



IT313-Software Engineering

Software Requirements Specifications

Streamify

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Software Requirements Specification (SRS) for Streamify

1. Introduction

Streamify is a streaming platform designed to provide users with a wide range of movies and TV shows for on-demand viewing, a streaming platform designed to deliver a seamless and enjoyable user experience. This document outlines the requirements for the development of Streamify.

1.1 Problem Statement

- Limited availability of desired content on other streaming platforms.
- High subscription costs deter some users.
- Traditional television faces issues such as limited content options, fixed schedules with commercial interruptions, geographical restrictions, and lack of on-demand viewing.
- Television broadcasting is often limited by geographical boundaries, leading to differences in available content between regions.
- Some users find other streaming platform's content library lacking in popular titles or niche genres.

1.2 Objectives

- The primary objective is to offer a diverse library of movies and shows to cater to a wide range of tastes and preferences.
- Curate specialized content libraries tailored to specific niche interests or demographics to cater to underserved markets
- Ensure compatibility across various devices and operating systems, maximizing accessibility for users.
- Create a seamless and intuitive user interface for easy navigation and enjoyable viewing experiences.
- Produce original movies and shows of exceptional quality to differentiate the platform and attract subscribers.

1.3 Expected outcomes

- The platform is anticipated to attract a larger user base due to expanded content availability, improved user experience, and competitive pricing models.
- Users are expected to spend more time on the platform, engaging with content, participating in community features, and providing feedback, leading to enhanced engagement.
- Establishing streamify as a recognizable brand in the streaming industry, leading to brand recognition and loyalty.
- Successful implementation and positive feedback

2. Definition

- **Streamify:** Streamify is a web-based streaming platform that allows users to access a diverse range of movies and TV shows on-demand.
- **User:** Any individual who accesses and uses the Streamify platform to watch movies and TV shows.
- **Admin:** The user responsible for managing content, user accounts, and overall platform functionality.

3. Scope

This project focuses on developing the core functionalities of Streamify, including:

- User authentication and registration
- Content browsing and search
- Video playback and control
- Basic user profile management with watchlist feature
- Offer a vast and diverse content library including movies, TV shows, documentaries, and more.
- Enable users to download content for offline viewing.
- Offer responsive customer support services through various channels.
- Provide different categories of movies i.e recently released , top rated etc.

4. User Stories

4.1 Visitor:

- As a user, I want to be able to browse through a wide range of movies and TV shows so that I can discover new content to watch.
- As a user, I want to be able to search for specific titles or cast to quickly find content that matches my interests.
- As a user, I want to be able to watch trailers for movies and TV shows to help me decide if I want to watch the full Content.
- As a user, I want to have the option to create an account so that I can access personalized features such as recommendations and watch history.
- As a user i should be able search based on movies.
- As a user i should be able to search based on the series.
- As a user i should be able to search based on cast.
- As a user i should be able to change the mode which suits as per my preference.
- As an unregistered user, I want to receive prompts or suggestions to create an account to unlock additional features and benefits.

4.2 Registered User:

- As a registered user i should be able to login to browse the content.
- As a registered user i should be able to browse the content based on top rated and popular movies or series.
- As a registered user i should be able to give feedback for the movies or tv series.
- As a registered user i should be able to add the movies/series to the watchlist.
- As a register user i should be able to remove the movies/series that are added in the watchlist.
- As a register user i should be able to view the movies/series that are added in the watchlist.
- As a register user i should be able to remove the feedback that are added for the movies/series.
- As a register user i should be able to view the feedback that are added in the list.
- As a registered user i should be able to update the password.
- As a registered user i should be able search based on movies.
- As a registered user i should be able to search based on the series.
- As a registered user i should be able to search based on cast.
- As a user i should be able to change the mode which suits as per my preference

5. Use Cases

5.1 Registration Page:

- **Actor:** User
- **Description:** Users can register on the platform to create an account and access the streaming service.
- **Preconditions:** User has access to the internet and a compatible device
- **Basic Flow:**
 - User navigates to the registration page.
 - User fills in required fields such as email, password, and personal information.
 - User agrees to the terms of service and privacy policy.
 - User submits the registration form.
- **Alternate Flows:**
 - If the registration form is incomplete, the system prompts the user to fill in all required fields.
 - If the email provided is already associated with an existing account, the system notifies the user to choose a different one.

5.2 Login Page:

- **Actor:** User
- **Description:** Users can log in to their account to access the streaming service.
- **Preconditions:** User has already registered an account on the platform.
- **Basic Flow:**
 - User navigates to the login page.
 - User enters their email and password.
 - User clicks the "Login" button.
- **Alternate Flows:**
 - If the entered credentials are incorrect, the system notifies the user to enter the correct email and password combination.

5.3 Home Page:

- **Actor:** User
- **Description:** Users land on the home page upon logging in, where they can discover featured content and personalized recommendations.
- **Preconditions:** User is logged into their account on the platform.

- **Basic Flow:**
 - User lands on the home page after logging in. User views featured movies, TV shows, and other content recommendations based on their viewing history and preferences.
 - User can scroll through various categories, genres, and trending content.
- **Alternate Flows:** None specified.

5.4 Search Page:

- **Actor:** User
- **Description:** Users can search for specific movies, TV shows, or genres using the search functionality.
- **Preconditions:** User is logged into their account on the platform.
- **Basic Flow:**
 - User navigates to the search page.
 - User enters keywords or titles into the search bar.
 - User views search results matching their query.
 - User clicks on a search result to view more details or start streaming.
- **Alternate Flows:** None specified.

5.5 Content Details Page:

- **Actor:** User
- **Description:** Users can view detailed information about a specific movie or TV show before deciding to watch it.
- **Preconditions:** User is logged into their account on the platform.
- **Basic Flow:**
 - User clicks on a movie or TV show thumbnail from the home page, search results, or recommendations.
 - User lands on the content details page, where they can view synopsis, cast, ratings, and related information.
 - User has the option to play the content, add it to their watchlist, or rate/review it.
- **Alternate Flows:** None specified.

6. Functional Requirements

- **User Registration and Authentication:**

- Users should be able to register for an account with their email and password. Users should be able to log in securely using their registered credentials.
- The system should verify user authentication to ensure secure access to the platform.

- **Content Catalog Management:**

- The system should have a comprehensive catalog of movies, TV shows, documentaries, and other content.
- Content should be organized into categories, genres, and curated collections for easy browsing.
- The system should support the addition, editing, and removal of content by administrators.

- **Content Recommendation System:**

- The system should provide personalized content recommendations based on user preferences, viewing history, and ratings.
- Recommendations should be updated dynamically to reflect changes in user behavior and preferences.

- **Content Streaming and Playback:**

- Users should be able to stream content seamlessly in high-definition (HD) or ultra-high-definition (UHD) quality.
- The system should support adaptive streaming to adjust video quality based on available bandwidth.
- Users should have control over playback features such as play, pause, rewind, and fast forward.

- **Search and Discovery:**
 - Users should be able to search for specific movies, TV shows, genres, or actors using keywords.
 - The search functionality should provide relevant and accurate results in real-time.
 - Users should be able to discover new content through featured recommendations, trending lists, and curated collections.
- **Device Compatibility:**
 - The platform should be accessible across various devices and operating systems, including smartphones, tablets, computers, smart TVs, and gaming consoles.
 - The system should provide a consistent user experience across different devices, adapting to screen sizes and resolutions.
- **Admin Dashboard and Content Management:**
 - Administrators should have access to a dashboard for managing content, user accounts, and platform settings.
 - Administrators should be able to add, edit, and remove content from the catalog, as well as moderate user-generated content and reviews.

7. Non-functional Requirements

7.1 Performance:

- Content pages must load within 3 seconds to ensure a seamless browsing experience for users.
- The system should be able to handle a minimum of 100,000 simultaneous users to accommodate peak usage periods without performance degradation.

7.2 Security:

- User data, including login credentials, must be encrypted using industry-standard encryption algorithms to protect sensitive information from unauthorized access.
- Secure connections using HTTPS (Hypertext Transfer Protocol Secure) must be implemented to ensure secure communication between the user's browser and the server, preventing interception or tampering of data.

7.3 Usability:

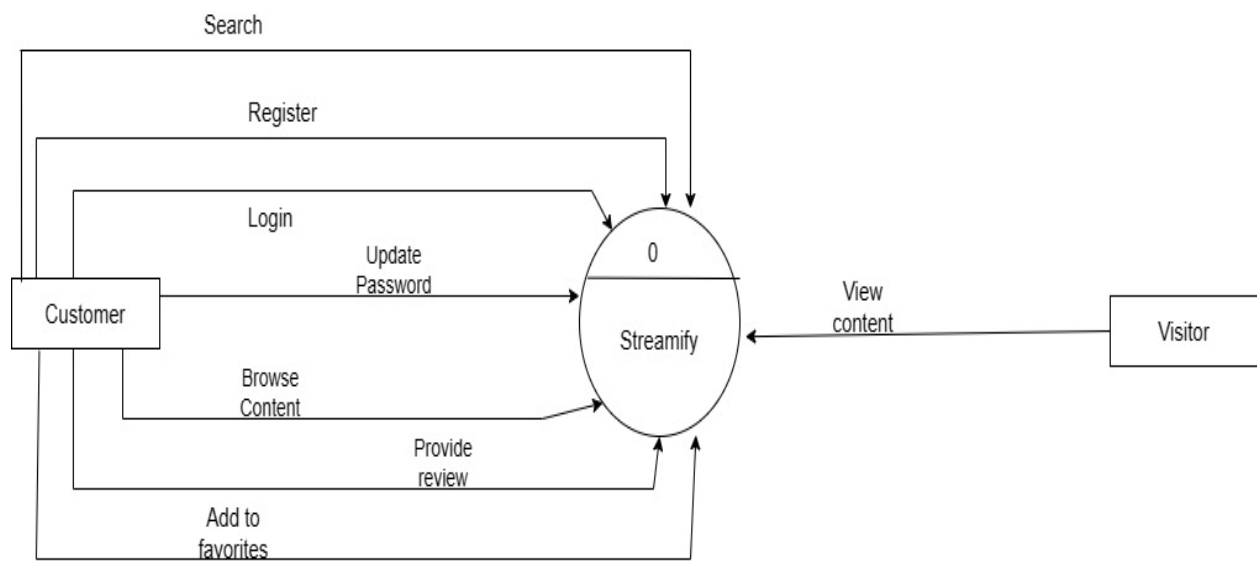
- The user interface should be intuitive and user-friendly, with clear navigation, consistent design elements, and logical placement of features to enhance usability.
- On-screen guidance, such as tooltips or walkthroughs, should be provided for first-time users to help them navigate the platform and understand its features more easily.

7.4 Reliability:

- The system should maintain a 99.9% uptime to minimize downtime and ensure continuous availability of the service to users.
- Regular backups of content and user data must be performed to prevent data loss in case of system failures, disasters, or other unforeseen events, ensuring data integrity and reliability of the platform.

