POPCORN OPINION

Software Engineering Project Report

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CDOF1

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Table of contents

1. What is PopCornOpinion ?

PopCornOpinion is a collaborative film review platform for all movie aficionados. On the user side, it is possible to create an account, access a wide selection of movies to discover based on certain criteria, such as the genre of the movie, the name of the director, or simply to search for the movie name. But the unique feature of this platform is that users can leave a review and rate the movie on a scale from 1 to 10. What's also interesting is that the user can see the reviews and ratings from other users.

On the admin side, it is possible to add movies from the site to meet the needs of the users.

2. Requirement analysis

a. Business Requirement

We established a list of business requirements at the beginning of our project to broadly define what the platform must facilitate in commercial terms:

- The platform must enable movie aficionados to discover, review, and rate films.
- The platform must offer a smooth and easy user experience to encourage sign-ups and interaction.
- The platform must allow filtering and searching for films based on different criteria (genre, director, title).
- The platform should foster an active community, with a transparent review and rating system.
- Administrators should be able to manage the film database intuitively to keep content up-to-date and relevant.

b. User Requirement

We established a list of user requirements at the beginning of our project to define the essential features available to our users:

- Users must be able to create and manage their own account.
- Users should have access to a filterable film library by genre, director, or through a free search.
- Users must be able to submit a review for a movie.
- Users must be able to rate a movie on a scale from 1 to 10.
- Users should be able to view the reviews and ratings of other members.
- Users must be able to edit or delete their own reviews and ratings.

c. Software Requirement

We established a list of software requirements at the beginning of our project to define what the software must be able to offer and manage:

- The system must provide a secure user interface for user registration and login.
- The system must incorporate a robust database to store details of movies, reviews, and ratings.
- The system must provide an advanced search function for movies based on filters.
- The system must allow users to submit reviews and ratings, which will then be stored and displayed on the corresponding movie page.
- The system must display the reviews and ratings of other users.
- The system must allow administrators to add, modify, and delete movie information in the database.
- The system must ensure compliance with data protection and privacy laws.
- The system must be designed to be scalable to manage an increase in the number of users and reviews.

3. Design

Our main concern is to create a user interface that is intuitive and easy to navigate for all users. The design must be responsive to ensure a consistent user experience across mobile devices and desktop computers. Visual elements such as movie posters should be clearly visible and appealing. The administrative dashboard must be secure and easy to use for managing movies and reviews.

4. Tools

a. Programming Langages

We decided to start from scratch for the development of our software. This allowed us to really learn to code and to use interesting tools.

In our development environment, we primarily used **TypeScript** to statically type our site and easily spot errors before compilation. We also used **HTML** markup language to display our graphical interface to users.

To manage the database of movies, users, reviews, etc., we used **SQL**.

b. Softwares

In terms of software, we used:

- **WebStorm** and **Intellij IDEA** as development environments for the front-end and back-end
- **PGAdmin 4** to manage the database
- **GitHub** as a tool for sharing work and ensuring the push and pull of commits.

c. Backend

For the back-end development of our application, we used the PostgreSQL DBMS to manage our database, and consequently to code in SQL.

In the runtime environment, we used the Angular framework with specific modules (non-exhaustive list):

- **Forms**: for creating template-based forms.
- **Router**: provides a routing service to enable navigation from one view to another.
- **Http**: allows making HTTP requests to communicate with remote servers.
- **Rxjs**: A library that facilitates the management of asynchronous events.
- **Nguniversal** with **express-engine**: enables server-side rendering for Angular with Node.js and Express.

