Software Design Document - My Movies Website

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May 6, 2021

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1 Introduction

1.1 Product Overview

My Movies is a website project based on API. It displays various details of movies in different interactive ways. User can explore and also search movies on our website. Also, user can sign up on My Movies and after logging in, user can also rate and review a movie. Also, user can mark/un-mark any movie as favorite.

1.2 Roles and Responsibilities

Table 1

Team member	Responsibilities
Komal Kumar	Front End
Priyanshu Uttam	Front End
Purnadip Chakrabarti	Front End and Documentation
Vaibhav Chandra	Backend and Database

2 User Experience Design documentation

2.1 User Stories

Table 2: User Stories Table

Requirements		
User Story Title	Story Description	Priority
Registration/Login	User wants to register/login with either their Email or by using Google account	Must have
Explore Movies	A user wants to explore popular movies along with their trailers/posters for all genres	Must have
Search Movies	A user also wants to search movies with either movie title or people associated with that movie	Must have
Rate and Review Movies	Users also want to read and write reviews along with ratings	Must have
Add/Remove To/From Favorites	Along with rating and reviewing, user also wants to mark/un-mark a movie as their favorite	Must have
Features without login	Users want some features of the website without logging in	Should have

3 System Modelling

3.1 Use Case Diagram

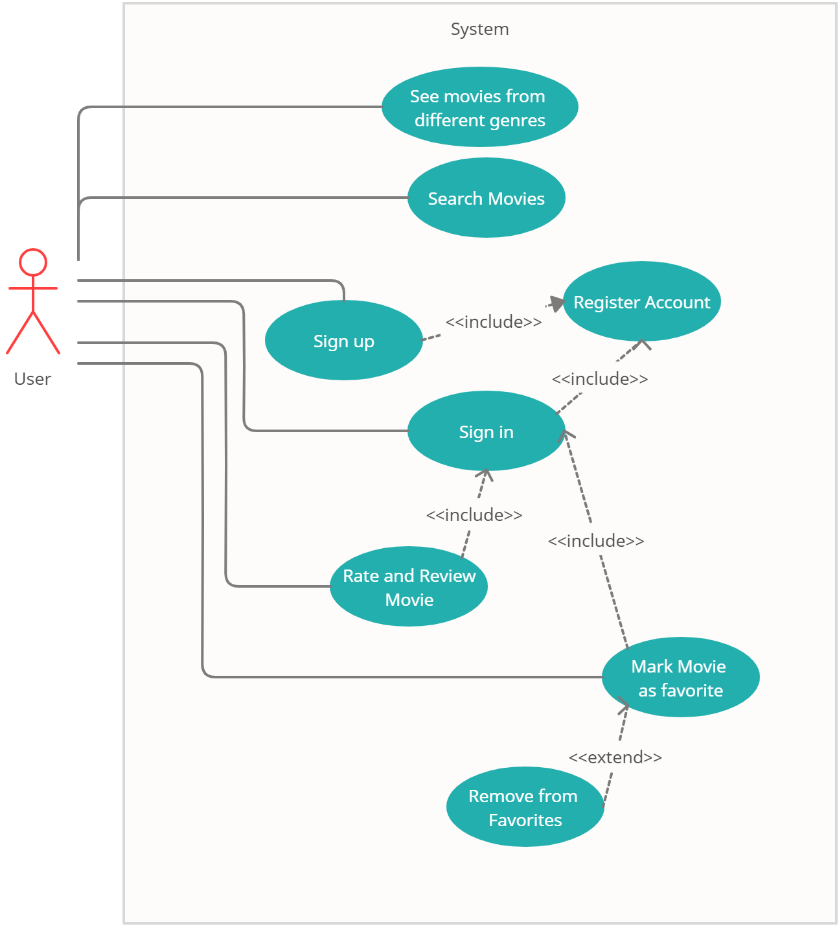


Figure 1: Use Cases

3.2 Activity Diagram

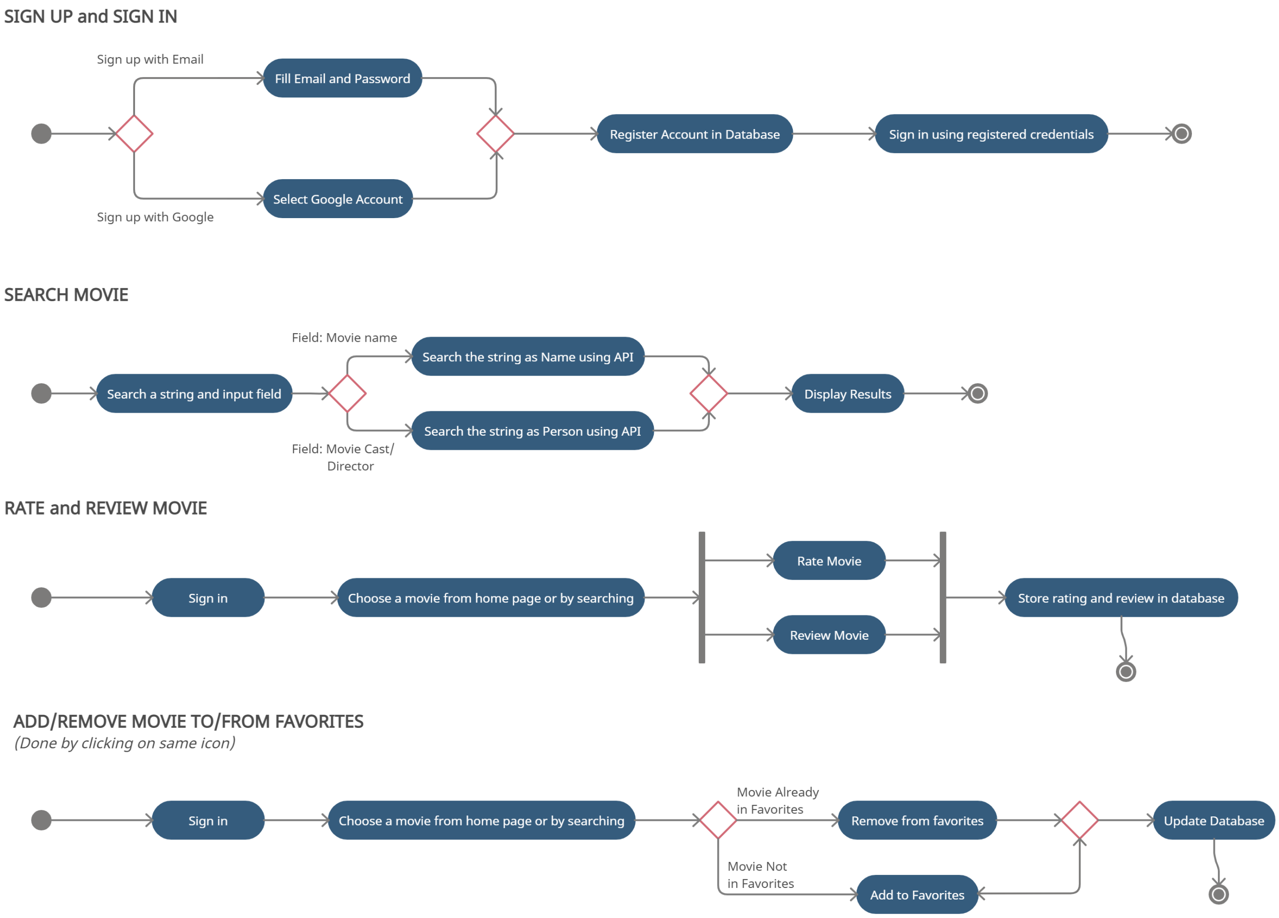

SIGN UP and SIGN IN
Sign up with Email
Fill Email and Password
Sign up with Google
Select Google Account
Register Account in Database
Sign in using registered credentials
SEARCH MOVIE
Search a string and input field
Field: Movie name
Search the string as Name using API
Field: Movie Cast/ Director
Search the string as Person using API
Display Results
RATE and REVIEW MOVIE
Sign in
Choose a movie from home page or by searching
Rate Movie
Review Movie
Store rating and review in database
ADD/REMOVE MOVIE TO/FROM FAVORITES
(Done by clicking on same icon)
Sign in
Choose a movie from home page or by searching
Movie Already in Favorites
Remove from favorites
Movie Not in Favorites
Add to Favorites
Update Database

