Requirements and Analysis Document for Watchr

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Version:
2.0

1. Introduction

The almost unlimited supply of movies can sometimes be overwhelming for movie enthusiasts, let alone the average guy. To choose a movie to watch only gets harder by the day as more and more movies are released, and with this in mind we wanted to develop an app to make it much simpler and easier to find movies you want to watch. The app will use a clean material UI design that anyone could use, with a plethora of settings to help filter out movies you don’t like. Movies you browse will show you plenty of information such as but not limited to score, runtime, reviews and comments. For users logged in to the app will also be able to use the ‘favorites’, ‘watched’ and ‘watch later’ tabs, to easily keep track of movies you’ve loved and seen. Furthermore a personal recommended page will be available for based on the movies you’ve liked before.

1.1. Definitions, acronyms, and abbreviations

MVVM - Model, View, ViewModel
SDD - System Design Document
RAD - Requirements and Analysis Document
UML - Universal Markup Language
GUI - Graphical User Interface
UI - User Interface
DAO - Database Access Object

2. Requirements

Legend: ☑ = Done, ☐ = Not done

2.1. User Stories

1. ☑ As a user I want to browse movies, so that i can find a movie I want to watch.
2. ☑ As a user I want to be able to log into an account inside the app so that i can use logged in functionality.
3. ☑ As a user I want to be able to navigate between the different screens with a bottom toolbar, so that i can easily browse the content.

4. ☑ As a user i want to see detailed information about the movies so that I can make educated decisions on whether I want to watch it or not.
5. ☑ As a user I want to search for movies by text, so that I can find what im looking for easier.
6. ☑ As a user I want to customize my profile so that I can express myself better.
7. ☑ As a user I want to filter by rating so that i can find movies above a specific rating.
8. ☑ As a user I want to order the lists by popularity to help me search better.
9. ☑ As a user I want to order the lists by rating to help me search better.
10. ☑ As a user I want to order the lists by title to help me search better.
11. ☑ As a user I want to be able to add movies to a “watch later” list so I can remember what movies I want to watch easier
12. ☑ As a user I want to see movies i want to watch to help me remember.
13. ☑ As a user I want to be able to add movies to a “watched” list so I can remember what movies I have already watched.
14. ☑ As a user I want to see movies I’ve already watched so I can recommend them to friends.
15. ☑ As a user I want to be able to add movies to a “favorite” list so I can remember which movies are my favorites.
16. ☑ As a user I want to see my favorite movies so that I can remember which movies are my favorites.
17. ☑ As a user I want to rate movies so I can remember what i thought about the movie
18. ☑ As a user I want to be able to comment on movies so that I can express my opinion
19. ☑ As a user I want to be able to see statistics based on my movies to get an overview of my movie hobby.
20. ☐ As a user I want to access application settings so that I can change the application to my liking.
21. ☐ As a user I want to be able to see other users movie lists.
22. ☐ As a user I want to be able to filter my user lists so i don’t have to mix them up with my movie search.
23. ☐ As a user I want to be able to filter by genre so i can find movies from a specific genre i like.
24. ☐ As a user I want to be able to sort by release date to help me search better.
25. ☐ As a user I want to be able to get recommendations based on my preferences to help me find movies I might like.

2.2. Definition of Done

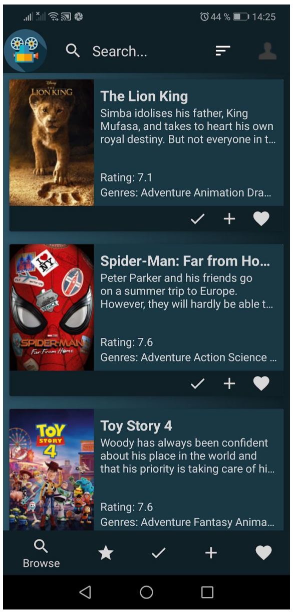
- ☑ The application should not be bandwidth heavy.
- ☑ The application should have a modern looking UI.
- ☑ The application should be accessible.
- ☑ The application should be fast with an easy to navigate UI.
- ☑ The model and the repository should have unit tests.
- ☑ The application should be able to browse movies from a large API.
- ☑ The applications cached data should be browsable without network.
- ☐ The application should be secure, fast and reliable.
- ☑ User data should be kept in the cloud allowing it to be used on any device.
- ☑ The application passes all of the test.