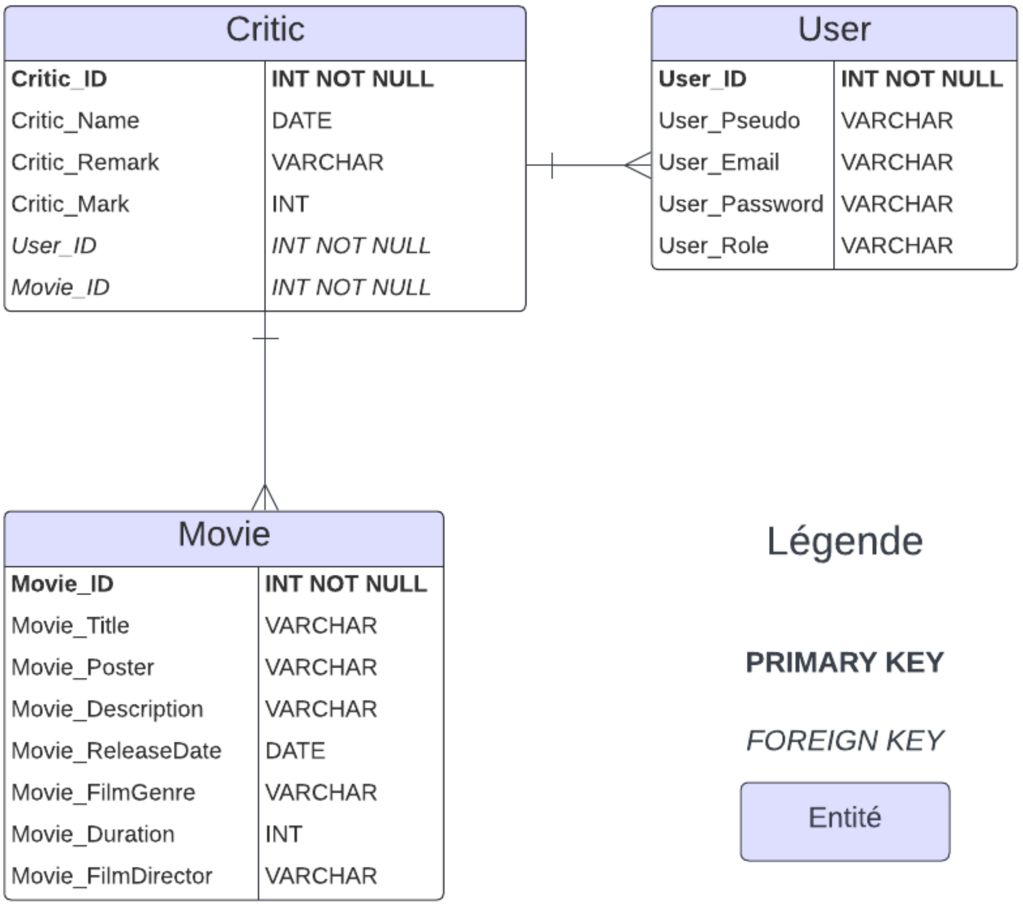
d. Frontend

For the front-end development of our application, the runtime environment used was Node.js, which is flexible and extensible, using very practical modules (non-exhaustive list):

- **Express**: a web framework.
- **Cors**: allows easy configuration of Cross-Origin Resource Sharing (CORS) in Express applications.
- **Sequelize**: an ORM (Object-Relational Mapping) for Node.js, supporting the PostgreSQL database.

