

Testing Environment:

This app has been tested on Samsung S8+ Android 8.0 Oreo, built with Android studio 3.01.

App name:

MovieDB Demo

Functionality

- Welcome page with app name, author and version information
- Central page with 2 tabs, "Now Playing" and "Upcoming movies". Each tab has a movies list, each row show a movie poster image, movie name, genres, popularity and released date
 - With movies list, content will be refreshed when you pull from top, more movies would be show when you pull from bottom
- Movie detail page show a movie poster, a backdrop image, movie name, running time, rating, overview, etc.
- When local language changed, app would fetch movie information with corresponding language depending on the Movie Database service language support

Data processing Used API Service

Defined an interface to encapsulate TMDb API(base URL: <https://api.themoviedb.org>). API reference as follow:

- @GET /3/genre/movie/list
- @GET /3/movie/upcoming
- @GET /3/movie/now_playing
- @GET /3/movie/{movie_id}

Data fetched from TMDb would be persisted as DTOs.

Structure:

App design with MVP pattern to separate the presentation layer from the logic.

Model

|-----Genre, Movie, MovieDetails

View

|-----SplashActivity

|-----MainActivity

| |---NowPlayingListFragment

| |---UpcomingMovieListFrament

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|-----MovieActivity

| |---MovieDetailFragment

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Presenter

|-----SplashPresenter

|-----NowPlayingPresenter

|-----UpcomingPresenter

|-----MovieDetailsPresenter

Third Party Libraries Dependency

- **Retrofit**
Used to get data from the Movie Database
- **Smarttablayout**
Used to implement two tabs in main page
- **Recyclerview**
Used to implement movie list view
- **Swipyrefreshlayout**
Used to implement swiping in both direction:
 - Swiping from top: refresh data
 - Swiping from bottom: fetch next page data of movies

Limitations and Future work

- **Network Connection**
When there is no network connection, the demo app simple shows “No Network”, this can be extended to a button that direct the user to ‘wifi setting’ or ‘network setting’
- **Local data repository**
Currently, the MoiveRepositoryFactory can only produce the CloudMovieRepository that fetch date from internet, this can be extended to support ‘LocalMovieRepository’, serves as a local buffer and display movies fetched from last time when there is no network connection
- **Screen rotation**
The app does not support screen rotation now, this can be solved during next release.
- **Muti-language**
The app only support two languages: English and Portuguese. The loaded information of movies should be update to corresponding language.