



University of Windsor

INTERNET APPLICATIONS AND DISTRIBUTED SYSTEMS

Professor: Dr. Usama Mir

Project Name: M4Movies

By: Group 4

| Student ID | Name of Team Members |
|------------|----------------------|
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M4Movies website is Django based online application of movie collection with different genres. The website also contains various categorized movie collections for users in order to find the best suitable movie content with the categories of popular movies, upcoming movies and top-rated movies.

1. List of features and its purpose:

1. Dynamic movie data fetching with TMDB API source
2. Authentication : Login/logout/signup
3. Populating various categories on movie web pages: Popular, Upcoming, top-rated
4. Display movie details on selection of specific movie
5. Upload profile image of customer
6. Update other details of customer
7. Star rating for movie along with number of reviews
8. Order movie by customer and display ordered list
9. Deployed on Heroku with CICD setup on GitHub
10. Beautiful UX/UI with bootstrap, icons and animations
11. Redirection to the TMDB website to buy, rent or stream the movie (with educational usage credits)

2. How this website was made - step-wise breakdown: (Steps to create/design the website)

The following numerous steps that we took as a group to build the application from scratch:

- Identified the appropriate movie database ‘TMDB’ to fetch all the movie collection dynamically for populating movie content on the website. We also explored the IMDB data dump and contacted the developer support for API access.
- Discussed the entire flow to design the website. The brainstorming sessions were held every time some had a new idea or feature to implement.
- Created the required model structure for Object Relational Mapping with a database as we learned in the class.

- Implemented core functionalities as follows
- Registered with TMDB and got the API key access after developer team approval for education usage.
- Integrated TMDB API
<https://developers.themoviedb.org/3/getting-started/introduction>
using API_KEY and the TMDB API docs and fetching data from the API.
- Prepared relevant views for rendering the website pages.
- Designed the relevant html pages with CSS for basic working flow and got the website reviewed by the Professor in the lab.
- Developed the authentication mechanism by login/logout/Register functionalities with Bootstrap styling using forms, model forms and validations as learned in class.
- Used the Pillow module to upload images in the Django user profile update page.
- Designed the website pages using required html pages with two different CSS frameworks Bootstrap, Tailwind for extensive styling and better look and feel for users. We also used an “Ionicon” library for good icons.
- Used JSONField() to save the settings for a logged in customer (user) and this JSON data can be extended further in the future scope of this project to hold multiple other data for the same customer.
- Used the settings JSON to save the movies ordered by the customer and whenever that customer will login and wants to see the ordered movies, they can by clicking on the top right “ordered list” button
- Prepared the data to be stored in the JSON data format while fetching from the API and converted into the class object to access in the code and html pages for rendering.
- Implemented Show All movie page for displaying various categories on movie web pages: Popular, Upcoming, top-rated.
- Implemented the Movie Description page which contains all relevant movie information for selected movies.
- Implemented an Order Movies feature where the user can click on order for a movie which will be saved in the logged in user settings for future reference.

- Implemented an additional ‘Watch’ button where the user is directly redirected to the TMDB website to find more details for movies like watch trailers, movie reviews, status and posters etc.
- Implemented the dynamic star ratings along with the customer reviews.
- Implemented the user profile page and the feature of image upload of the user.
- Performed improvement in UI web pages for best look and feel by implementing the card tiles along with horizontal and vertical scrolling and hover animations.