- ☑ The application passes the continuous integration.
- ☑ The application is under version control.

2.3. User interface

Our application has a static and a dynamic layout, the static layout consists of a bottom navigation bar and a top actionbar. The bottom navigation bar enables you to navigate between different movie lists displayed on the screen. The initial one is browse which shows a list of movies the user might enjoy. By clicking on recommended you get to a list of movies based on your movie preferences like genres and actors. The next three buttons is the users personal lists, watched, watch later and favorites. These lists can only be accessed when the user is logged in, else an error message is displayed. Also if a list is empty, an error message will be displayed.

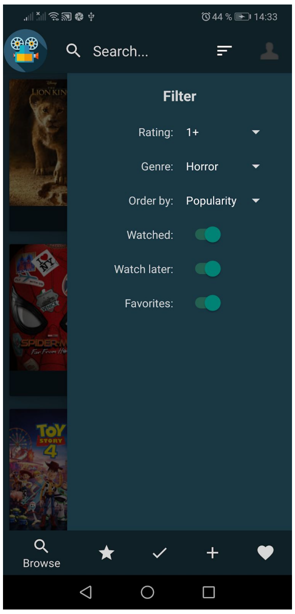
The action bar has several functions, the main one is the search feature which enables you to search for a specific movie. Aside from that there is also the filter button which opens up a slick menu where you can modify what kind of movies you'd like to have displayed. On top of that there is a button in the upper right corner which navigates you to either the login page or the account page in the form of either a dropdown menu or a pullup menu.



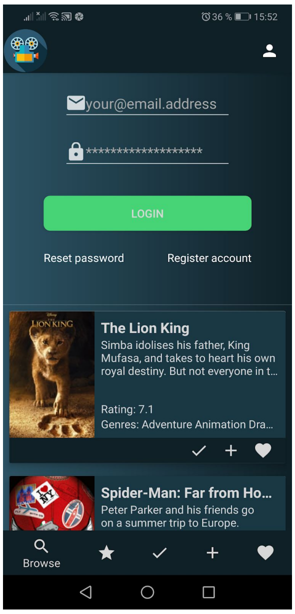
The Lion King
Simba idolises his father, King Mufasa, and takes to heart his own royal destiny. But not everyone in t...
Rating: 7.1
Genres: Adventure Animation Dra...

Spider-Man: Far from Ho...
Peter Parker and his friends go on a summer trip to Europe. However, they will hardly be able t...
Rating: 7.6
Genres: Adventure Action Science ...

Toy Story 4
Woody has always been confident about his place in the world and that his priority is taking care of hi...
Rating: 7.6
Genres: Adventure Fantasy Anima...



Rating: 1+
Genre: Horror
Order by: Popularity
Watched:
Watch later:
Favorites:



your@email.address
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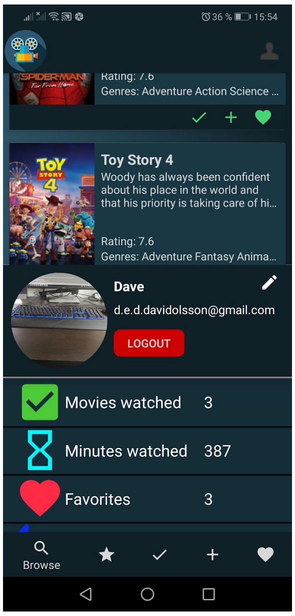
The Lion King
Simba idolises his father, King Mufasa, and takes to heart his own royal destiny. But not everyone in t...
Rating: 7.1
Genres: Adventure Animation Dra...

