Assignment 3

Submit Assignment

Due Feb 9 by 11:59pm **Points** 100 **Submitting** a website url

Assignment Objectives

1. Understand RecyclerView and CardView layouts and their use cases.
2. Consume a third-party API for data-centered activities using an HTTP client (Retrofit).
3. Apply a pagination algorithm for more efficient data requests and responsible data consumption.
4. Download and dynamically load images (Glide).

Background

There's a high chance that you will need to consume data for any application that you build. This assignment is focused on consuming data from a third-party API in the Android stack using an HTTP client to make API requests and using data-centered layouts to aesthetically display the data. The domain of the data is up to you.

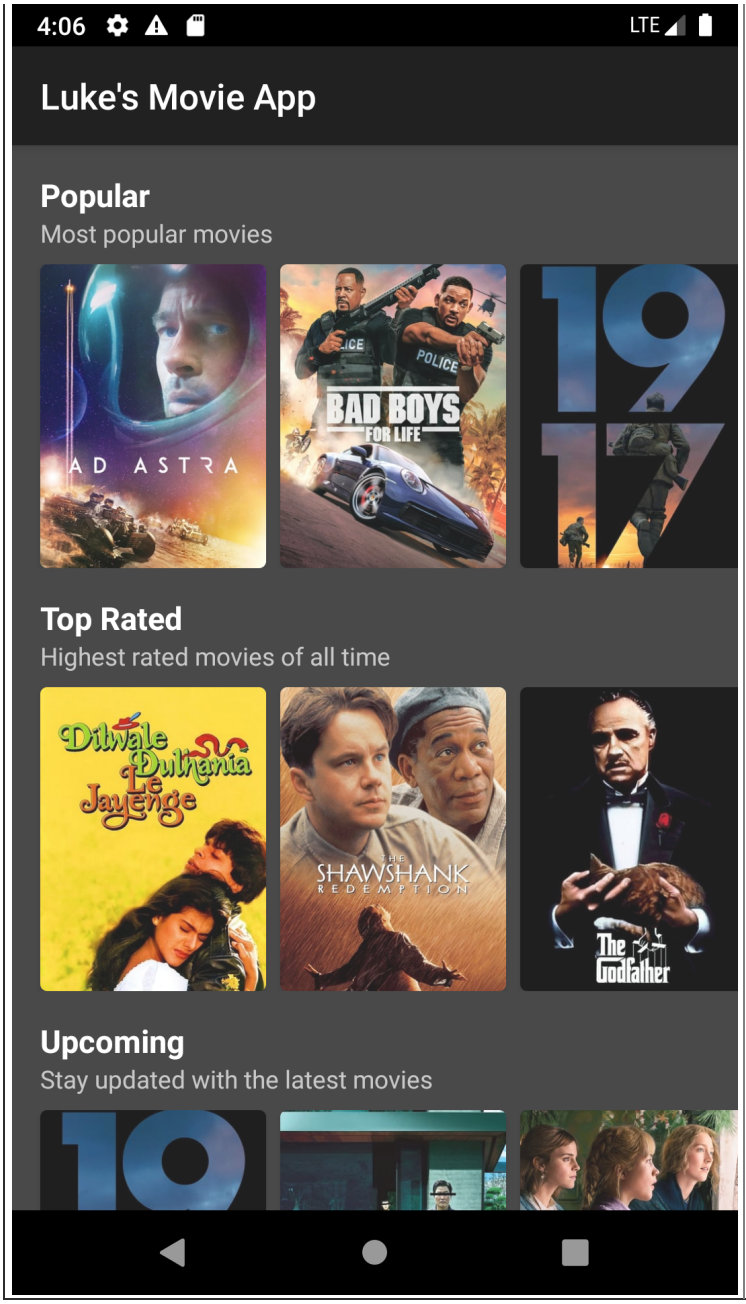
Instructions and Requirements

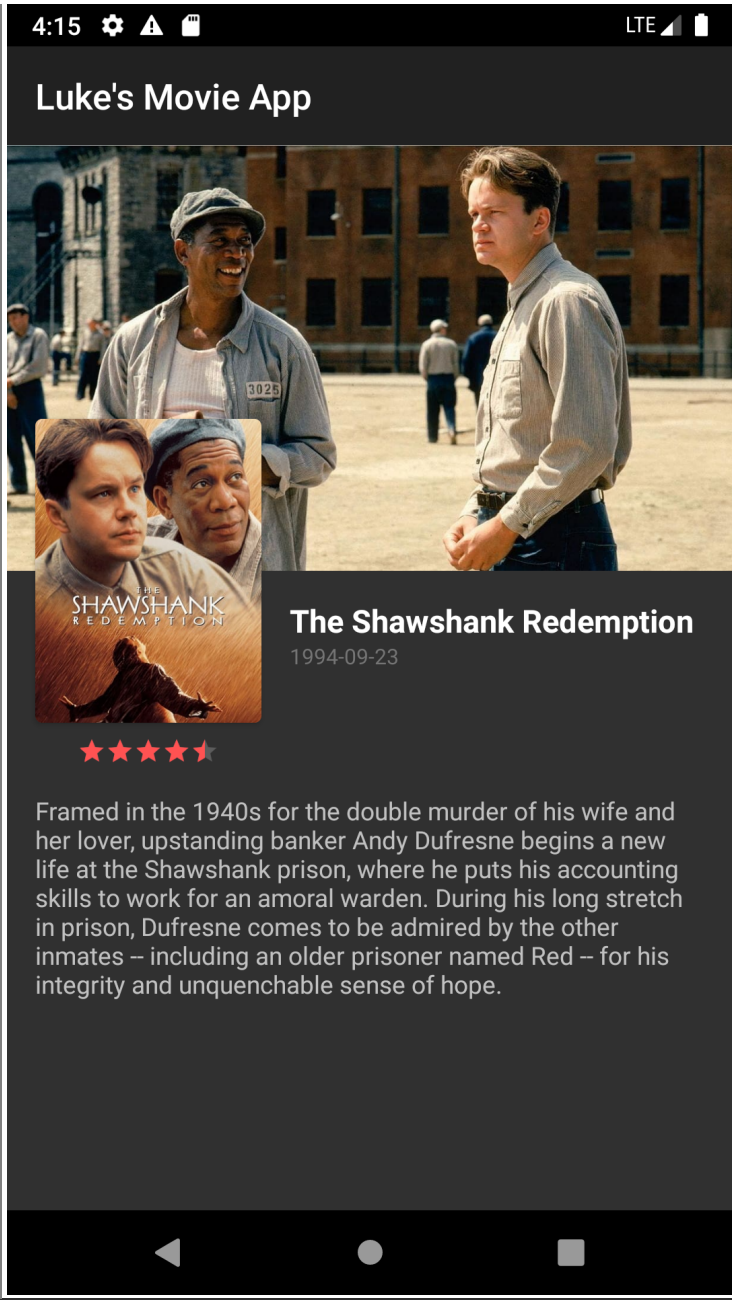
1. Research open third-party APIs which contain data that you're interested in. Example domains include, but are by no means limited to: music, movies, weather, news, food, drinks, recipes, gaming (see sample APIs below). It is important to look into pertinent information such as consumption limits for free accounts as well as licensing and terms.
2. Create a single or multi-activity app in Android to showcase the data you have retrieved from the API you selected.
3. The activity/activities must utilize at least one RecyclerView and CardView.