5. Diagrams

a. DataBase diagram

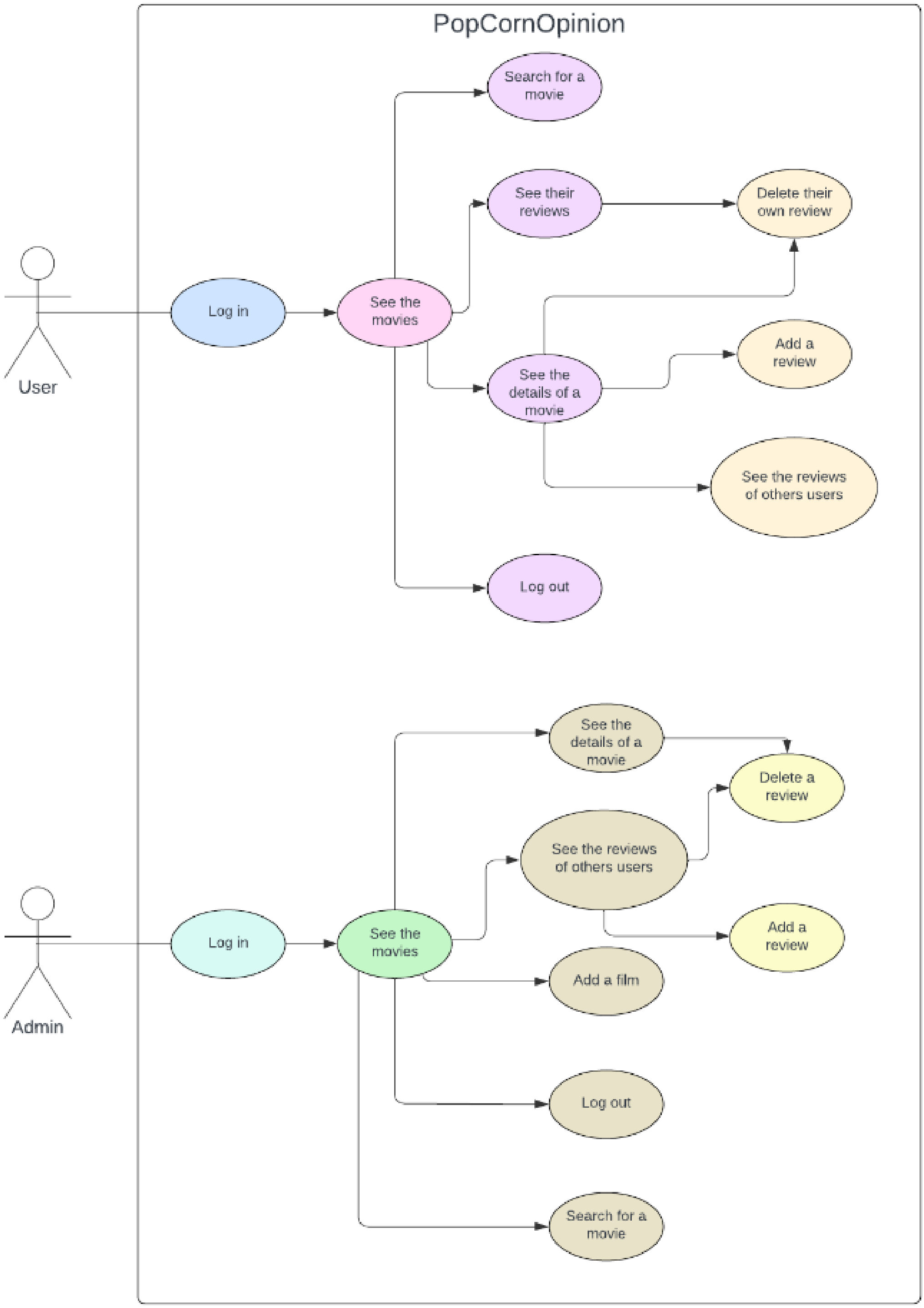


Critic	
Critic_ID	**INT NOT NULL**
Critic_Name	DATE
Critic_Remark	VARCHAR
Critic_Mark	INT
User_ID	*INT NOT NULL*
Movie_ID	*INT NOT NULL*

User	
User_ID	**INT NOT NULL**
User_Pseudo	VARCHAR
User_Email	VARCHAR
User_Password	VARCHAR
User_Role	VARCHAR

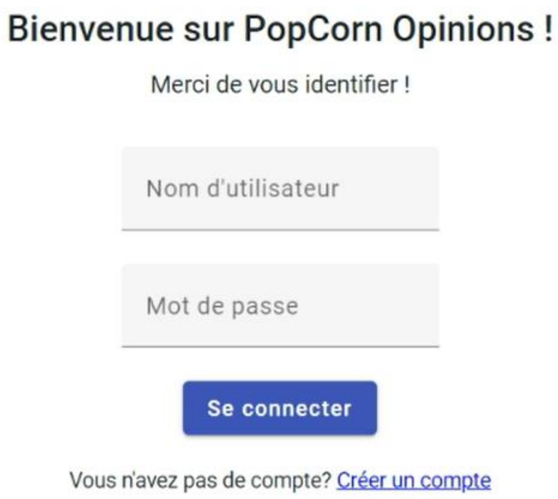
Movie	
Movie_ID	**INT NOT NULL**
Movie_Title	VARCHAR
Movie_Poster	VARCHAR
Movie_Description	VARCHAR
Movie_ReleaseDate	DATE
Movie_FilmGenre	VARCHAR
Movie_Duration	INT
Movie_FilmDirector	VARCHAR

b. UseCase diagram



6. Features tour

Log-in page



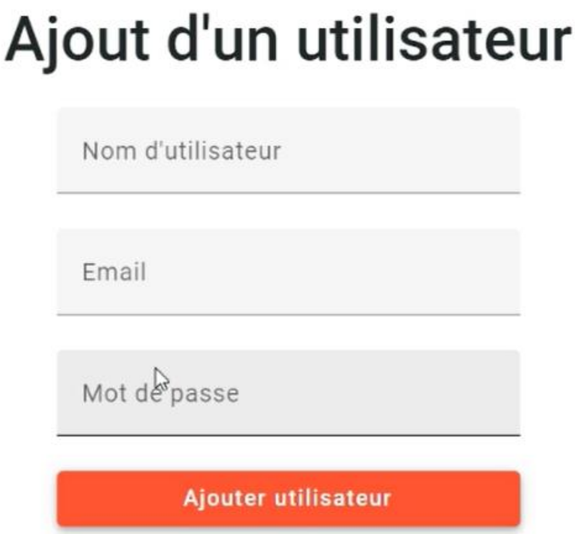
Bienvenue sur PopCorn Opinions !

Merci de vous identifier !

Vous n'avez pas de compte? Créer un compte

The user can log in using a username and password to access the site. If they are not registered, they can create an account.

