Your project is for profit (not ad supported) You are an OEM or hardware vendor	• Click on "Developer"
 API Details Create Type of Use Mobile Application ▾ Application Name Movie Viewer Application URL www.nyp.edu.sg Application Summary A movie test application that allows users to see top rated and popular movies	• Fill in the following details and your other personal details.

Once registered, follow the following instructions and download the v3 Auth API key.

Open up your project and place this key into strings.xml in your project. You should set it as the value of “moviedb_api_key”.

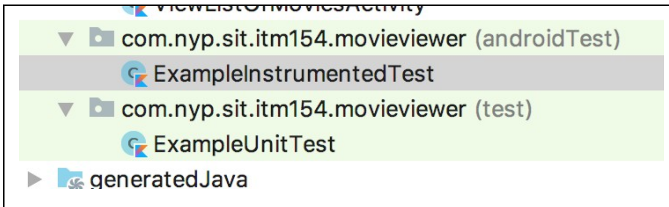


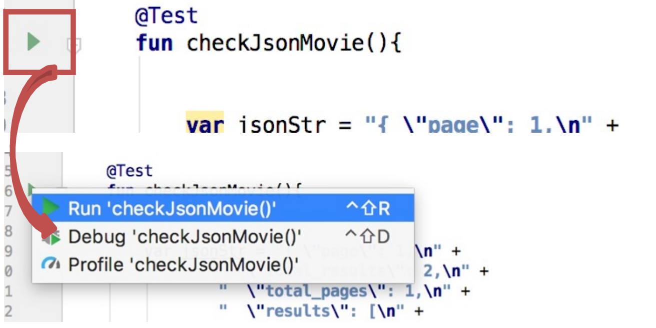
```xml
<resources>
    <string name="app_name">MovieViewer</string>
    <string name="menu_sort_popular">Sort by Popularity</string>
    <string name="menu_sort_top_rated">Sort by Ratings</string>
    <string name="moviedb_api_key">XXXXXXXXXX</string>
</resources>
```

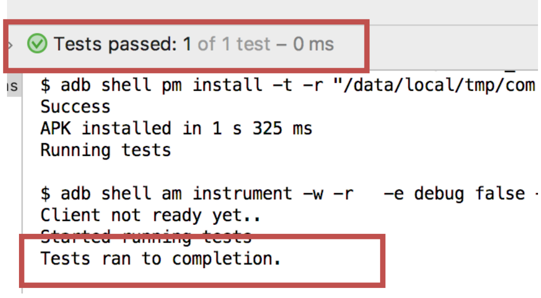
Junit Testing Json parsing [5%]

Before you retrieve the movies information from “TheMovieDB”. Update the getMovieDetailsFromJson method in movieDBJsonUtils class file to parse the downloaded json into an array of movie items.

To pass this section, you will need to run the test method.

 com.nyp.sit.itm154.movieviewer (androidTest) ExampleInstrumentedTest com.nyp.sit.itm154.movieviewer (test) ExampleUnitTest generatedJava	To test this, you are to make use of the ExampleInstrumentedTest file. Look for it in the “androidTest” folder


`@Test`
`fun checkJsonMovie(){`
`    var jsonStr = "{ \"page\": 1,\n" +`
Run 'checkJsonMovie()' ^⇧R
Debug 'checkJsonMovie()' ^⇧D
Profile 'checkJsonMovie()'
`"  \"total_pages\": 1,\n" +`
`"  \"results\": [\n" +`
	Run the checkJsonMovie test method. You are NOT allowed to change the jsonStr value.


Tests passed: 1 of 1 test – 0 ms
`$ adb shell pm install -t -r "/data/local/tmp/com`
`Success`
`APK installed in 1 s 325 ms`
`Running tests`
 	
`$ adb shell am instrument -w -r   -e debug false`
`Client not ready yet..`
`Started running tests`
`Tests ran to completion.`
	Make sure you pass all the test.

Data response retrieval [10%]

- In ViewListOfMoviesActivity, create and trigger a coroutine to do a HTTP request from “TheMovieDB” and store the information in the database via ViewModel and Room. The default list should be the top-rated list. You are to make use of

NetworkUtils to do http request and getting the response.