4. You must use a pagination algorithm for data retrieval to avoid over-consumption (restrictions may vary depending on API vendor).
5. If the user taps on an item in the list, you must display a detailed page for the item.
6. Strict Material Design is highly suggested, but not required for this assignment.

Visual Example (this specific app will be discussed and demonstrated in class)

API consumed: themoviedb.org

Main Activity	Detailed Activity





Only a Sample of APIs

- **News API:** https://newsapi.org/ (https://newsapi.org/)
- **Movie API:** https://www.themoviedb.org/ (https://www.themoviedb.org/)
- **Weather API:** https://openweathermap.org/ (https://openweathermap.org/)
- **Cat Facts API:** https://alexwohlbruck.github.io/cat-facts/ (https://alexwohlbruck.github.io/cat-facts/)
- **Cocktail DB API:** https://www.thecocktaildb.com/ (https://www.thecocktaildb.com/)

Grading

1. Successful and responsible consumption of an API **(40%)** / Hard-coded data instead of an API will only earn you 20% on this grading criterion

2. Populating data using RecyclerView and CardView layout in a nested scrollable list (vertical or horizontal) **(20%)**
3. Details page for tapping on an item **(10%)**
4. **Originality and design (30%) - using a different API than TMDb, alternate layout designs, if using TMDb showcasing different types of data (i.e. actor, director details)**