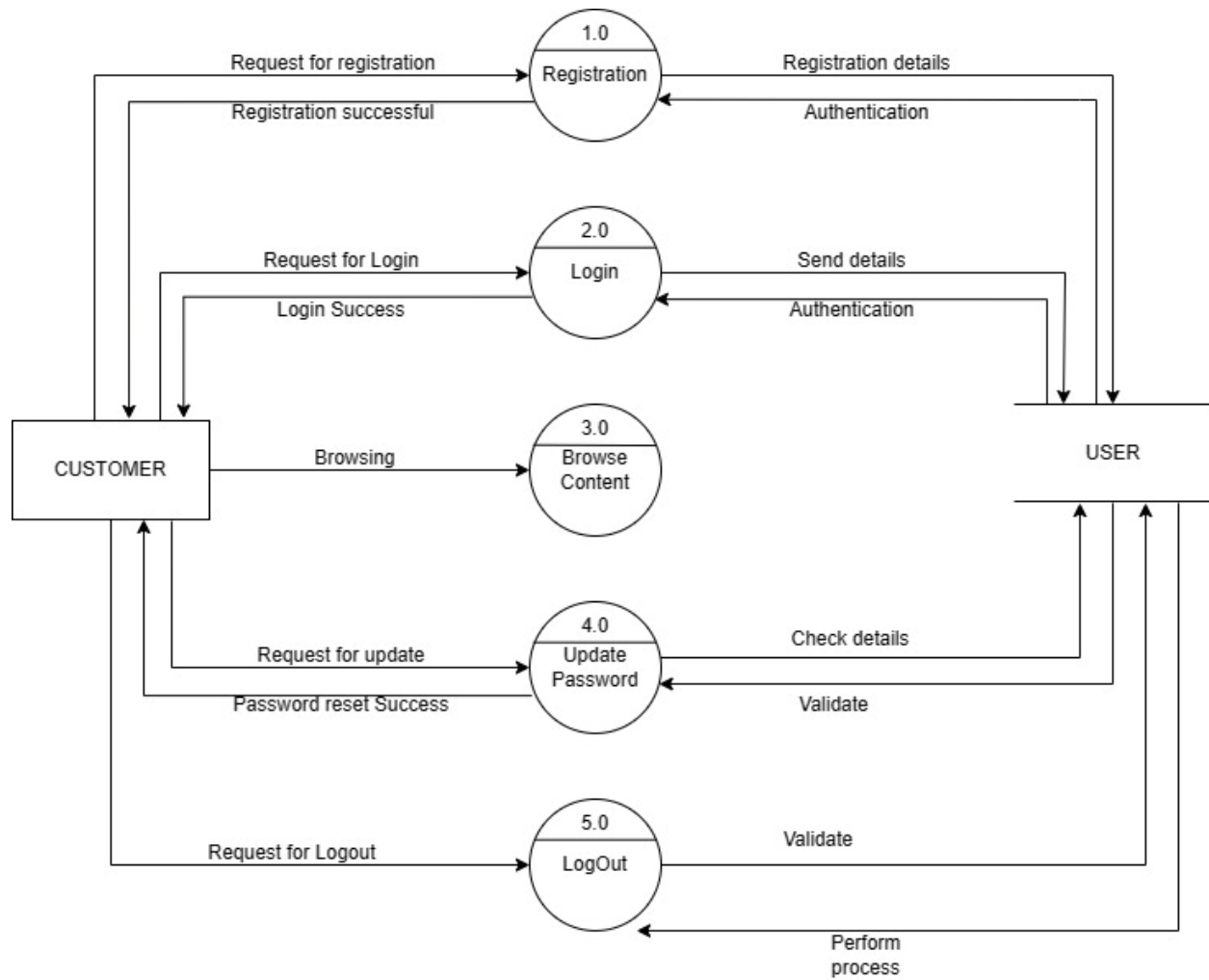
8 Dataflow Diagram:

Level 0 Dfd:



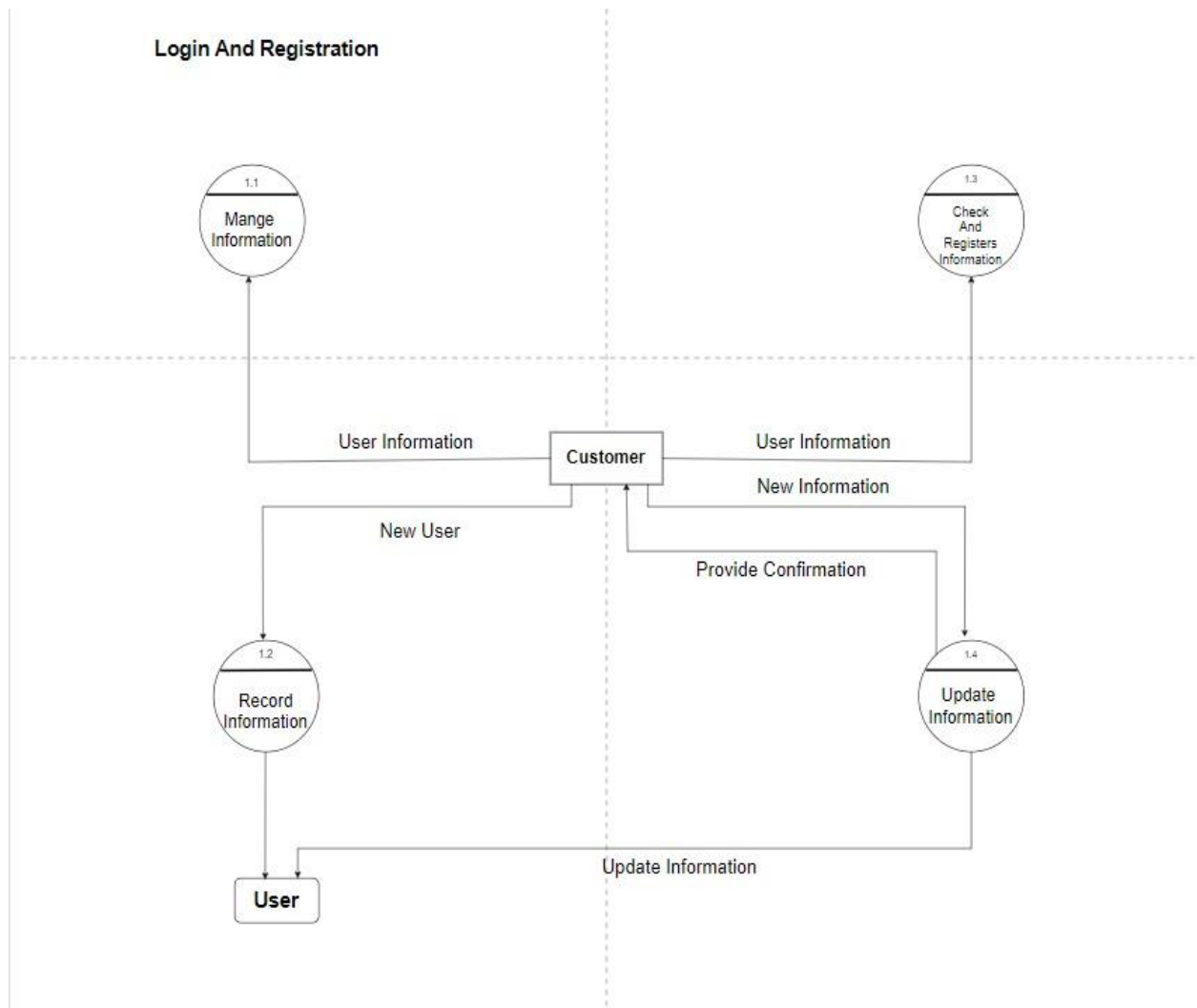
Level 1 Dfd:

- Customer:

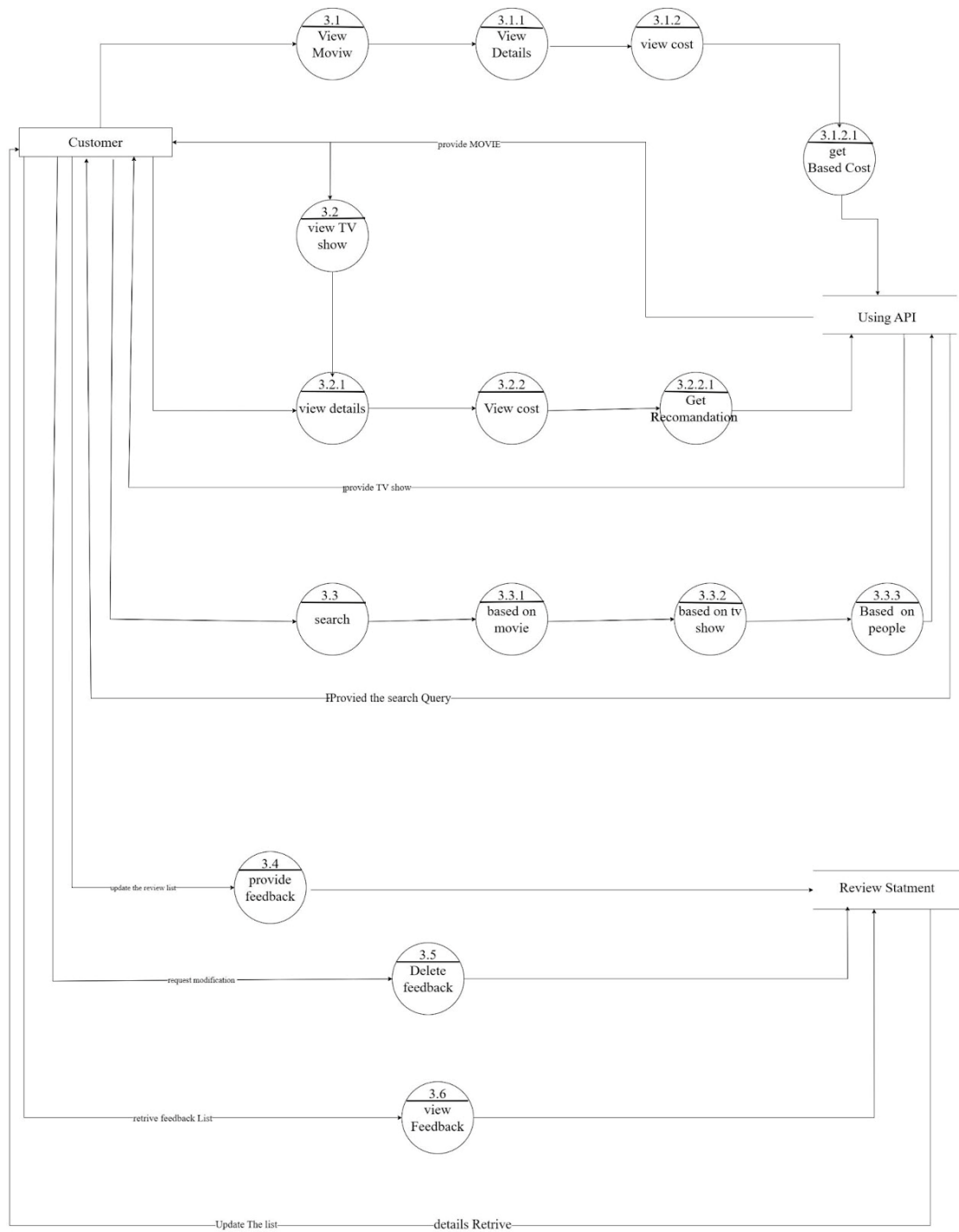


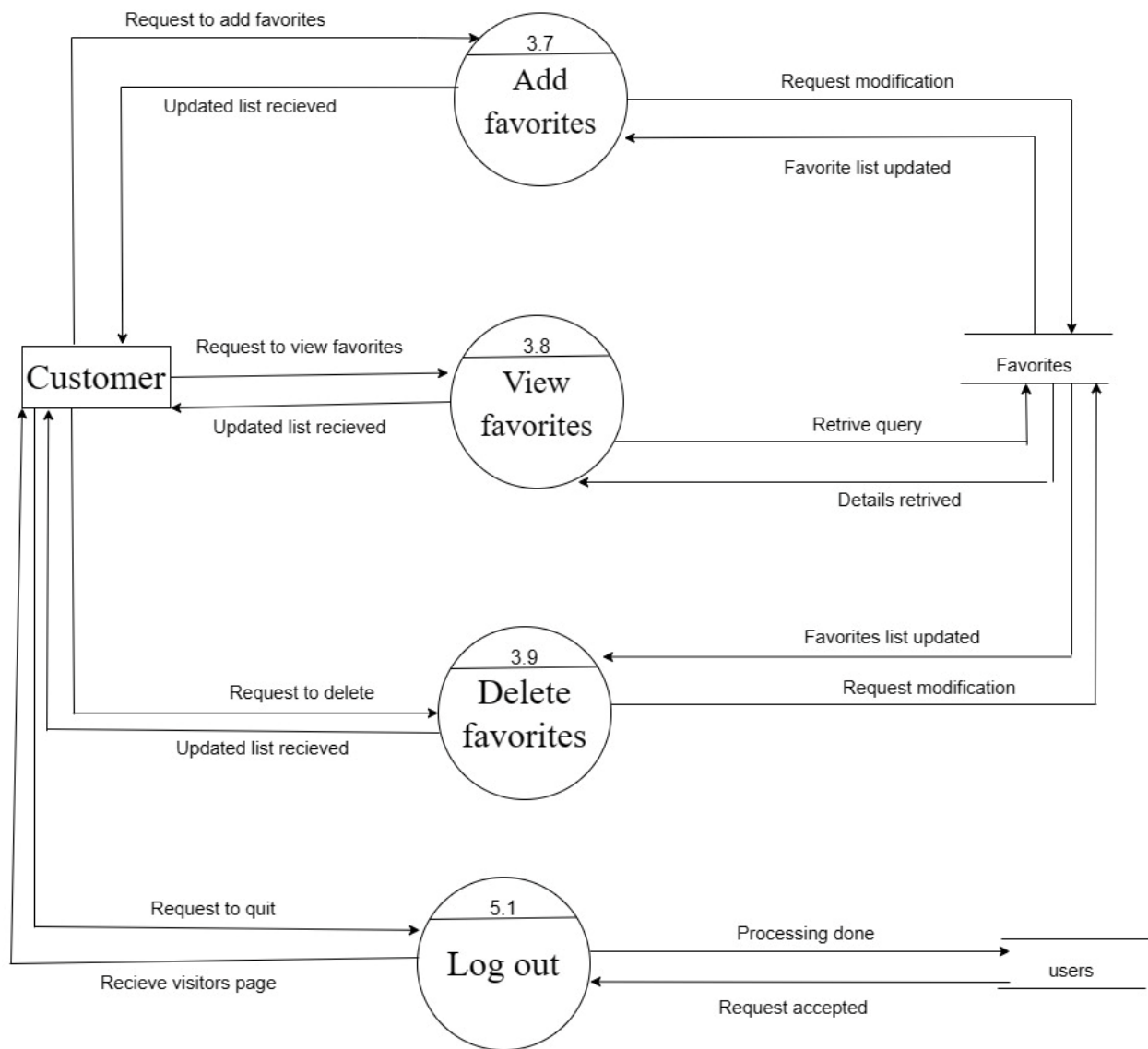
Level 2 Dfd:

- Login and registration:

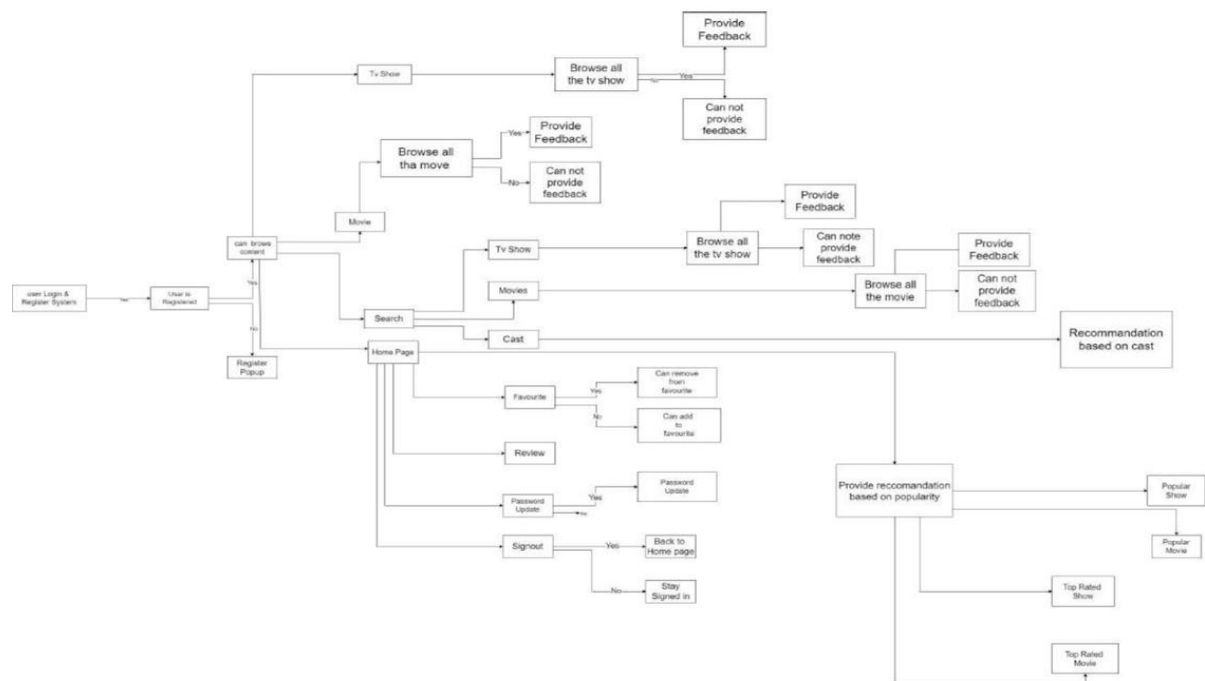


- **Browse Content:**





9 Decision Tree



10 Decision Table

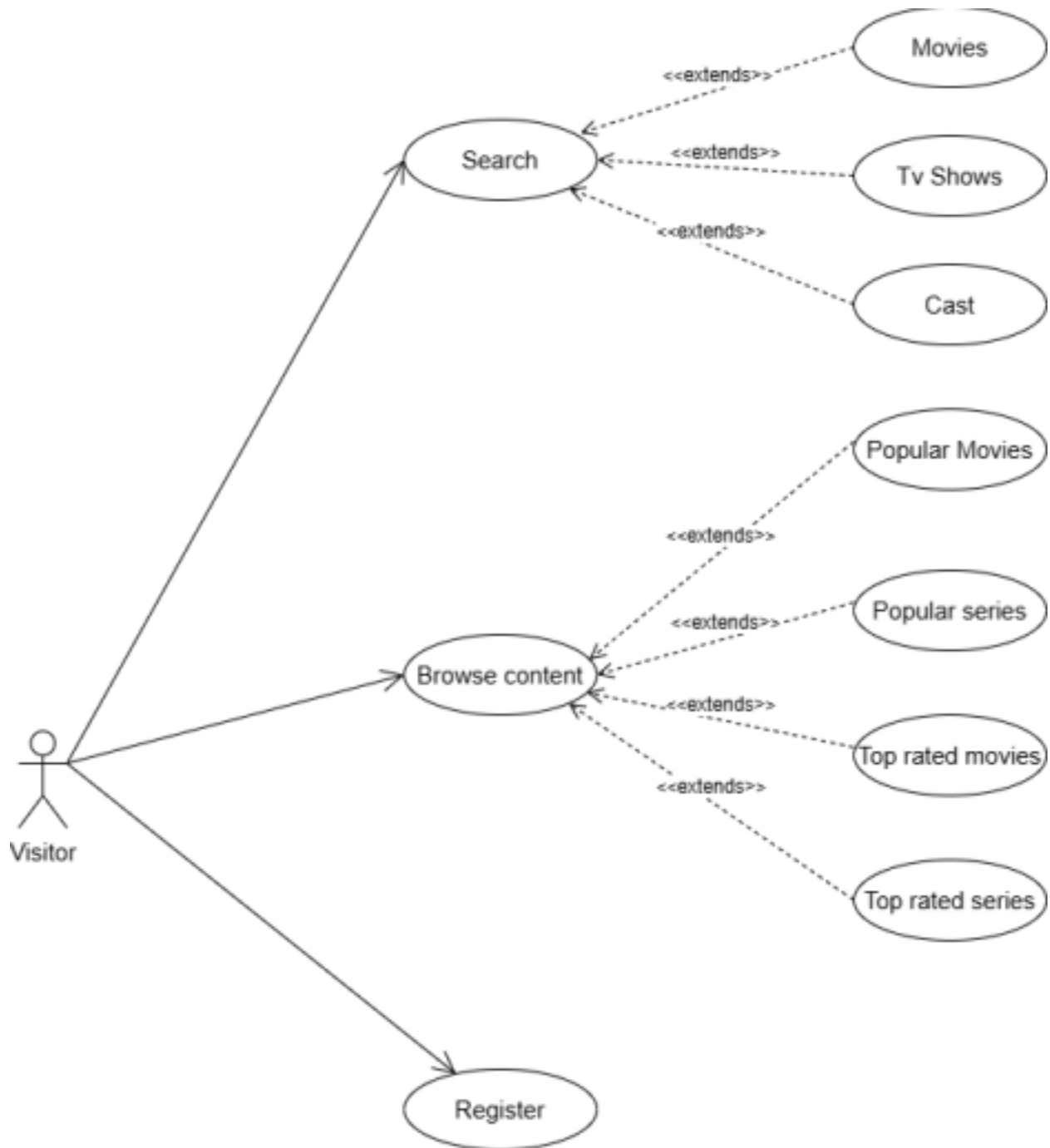
Decision Table											
Conditions											
Should have registered	T	T	T	T	T	T	T	T	T	T	T
should be logged in	F	T	T	T	T	T	T	T	T	T	T
User selects series/movie	-	-	T	F	-	-	-	-	-	-	-
Search query	-	-	-	-	T	F	-	-	-	-	-
users interaction with fav module.	-	-	-	-	-	-	T	F	-	-	-
User submits review	-	-	-	-	-	-	-	-	T	-	-
User makes password update req	-	-	-	-	-	-	-	-	-	T	-
System generates recommendation	-	-	-	-	-	-	-	-	-	-	T
Action											
Redirect to home page	X										
Error message.											
Display details			X			X					
Provide feedback								X			
Display results					X						
Update favorites							X				
Display recommendations											X
Display confirmation										X	
Redirect to home page as a registered user		X		X							
Fav list is empty								X			

