

## Project 3 Due Week 10

In this homework, you should create a RecyclerView fragment and give it a “professional look” (Create themes and styles based on your own taste. You need to do the following tasks:

**Task 1:** Create a Firebase RealtimeDatabase (or Firestore) and structure your JSON tree (or documents and collections) with the movie data from last project. You need to first upload all images to the Firebase storage.

**Task 2:** Enable authentication mode in your firebase console. You need to implement at least the email-password authentication.

**Task 3:** Design and implement a new user sign up and login activity that uses the Firebase auth.

**Task 4:** Design and implement a main activity in which all movie data is listed in a recycler view (see below.) On the action bar of RecyclerView, please include a “search” action view, i.e. SearchView (we covered that in our Action Bar lecture). When users type a number in the text field, the RecyclerView will refresh and display all the movies with ratings larger than or equal to the number typed in the SearchView field.

**Task 5:** When a movie is selected, the detail fragment should be loaded, which displays the details of the movie, including its name, description, year, length, stars, directors, rating, and images (you can reuse the fragment that you built in the past homework). The details of the movie are not included in the json array received in Task 1; instead, you need to fetch the details from your server.

**Task 6:** In the RecyclerView, implement a popup menu for "duplicate" and "delete" movies (use a small button). In this task, when the "duplicate" menu item is clicked, a duplicated copy of the selected movie will be inserted into the server-side database (please change the id of the movie, e.g., by attaching "\_new" after the existing id). When the "delete" menu item is clicked, the selected movie is deleted. These shall trigger your realtime listeners that add or remove an item from the list.

**Task 7:** Create a Floating Action Button to add a brand-new movie. This should start a new activity in which all of the details of the movie are entered and uploaded to the server. As for the image, you shall provide two options: choose from the files or take a picture using the camera.