Spider-Man: Far from Ho...
Peter Parker and his friends go on a summer trip to Europe.



Rating: 7.6
Genres: Adventure Action Science ...

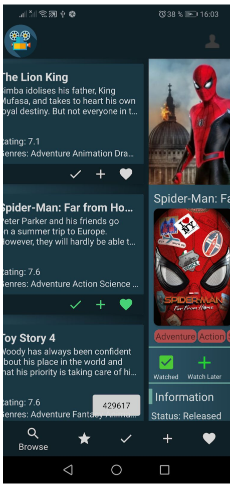
Toy Story 4
Woody has always been confident about his place in the world and that his priority is taking care of hi...
Rating: 7.6
Genres: Adventure Fantasy Anima...

Dave
d.e.d.davidolsson@gmail.com

Movies watched 3
Minutes watched 387
Favorites 3

The actual lists consists of movie "cards" that gives the user a quick overview of the movie along with the movie poster. User can see the title, overview, rating and genres on these cards. This is so the user can make fast decisions whether to research the movie more or not. Also at the bottom on the cards are three buttons the user can click to quickly add the movie to one of the three personal lists. This functionality gives an error message if the user is not logged in. If the user clicks one of the buttons it will turn green indicating that the movie has been added to the respective list, and if the user press again it will turn white indicating the movie was removed from the list.

Besides from the static bars and movie lists you can also navigate by clicking on a movie, this will bring you to a layout where you can see detailed information on the movie in question. Here you can also rate the movie, or add it to a list such as watched or watched later etc. On this page you can also in addition to rating the movie leave a comment letting others know what you thought about it.



38 % 16:03

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oy Story 4
Voody has always been confident
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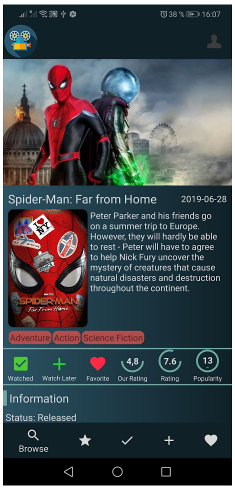
ating: 7.6
enres: Adventure Fantasy Anima...

429617

Spider-Man: Fa

Information
Status: Released



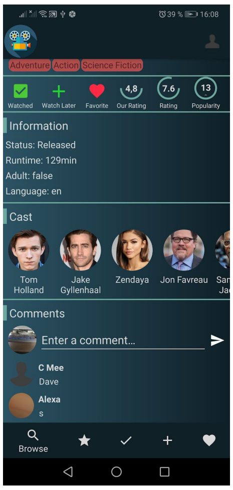
38 % 16:07

Spider-Man: Far from Home 2019-06-28

Peter Parker and his friends go on a summer trip to Europe. However, they will hardly be able to rest - Peter will have to agree to help Nick Fury uncover the mystery of creatures that cause natural disasters and destruction throughout the continent.

4,8 Our Rating
7.6 Rating
13 Popularity

Information
Status: Released



39 % 16:08

4,8 Our Rating
7.6 Rating
13 Popularity

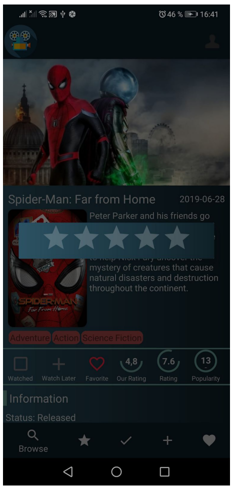
Information
Status: Released
Runtime: 129min
Adult: false
Language: en

Cast
Tom Holland
Jake Gyllenhaal
Zendaya
Jon Favreau
Sar Ja

Comments
Enter a comment...

