

HCI Milestone 3

❖ Team members:

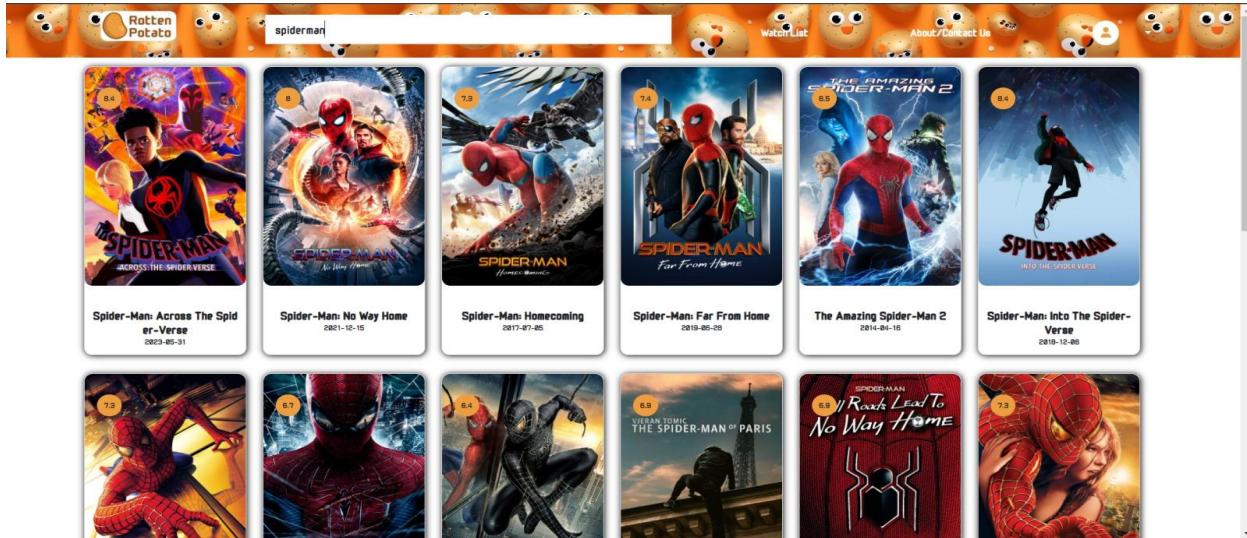
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❖ Contents of Milestone 3:

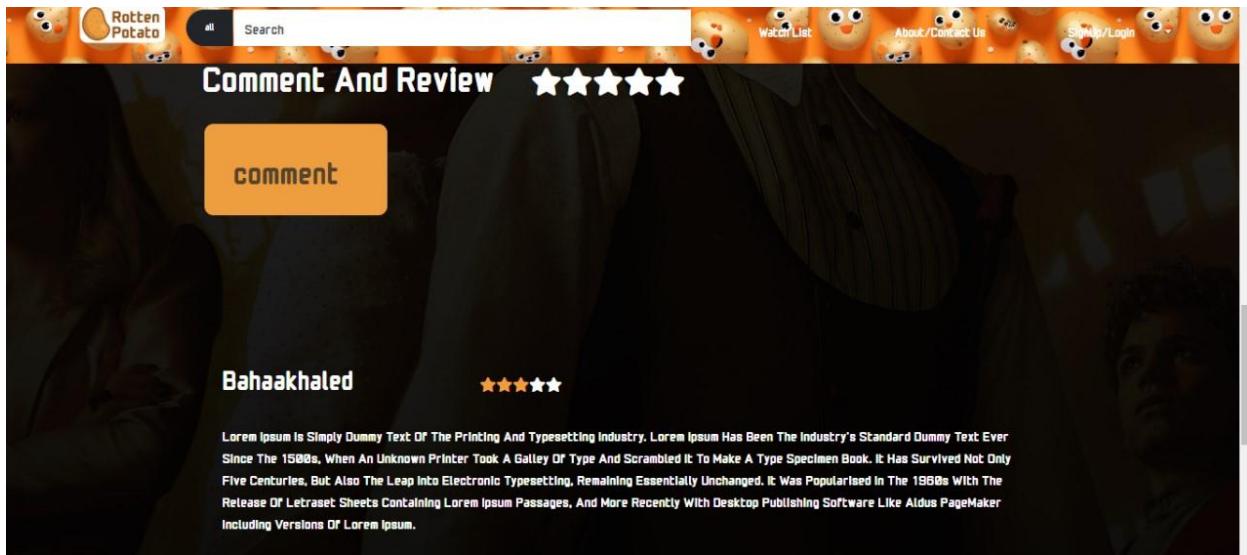
- A. Introduction:
 - 1. Overview and purpose of the website.
 - 2. Goals and objectives.
 - 3. Target audience or users.
- B. Installation Guide:
 - 1. Instructions for installation.
- C. User Manual:
 - 1. How-to guides or tutorials describing the flows
- D. Architecture Overview:
 - 1. High-level architecture diagram.
 - 2. Components, modules, or layers and their interactions.
- E. API Documentation (if applicable):
 - 1. Description of APIs.
 - 2. Endpoint details.

❖ Implemented Features (in milestone 3):

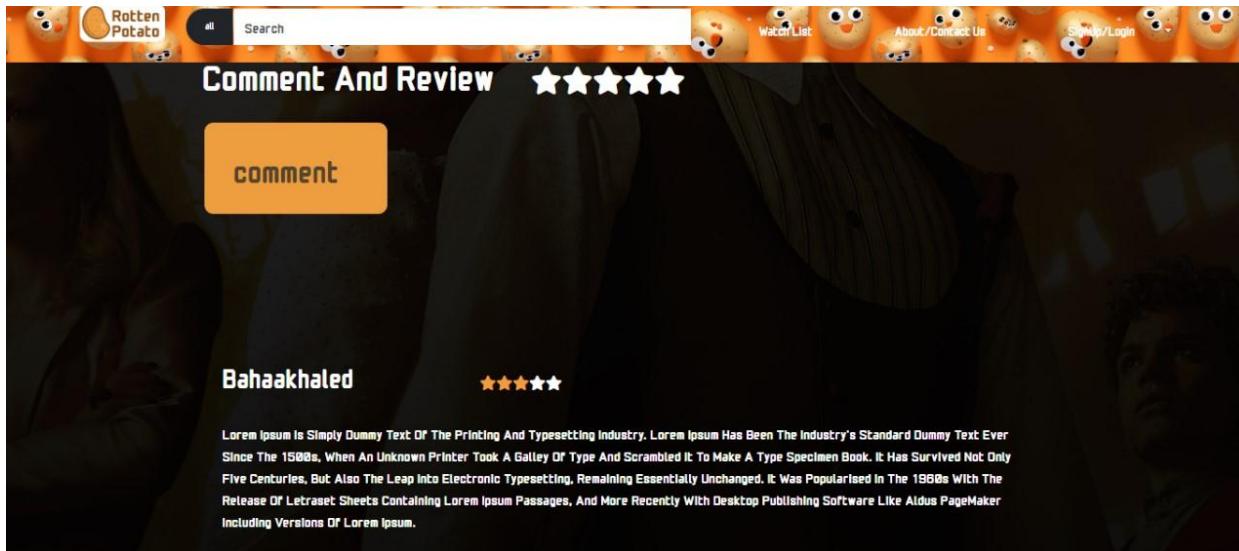
1- Search: This feature is available to logged in and non-logged in users. From the HOMEPAGE, you can search for the movie you want by its name.



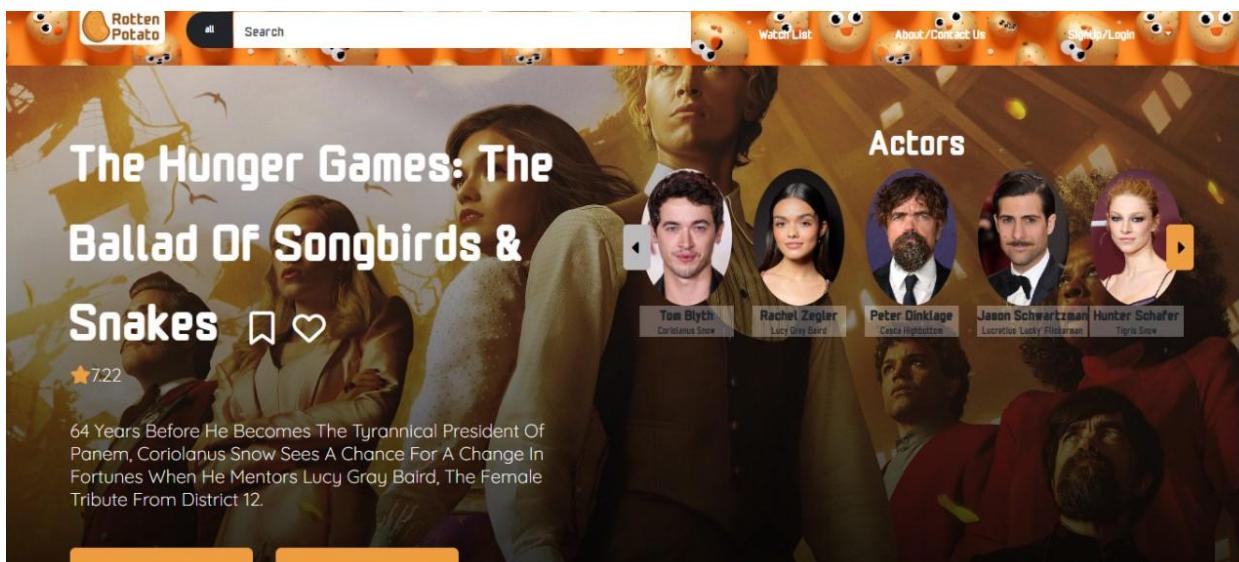
2- Comments: This feature is only available for logged in users, where they can leave their comments on any film and view other user's comments for the same film.