Figure 2: Activity diagram

3.3 Sequence Diagrams

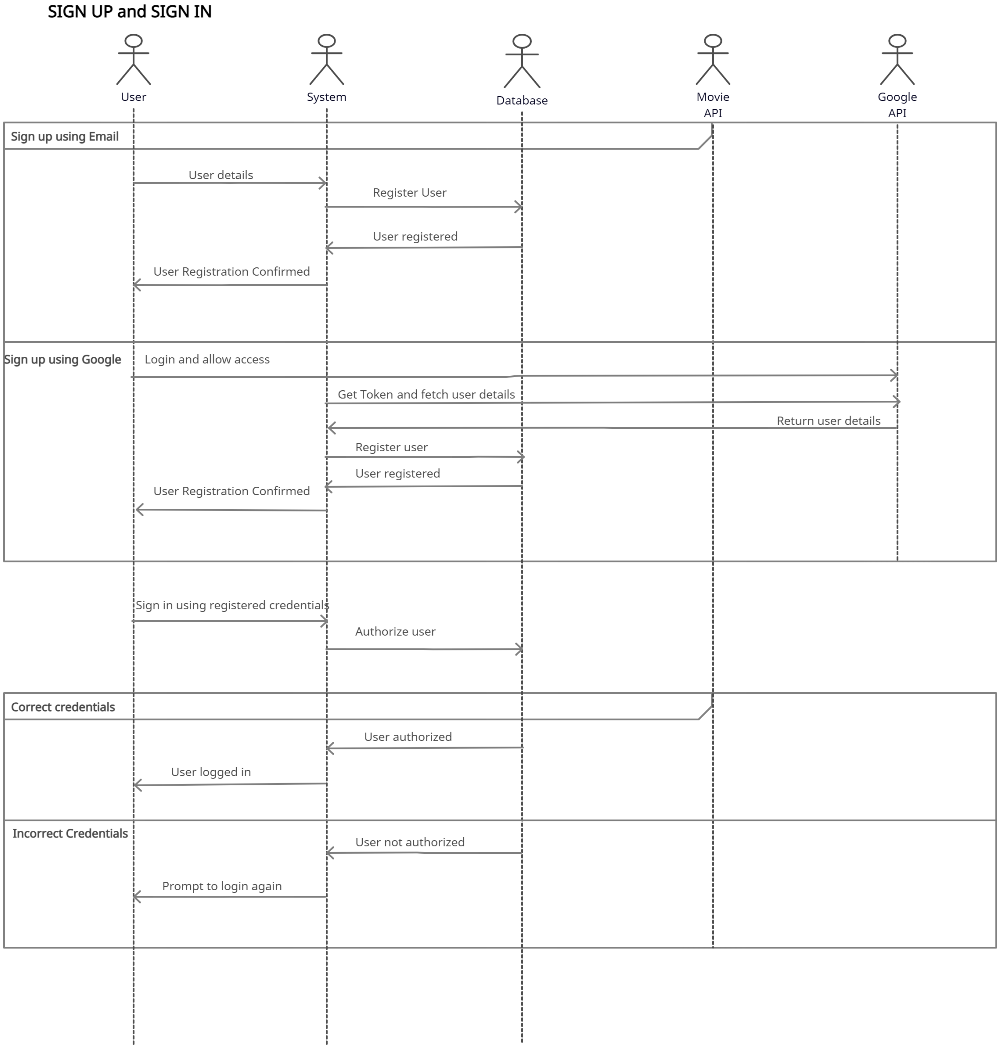


Figure 3: Sequence diagram for use case:Sign Up and Sign in

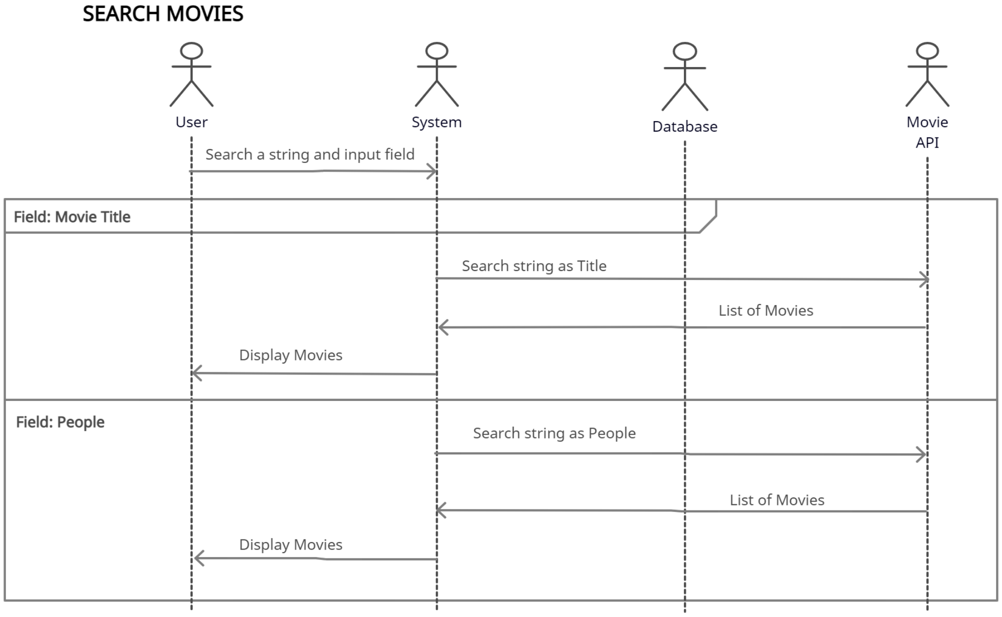


Figure 4: Sequence diagram for use case: searching movies

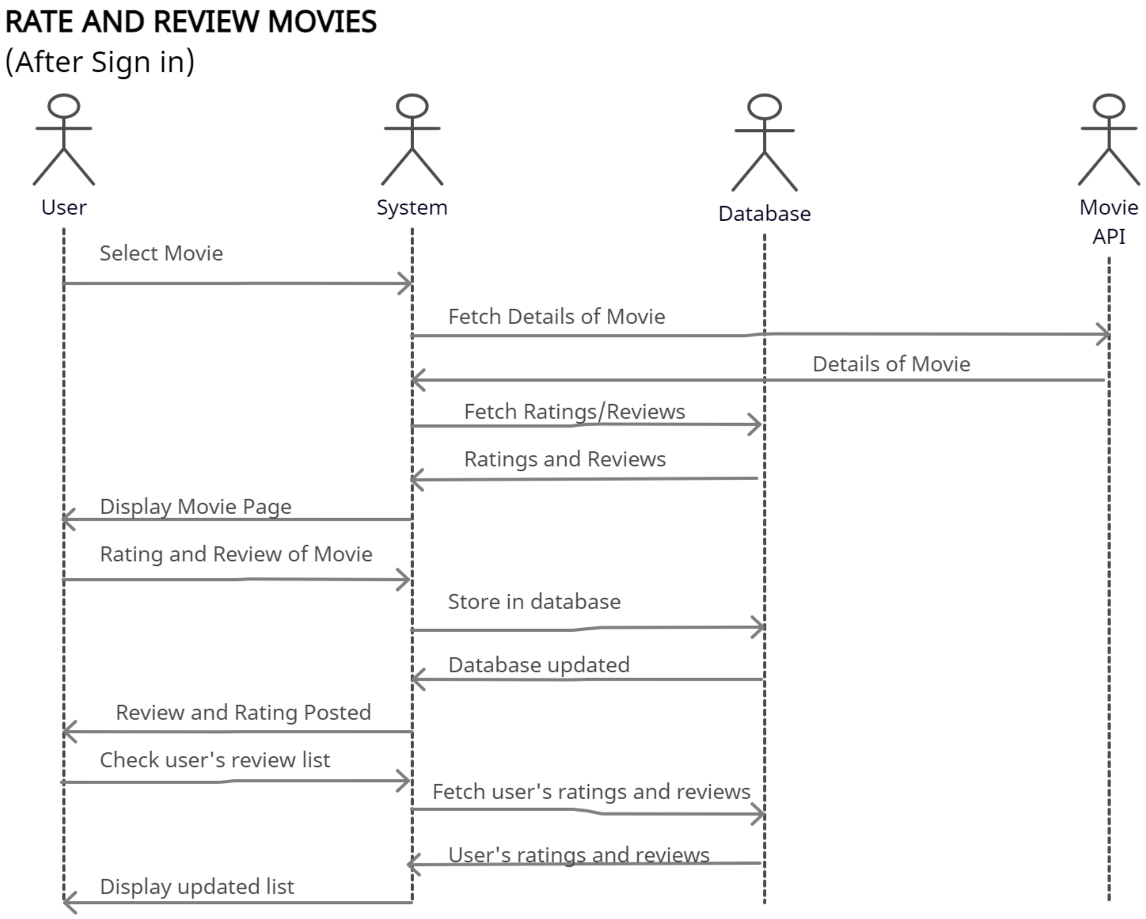


Figure 5: Sequence diagram for use case: Rate and Review movies