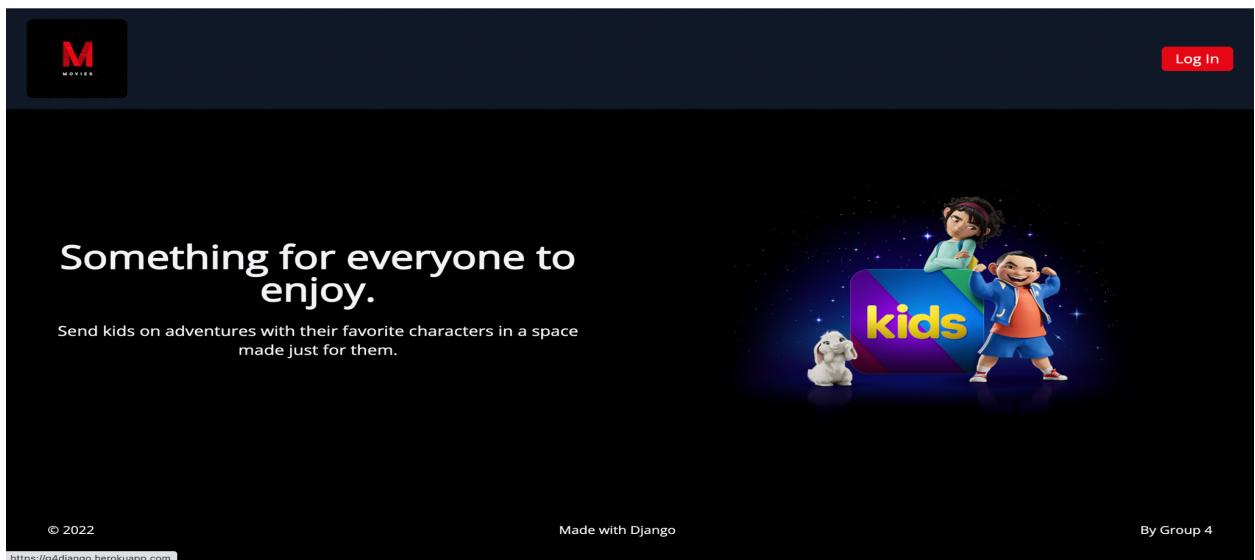
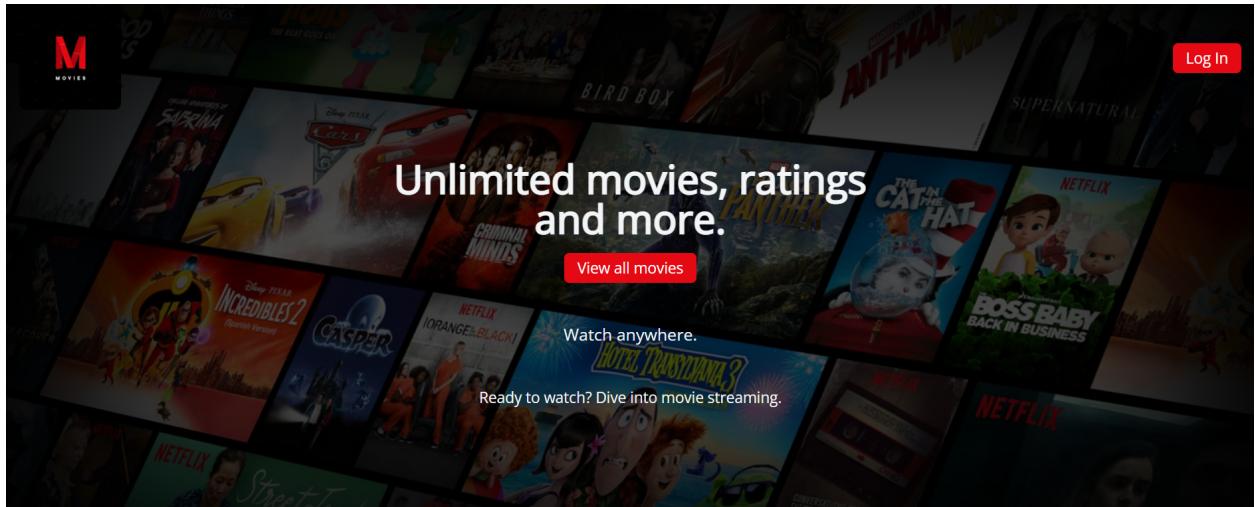
2. Role of each team members

| S.No. | Task | Contributor(s) |
|-------|--|---------------------------------|
| 1. | Discussing and identifying the movie API for movie content | Abhay, Shruti, Sarabjeet, Rahul |
| 2. | Identified the suitable models for project | Abhay, Shruti, Sarabjeet, Rahul |
| 3. | Planned the entire workflow for website | Abhay, Shruti, Sarabjeet, Rahul |
| 4. | Integrating TMDB movie api for fetching and populating the dynamic movie content | Abhay, Sarab |