3- Rates: This feature is only available for logged in users. Whenever the user adds a comment on the film, he's asked to give a rate. Automatically, the total rate of the movie is updated.



4- Watchlist: This feature is only available for logged in users, where the user navigates to the movie page by clicking on the film he wants. Then, click on the “add to watch list” icon (the bookmark symbol).



5- Favorites: This feature is only available for logged in users, where the user navigates to the movie page by clicking on the film he wants. Then, click on the “add to favorites” icon (the heart symbol).



The Hunger Games: The Ballad Of Songbirds & Snakes

7.22

64 Years Before He Becomes The Tyrannical President Of Panem, Coriolanus Snow Sees A Chance For A Change In Fortunes When He Mentors Lucy Gray Baird, The Female Tribute From District 12.

Actors:

- Tom Blyth (Coriolanus Snow)
- Rachel Zegler (Lucy Gray Baird)
- Peter Dinklage (Cesta Highbottom)
- Jason Schwartzman (Lucretius Lucky Pfefferman)
- Hunter Schafer (Tigris Snow)

6- Similar Suggestions: This feature is only available for logged in users. When the user opens a film, we give him suggestions for similar movies.

Cambiamento D'aria

Mist On The Moors

Godzilla Vs. Destoroyah

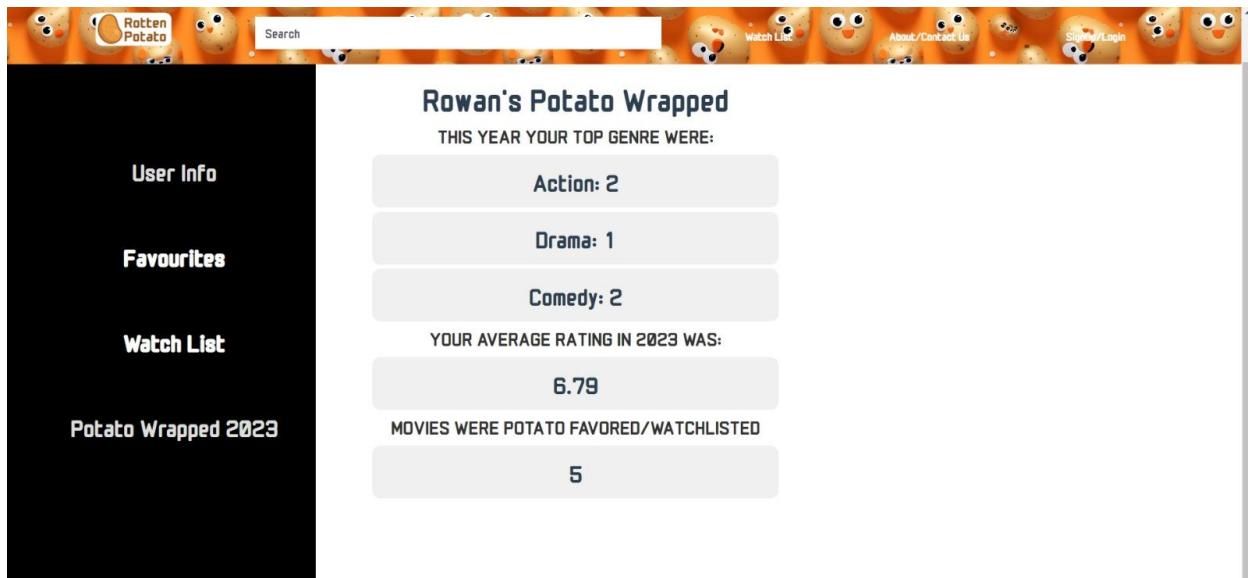
November Child

Brideshead Revisited

Cop And 1/2

Comment And Review ★★★★★

7- Potato Wrapped: This feature is only available for logged in users. A data analysis feature to wrap up user experience and data throughout the previous year.



❖ Background: Implementation:

- Frontend using Vue.js
 - Backend using Spring Boot.
 - Version control: Git- GitHub.
 - JSON file server for database.
-

❖ References:

- Vue.js documentation: <https://vuejs.org/guide/introduction.html>
 - SpringBoot documentation:
<https://docs.spring.io/spring-boot/docs/current/reference/htmlsingle/>
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1. Introduction:

1) Overview and purpose of the website:

Welcome to our website “Rotten Potatoes”, where movie reviews simmer and sizzle!

OVERVIEW on the website: At Rotten Potatoes, we believe in the power of a good film to transport you to different worlds, evoke emotions and spark conversations. Whether you’re a seasoned cinephile or just looking for your next movie night pick, Rotten Potatoes is your go-to destination for insightful and entertaining movie reviews. What sets us -Rotten Potatoes- apart is our commitment to delivering reviews that are as diverse as the films themselves.

PURPOSE of the website: We’re here to help you decide what to watch and to help you discover new movies and TV shows you’ll love. We provide several ways to interact with our reviews, including a rating system and comments.

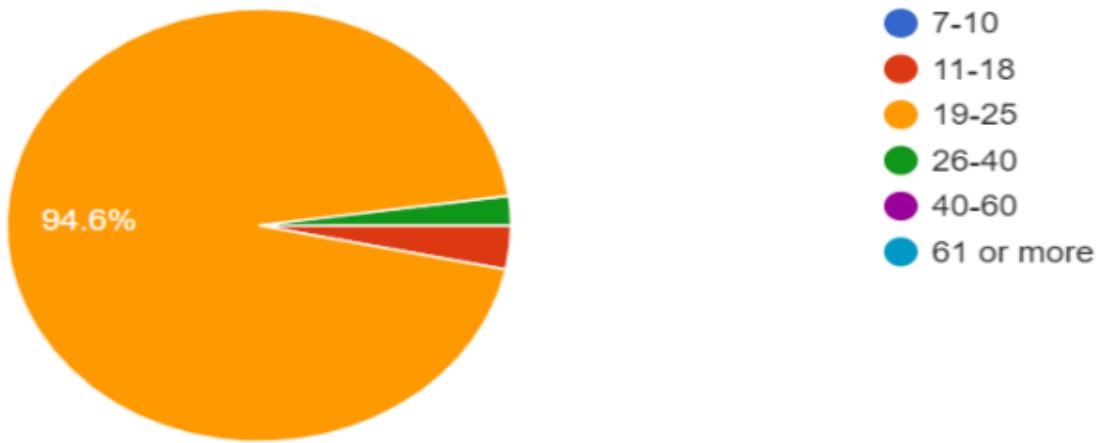
2) Goals and objectives:

Our objective is to enhance user experiences when searching for captivating and popular movies across various genres (horror, romance, action, drama, science fiction, comedy, etc.). We provide brief descriptions and overviews for each movie and offer trailers, share cast information, display movie ratings, give ratings, leave and view comments.

Our GOAL is to help users find new movies easily through our reviews, and ratings, and give them a platform to publish their criticism or admiration through comments and interact with other enthusiasts.

3) Target audience and users:

According to the analysis we made before, our project targets users between 18 and 25 as we want to satisfy what they want and what they need.



However, our website is suitable for both genders of any age.

- There are **2 types of users**: a logged in user and non-logged in. Both have the ability to search for the movie by a keyword or by filters like genre, release year,...etc so it's easier for the user to choose a movie according to his interests. They can choose to watch the trailer or read a brief description of the movie and its plot, know about the cast; actors, directors, or whoever participated in its production.

For the logged in users only, they can check out the reviews, comments, and ratings of a movie, add their comments/ratings or add movies to their favorite list/watch list.

2. Installation Guide:

1) Instructions for installation:

1. By downloading the source codes on github from our repo. The link: <https://github.com/rowanxgamel/Rotten-Potatoes>
 2. Run the backend using SpringBoot.
 3. Run the frontend files using VueJS by the commands:
 - 'npm install'
 - 'Npm run dev'
 4. You can now follow the link given in the terminal and **Welcome To Rotten Potatoes!**
-

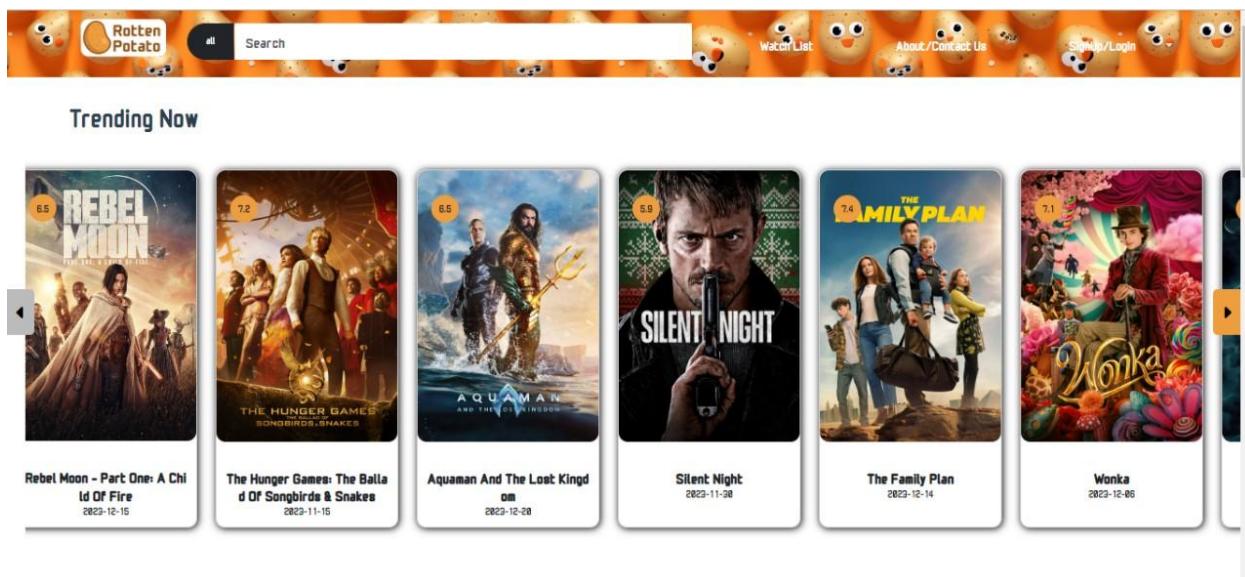
3. User Manual:

1) Tutorials describing the flows:

Welcome to our website: Rotten Potatoes!