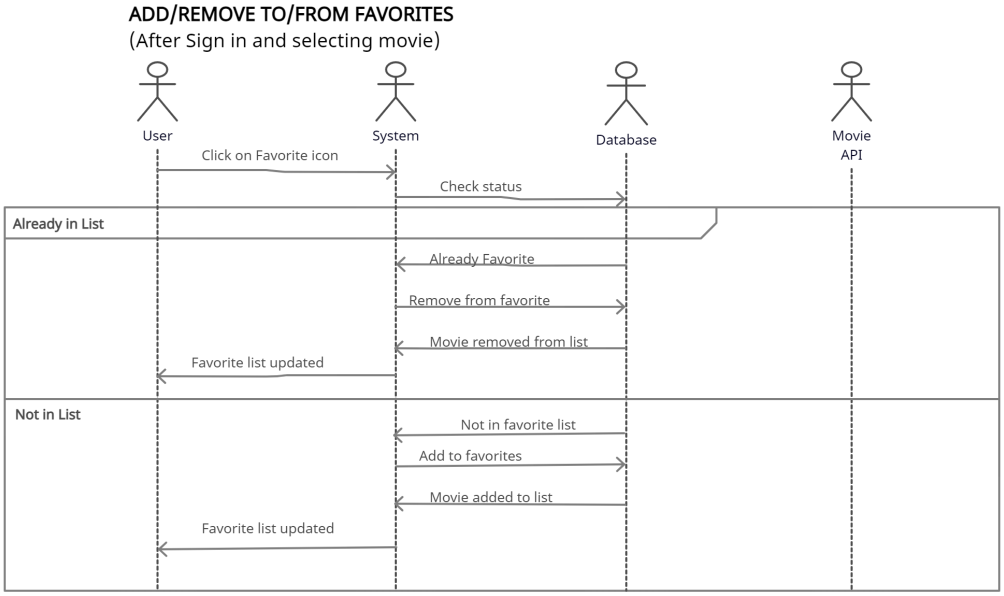


Figure 6: Sequence diagram for use case: Mark/Un-mark as favorite

3.4 Class Diagram

Since, we are fetching maximum data from API, we don't require overly complex database and hence our system is quite simple in structure. Hence, we have a very simple class diagram which is as follows:

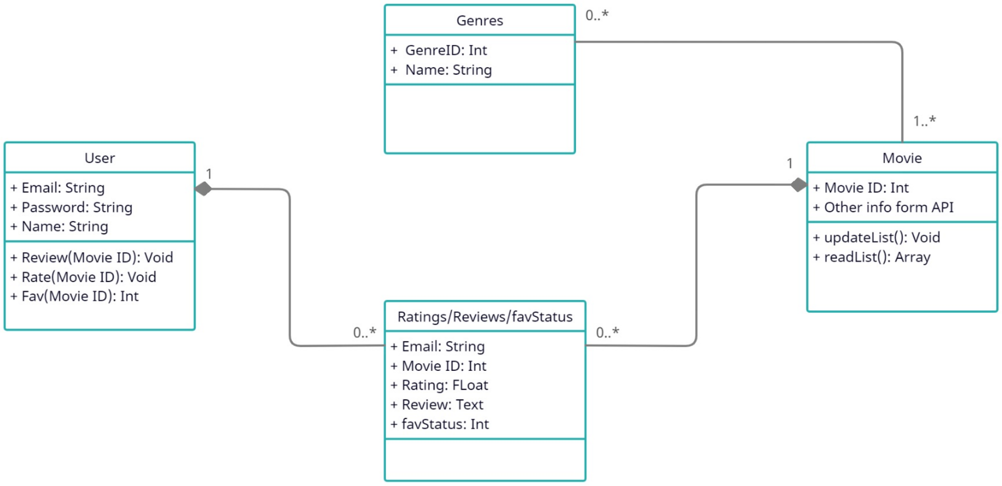
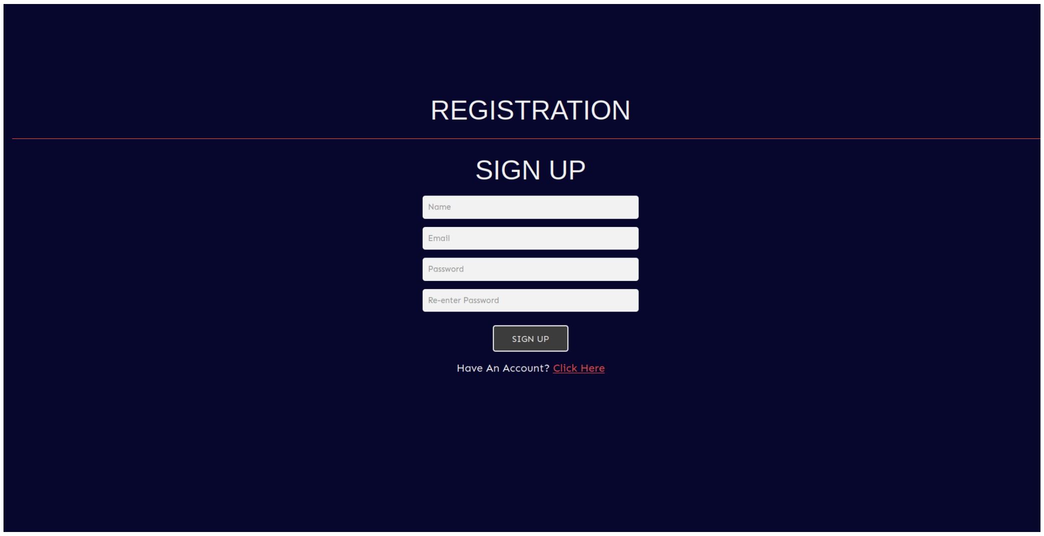


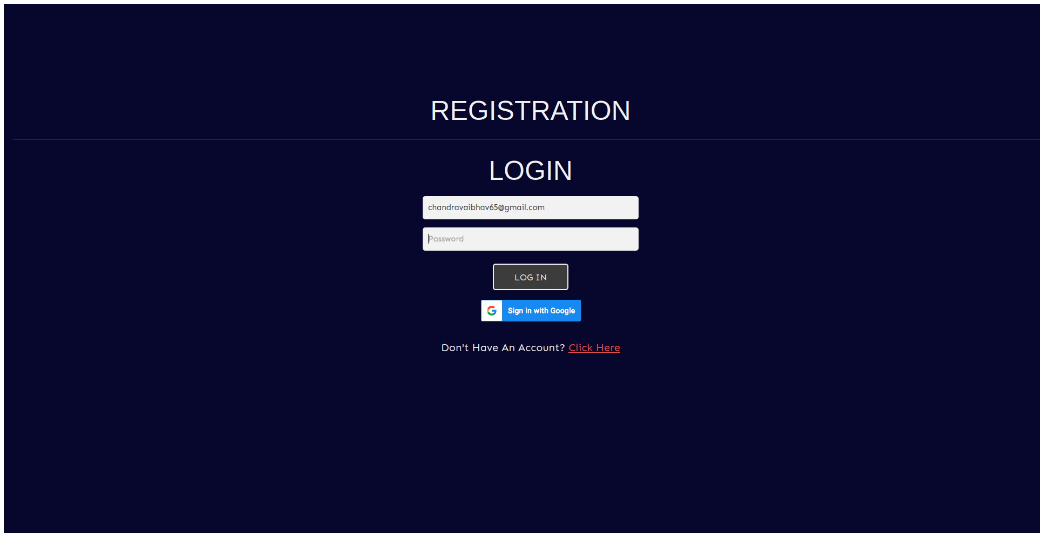
Figure 7: Sequence diagram for use case: Class Diagram