(

11 UML Diagrams

11.1 Use Case Diagram

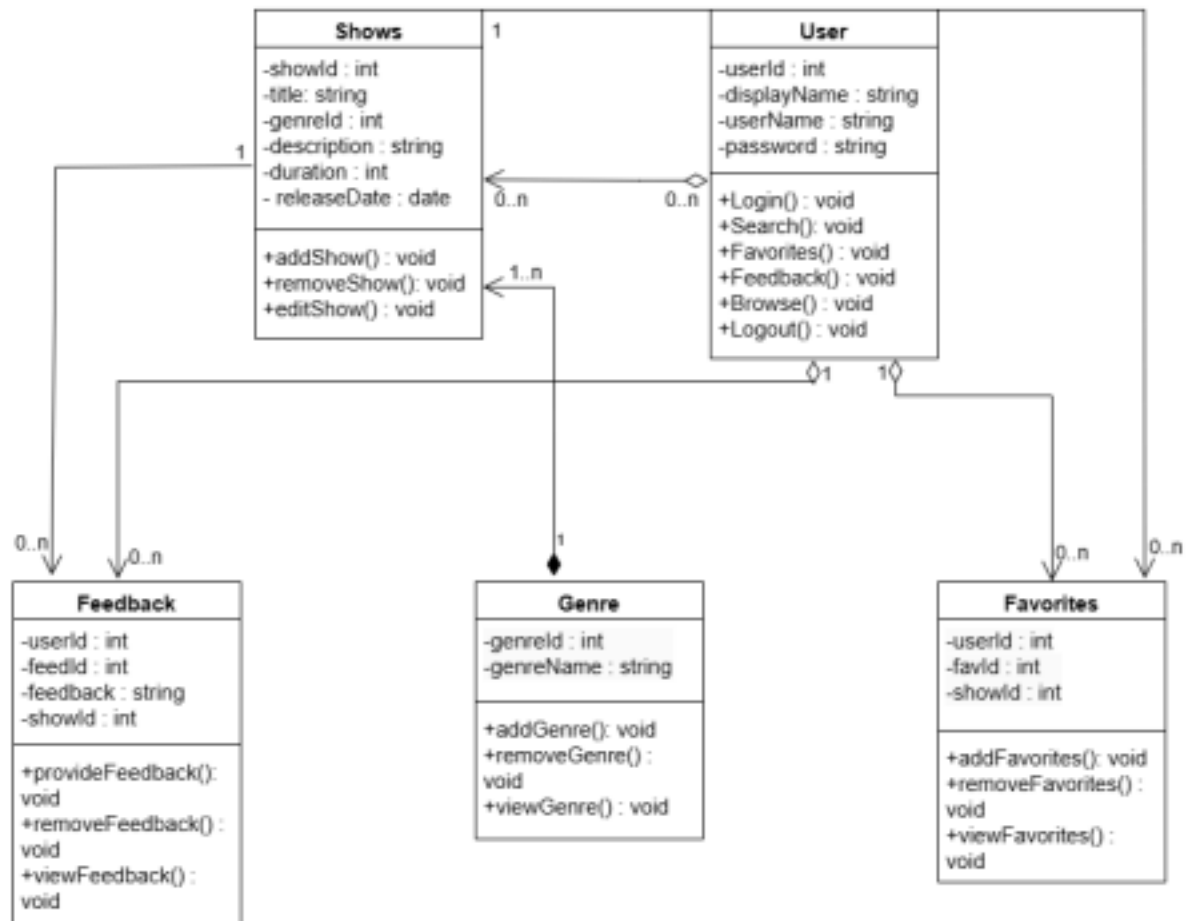
Visitor:



Registered customer:

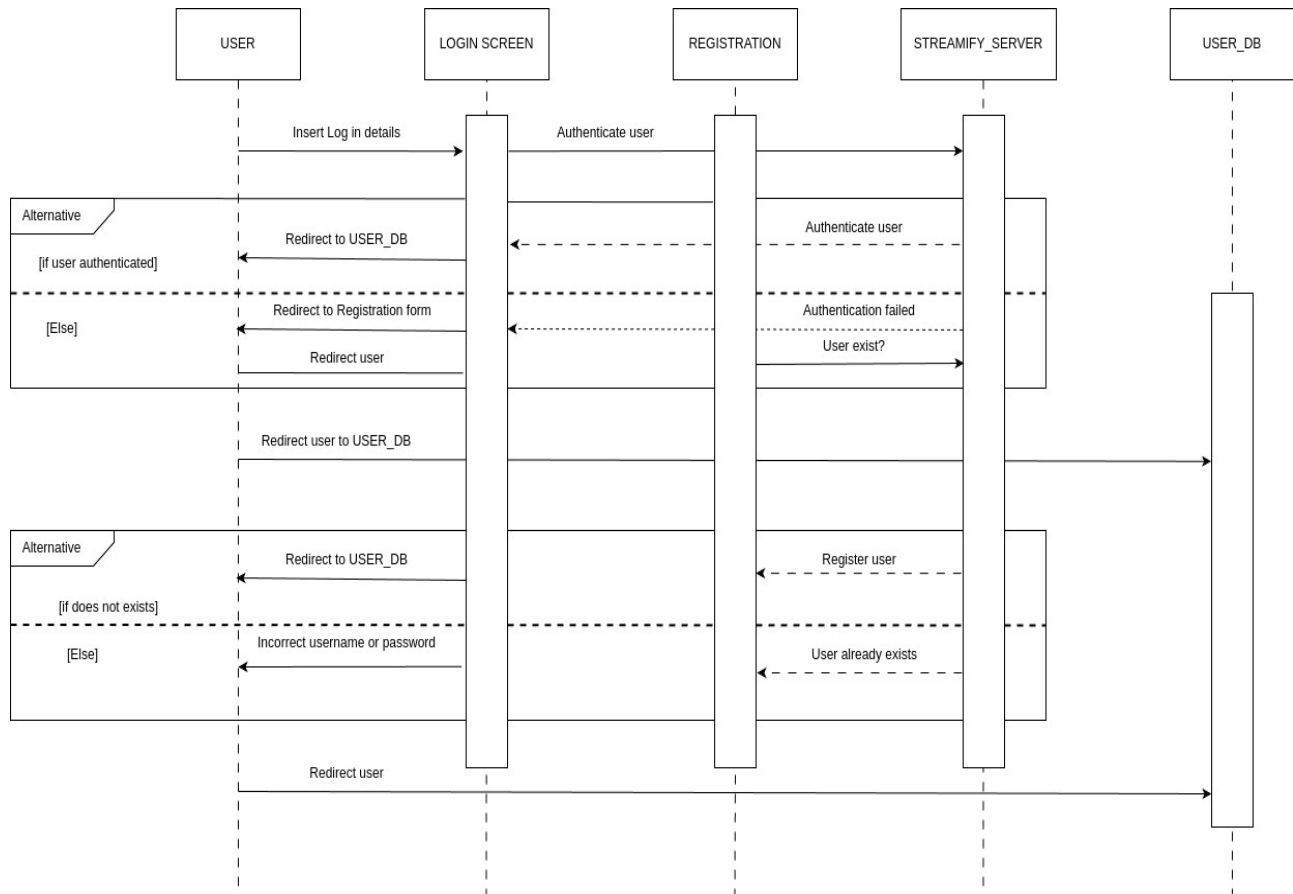


11.2 Class Diagram

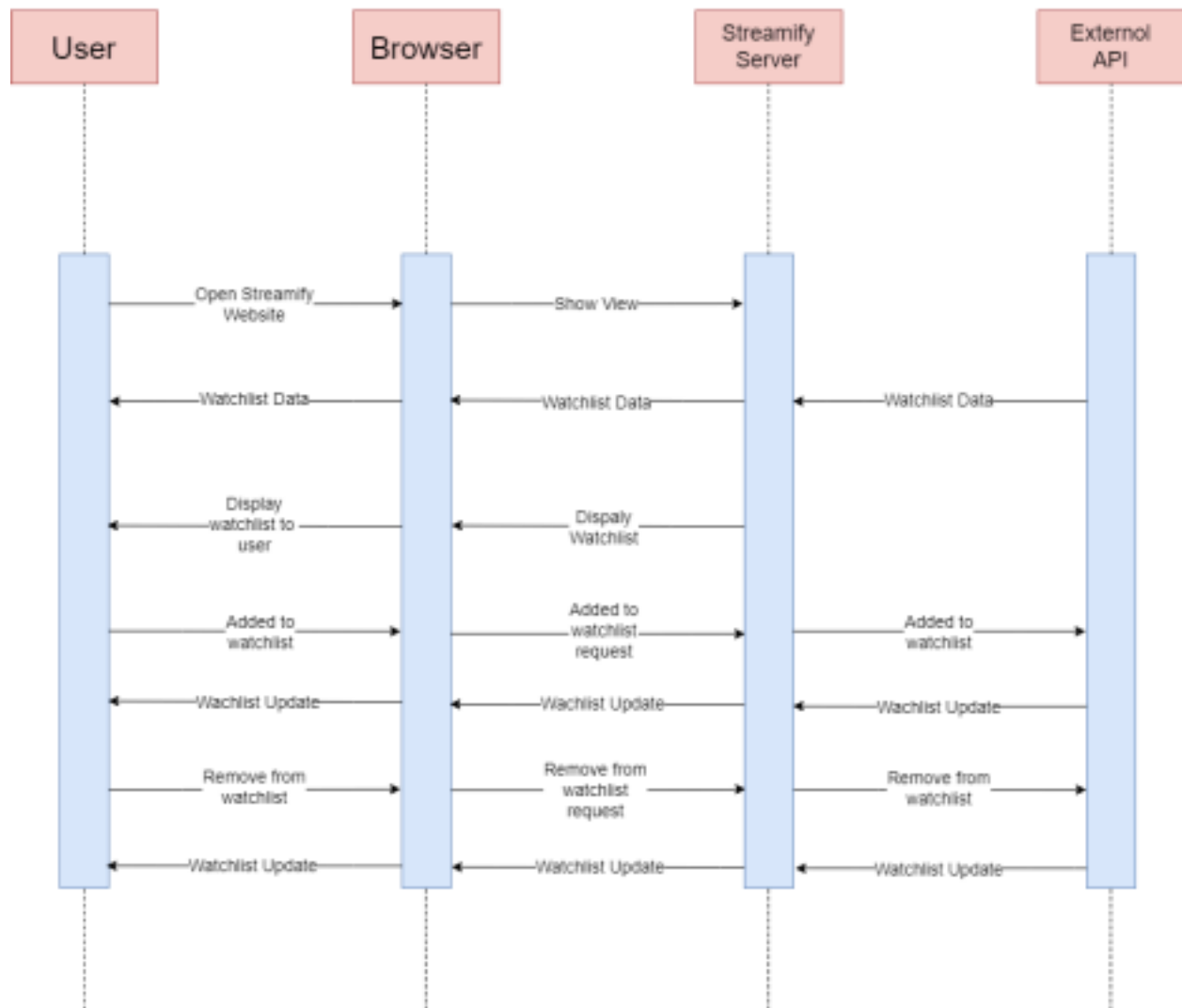


12 Sequence Diagram

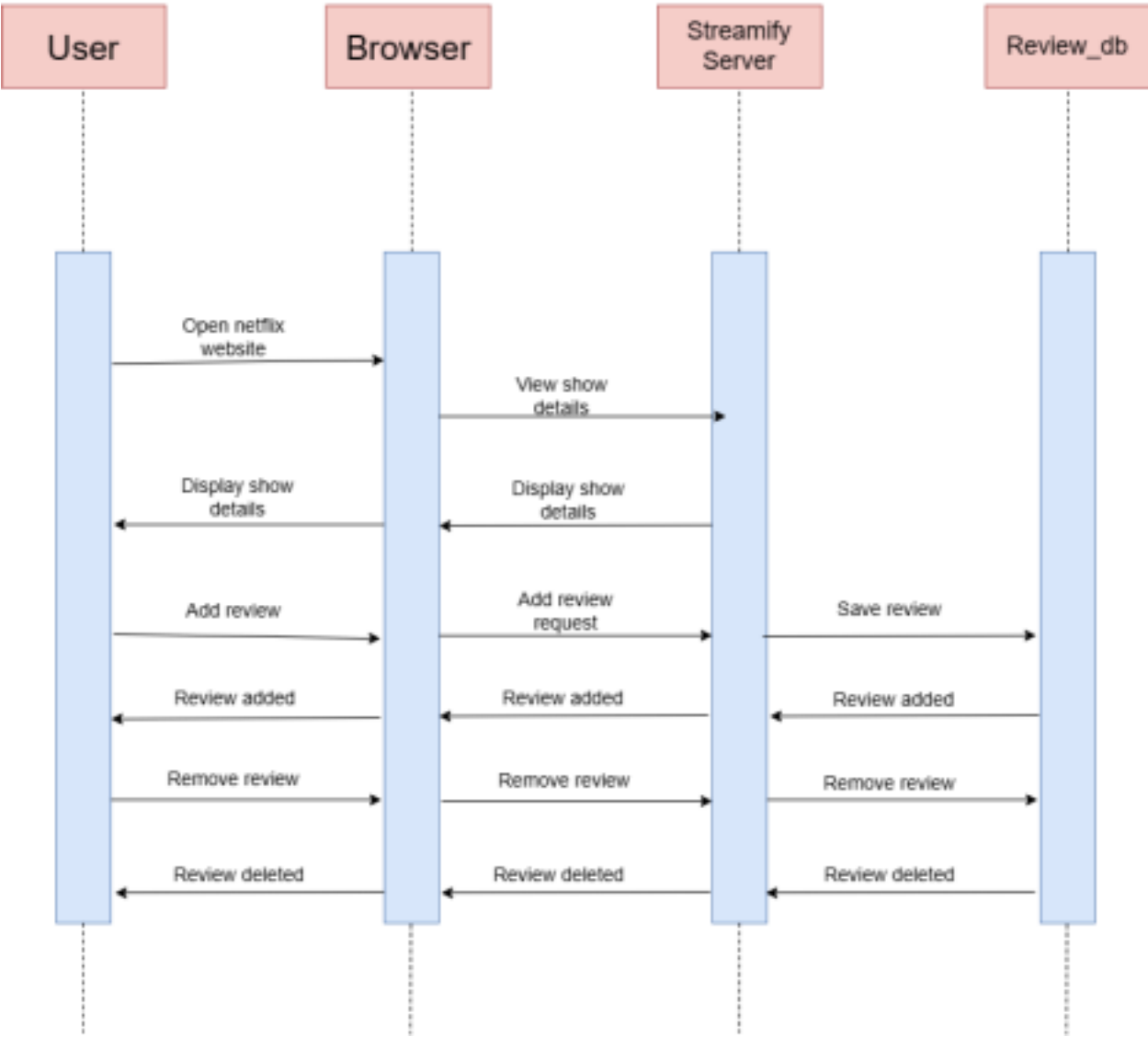
Login/Registration



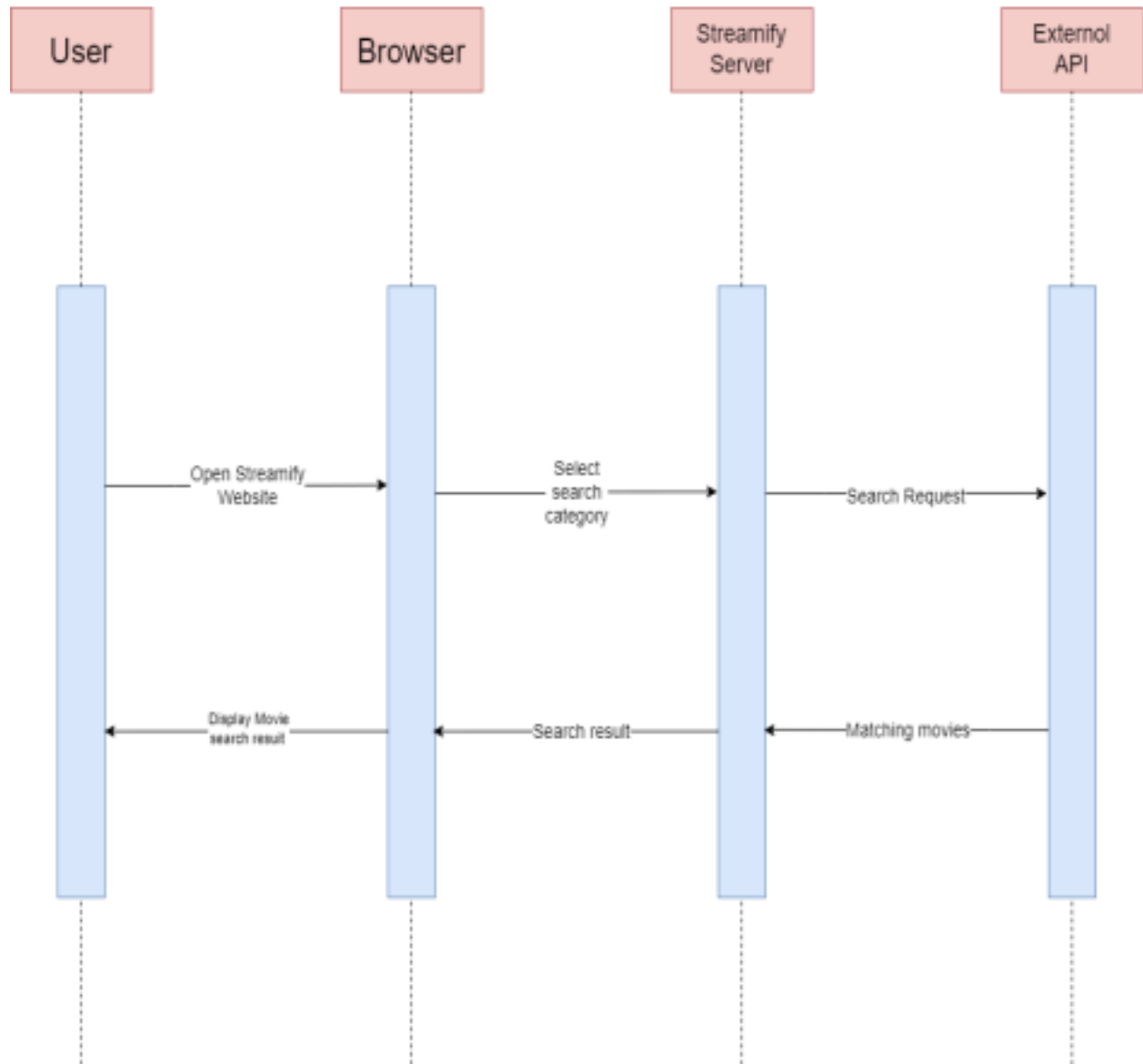
Watchlist



Review

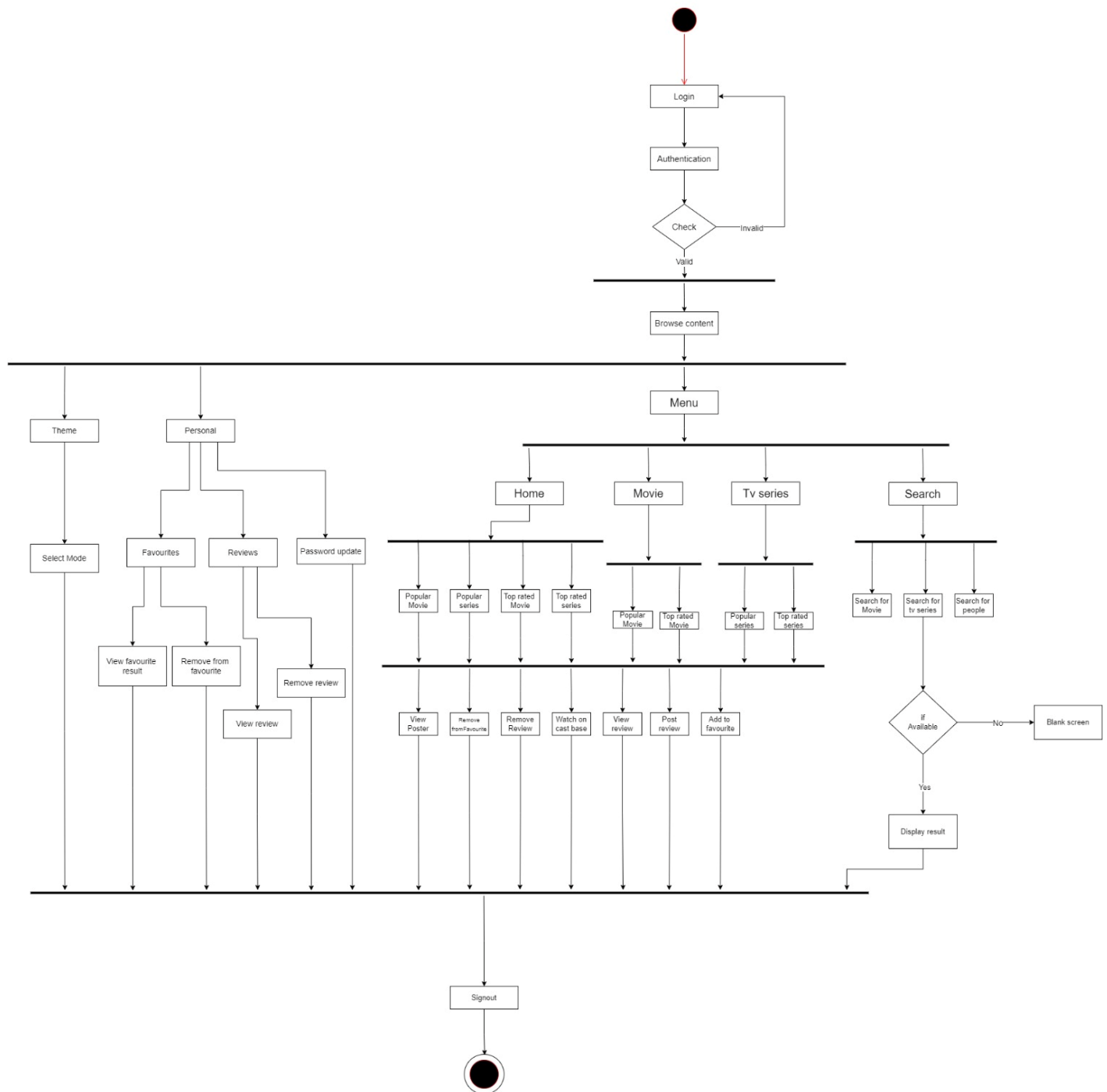


Search Based On Movie

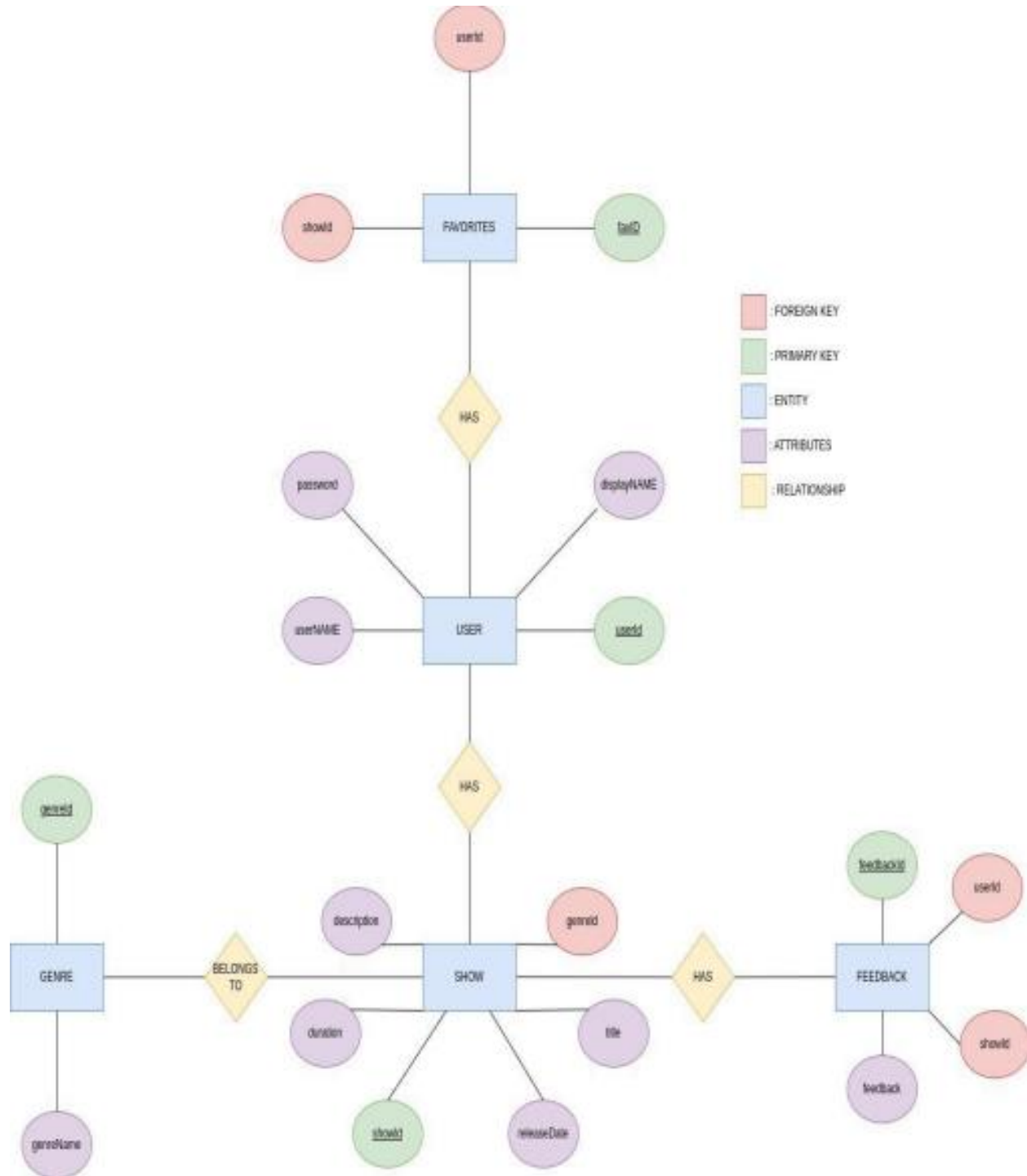


11.4 Activity Diagram

Activity Diagram

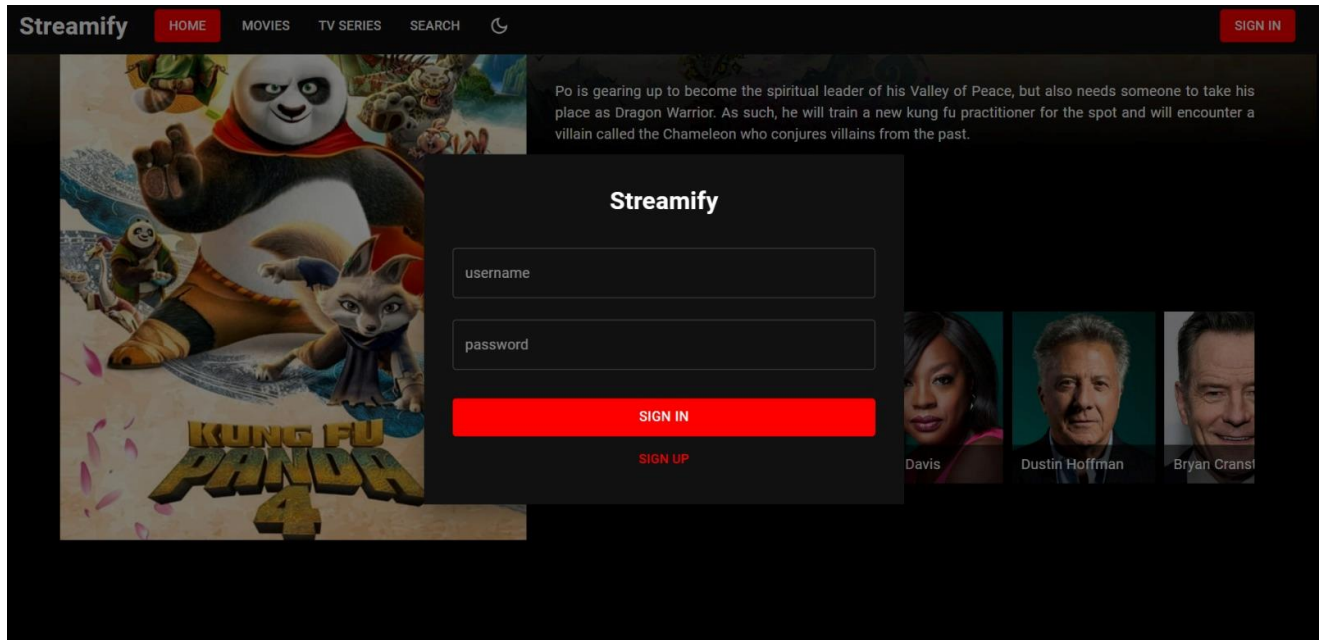


12 ER Diagram

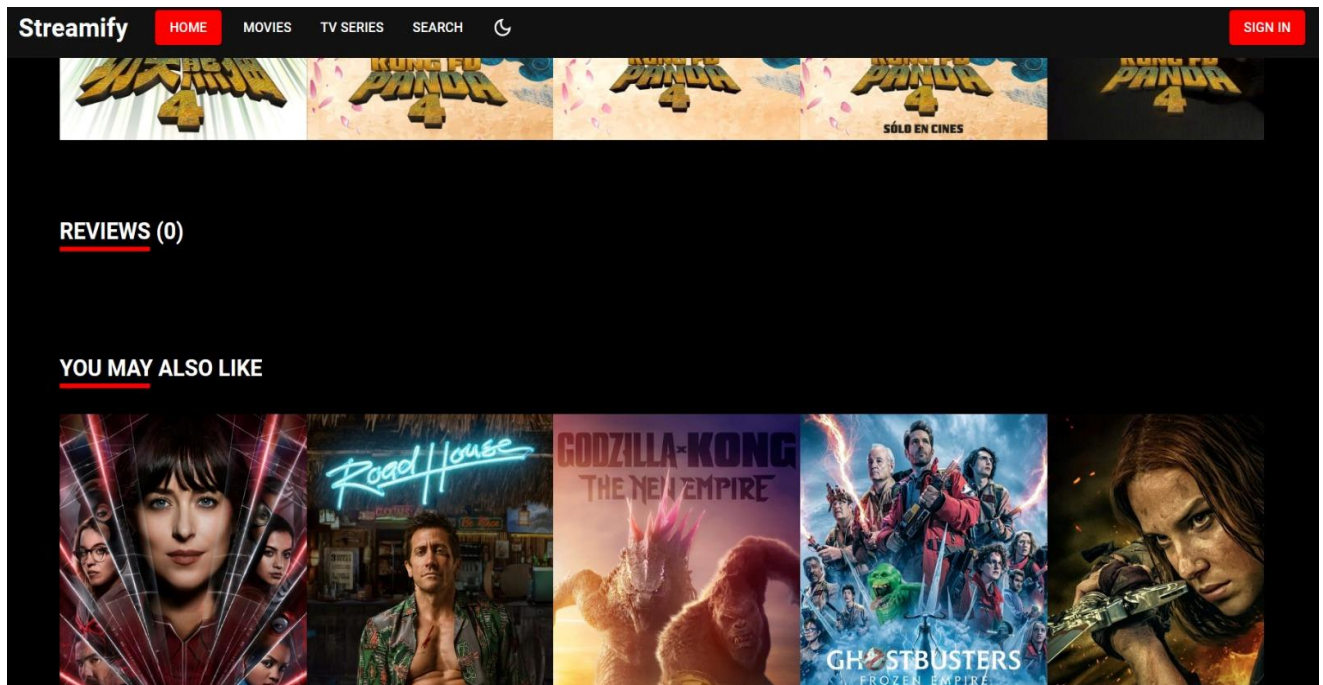


13 Testing

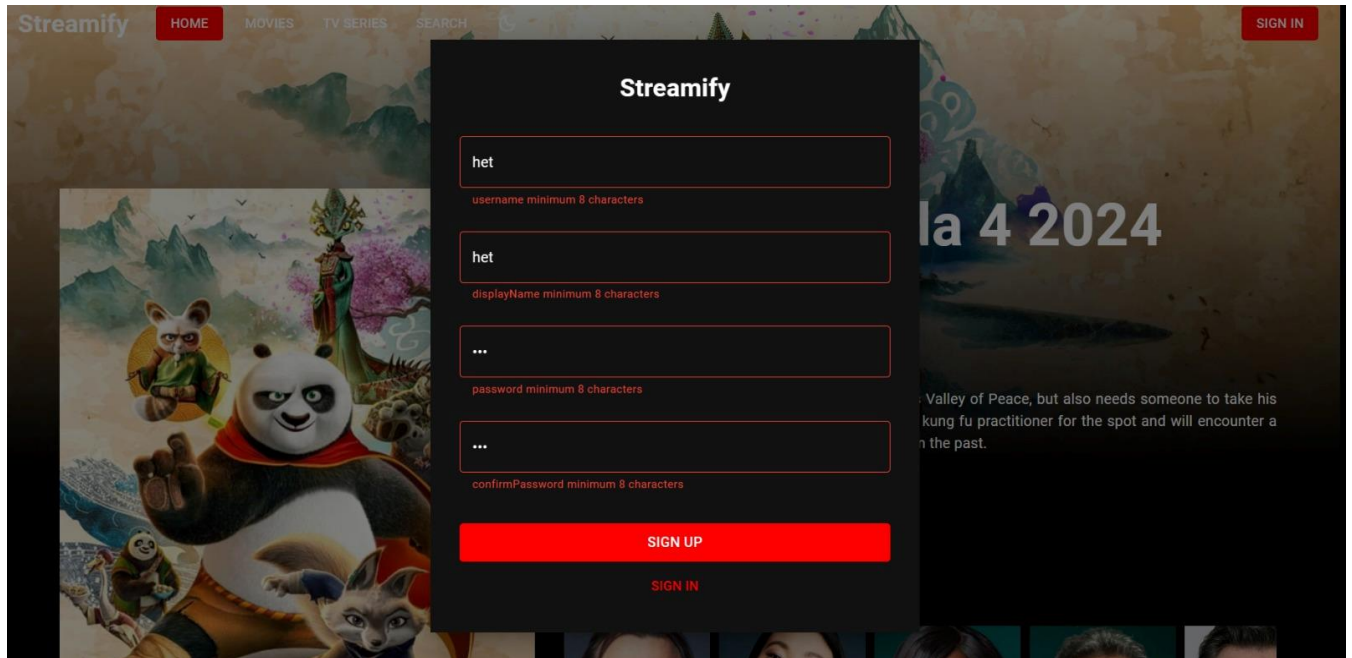
When visitor tries to add to watchlist



The visitor is not provided option to add review



The username , password should be 8 characters or more/valid when registering



The image shows a registration form overlay on the Streamify website. The form is titled "Streamify" and contains four input fields. The first field is for "username" with the value "het" and a red error message "username minimum 8 characters". The second field is for "displayName" with the value "het" and a red error message "displayName minimum 8 characters". The third field is for "password" with three dots and a red error message "password minimum 8 characters". The fourth field is for "confirmPassword" with three dots and a red error message "confirmPassword minimum 8 characters". Below the fields are two buttons: "SIGN UP" in red and "SIGN IN" in red. The background of the website shows a "Kung Fu Panda 4" movie poster with Po the panda and other characters. The top navigation bar includes "HOME", "MOVIES", "TV SERIES", and "SEARCH". A "SIGN IN" button is in the top right corner.

