Problem Description

The objective of this assignment is to get hands-on experience of building an Android REST client. Specifically, you will be asked to build an Android app that displays the data of top-rated movies returned by a REST API. This assignment consists of two parts. The first part is a tutorial with example code that introduces how to (1) use the Retrofit library to retrieve data from a remote service; and (2) use the RecyclerView widget to display a list of items. The second part is a lab that asks you to modify the example code to finish the required functionality.

Read the tutorial here:

https://github.com/jwlin/android-retrofit-tutorial

Task: Display Top-Rated Movies

Your task is to display top-rated movies in *MovieListActivity*. The data can be retrieved from here:

https://api.themoviedb.org/3/movie/top_rated?api_key=YOUR_API_KEY

You have to display the 20 movies in the results returned by the above REST API.

All required class and layout files are provided in the project. Specifically, you have to modify the following four files:

- *MovieApiService.java*: add one more method for the above API
- *TopRatedResponse.java*: implement it as the *Movie* class
- *MovieListAdapter.java*: implement it as the *ProgramListAdadpter* class
- *MovieListActivity.java*: implement it as the *ProgramListActivity* class

Besides, you need to check *movie_row.xml* to know where to place the data when you modify *MovieListAdapter*. Note that, movie_row.xml contains an *ImageView* field for displaying the poster of a movie. The poster image can be retrieved with the following URL:

https://image.tmdb.org/t/p/w500/POSTER_PATH

You also need to use *Picasso* (https://square.github.io/picasso/) to download the poster image from the above URL and put it into the *ImageView* in your *MovieListAdapter*.

Demo, Packaging, and Submission

- **Schedule a 10-minute demo with TA** to show and explain your implementation using your laptop. You will be asked questions about your implementation.

- Compress the modified project to a zip file and submit it via canvas. We will import the submitted project with Android Studio and run the project on an emulator. Provide a README file if specific configurations are required to install and run your project.
  (PS. Feel free to remove the API Key in your code. We will replace the key with ours.)

Grading Criteria (100 points)

- The correctness and understanding of your implementation shown in the demo.
- The degree to which your solutions adhere to the REST architectural style where possible to do so.