1- As soon as you complete the installments as mentioned in the **INSTALLATION GUIDE**, you're now viewing our homepage where you can navigate through the website whenever you want. However, having an account will let you experience extra features.

- **HomePage:**



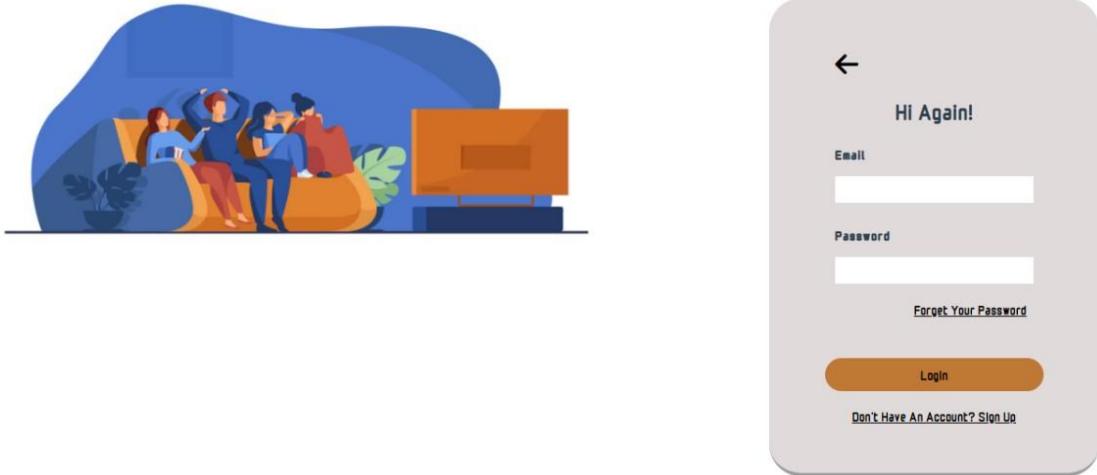
2- Click on **SignUp/Login** through the navigation bar.



3- In case you already have an account, let's **login!**

Enter your data:

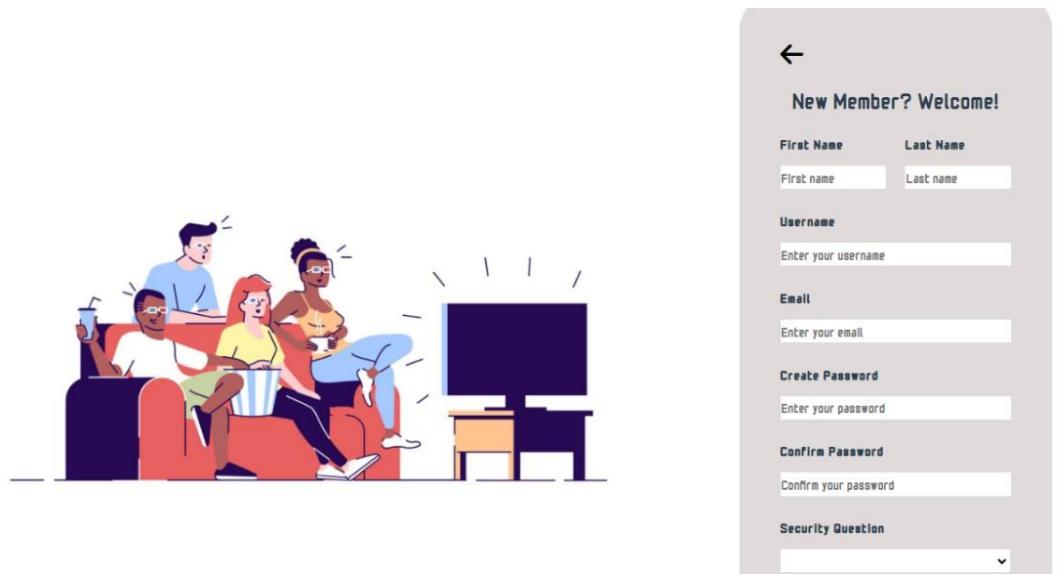
- Email.
- Password.



4- If you don't have an account, click on '**Sign Up**' below!

Enter your data:

- First Name.
- Last Name.
- Username.
- Email.
- Create Password.
- Confirm Password.
- Choose a security question and answer it. This will let us help you when you forget your password.



5- If you already have an account, but you forgot your password, don't worry, we can help you!

- Click on '**Forgot your password**' in the Login page
- Enter you email
- Click the "ForgetPassword" button
- Remember the SECURITY QUESTION you've entered while signing up? Its time has come!
- Answer the question the same answer you've given while signing up.
- Click "Continue".
- If the 2 answers match, then you will be allowed to create a new password.



←

Let's Get There!

Email

ForgetPassword

[Don't Have An Account? Sign Up](#)



←

One More Step!

Question

What Is The Name Of Your Favorite Childhood Friend?

Answer

Continue

6- NOW, you are viewing the **Homepage** through your account.

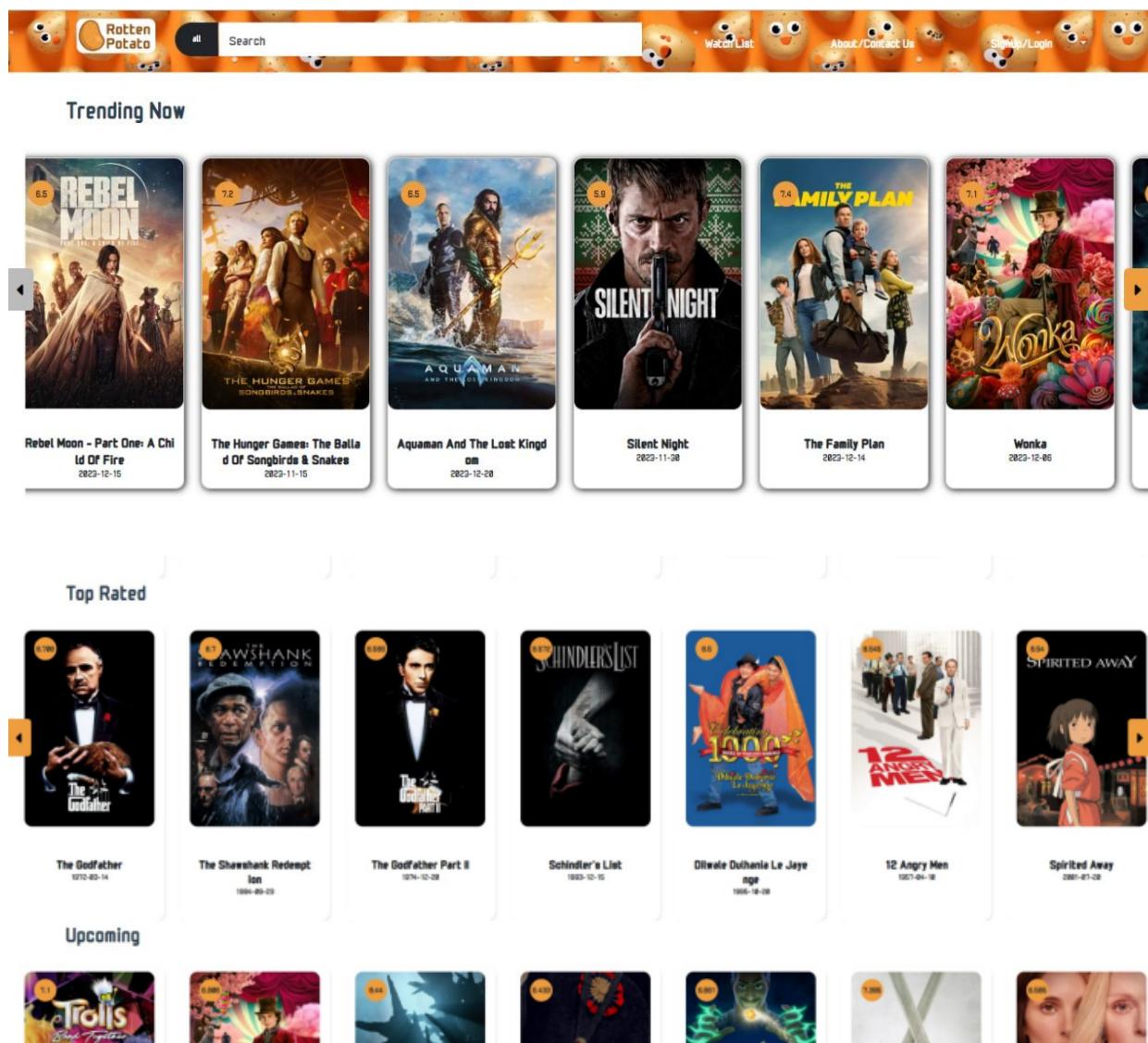
It's available for both registered and non-registered users with a little difference.