3.5 Wireframes



Have An Account? Click Here

Figure 8: The Signup Page



chandravaibhav65@gmail.com

Don't Have An Account? Click Here

Figure 9: The Login Page

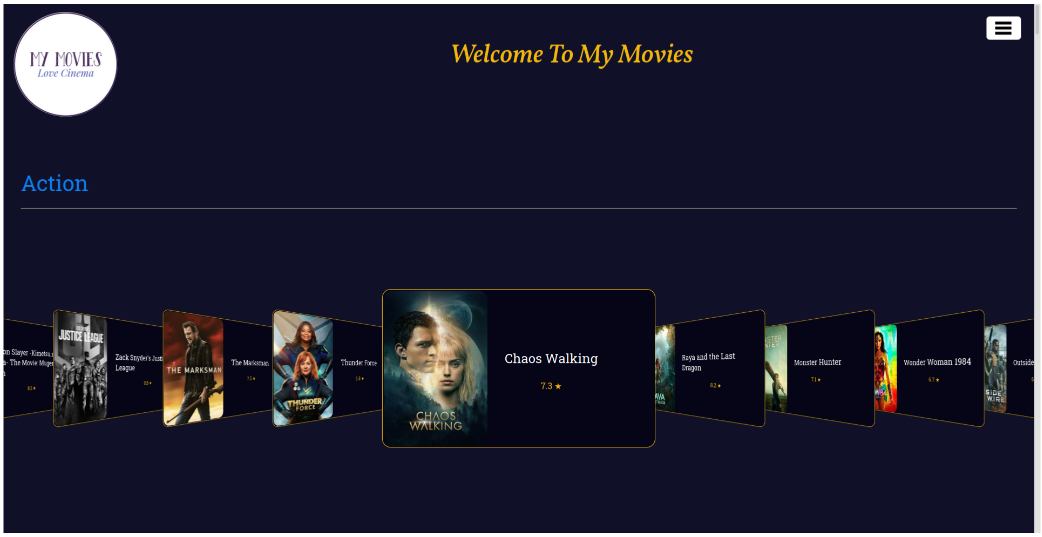


Figure 10: The Hompage

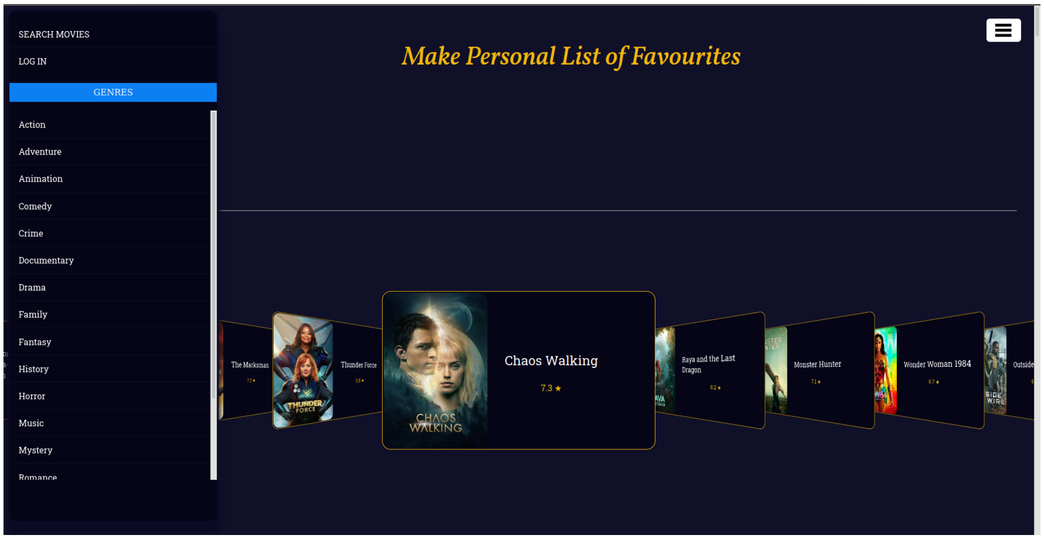
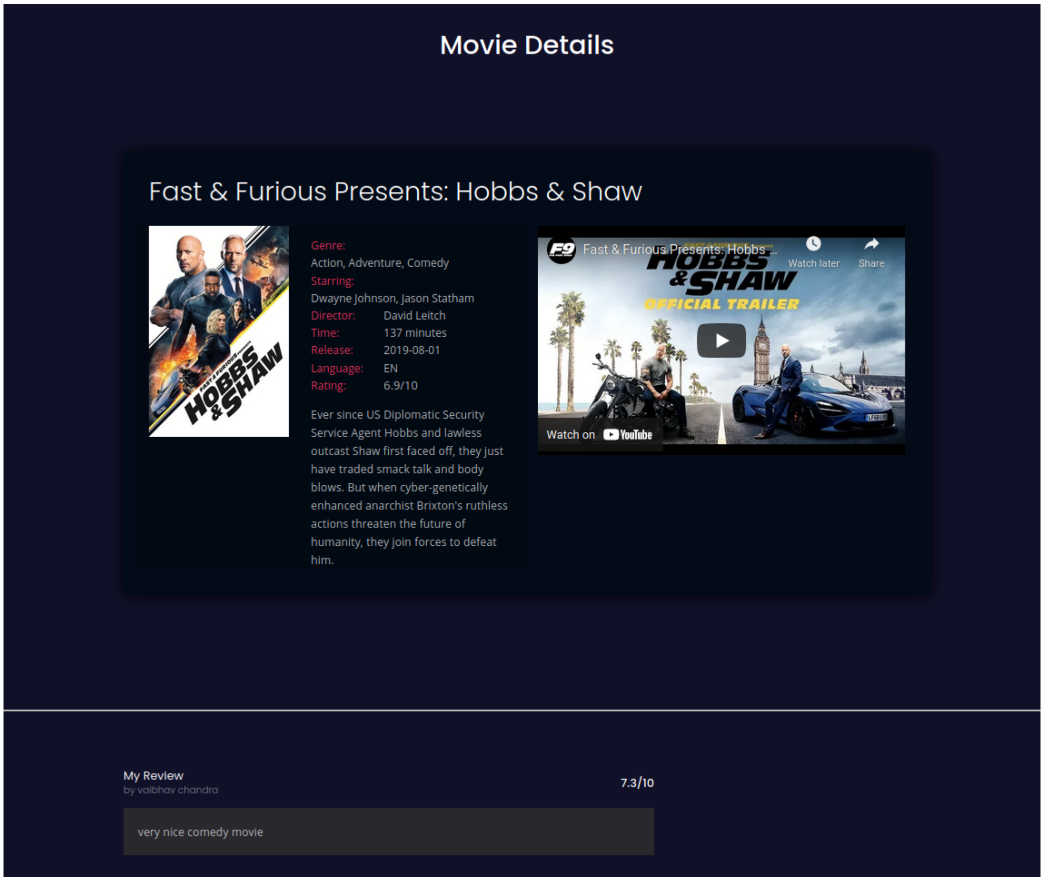