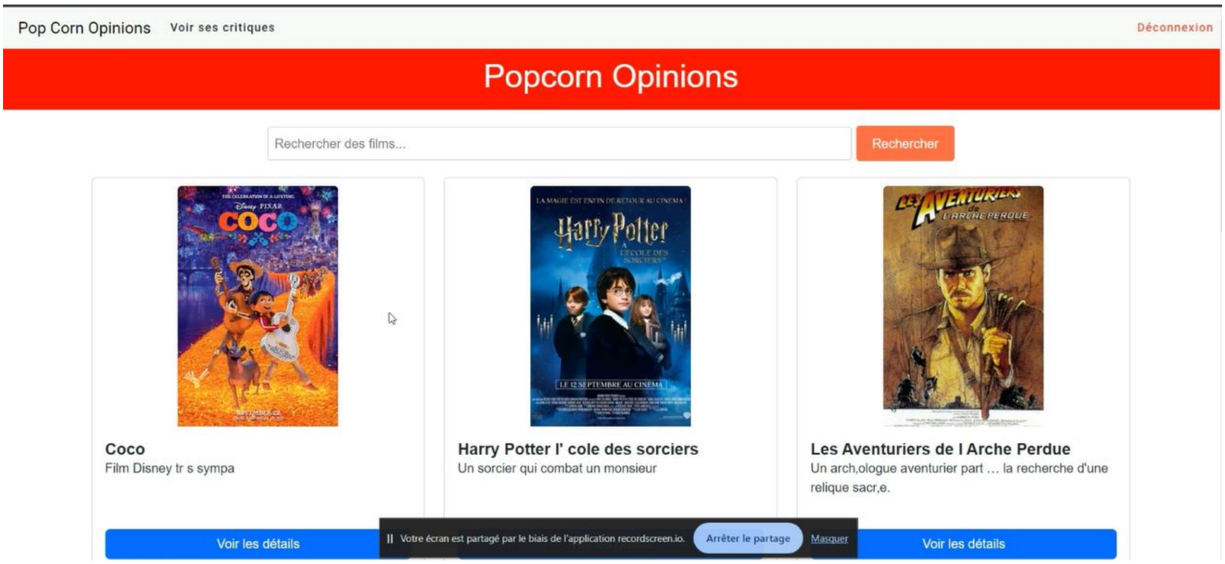
Create a new account



Ajout d'un utilisateur

The user can create a new account by providing a username (nickname), email address, and password.

Homepage for a user



Coco
Film Disney tr s sympa

Harry Potter l' cole des sorciers
Un sorcier qui combat un monsieur

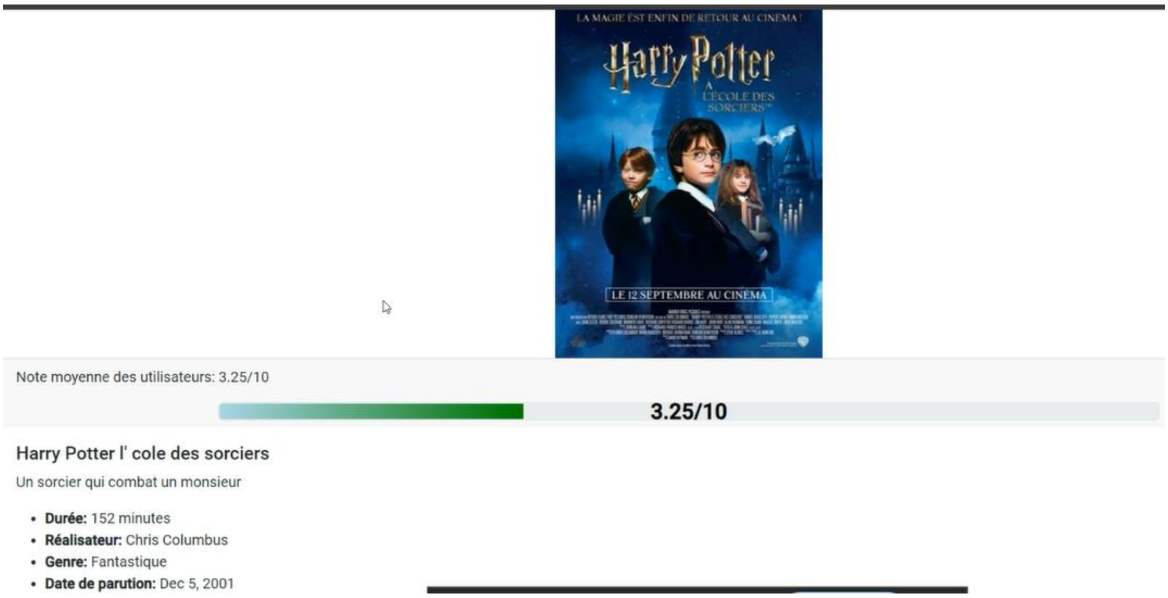
Les Aventuriers de l Arche Perdue
Un arch,ologue aventurier part … la recherche d'une relique sacr,e.