The similarities are:

- There's a **search bar** in the navigation bar, you can search for a movie by its name.
- There's a "Trending Now", "Top Rated" and "Upcoming" where the user can navigate through them using a carousel.
- Below, actors are shown where the user can scroll through them.

The difference between a registered and non-registered user:

- As an extra feature for the registered user, he can view his watch list and add movies to it. For the non-registered user, he will be asked to sign up to Rotten Potatoes to add movies to his list or view them if he already has an account.

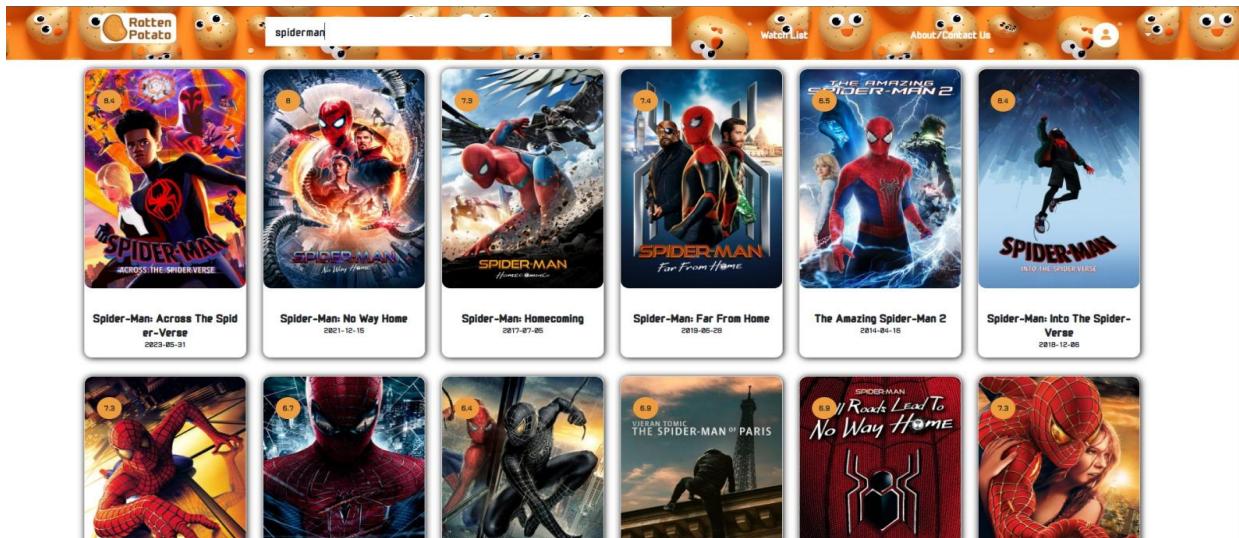


Homepage for a non-registered user

Homepage for a registered user

7- If you're looking for a certain movie, you can type its name in the **search bar**.





8- To navigate through the movies you've added before to your **WATCHLIST**, you can find them in the HomePage below or click on “WatchList” in the navigation bar.

9- When logging in, you can navigate to your **profile** through the navigation bar.

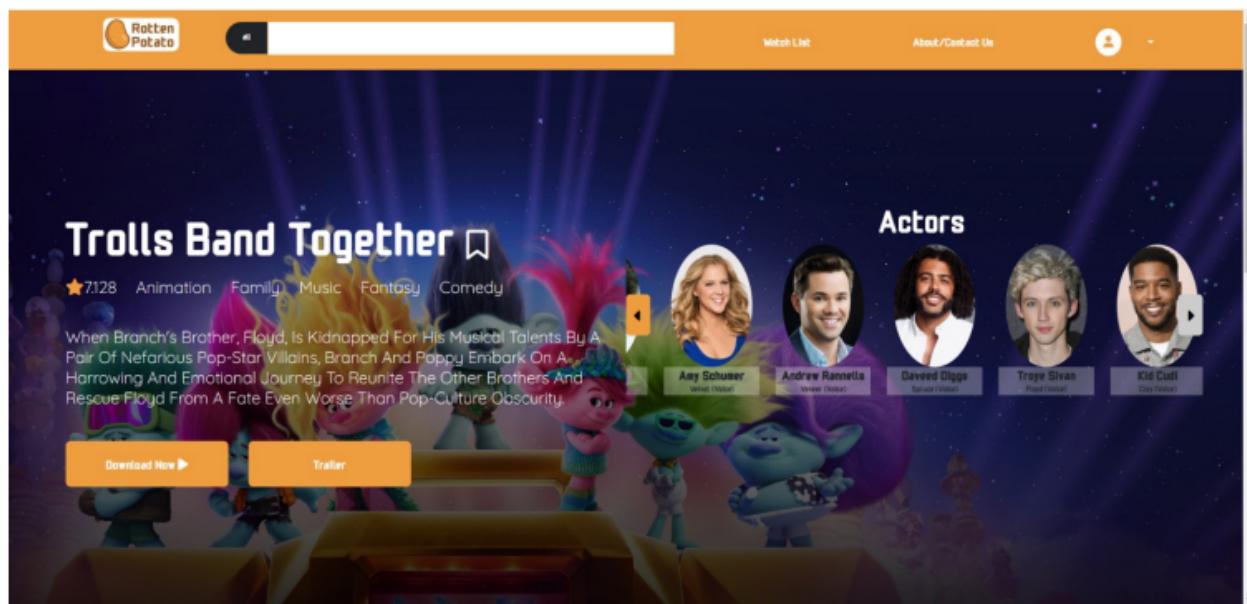
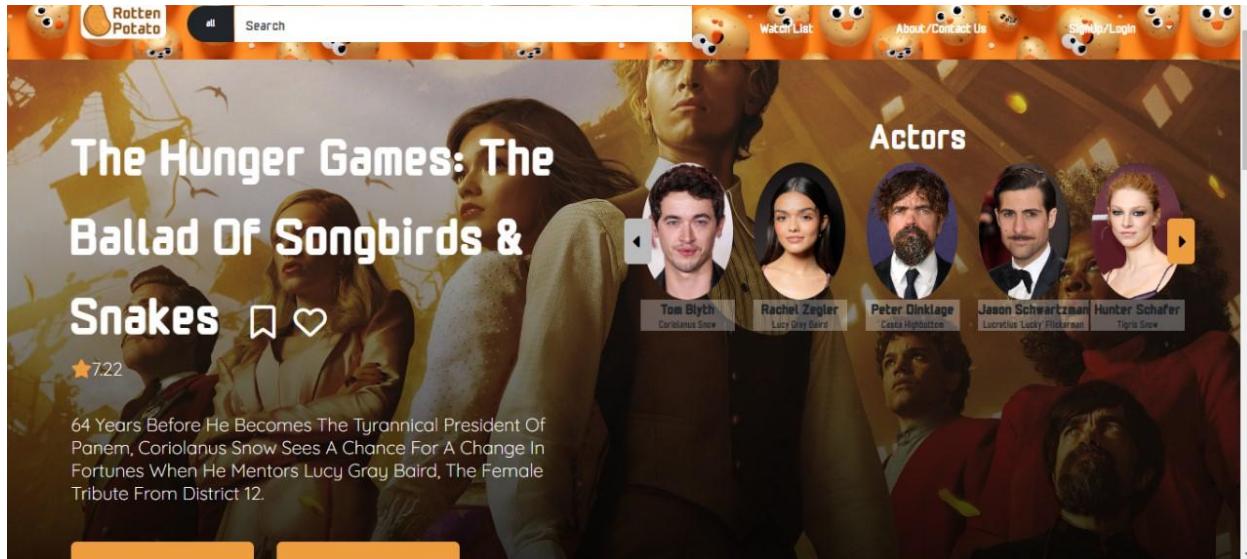
- There, you will find an avatar, your email, first and last name, your username and gender (the info you typed in during signing up). Moreover, you can access your watch list and favorites.