Figure 11: The HomePage with navbar



Movie Details

Fast & Furious Presents: Hobbs & Shaw

Genre:
Action, Adventure, Comedy
Starring:
Dwayne Johnson, Jason Statham
Director: David Leitch
Time: 137 minutes
Release: 2019-08-01
Language: EN
Rating: 6.9/10

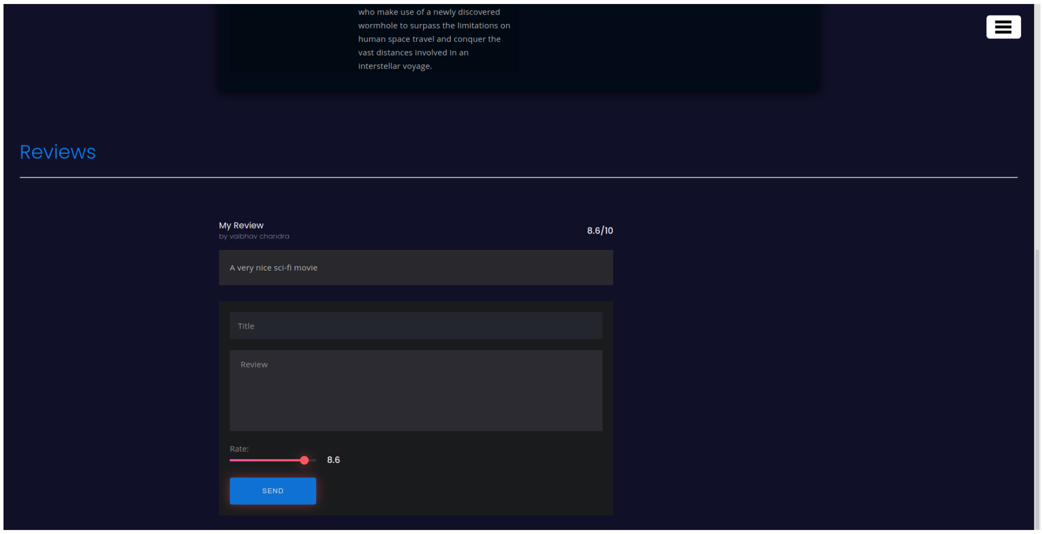
Ever since US Diplomatic Security Service Agent Hobbs and lawless outcast Shaw first faced off, they just have traded smack talk and body blows. But when cyber-genetically enhanced anarchist Brixton's ruthless actions threaten the future of humanity, they join forces to defeat him.

My Review
by vaibhav chandra

7.3/10

very nice comedy movie

Figure 12: Details of Movie along with reviews



who make use of a newly discovered wormhole to surpass the limitations on human space travel and conquer the vast distances involved in an interstellar voyage.