C Mee
Dave

Alexa
s



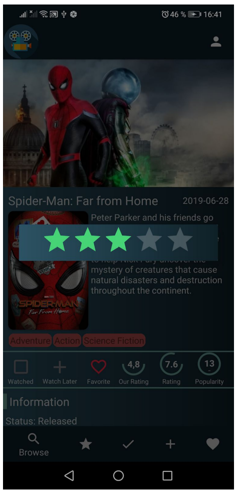
46 % 16:41

Spider-Man: Far from Home 2019-06-28

Peter Parker and his friends go
mystery of creatures that cause natural disasters and destruction throughout the continent.

4,8 Our Rating
7.6 Rating
13 Popularity

Information
Status: Released



46 % 16:41

Spider-Man: Far from Home 2019-06-28

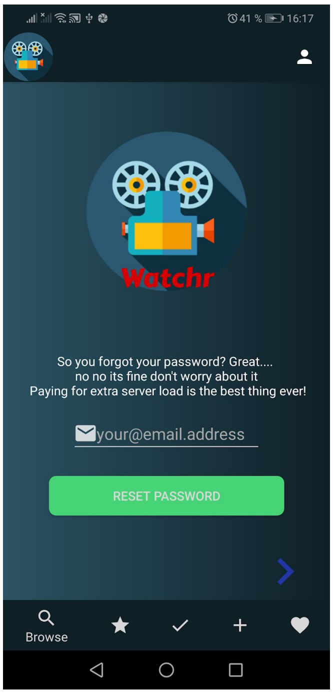
Peter Parker and his friends go
mystery of creatures that cause natural disasters and destruction throughout the continent.

4,8 Our Rating
7.6 Rating
13 Popularity

Information
Status: Released

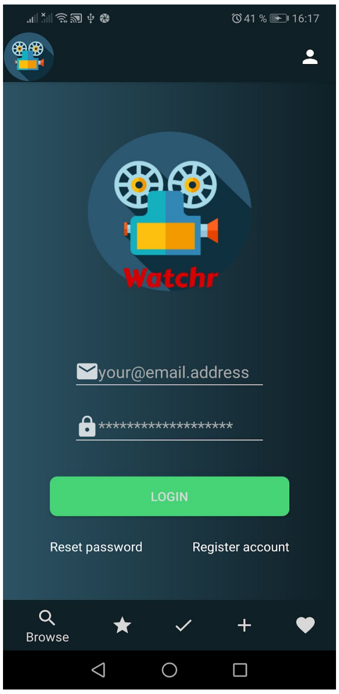
On top of the movie list pages and the movie info pages we have three additional pages. The account page, the account settings page, and the login page. The first step to navigating to either one of these is to press the profile icon up in the right corner, this action is available from anywhere within the application. Pressing this while no user is logged in takes you to the login page.

The login page has three layouts each serving a specific purpose. You navigate between these by clicking what you want to do register/forgot password on the initial (login) layout and then you navigate back by pressing the blue arrow. Each of these views has a responsive UI that notifies when a field is not correctly formatted and displays the result of an attempted action, send password recovery/login/register.



So you forgot your password? Great....
no no its fine don't worry about it
Paying for extra server load is the best thing ever!

your@email.address



your@email.address

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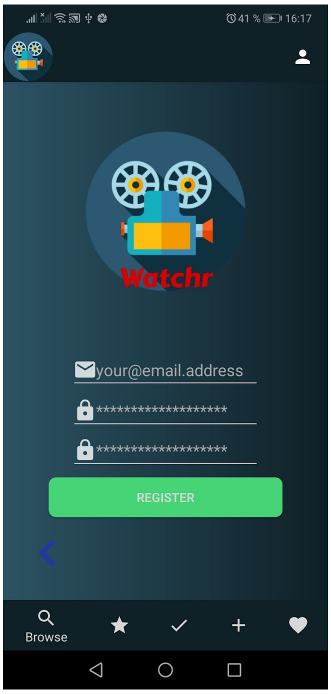