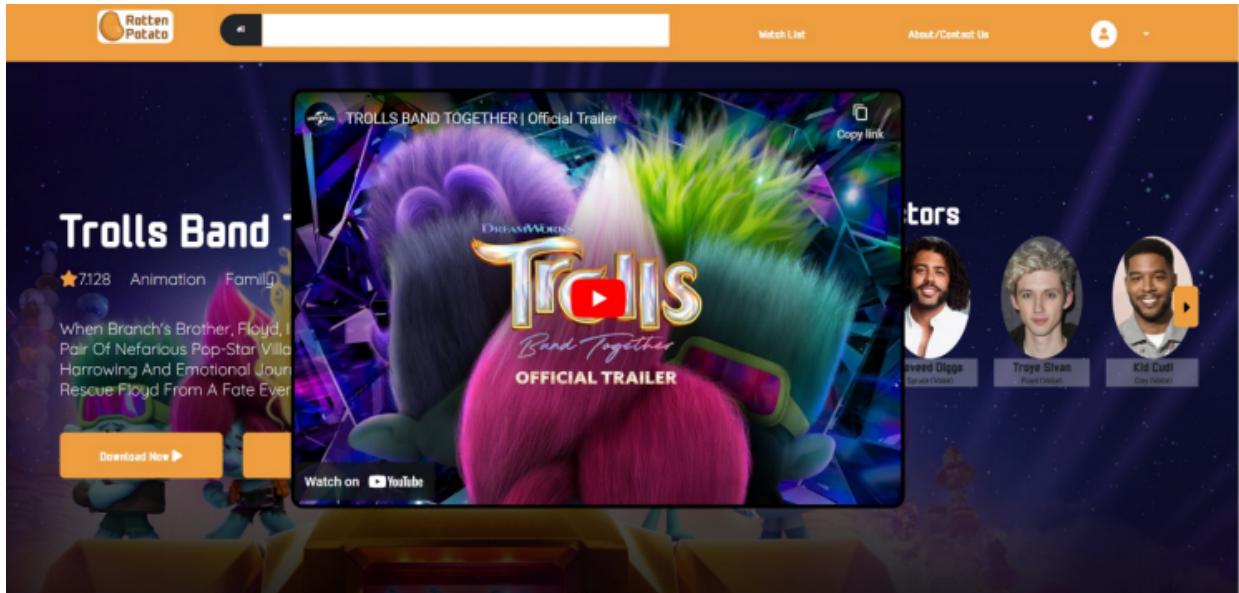
• WHAT ABOUT WATCHING A MOVIE NOW?

10- Choose your movie by clicking on it and you will be transferred to the **MOVIE PAGE**.

- There, you can see the movie name is viewed, description about the movie and the story, genre, rate, actors, comments section, the trailer and a download button.

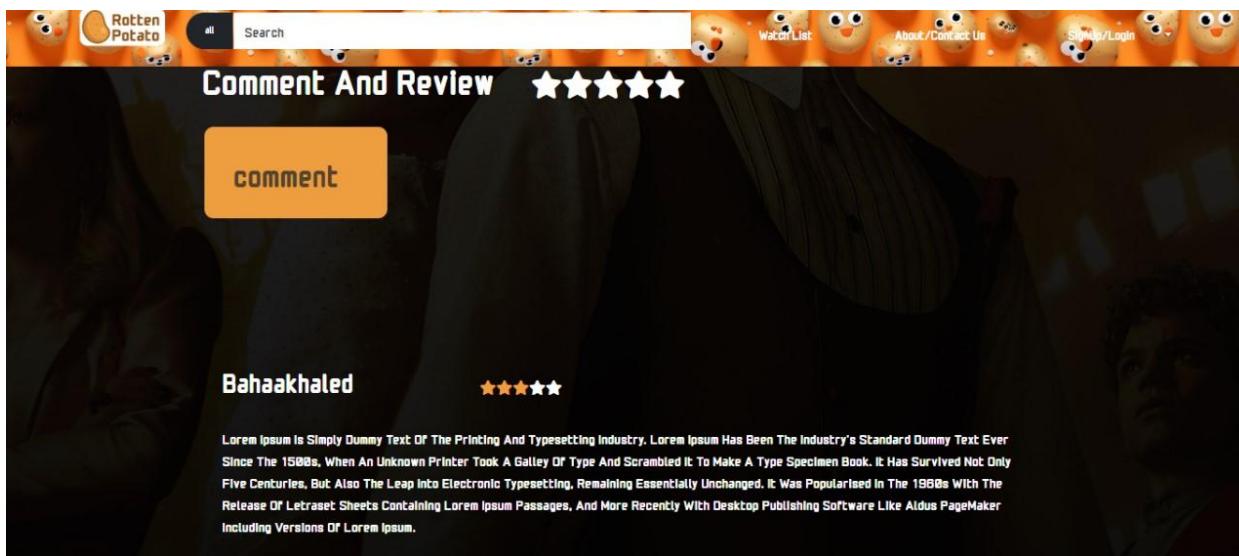


11- If you want to download a movie, click on the “Download Now” button.



12- In case you want to leave a **COMMENT** or view other users' comments, there's a comment section below in the same movie page (Remember, you should be logged in!)

13- Whenever you add a comment on the film, you're asked to give a **RATE**. Automatically, the total rate of the movie is updated.



14- Finally, to know more about us or for any inquiries, you can navigate to the “ABOUT PAGE” through the navigation bar from the “About/Contact Us”.



- There, some information about the website is displayed and what it offers.

About Rotten Potatoes

Welcome To Rotten Potatoes. Where Movie Reviews Sizzle And Sizzle!

Our Story

At Rotten Potatoes, We Believe In The Power Of A Good Film To Transport You To Different Worlds, Evoke Emotions, And Spark Conversations. Whether You're A Seasoned Cinephile Or Just Looking For Your Next Movie Night Pick, Rotten Potatoes Is Your Go-To Destination For Insightful And Entertaining Movie Reviews. What Sets Rotten Potatoes Apart Is Our Commitment To Delivering Reviews That Are As Diverse As The Films Themselves.

Our Mission

We're Here To Help You Decide What To Watch And To Help You Discover New Movies And TV Shows You'll Love. We Provide Several Ways To Interact With Our Reviews, Including A Rating System And Comments.

Contact Us/Support

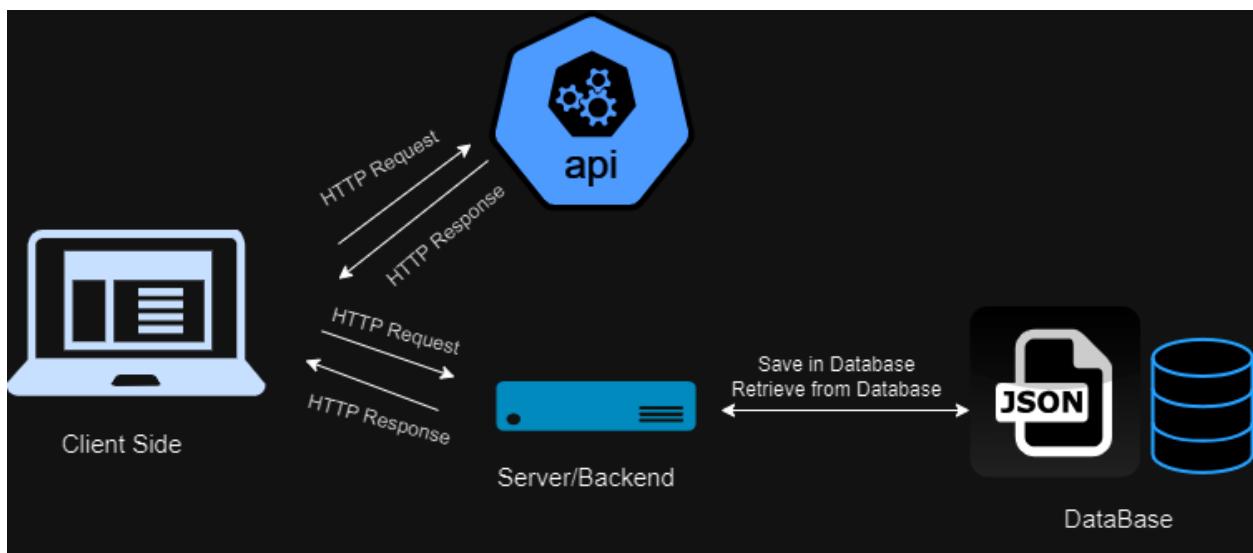
If You Have Any Questions Or Concerns, [Contact Us Through This Link](#)

4. Architecture Overview:

1) High-level architecture diagram:

Our Architecture Properties:

- Monolithic Architecture: Client side, Server side, and database all on one machine
- For future upgrades using Microservices would benefit us a lot because it would make the system more scalable and reliable (limit single-point failure)



2) Components, modules, or layers and their interactions:

Frontend (Client Side):

- Responsibility:
 - Handles user interface and interactions.
 - Sends HTTP requests to retrieve movie-related data.
- Components:
 - UI components (e.g., React or Vue components).
 - Fetch HTTP Requests.

Backend (Spring Boot):

- Responsibility:
 - Manages business logic, data processing, and communication with external APIs.
 - Saves and retrieves data from a JSON file acting as a database.
- Components:
 - Controller: Handles incoming HTTP requests.
 - Service layer: Implements logic and computations.
 - Data Access layer: Interacts with the JSON file for data storage and retrieval.

JSON File (Acting as Database):

- Responsibility:
 - For data retrieval and storage.

TMDB API:

- Responsibility:
 - External API providing movie-related data.
- Components:
 - Gives HTTP Response to our client side.

5. API Documentation (Description/Endpoints):

A. Backend Fetches:

1. Get All Users

- Endpoint: GET /users
- Description: Retrieve a list of all users.
- Response:
 - Status Code: 200 OK
 - Body: List of user data.

2. Get Comments by ID

- Endpoint: GET /Comments/{id}
- Description: Retrieve comments based on user ID.
- Path Variable:
 - {id}: User ID for filtering comments.
- Response:
 - Status Code: 200 OK
 - Body: List of comments for the specified user ID.