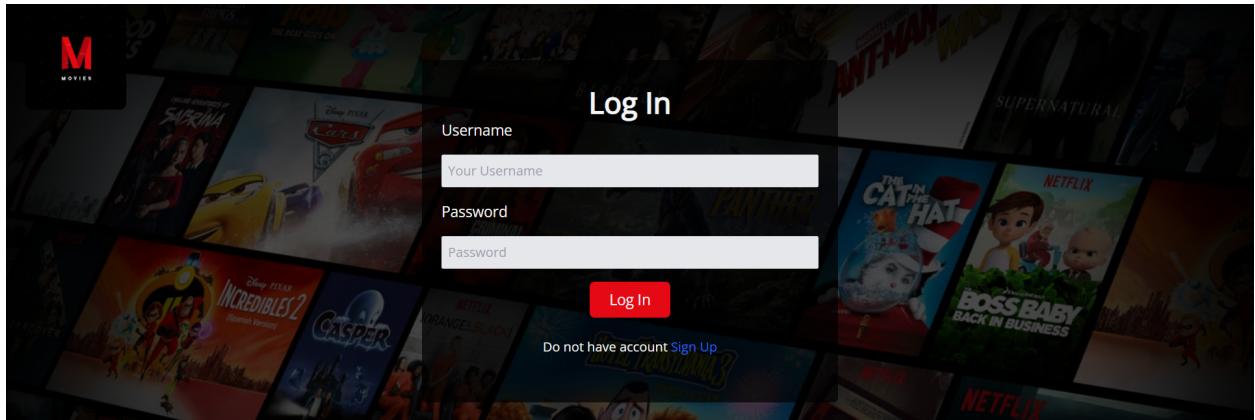
| S.No. | Task | Contributor(s) |
|-------|---|----------------|
| 5. | Implemented the authentication system by implementing Register, login/logout for user | Rahul, Shruti |
| 6. | Designing website pages with modern CSS frameworks | Shruti, Sarab |
| 7. | Implemented profile picture upload and user profile page | Rahul, Shruti |
| 8. | Worked on the JSON Data format | Abhay, Rahul |
| 9. | Designed and implemented the star ratings feature for customer feedback | Sarab, Abhay |
| 10 | Deployment and GitHub CICD for project management | Abhay |

4. User manual:

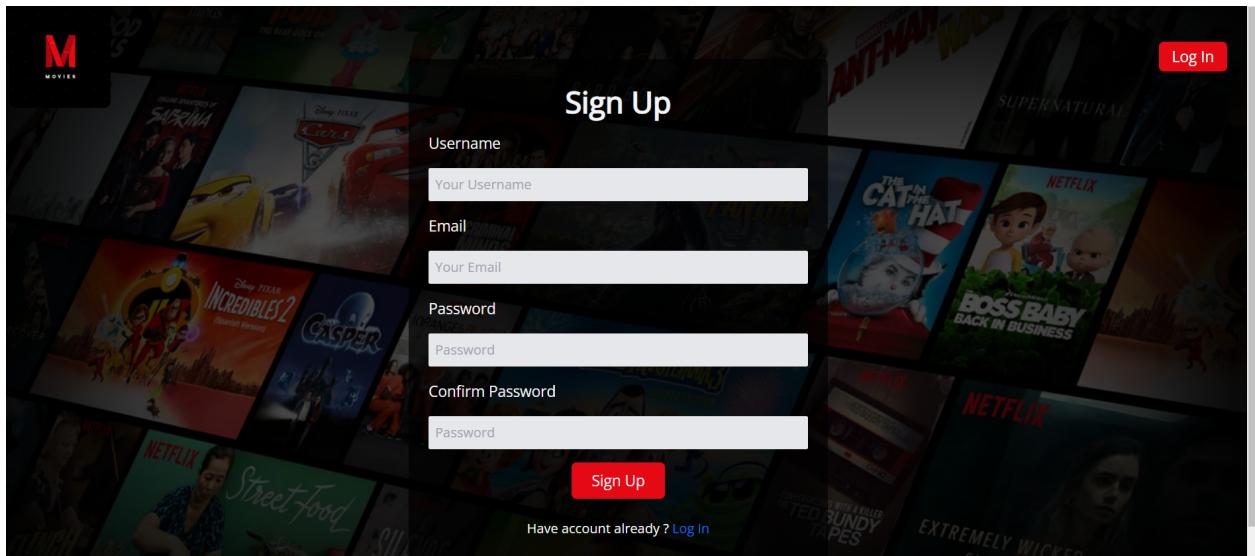
1. Go to the application by visiting <https://g4django.herokuapp.com/> where you will see the landing page with “home” icon on the top-left, “login” button on top-right and a “View all movies” button in the center. This page also has some other sections with descriptions of our website and a footer in the end with copyrights for our group 4. Even after the scroll, the header remains freezed for easy access.