your@email.address

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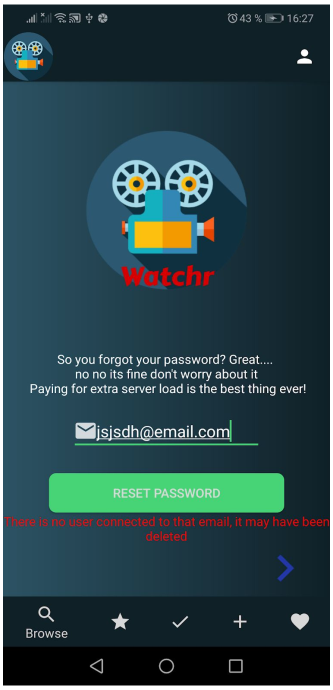
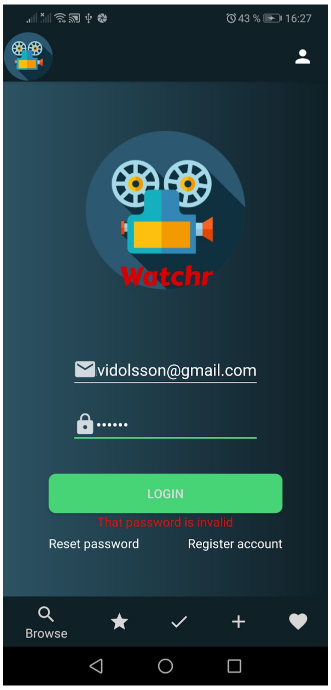


So you forgot your password? Great....
no no its fine don't worry about it
Paying for extra server load is the best thing ever!

jsjsdh@email.com

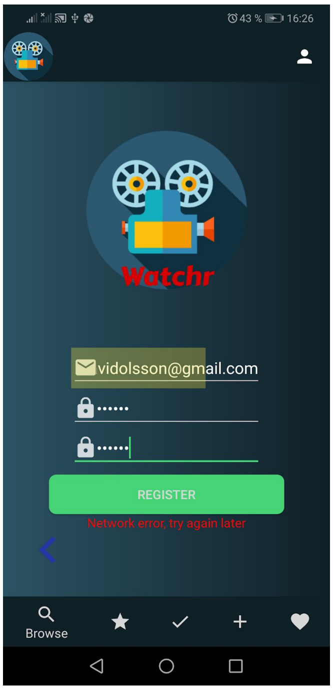
There is no user connected to that email, it may have been deleted



vidolsson@gmail.com

••••••

That password is invalid



vidolsson@gmail.com

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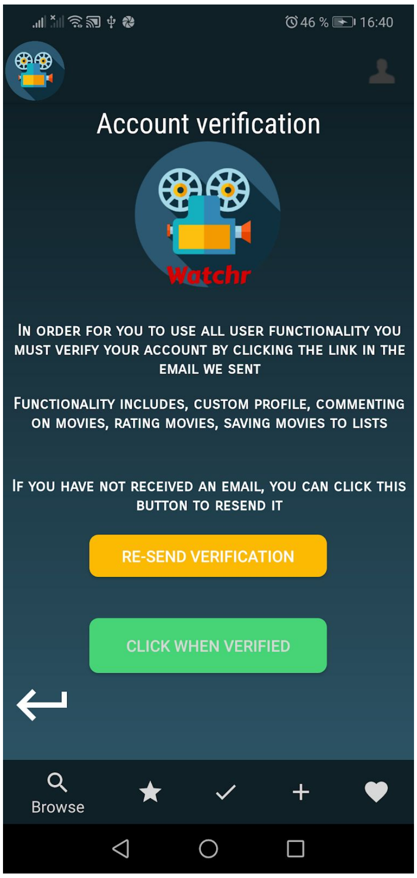
Network error, try again later

There are two ways to navigate to the account settings page either through the account page or when a user is registered for the first time. When a user has not yet verified his/hers email the settings page will show an informative layout where the user has the option to check if they are verified yet or send a new verification email. This layout functions as a block as the account settings features are not permitted until the user is verified. This UI is also responsive and shows the results of attempted actions, check email verification/send email verification. You can exit by pressing the white arrow.