3. Add Comment

- Endpoint: POST /addComment
- Description: Add a new comment.
- Request Body:
 - Comment object in the request body.
- Response:
 - Status Code: 200 OK

4. Add User

- Endpoint: POST /users/add
- Description: Add a new user.
- Request Body:
 - User data in the request body.
- Response:
 - Status Code: 200 OK

5. Get User by Email

- Endpoint: `GET /users/{email}`
- Description: Retrieve user data by email.
- Path Variable:
 - `{email}`: **Email of the user.**
- **Response:**
 - **Status Code: 200 OK**
 - **Body: User data for the specified email.**

6. Check Login

- Endpoint: `POST /checkPass/{email}`
- Description: Check login credentials.
- Path Variable:
 - `{email}`: **Email for login verification.**
- **Request Body:**
 - **User password in the request body.**
- **Response:**
 - **Status Code: 200 OK if login successful, 404 Not Found otherwise.**

7. Update User

- Endpoint: `POST /updateUser/{email}`
- Description: Update user data.
- Path Variable:
 - `{email}`: **The email of the user is to be updated.**
- **Request Body:**
 - **Updated user data in the request body.**
- **Response:**
 - **Status Code: 200 OK**

8. Update Password

- Endpoint: `PUT /updatePassword/{email}`
- Description: Update user password.
- Path Variable:
 - `{email}`: **Email of the user to update the password.**

- **Request Body:**
 - New password in the request body.
- **Response:**
 - Status Code: 200 OK

9. Get Analysis Results

- Endpoint: GET /potatoWrap/{email}
- Description: Get analysis results for a user.
- Path Variable:
 - {email}: Email of the user.
- **Response:**
 - Status Code: 200 OK
 - Body: Analysis results for the specified user.

B.External API / TMDB Fetches:

1. Trending Movies Fetch

- Endpoint: GET /trending
- Description: Fetch trending movies based on the specified category.
- Query Parameters:
 - category: Movie category (e.g., top_rated, now_playing).
- **Response:**
 - Status Code: 200 OK
 - Body: List of trending movies.

2. Actors Fetch

- Endpoint: GET /actors/{id}/credits
- Description: Fetch cast and crew credits for a specific movie.
- Path Variable:
 - {id}: Movie ID.
- **Response:**
 - Status Code: 200 OK
 - Body: List of actors and their credits for the specified movie.

3. Trailer Fetch

- Endpoint: GET /trailers/{id}/videos
- Description: Fetch movie trailers for a specific movie.
- Path Variable:
 - {id}: Movie ID.
- Response:
 - Status Code: 200 OK
 - Body: List of trailers for the specified movie.

4. Download Movie Fetch

- Endpoint: GET /download/{title}
- Description: Search and fetch download links for a specific movie.
- Path Variable:
 - {title}: Movie title.
- Response:
 - Status Code: 200 OK
 - Body: Download links for the specified movie.

5. Search Movies

- Endpoint: GET /search
- Description: Search for movies based on a query.
- Query Parameters:
 - query: Search query.
- Response:
 - Status Code: 200 OK
 - Body: List of movies matching the search query.

❖ Requirements:

Functional Requirements:

1. User Authentication and Authorization:
 - User Registration

- Login/logout functionality
- User roles and permissions (unregistered and registered users)

2. Content Management:

- Ability to rate, comment, and add to the watchlist.
- Ability to click on movies to view their reviews and actors
- Ability to search and filter

3. Navigation:

- Intuitive navigation Bar
- Search functionality

4. Analytics:

- Integration with analytics tools (Google Analytics) helps us to:
 - a. Determine which part of the website, the user clicks on the most
 - b. This will help us update the layout for better usability
 - c. This might also add new ideas to attract more users

Non-Functional Requirements:

1. Performance: (Checkout performance evaluation at the end)

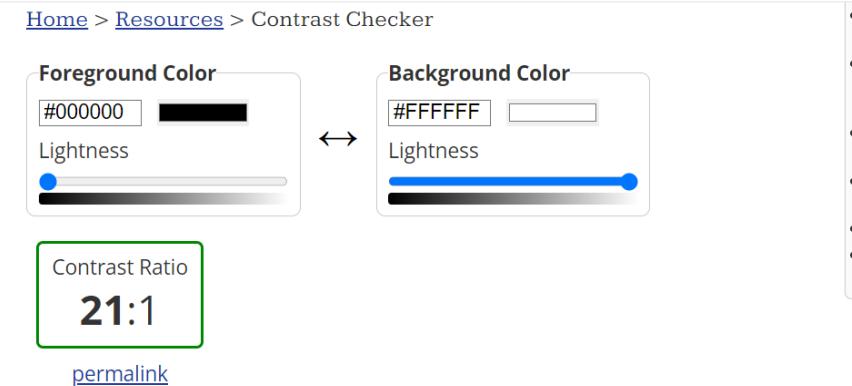
- Response time expectations:
 - Vue.js Frontend:
 - Page Load Time: we aim for a page load time of 2 seconds or less. Users tend to have better experiences when web pages load quickly.
 - Spring Boot Backend:
 - API Response Time: aim for response times under 500 milliseconds.
- Used lighthouse and chrome extensions for performance measuring
- **Performance improved**

4. Security:

- **Password hashing (SHA-256)**
- **Security Question for Password Change**

5. Accessibility

- Text inputs and words are accessible to people with disabilities: color blind and dyslexic
- Resources: <https://webaim.org/resources/contrastchecker/>



5. Scalability:

- Ability to handle increased load:
 - The website is unable to handle that much load so eventually, it needs a more robust solution like a database.
- JSON server:
 - Caching method is used for user info, once the user logs in, all his data are cached into the website.
 - No need to refer to the backend for every query.

6. Maintainability:

- UML diagrams for features reference
- The backend is divided into service, control, hashing function, and user data, so it's organized and maintainable
- Our main documentation guide by the end: project README file

User Analysis Using Google Analytics:

- Google Analytics provides us with essential insights into user behavior and website performance
- It offers data on audience demographics, traffic sources, and user interactions.
- Filters enhance data accuracy by excluding internal traffic or focusing on specific pages.

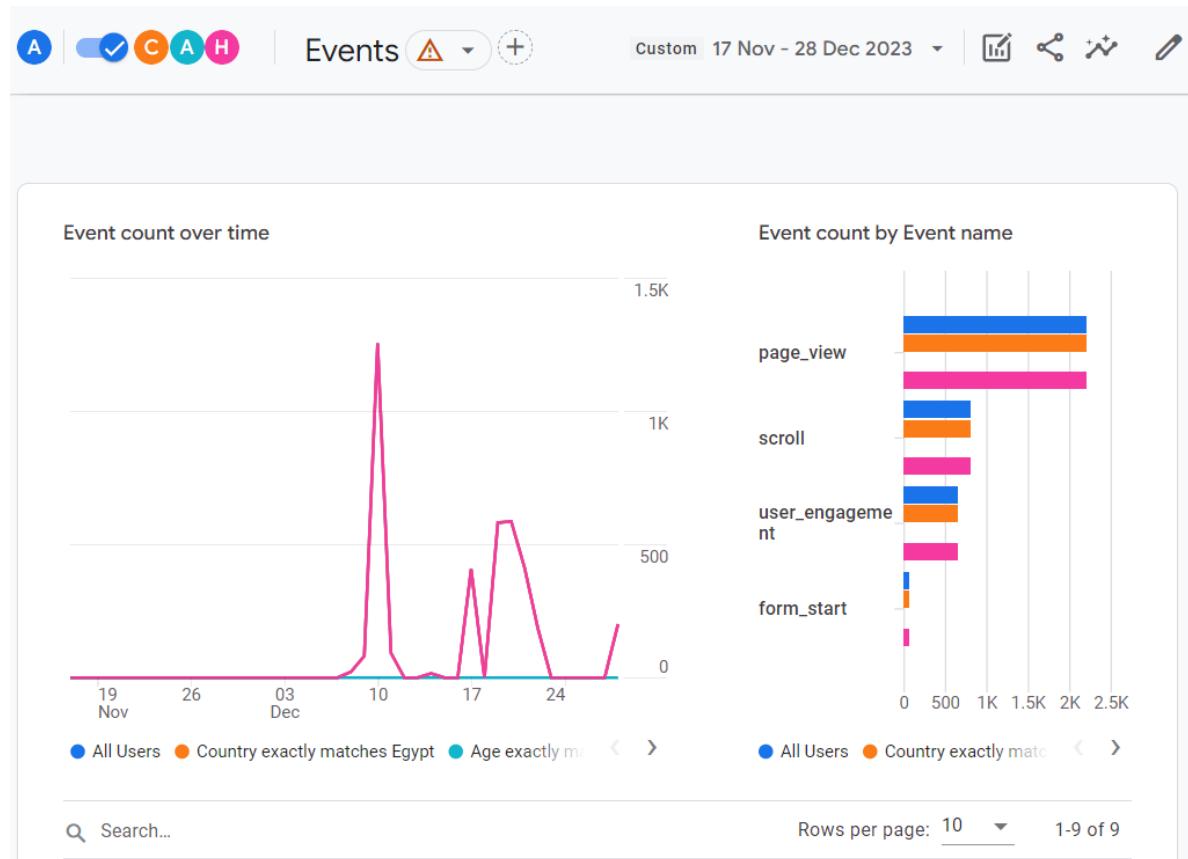
- Event tracking enables monitoring of key user interactions, from clicks to form submissions and downloads. We can leverage this information to optimize their websites for improved user experience and performance.
- Google Analytics' customizable reports and dashboards empower businesses to focus on key metrics and make informed decisions.