Votre écran est partagé par le biais de l'application recordscreen.io.

Once the user has logged in or created a new account, they land on this homepage, where they can:

- View featured movies: a large poster to attract attention, the movie title, and a quick pitch.
- Search for movies in the search bar.
- Access their personal reviews through the navigation menu.
- Return to the homepage via the navigation menu.
- Log out of their account through the navigation menu.

“Voir les détails” of a movie


LA MAGIE EST ENFIN DE RETOUR AU CINÉMA !
Harry Potter
À L'ÉCOLE DES SORCIERS
LE 12 SEPTEMBRE AU CINÉMA

Note moyenne des utilisateurs: 3.25/10

3.25/10

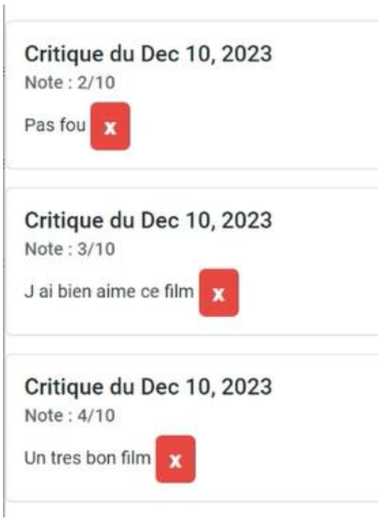
Harry Potter l' cole des sorciers

Un sorcier qui combat un monsieur

- **Durée:** 152 minutes
- **Réalisateur:** Chris Columbus
- **Genre:** Fantastique
- **Date de parution:** Dec 5, 2001

After clicking on the "View Details" button, the user can access the details of a specific movie. They can observe:

- The movie poster.
- The average rating of all the reviews submitted by other users for the movie.
- The name of the movie.
- The pitch of the movie.
- The duration of the movie.
- The name of the movie's director.
- The genre of the movie.
- The release date of the movie.



Critique du Dec 10, 2023

Note : 2/10

Pas fou x

Critique du Dec 10, 2023

Note : 3/10

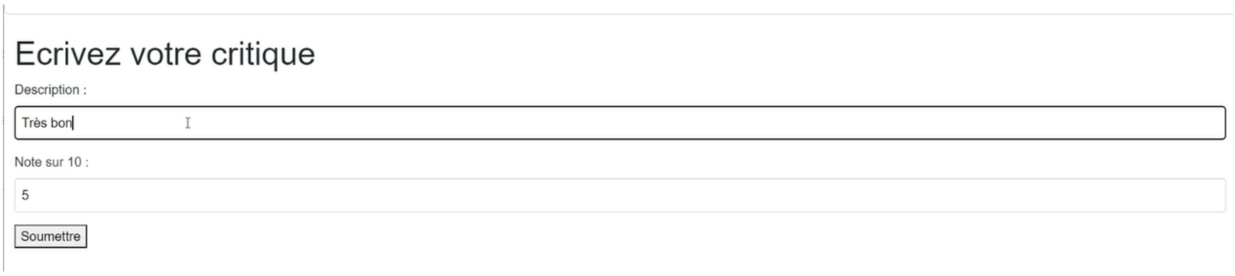
J ai bien aime ce film x

Critique du Dec 10, 2023

Note : 4/10

Un tres bon film x

When the user scrolls down the screen, they can view the reviews from all other users. A delete button is displayed, but when the user clicks on it, the review does not get deleted because they are not the one who wrote it.



Ecrivez votre critique

Description :

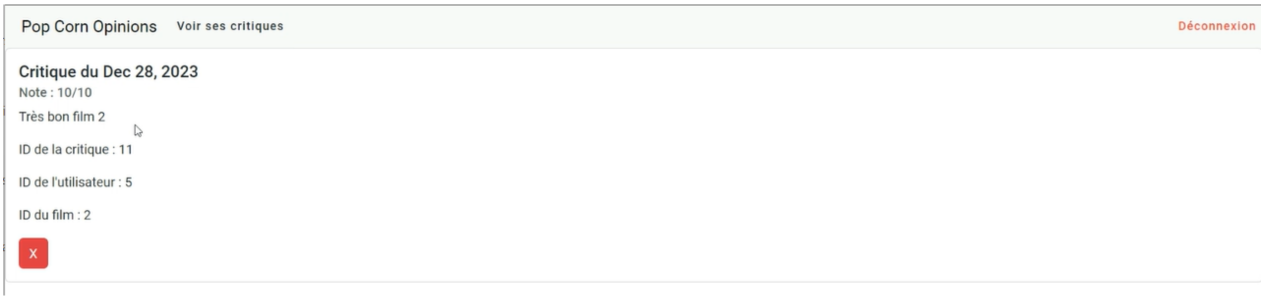
Très bon

Note sur 10 :

5

Scrolling further down the screen, the user has the opportunity to submit their own review with a description and a rating out of 10.

