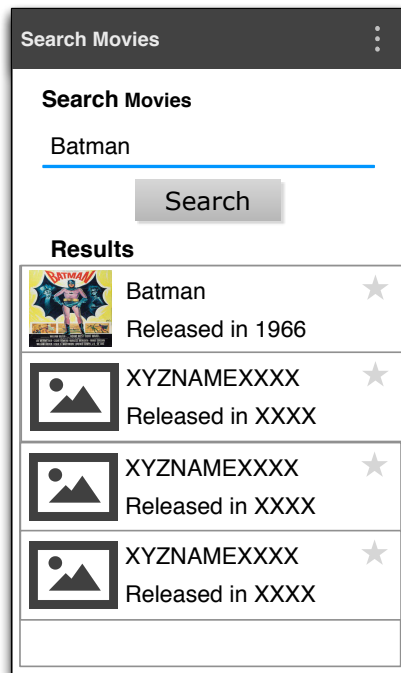


ITIS/ITCS 5180 Mobile Application Development
Midterm

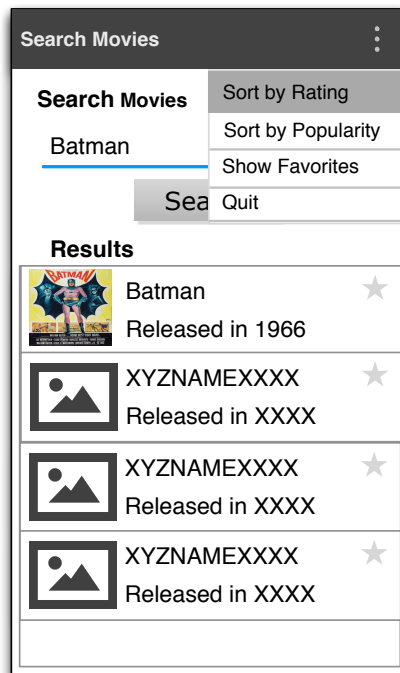
Basic Instructions:

1. This is the Midterm Exam, which will count for 15% of the total course grade.
2. This is an individual effort. Each student is responsible for her/his own Midterm and its submission.
3. Once you have picked up the exam, you may not discuss it in any way with anyone until the exam period is over.
4. During the exam, you are allowed to use the course videos, slides, and your code from previous home works and in class assignments. You are NOT allowed to use code provided by other students or from other sources.
5. Answer all the exam parts, all the parts are required.
6. Please download the support files provided with the Midterm and use them when implementing your project.
7. Your assignment will be graded for functional requirements and efficiency of your submitted solution. You will loose points if your code is not efficient, does unnecessary processing or blocks the UI thread.
8. Export your Android project and create a zip file which includes all the project folder and any required libraries. The file name is very important and should follow the following format: **800#_Midterm.zip**. Submit the exported file using the provided canvas submission link.
9. **Do not try to use any Social Messenger apps, Emails, Or Cloud File Storage services in this exam.**
10. **Failure to do the above instructions will result in loss of points.**
11. **Any violation of the rules regarding consultation with others will not be tolerated and will result disciplinary action and failing the course.**

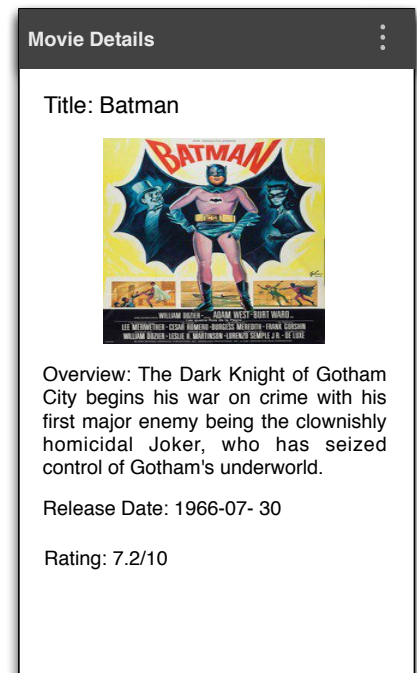
Midterm (100 points)