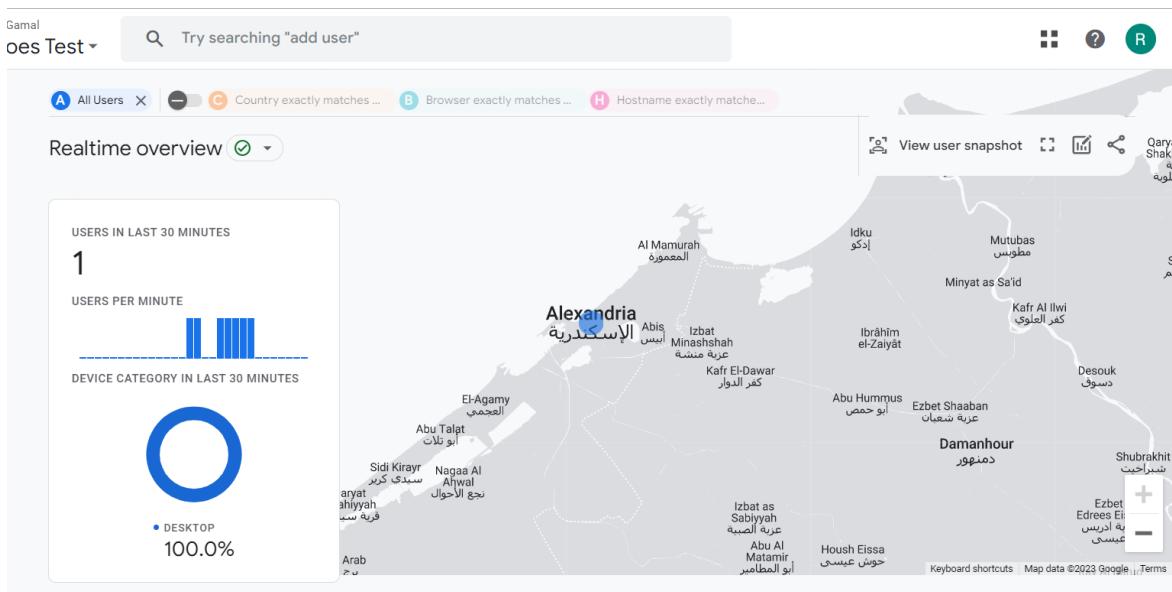
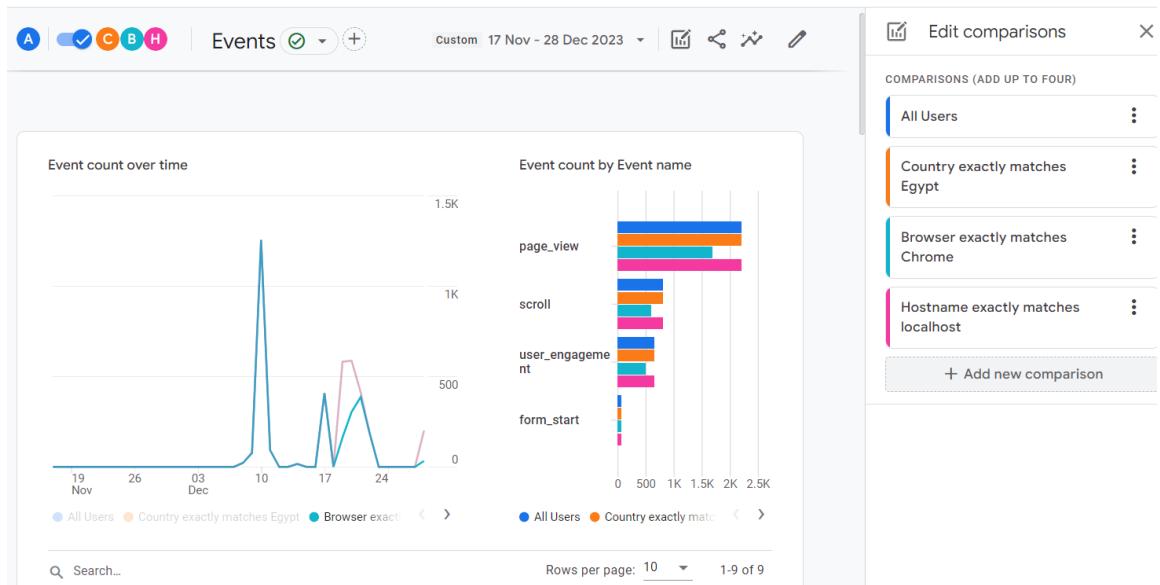
A + | Events: Event name ✓ +

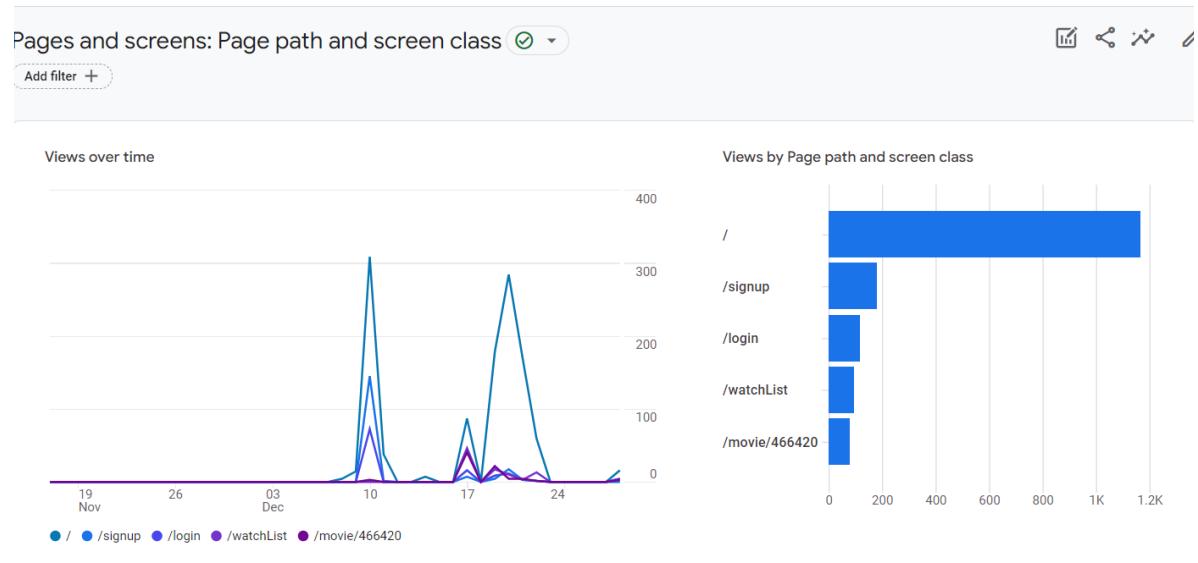
Custom 17 Nov - 28 Dec 2023 |

Search... Rows per page: 10 1-9 of 9

Event name	+	↓ Event count	Total users	Event count per user	Total revenue
		3,844 100% of total	7 100% of total	549.14 Avg 0%	£0.00
1 page_view		2,205	7	315.00	£0.00
2 scroll		813	7	116.14	£0.00
3 user_engagement		663	6	110.50	£0.00
4 form_start		71	3	23.67	£0.00
5 session_start		35	7	5.00	£0.00
6 click navbar		34	1	34.00	£0.00
7 form_submit		13	2	6.50	£0.00
8 first_visit		9	7	1.29	£0.00
9 click		1	1	1.00	£0.00