“Voir ses critiques” user page



Critique du Dec 28, 2023

Note : 10/10

Très bon film 2

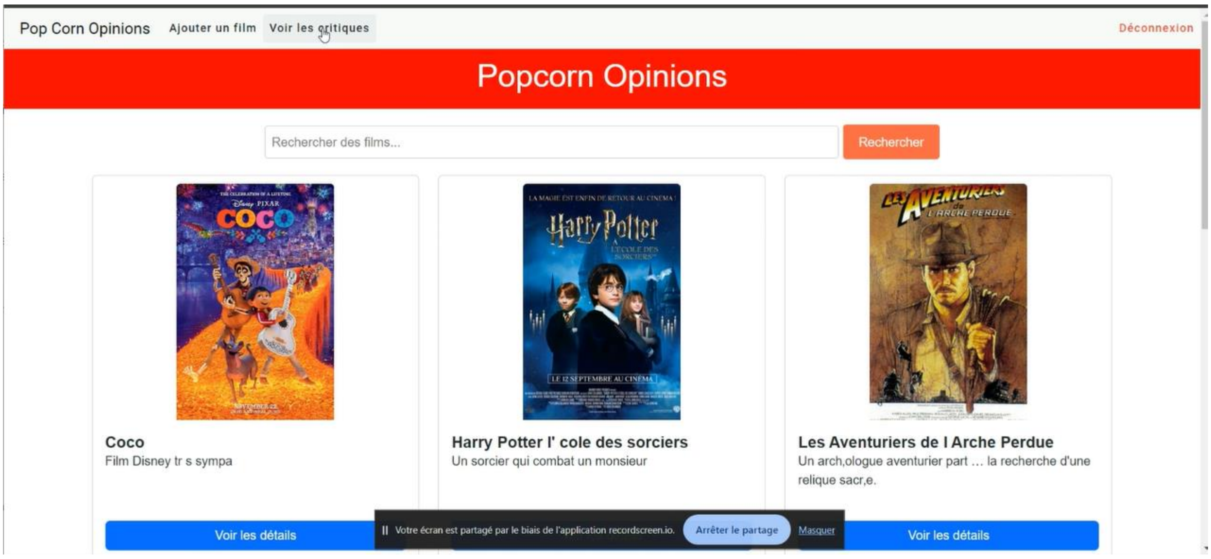
ID de la critique : 11

ID de l'utilisateur : 5

ID du film : 2

When the user clicks on "View Their Reviews" in the top left corner of the navigation bar, they can see the reviews submitted with their account.

Homepage for the administrator



Popcorn Opinions

Coco
Film Disney tr s sympa

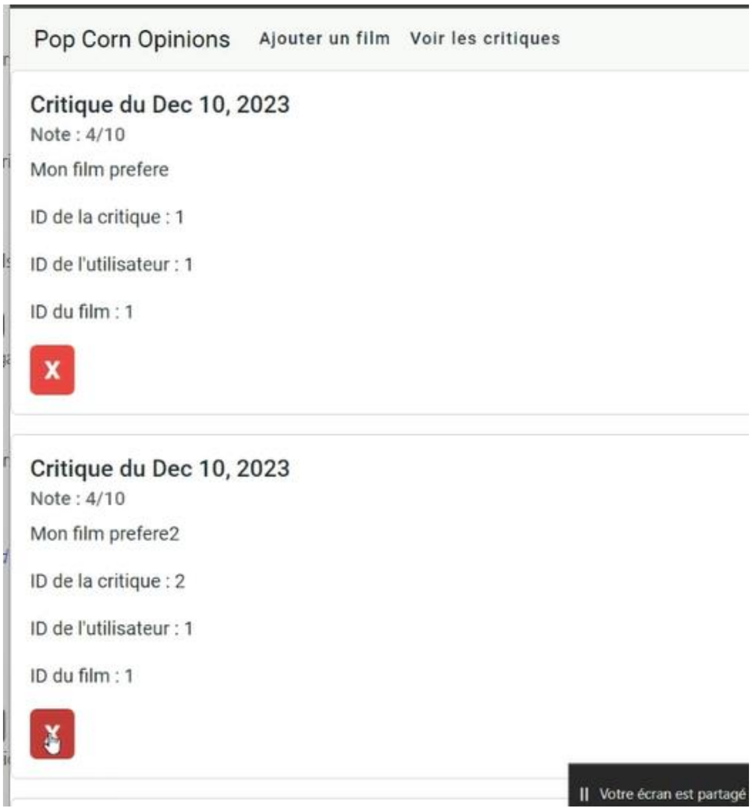
Harry Potter l' cole des sorciers
Un sorcier qui combat un monsieur

Les Aventuriers de l Arche Perdue
Un arch,ologue aventurier part … la recherche d'une relique sacr,e.