2. Click on the “Login” button, if the customer already has an account, they can directly login, or else they can click on the “sign up” button to create a new account.

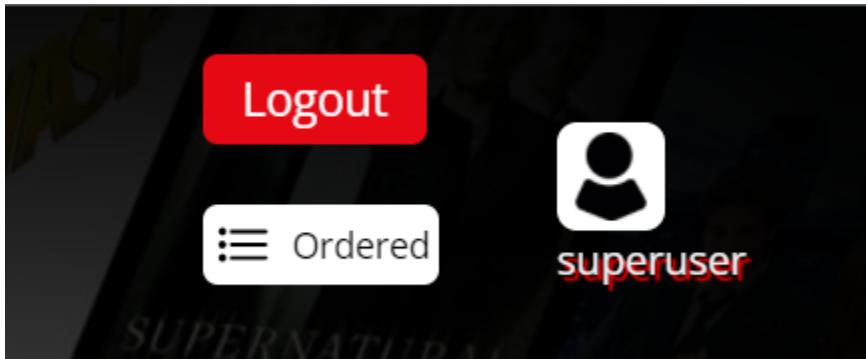


3. On the “sign up” page the user can fill their details and submit the form and their account will be created.

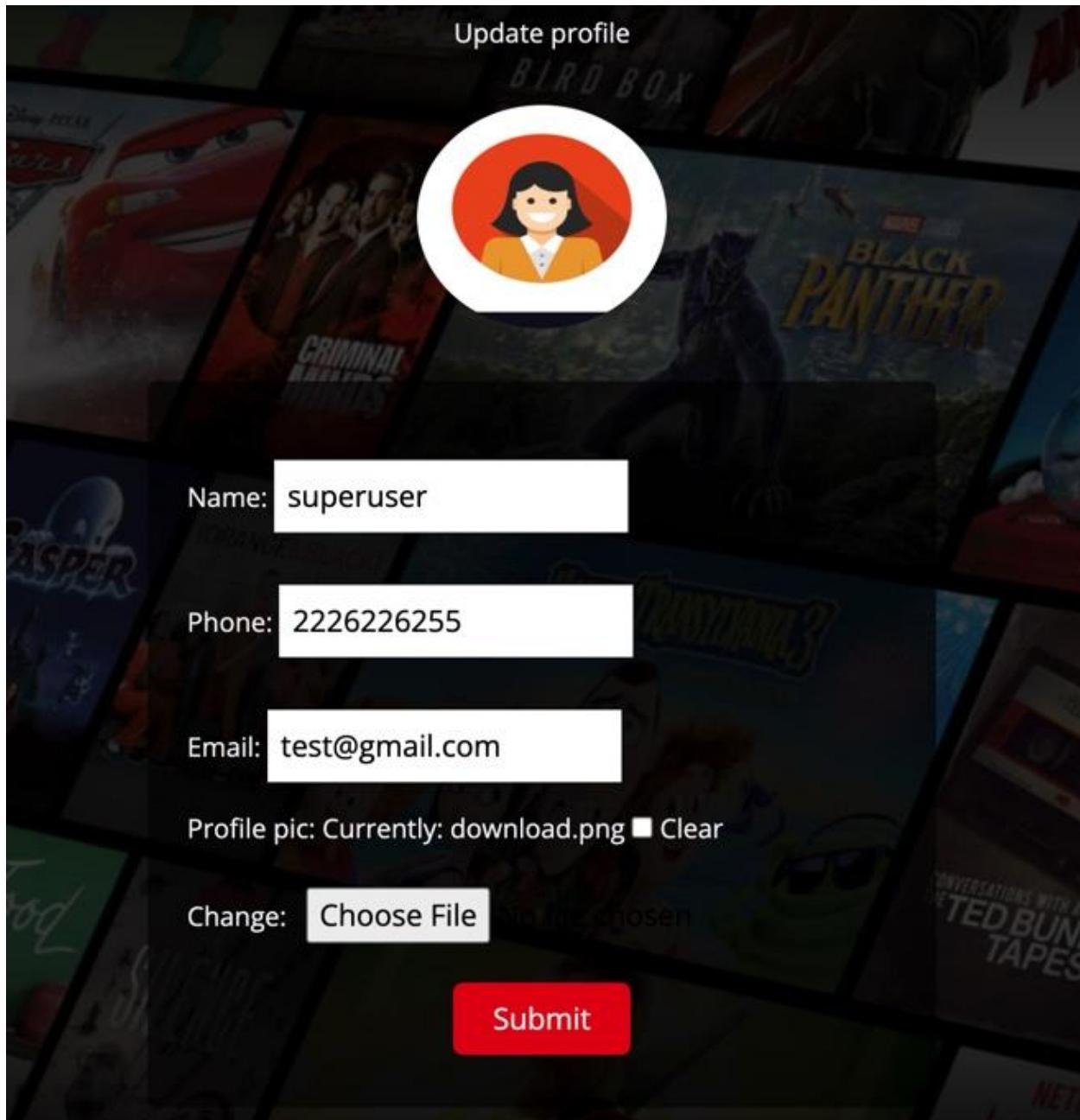


4. Users can login by providing the correct username and password in login form.

- Once login is successful, users can see the “user profile” icon on the top-right corner along with username and “ordered list” button.



- Click on the “user profile” icon, the user profile page will open where users can edit the user details and change the profile picture by uploading it using the “choose file” button. The user can also clear the profile picture if they want to remove it.

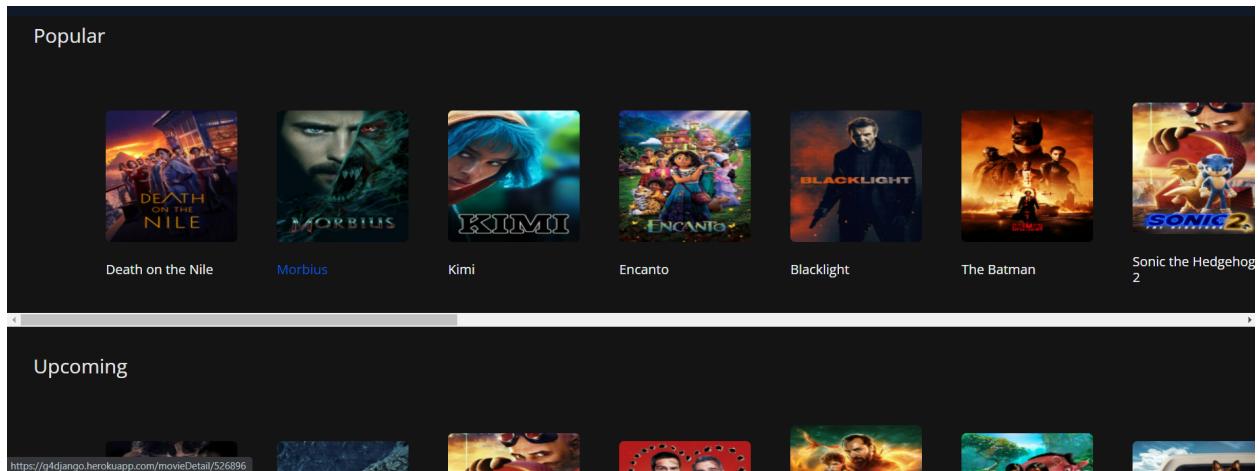


7. On the landing page, click on the “show all movies” to see the list of top movies, popular movies and upcoming movies. The movie list page will have the trending movie on top, followed by top movies in animated cards, then horizontal scrollable cards for popular and upcoming movies.



8. Hover over the movie tiles to see the movie title, rating and description.

9. Go to the popular movies section and scroll horizontally to see all the movies under that section. Perform the same steps for upcoming sections and top rated movies.



10. Click on any of the movie cards/tiles, it will be redirected to the movie details page where the user can see the movie picture at the top along with title, description, order button and watch button on the left side of the picture. And in the below section, it contains description, review count, rating out of 10, star rating, release date and duration of the movie in minutes.

The Shawshank Redemption

Fear can hold you prisoner. Hope can set you free.