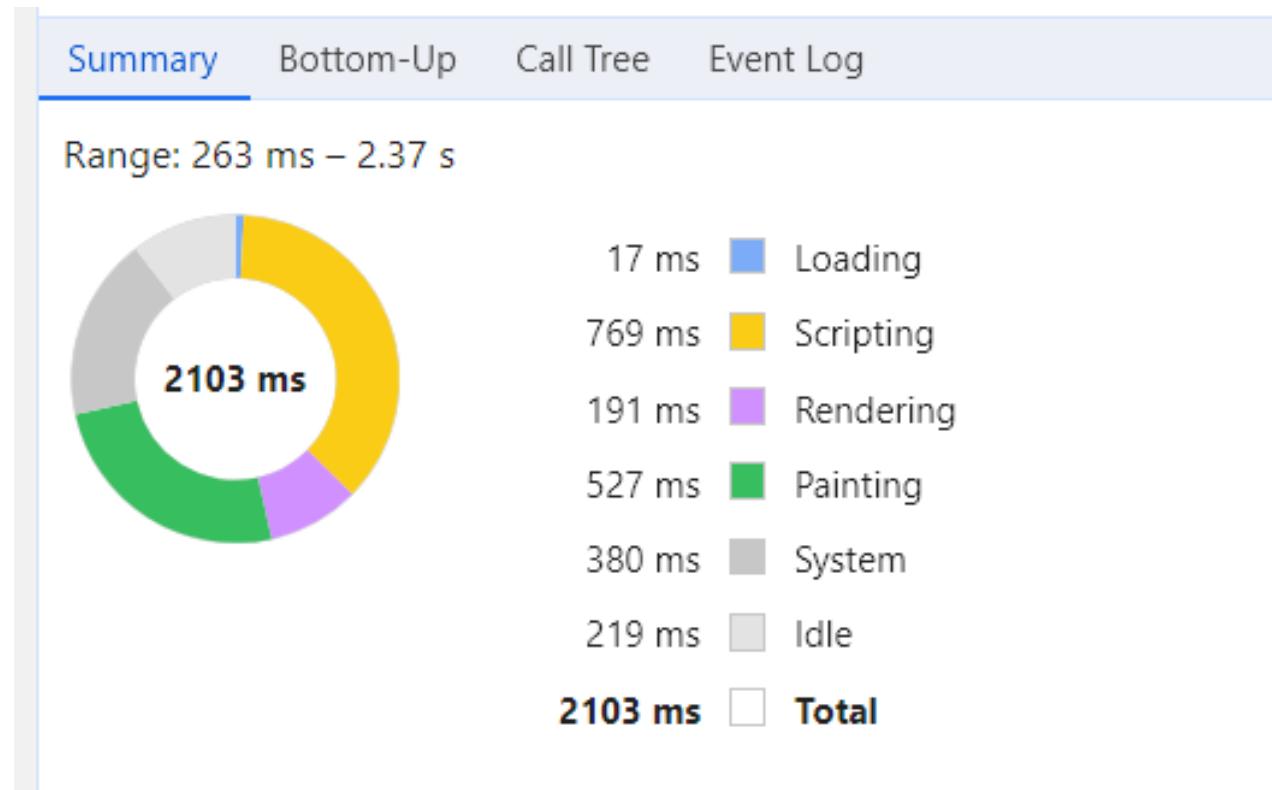




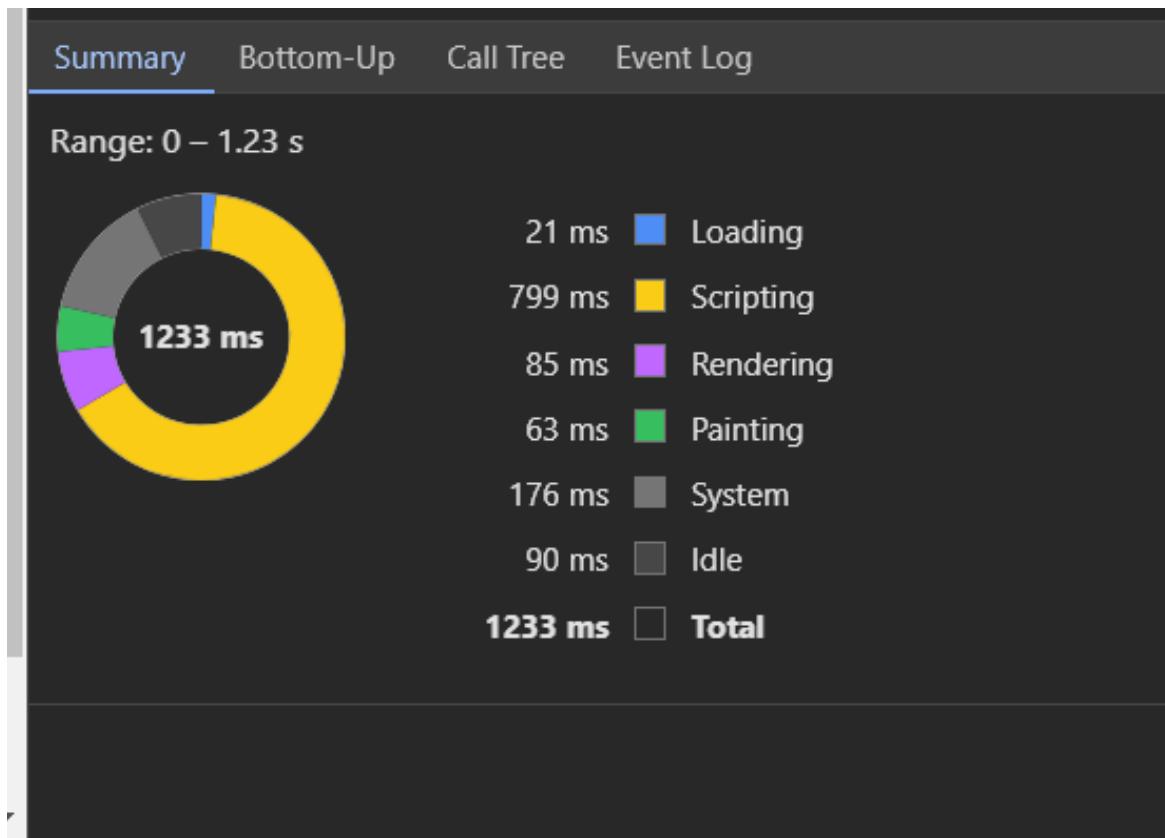


Performance Optimization:

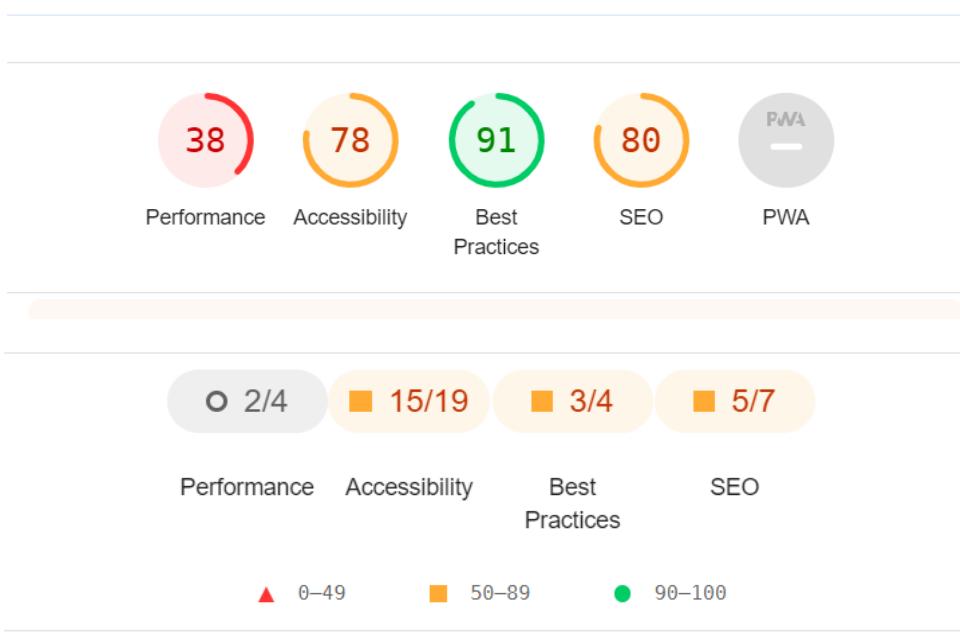
Milestone 2:



Milestone 3:



Milestone 2:



Milestone 3:



Our Website's Features:

1. Home page (non-registered users and registered).
 2. Sign up.
 3. Login.
 4. UserProfile page.
 5. About Page & contact us.
 6. Forget Password.
 7. Movie Details.
 8. Download movies and trailers .
 9. Encryption.
 10. Stay Logged in.
 11. Sign Out.
 12. Search.
 13. Comments.
 14. Rates.
 15. Potato Wrapped.
 16. Similar Suggestions.
 17. Watch List.
 18. Favorites.
-

1) Home page: It's available for both registered and non-registered users with a little difference. For both of them, there's a search bar in the navigation bar, featured today and trending movies where the user can scroll through them using a carousel. Below actors are shown where the user can scroll through them. As an extra feature for the registered user, he can view his watch list and add movies to it. For the non-registered user, he will be asked to sign up to Rotten Potatoes to add movies to his list or view them if he already has an account.

2) Sign up: the user enters the following data: username, email, password, confirm password, gender, birthdate and a security question to be used in case he forgets his password when he logs in again.

3) Login: the user enters his username and password, clicks login and now welcome to Rotten Potatoes! If he forgets his password, there's a forget password button.

4) UserProfile page: The user can view his own profile where he would find an avatar, his email, first and last name, his username and gender (the info he typed in during signing up). There, he can access his watch list and favorites.

5) About page & Contact Us: Information about the page is displayed and what it offers.

6) Forget password: In case the user forgets his password, he will be asked a question. The question is the same as the one he answered while signing up. If both answers were alike, he would be allowed to change his password and confirm the new one. But, if he couldn't answer the question right, he won't be able to change his password.

7) Movie page: Whenever the user clicks on a movie, the movie page appears. The user can see the film name, description about the movie and the store, genre, rate, actors of the movie, comments section, the trailer and a download button.

8) Download trailers and movies: For any movie there's a button where you can download it and download the trailer.

9) Encryption: Hashing using SHA-256 and applying AES encryption algorithm 128 bits in the backend for future use.

10) Stay logged in: When the user refreshes the page or closes it and reopens it, he will still be logged in as long as he didn't sign out.

11) LogOut: The user can log out of his account and navigate as a non-registered user, sign up with a new account or log in to another existing one.

12) Search: This feature is available to logged in and non-logged in users. From the HOMEPAGE, you can search for the movie you want by its name.

13) Comments: This feature is only available for logged in users, where they can leave their comments on any film and view other user's comments for the same film.

14) Rates: This feature is only available for logged in users. Whenever the user adds a comment on the film, he's asked to give a rate. Automatically, the total rate of the movie is updated.

15) Potato Wrapped: This feature is only available for logged in users. A data analysis feature to wrap up user experience and data throughout the previous year.

16) Similar Suggestions: This feature is only available for logged in users. When the user opens a film, we give him suggestions for similar movies.

17) Watchlist: This feature is only available for logged in users, where the user navigates to the movie page by clicking on the film he wants. Then, click on the "add to watch list" icon (the bookmark symbol).

18) Favorites: This feature is only available for logged in users, where the user navigates to the movie page by clicking on the film he wants. Then, click on the "add to favorites" icon (the heart symbol).