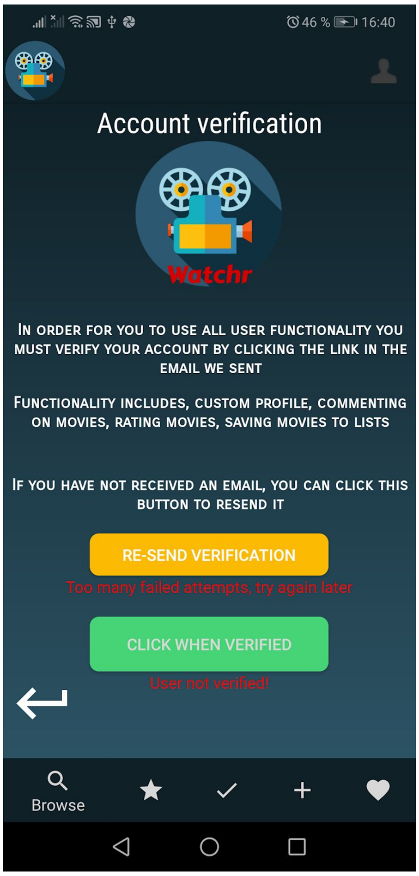


Account verification

In order for you to use all user functionality you must verify your account by clicking the link in the email we sent

Functionality includes, custom profile, commenting on movies, rating movies, saving movies to lists

If you have not received an email, you can click this button to resend it



Account verification

In order for you to use all user functionality you must verify your account by clicking the link in the email we sent

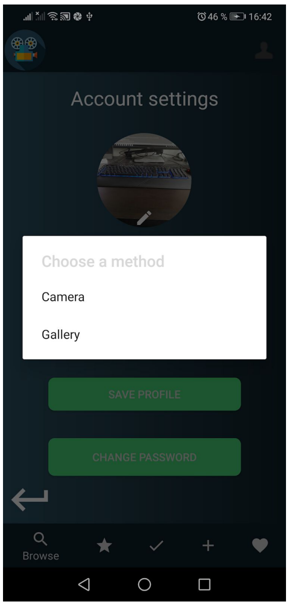
Functionality includes, custom profile, commenting on movies, rating movies, saving movies to lists

If you have not received an email, you can click this button to resend it

Too many failed attempts, try again later

User not verified!

Once the user is verified the blocking layout will disappear and give access to the two remaining layouts, profile settings and change password. This UI is like the others, responsive and shows the result of attempted actions. To navigate between these two layouts you press the change password button on the initial (profile settings) layout and then the blue arrow to go back. If you click on the profile picture you can edit it by choosing either to take a new photo or fetch one from the gallery.