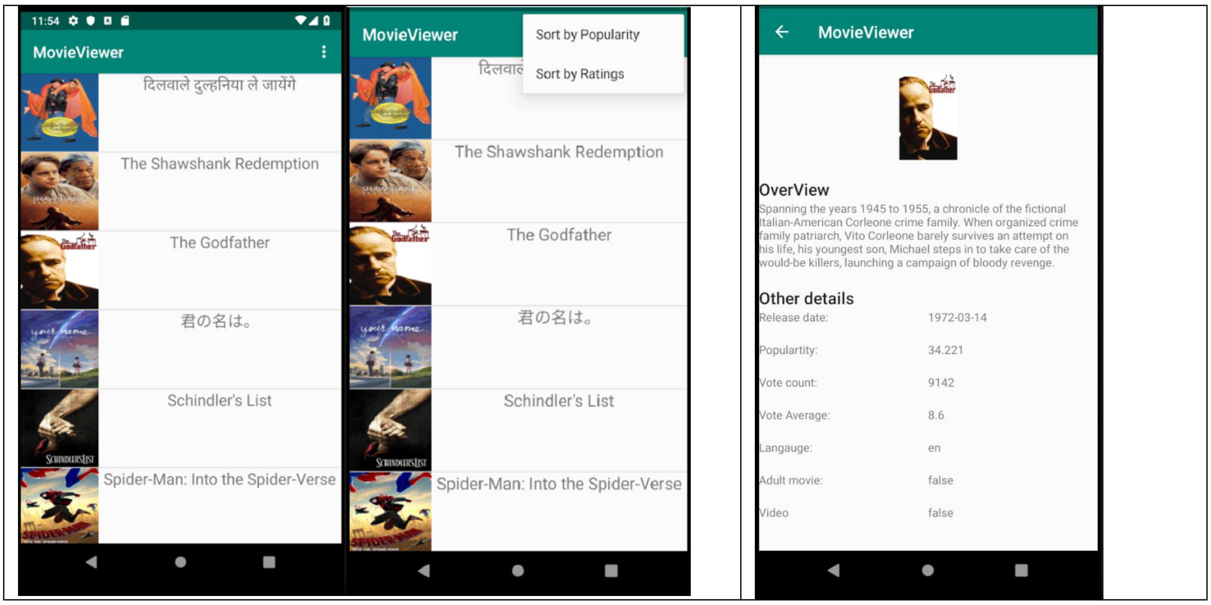
- Update the Listview to display the list of movie items as shown below.
- User should be able to toggle between top-rated and popular list via the options menu.
    - ○ https://developers.themoviedb.org/3/movies/get-top-rated-movies
    - ○ https://developers.themoviedb.org/3/movies/get-popular-movies
- Each time the data is updated, the previous data is to be removed from the database.

Note :

- There is no need to update how favorite movie items are being saved currently. i.e. you will only need to use ViewModels and Room for data retrieved from "TheMovieDB".

<u>Item retrieval</u> [5%]

- Update ItemDetailActivity to display the selected movie item.



OverView

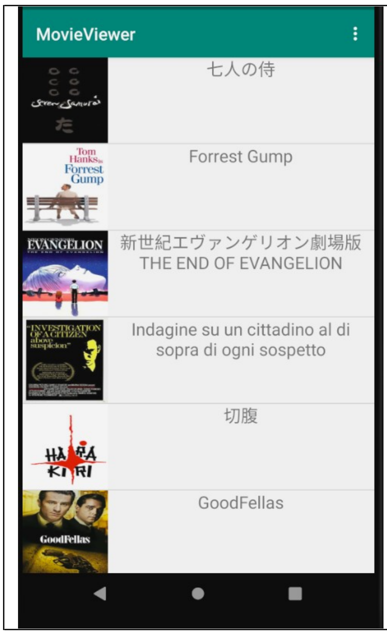
Spanning the years 1945 to 1955, a chronicle of the fictional Italian-American Corleone crime family. When organized crime family patriarch, Vito Corleone barely survives an attempt on his life, his youngest son, Michael steps in to take care of the would-be killers, launching a campaign of bloody revenge.

Other details

Release date:	1972-03-14
Populartity:	34.221
Vote count:	9142
Vote Average:	8.6
Langauge:	en
Adult movie:	false
Video	false

Configuration change [5%]

- Currently the list will shift back to the first item each time the device’s orientation changes. Update the ViewListOfMoviesActivity to display the correct item each time the device change orientation.



七人の侍

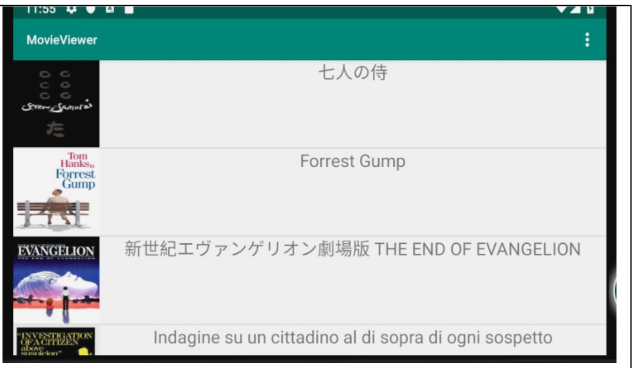
Forrest Gump

新世紀エヴァンゲリオン劇場版 THE END OF EVANGELION

Indagine su un cittadino al di sopra di ogni sospetto

切腹

GoodFellas



七人の侍

Forrest Gump

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