Voir les détails
Votre écran est partagé par le biais de l'application recordscreen.io.
Arrêter le partage
Masquer
Voir les détails

If logged in as an administrator (root), new options appear in the top navigation bar: add a movie, view reviews.

“Voir les critiques” admin page

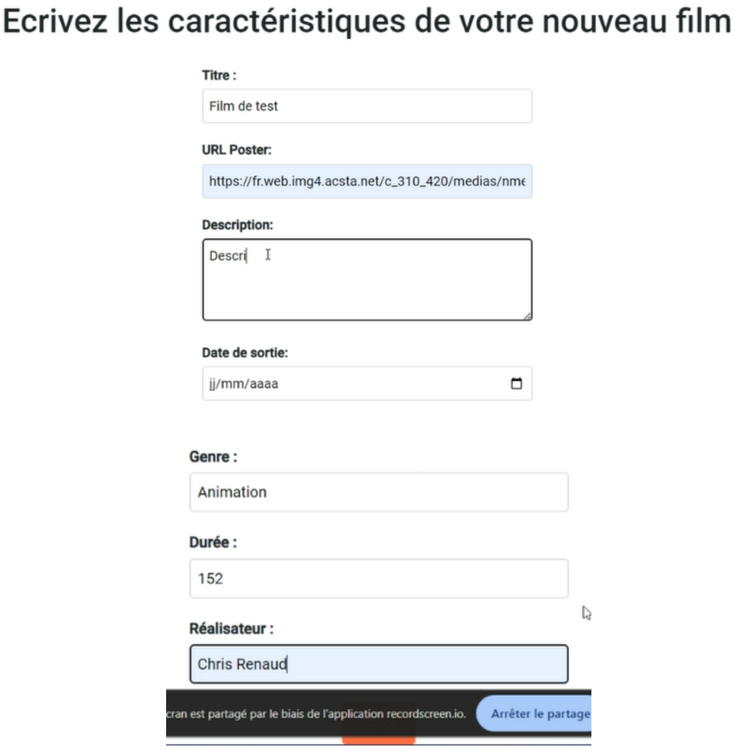


Critique du Dec 10, 2023
Note : 4/10
Mon film prefere
ID de la critique : 1
ID de l'utilisateur : 1
ID du film : 1

Critique du Dec 10, 2023
Note : 4/10
Mon film prefere2
ID de la critique : 2
ID de l'utilisateur : 1
ID du film : 1

The administrator can view reviews from all users and, importantly, delete certain reviews if, for example, they are non-compliant, offensive, etc.

“Ajouter un film” page



Ecrivez les caractéristiques de votre nouveau film

Titre : Film de test

URL Poster: https://fr.web.img4.acsta.net/c_310_420/medias/nme

Description: Descri

Date de sortie: jj/mm/aaaa

Genre : Animation

Durée : 152

Réalisateur : Chris Renaud

cran est partagé par le biais de l'application recordscreen.io.

The admin can add movies to the database so that they are visible to other users, who can then add a review. The admin must enter the movie title, the URL of the poster, the pitch (description), the release date, the genre, the duration, and the director's name to submit a new movie addition.

7. Project Management

a. Agile method SCRUM

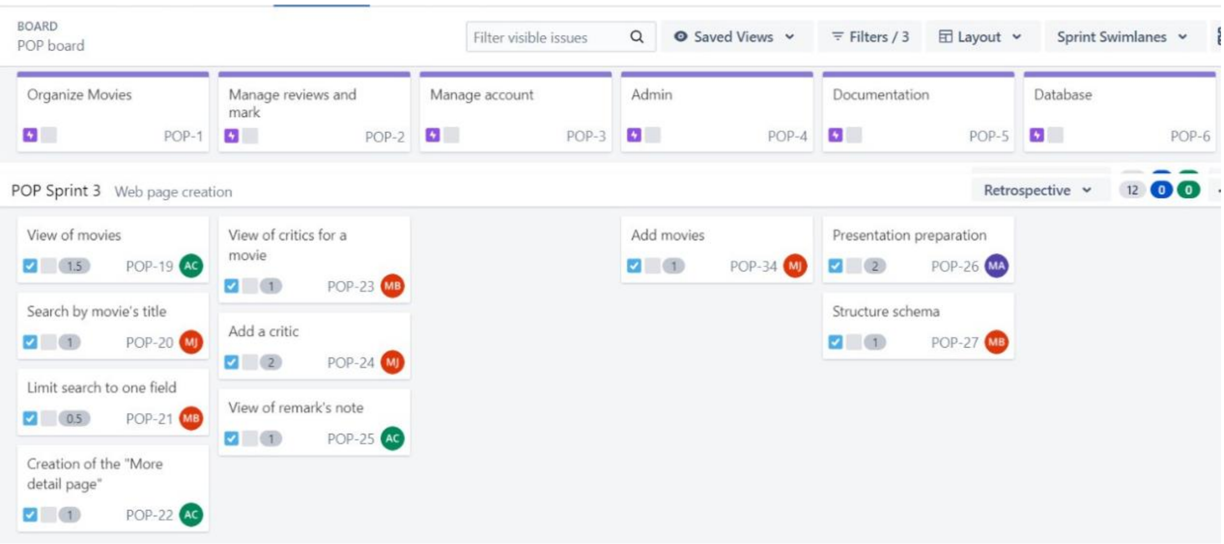
For planning and task distribution within the team, we used the Jira software. Our agile SCRUM methodology allowed us to organize sprints every two weeks. Our Product Backlog consisted of developing the PopCornOpinion web app.