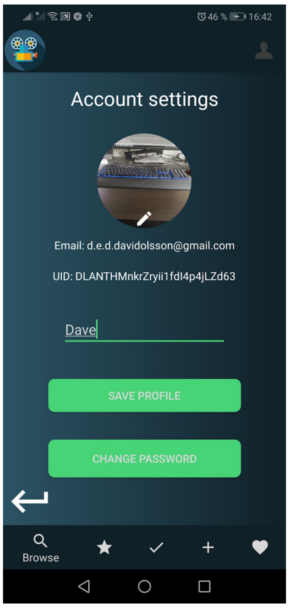


Account settings

Choose a method

Camera

Gallery

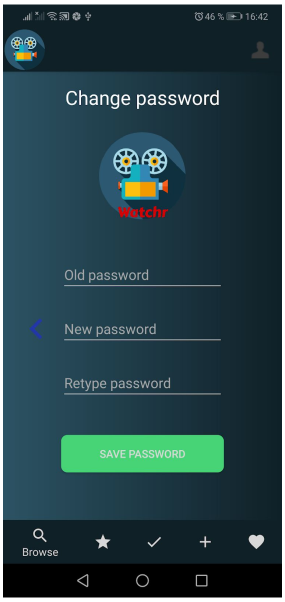


Account settings

Email: d.e.d.davidolsson@gmail.com

UID: DLANTHMnkrZryii1fdl4p4jLZd63

Dave

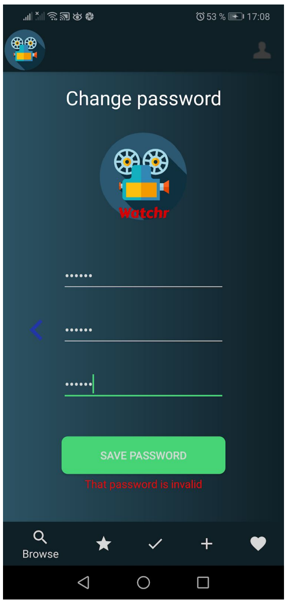


Change password

Old password

New password

Retype password



Change password

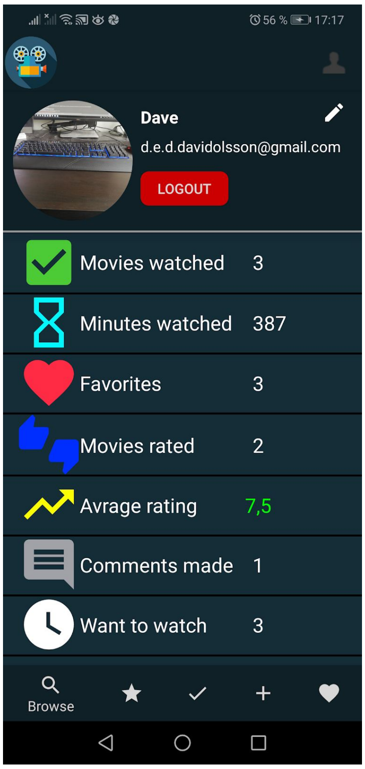
••••••

••••••

••••••

That password is invalid

In order to navigate to the account page you click the upper right profile icon while you are logged in, here data on your user is displayed. Profile picture, username, email and verified/not verified but also statistics on your movie habits is displayed on the account page. From here you can get to the account settings page by clicking the white edit icon in the upper right corner beneath the profile icon.