[Order](#) [Watch](#)

Description 21084 reviews 8.7 rating

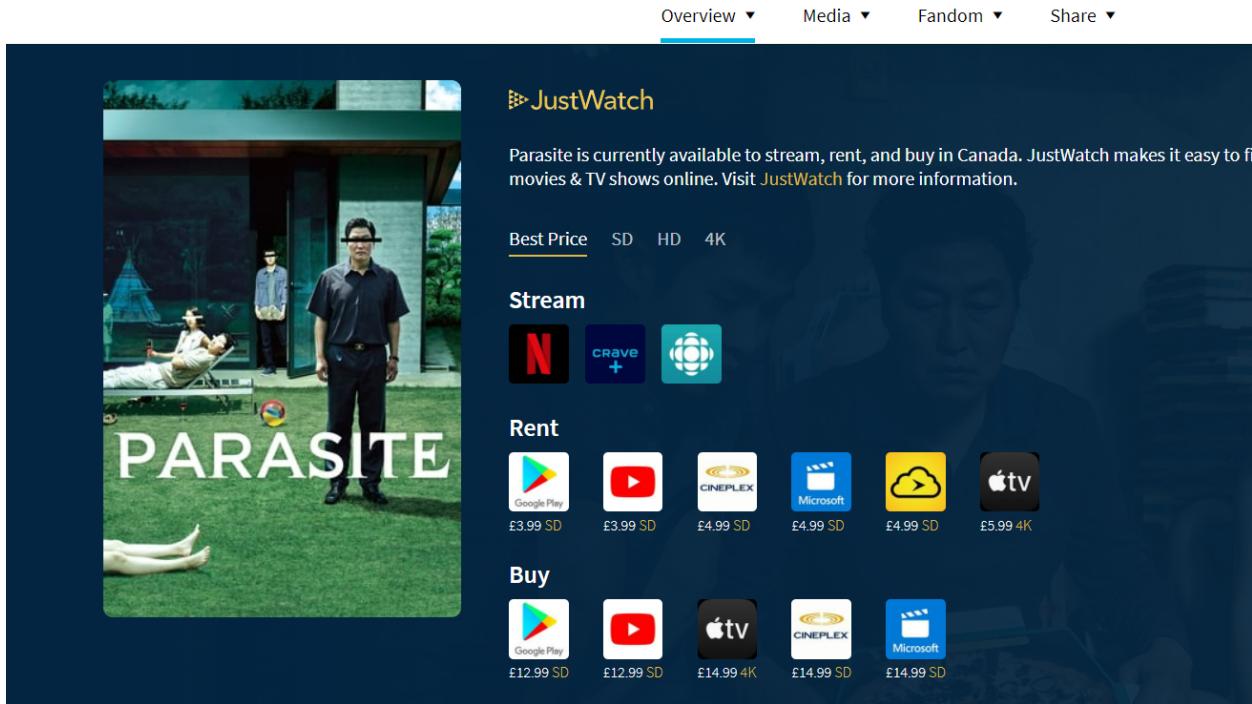
Framed in the 1940s for the double murder of his wife and her lover, upstanding banker Andy Dufresne begins a new life at the Shawshank prison, where he puts his accounting skills to work for an amoral warden. During his long stretch in prison, Dufresne comes to be admired by the other inmates -- including an older prisoner named Red -- for his integrity and unquenchable sense of hope.