Reviews

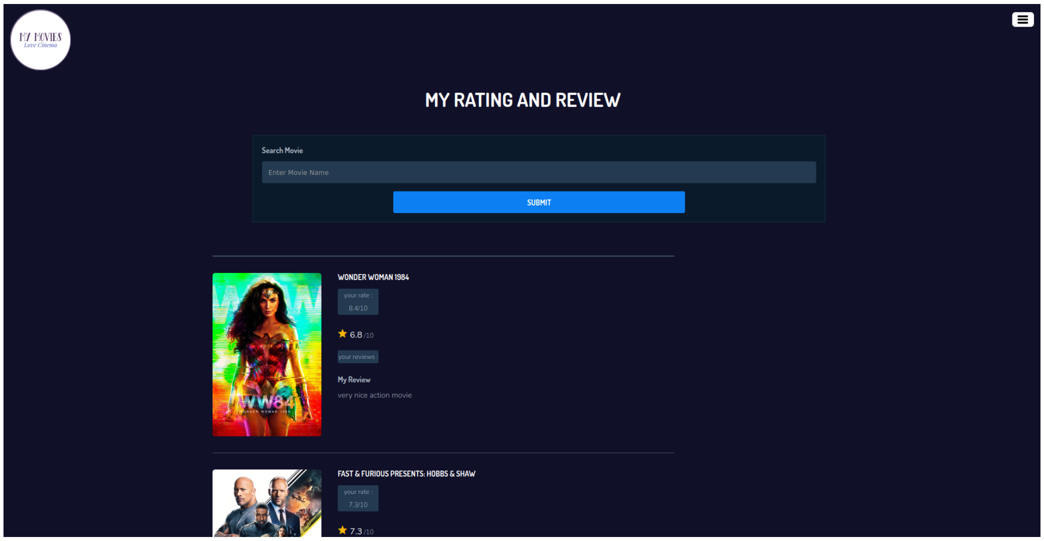
My Review
by vaibhav chandra

8.6/10

A very nice sci-fi movie

Rate: 8.6

Figure 13: Submit Review and Rate Movie



MY RATING AND REVIEW

Search Movie

Enter Movie Name

WONDER WOMAN 1984

your rate : 8.4/10

★ 6.8 /10

your reviews :

My Review

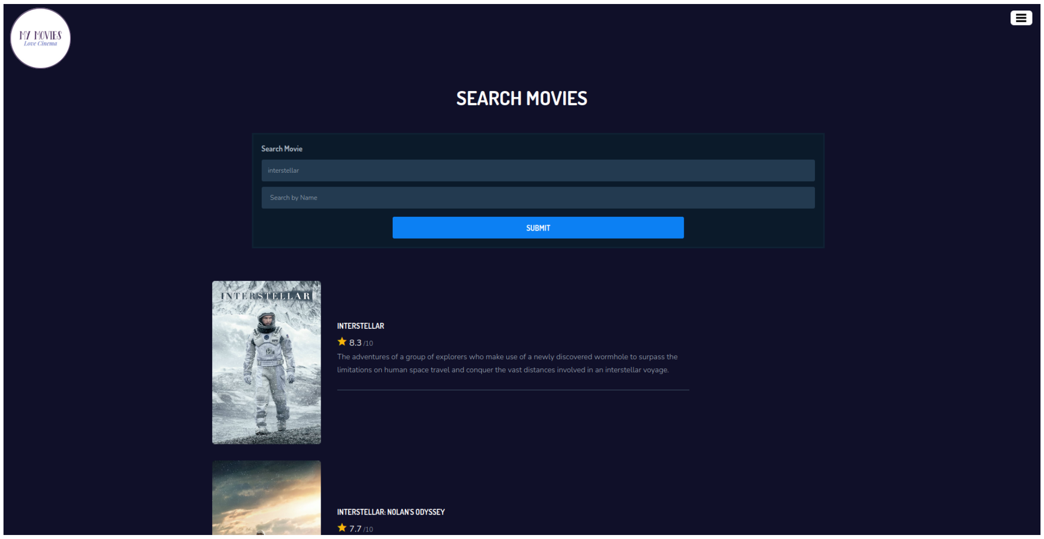
very nice action movie

FAST & FURIOUS PRESENTS: HOBBS & SHAW

your rate : 7.3/10

★ 7.3 /10

Figure 14: User's list of Rated movies



SEARCH MOVIES

Search Movie

interstellar

Search by Name

SUBMIT

INTERSTELLAR

★ 8.3 /10

The adventures of a group of explorers who make use of a newly discovered wormhole to surpass the limitations on human space travel and conquer the vast distances involved in an interstellar voyage.

INTERSTELLAR: NOLAN'S ODYSSEY

★ 7.7 /10

Figure 15: Search movies

4 Software Architecture

4.1 Technologies used

It is planned to use the following techstack in our product.

- Frontend: HTML, CSS, EJS, JQuery, AJAX
- Backend: Nodejs, Express, Passport, bcrypt
- Database: MongoDB, Mongo Atlas for cloud storage
- Hosting: Heroku
- Movie API: themoviedb.org
- IDE: VSCode (community version)
- Testing: Jest, Supertest
- Documentation: Overleaf(LaTex)

4.2 Architecture of our product

A brief description of the architecture of our product:

- Frontend: Various pages displayed are login, signup, homepage and moviedetails. There are various forms in the pages. The serialized data of these forms are sent through ajax requests. Required data is also receive through ajax requests without the need to refresh the page. Jquery helps in DOM manipulation.

- Backend: Express app responds to the requests made to the server. Authentication is handled through passportJS and specifically the Google OAuth strategy and local strategy. All the passwords saved in the database are hashed through very secure bcrypt library. Cookies are used to maintain sessions. Each session lasts for about 3 hours. Each day movie data is fetched from moviedb API and stored in a js file.

- Database: Database stores the data about users, movies, genres and their relations. Complete movie details are not stored so as to keep the database simple. Only their id's are stored so as to fetch them as and when required.

5 Keywords

- HTML: Hypertext Markup Language

- CSS : Cascaded Style Sheets

- AJAX: Asynchronous Javascript and XML

- EJS: Embedded JavaScript

- API: Application Programming Interface