Streamify

het

username minimum 8 characters

het

displayName minimum 8 characters

...

password minimum 8 characters

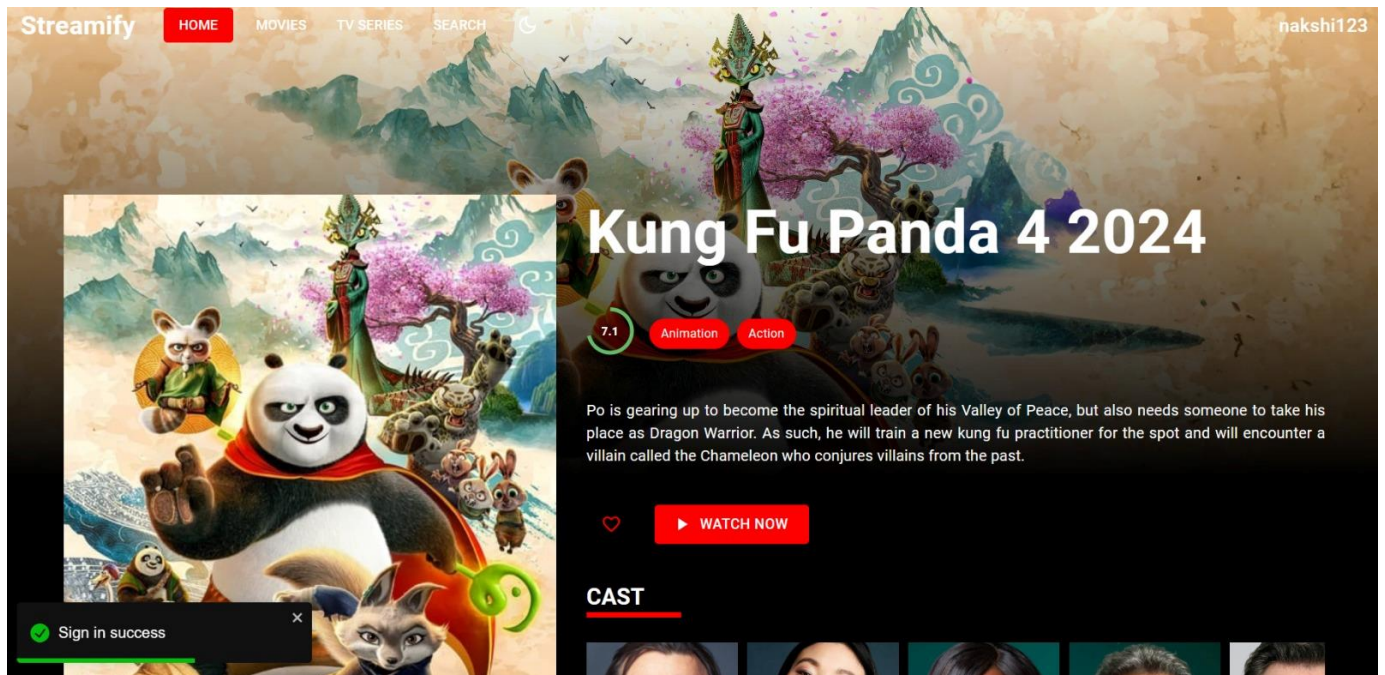
...

confirmPassword minimum 8 characters

SIGN UP

SIGN IN

Signup success message for the new customer



The image shows the Streamify homepage after a successful registration. A green success message "Sign in success" is displayed in the bottom left corner. The main content area features a large movie poster for "Kung Fu Panda 4 2024". The poster includes the title, a rating of 7.1, and genres "Animation" and "Action". Below the poster is a "WATCH NOW" button. The background of the website shows the same "Kung Fu Panda 4" movie poster. The top navigation bar includes "HOME", "MOVIES", "TV SERIES", and "SEARCH". The user's name "nakshi123" is displayed in the top right corner.

Streamify

HOME MOVIES TV SERIES SEARCH

nakshi123

Kung Fu Panda 4 2024

7.1 Animation Action

Po is gearing up to become the spiritual leader of his Valley of Peace, but also needs someone to take his place as Dragon Warrior. As such, he will train a new kung fu practitioner for the spot and will encounter a villain called the Chameleon who conjures villains from the past.