(a) Main Screen



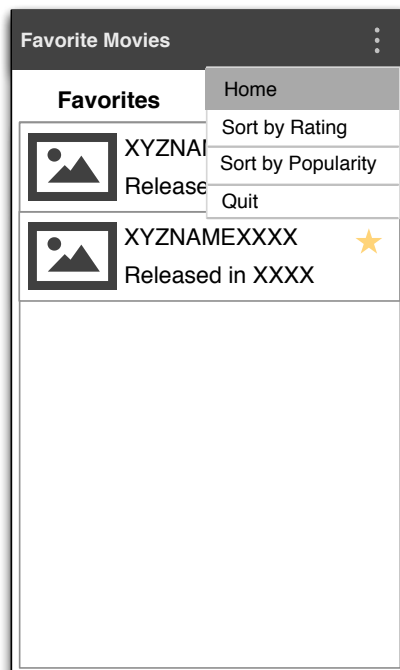
(b) Menu Items



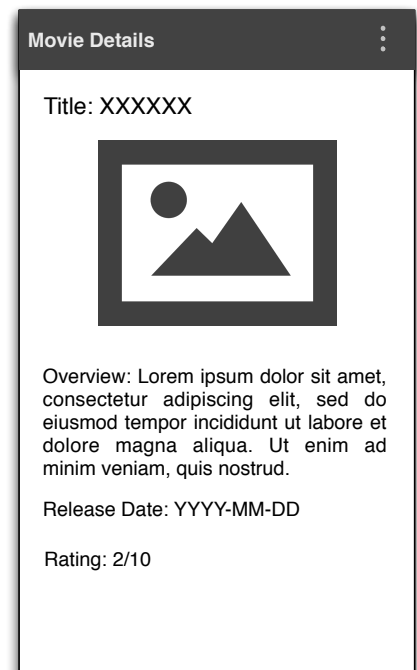
(c) Details Screen



(d) Favorite Movies Screen



(e) Menu Items



(f) Details Screen

Figure 1: App wireframes

In this assignment, you will be developing a Movie Search Application using the Movie Database API. You can search any movie and display the search results. Your application should be able to view the details of the selected movie. You will be using JSON parsing to retrieve the movies, ListViews, or dynamic layout to display the list, a different activity to show the your favorite movies, and another activity to display the movie details.

The assignment consists of three screens: Main screen, Favorite Movies screen, and Movie Details screen.

JSON API: We will be using the Movie Database movie search API to develop the app. Please read the following for the API details:

API URL	<code>https://api.themoviedb.org/3/search/movie?query=<<MovieName>>&api_key=<<YourKey>>&page=1</code>
query	Keyword/s you put in the search bar. If you put two or more keywords in the search bar like in our example, you should modify the URL to <code>.../movie?query=batman+begins ...</code>
page	Set it to 1
Movie name	use original_title from JSON
Overview	use overview from JSON
Release Date	use release_date from JSON
Rating	use vote_average from JSON
Popularity	use popularity from JSON
Image Base URL	<code>http://image.tmdb.org/t/p/ <<WidthSize>> / <<PosterPath>></code>
Width sizes	Small Image: w154 , and Large Image: w342
Poster Path	use poster_path from JSON

Main screen: please follow the instructions in the following:

1. The app should have a search bar on the top.
2. There should be a Search button right below the search bar.
3. There should be a TextView with string "Results."
4. There should be a Scrollable ListView to display the results right below the TextView.
5. In each of the items in the list, you should display a small poster image, release year, and an ImageButton to mark as favorite.
6. You need to type the movie name you want to search, and click the Search button.
7. Clicking on the Search button should parse the API and load the results in the ListView.
8. If there is no result is found, you should Toast it.

9. Clicking on 'mark as favorite' button should save the movie as your favorite and turn the gray button to gold. Also, you should be able to unmark any of the favorites. Make toasts each time.
10. The screen should contain 4 menu buttons:
 1. Sort by Rating: sort the results by the descending order of user votes.
 2. Sort by Popularity: sort the list by the descending order of popularity.
 3. Show Favorites: display the Favorite Movies screen.
 4. Quit: quit the app.
11. Clicking on any of the items in the list should take you to the Movie Details screen.
12. Use shared preferences to save the favorite movies.

Favorite Movies Screen: Please follow the instructions below:

1. The screen should include a TextView with the string "Favorites."
2. Below that, there should be a scrollable list of favorite movies.
3. The style and layout of this list should be similar to the main screen.
4. You can mark any of them as not favorite. Make toast, remove the item from the favorite list, and refresh the list.
5. Clicking on any of the items should take you to Movie Details screen.
6. This screen also contains 4 menu items:
 1. Home: takes you to the main screen.
 2. Sort by Rating: sort the results by the descending order of user votes.
 3. Sort by Popularity: sort the list by the descending order of popularity.
 4. Quit: quit the app.

Display details activity: Please follow the instructions below:

1. On the top, it should display the title of the movie.
2. Below that, there should be the poster image (size is w342).
3. Next, you should display the overview of the movie followed by Release date, and Rating.
4. There should be two menu buttons: Home, and Quit.

Please Note: You need to use two different URLs for getting movie search results, and images.

Good Luck!