Jira Software

The distribution of roles within the team was as follows :

- **Product Owner** : Mathilde Bulat
- **Scrum Master** : Alexandre CORREIA & Mathys JURET-RAFIN
- **Équipe de développement** : Alexandre CORREIA, Mathis JURET-RAFIN, Mathilde BULAT, Mohammed AZIZI
- **Stakeholders** : Ahmed AZOUGH, all the platform users

Example Jira dashboard



BOARD
POP board

POP Sprint 3 Web page creation

Organize Movies POP-1	Manage reviews and mark POP-2	Manage account POP-3	Admin POP-4	Documentation POP-5	Database POP-6
View of movies ☑ 1.5 POP-19 AC	View of critics for a movie ☑ 1 POP-23 MB		Add movies ☑ 1 POP-34 MJ	Presentation preparation ☑ 2 POP-26 MA	
Search by movie's title ☑ 1 POP-20 MJ	Add a critic ☑ 2 POP-24 MJ			Structure schema ☑ 1 POP-27 MB	
Limit search to one field ☑ 0.5 POP-21 MB	View of remark's note ☑ 1 POP-25 AC				
Creation of the "More detail page" ☑ 1 POP-22 AC					

We organized a sprint every two weeks for a total of 4 sprints, in which we could report on progress, discuss what was working, what was more complicated, and what needed to be set aside. All tasks were clearly defined and distributed among the members of the development team to ensure that no functionality was overlooked.

b. Tasks distribution

Within our team, we noticed that some members were more efficient in specific tasks. Therefore, to save time, we allowed our team to focus on areas where each felt most comfortable.

- Alexandre contributed to the development of both front-end and back-end for the web app's code: creating components and development, a cornerstone for linking the front-end and back-end, creating graphical interfaces in HTML, etc.

- Mathis contributed to the development of the front-end, back-end, database, and management of Jira: handling components and developing existing ones, creating and managing the database, task allocation, and updating Jira during the different sprints.
- Mathilde contributed to the development of the database, back-end, and the design of reports: managing the database, coding in the back-end to retrieve SQL queries, presenting PowerPoint during oral presentations, layout and chief editor of the report.
- Mohamed contributed to the reports: presenting PowerPoint during oral presentations and writing the report.

8. Retrospective and conclusion

Throughout the development of our project, we were able to assess the favorable winds and obstacles to managing this project.

- **Many features in the software:** as we mentioned earlier, we decided to develop our platform from scratch, which already took quite a bit of time. We had planned a very large number of features in our specifications, however, we could not develop all of them; it wasn't a matter of difficulty, but rather time management. We had specific tasks to accomplish within a set time, and the time availability of the group members did not allow us to do everything that was planned. So we decided to focus on the most interesting, most relevant features, but also simply to offer fewer features than planned, but functional! We did not want to try to develop too many features at the risk that they would not work...! The final result satisfies us, and we believe it is up to par with what the platform offers for users.
- **Different skills within the SCRUM team**: we chose to be inspired by the SCRUM model to manage our project since it allowed delegating tasks and recognizing that each member brings different benefits. Some proved to be more skilled in back-end and front-end programming, others more comfortable with database development, or even the elaboration of presentations and reports. Delegating roles and tasks was crucial so that everyone could be effective, and the project's finality could be assured.
- **Difficulty in getting the hang of GitHub:** for some, using this tool was new. We had to take into account extra time to understand how it works and how to use GitHub. It turned out to be a very useful tool, and we do not regret having devoted time to understanding it.

9. GitHub & Jira links

GitHub Link

Jira Link