Description 339 reviews 8.5 rating

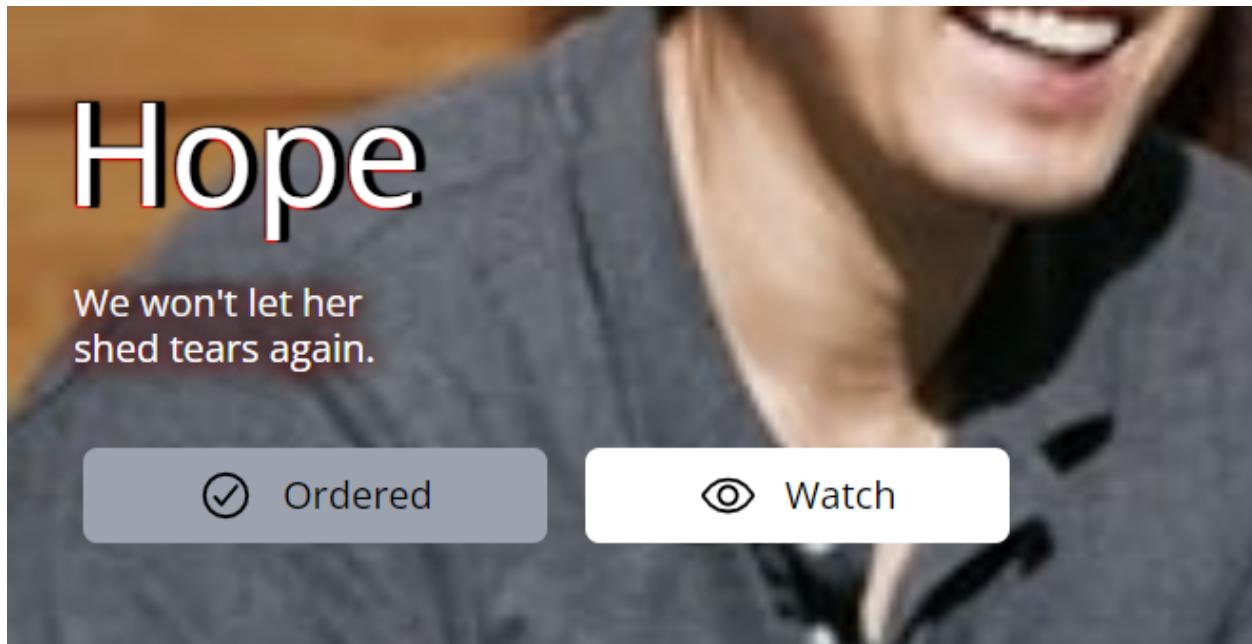
After 8-year-old So-won narrowly survives a brutal sexual assault, her family labors to help her heal while coping with their own rage and grief.

Released: 2013-10-02
Duration: 122 minutes

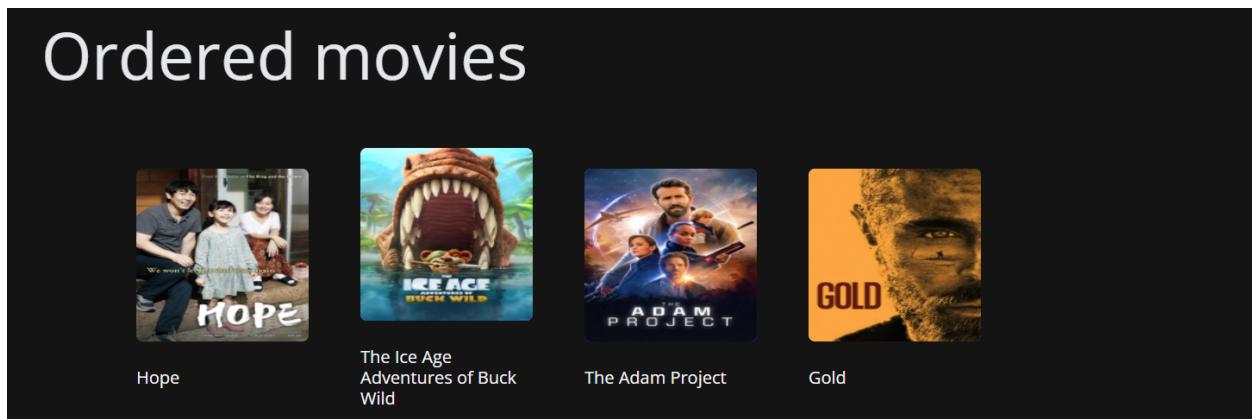
11. On movie detail page click on watch button, it will be redirected to TMDB site where user can watch movie trailer, buy movie, rent movie, see the star cast and many more (we redirected to “TMDB” and “Justwatch” website because we need to give credit to the website and as we are using their API for displaying the movie details dynamically for educational purposes).



12. On the movie detail page click on the “order” button, it will add the movie to the order list of movies for the particular user and the order button will be changed to “ordered” and its icon and color will change. This detail is persistent in the database.



13. Go to the “ordered list” button at the top right corner, it will display all the movies ordered in the previous step by the logged in customer. These movies also have horizontal scrolling.



14. Logout and login again and go to the order list, it will display the movies order for the logged in user.