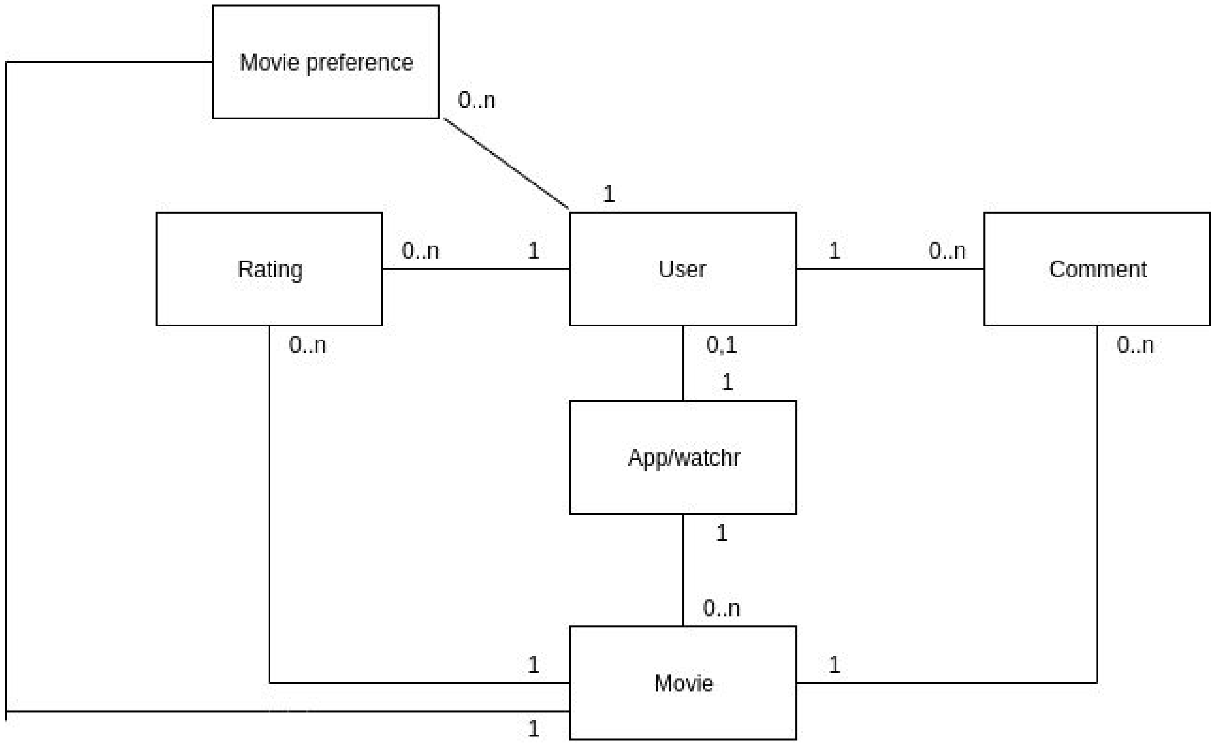


Dave
d.e.d.davidolsson@gmail.com

Movies watched	3
Minutes watched	387
Favorites	3
Movies rated	2
Avrage rating	7,5
Comments made	1
Want to watch	3

3. Domain model

The most abstract model of the application.
User: An account each app user has
Movie preference represents movies liked/disliked/watched/want to watch
Comments : Text reviews left on movies
Rating : How well a user liked a movie
App/watchr : Where all data is displayed



3.1. Class responsibilities

App/watchr is where it all happens, this is where you browse movies, look at movie details, rate movies and leave reviews. In order to lookup a movie you need information on it, such as name, cast, release year, director and wallpapers etc. This is contained within the movies class and to show this we hold 0..n movies in the app/watchr class.

If someone wants to make their voice heard and have some kind of public image we need a user class both to authenticate (we can't have anyone posting on our forums) and hold all the data we might want to associate with the user. For this reason app/watchr holds a user and since this is a mobile application which tend to be personal belongings we only allow one user at a time 0...1.

If a user has an opinion on how good a movie was and either wants to make his/her voice heard or save this for the future they need some way to put a score on a movie for this we have the Rating class. A user can optionally rate as many movies as they want so a user class can hold 0..n ratings.

If a user wants to leave a review to let everyone know what/he she thought or alternatively discuss the movie with someone they need to post this somehow. For this we have the Comment class, and a user can leave as many comments as they want so a user can hold 0..n comments.

When rating or commenting a movie is not enough and you want to have some kind of extra identifier/preference/mark such as watched, watch later, favorite and liked etc., we have the movie preference class to represent these special preferences. A user can have as many movie preferences as they like so the user can hold 0..n.

4. References

- Android Jetpack: https://developer.android.com/jetpack
- CircleImageView: https://github.com/hdodenhof/CircleImageView
- Navigation: https://developer.android.com/guide/navigation
- Glide: https://github.com/bumptech/glide
- Robolectric: https://github.com/robolectric/robolectric
- Butterknife: https://jakewharton.github.io/butterknife/
- Firebase: https://firebase.google.com/
- Retrofit: https://square.github.io/retrofit/
- Room: https://developer.android.com/topic/libraries/architecture/room