WATCH NOW

CAST

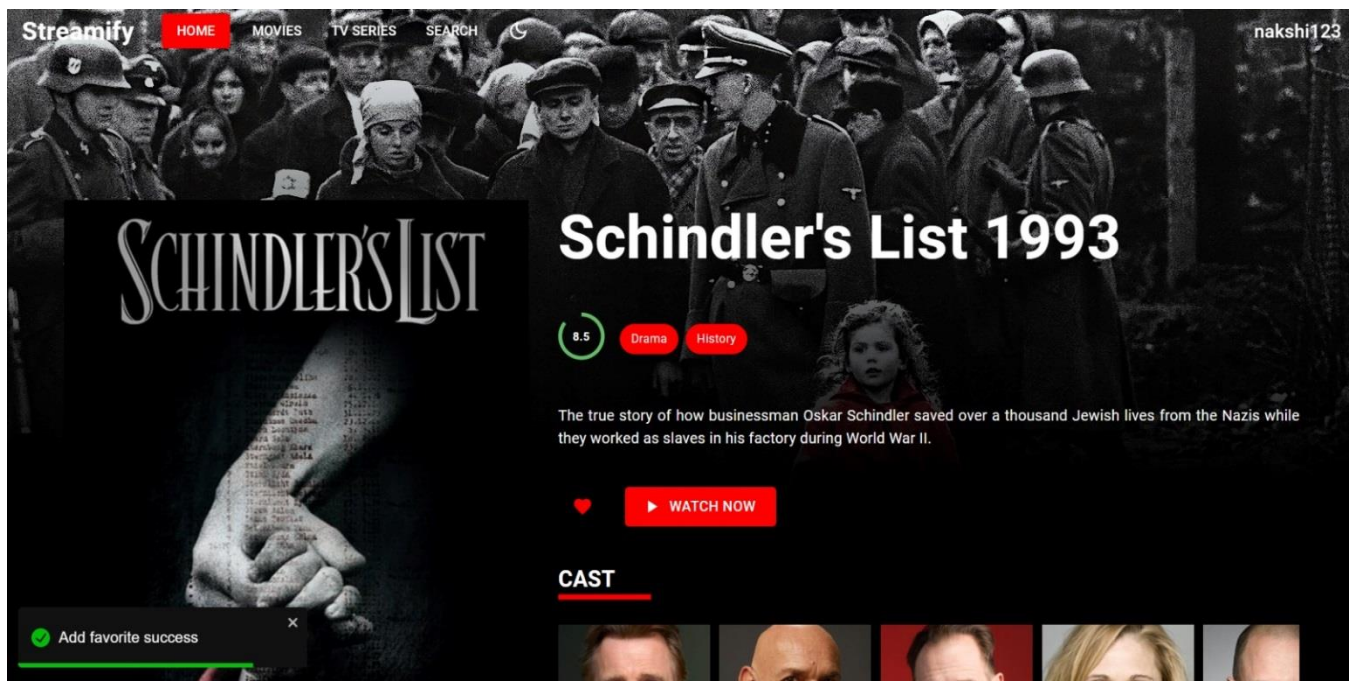
Sign in success

sign in success message for the customer when logged in

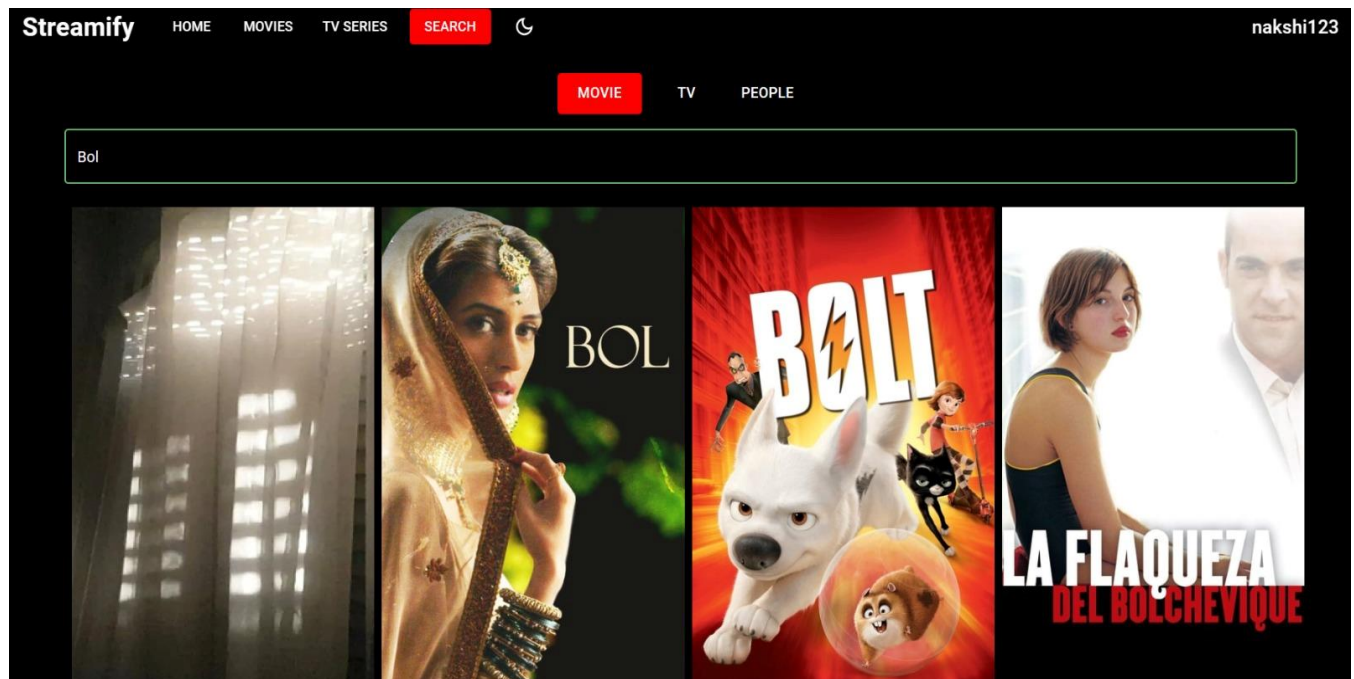


Registered User

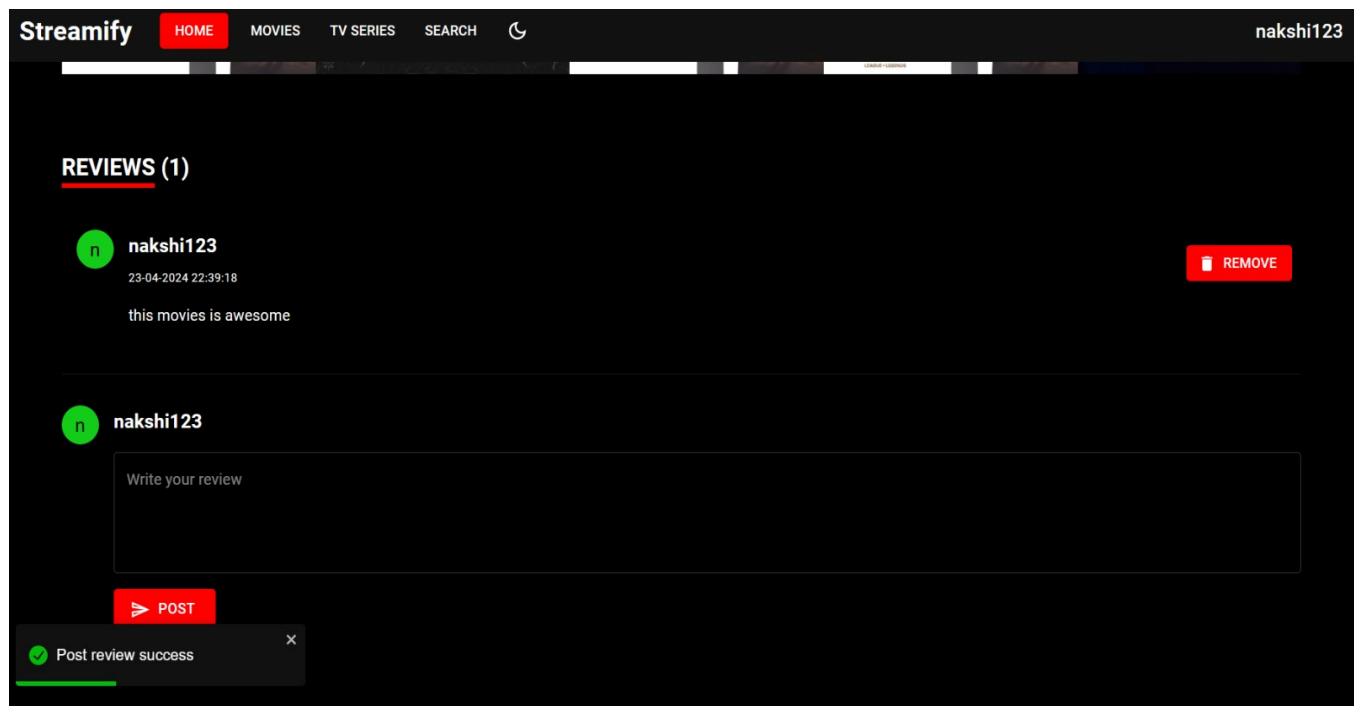
when user add to favorites



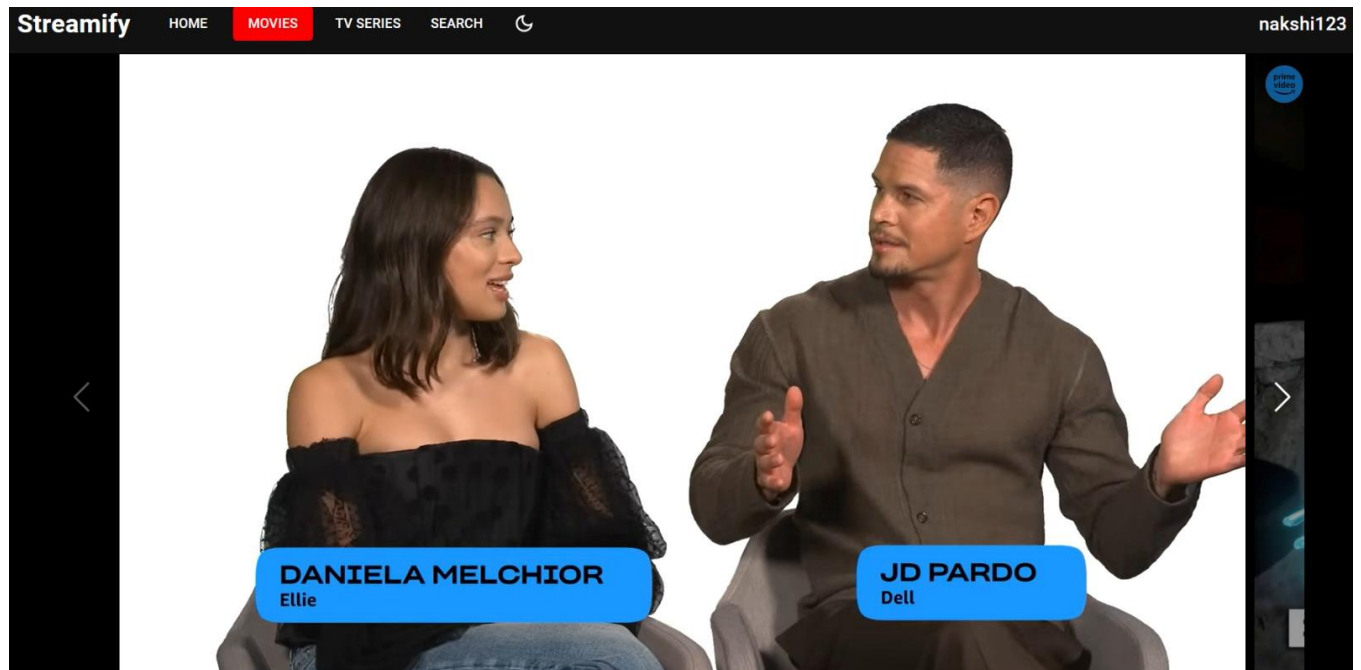
when user search for a particular movies



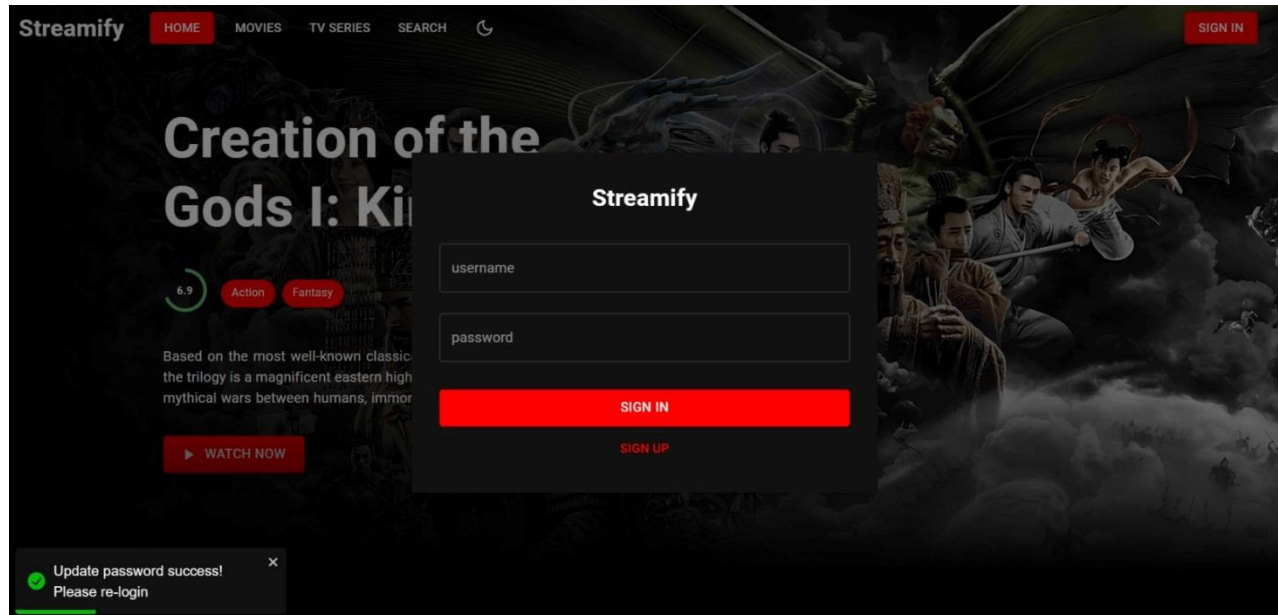
when user add the feedback message is provided



when the user wants to watch a particular movie

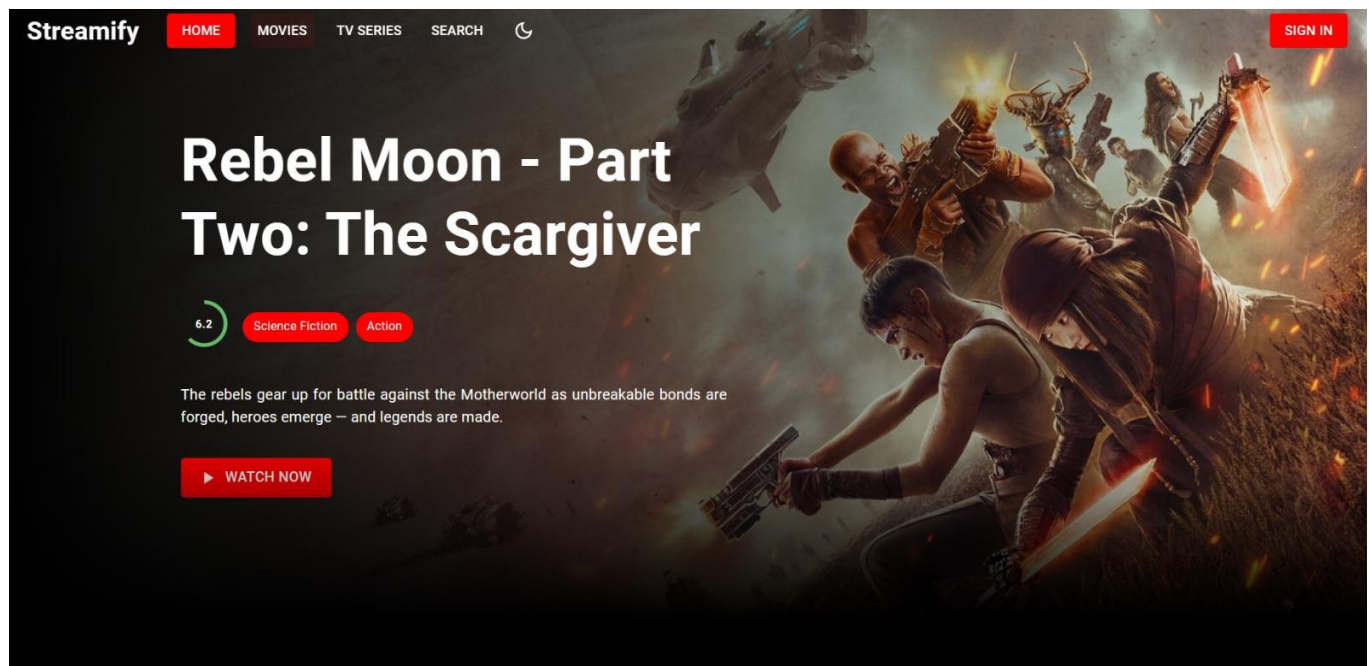


After password update asks for relogin

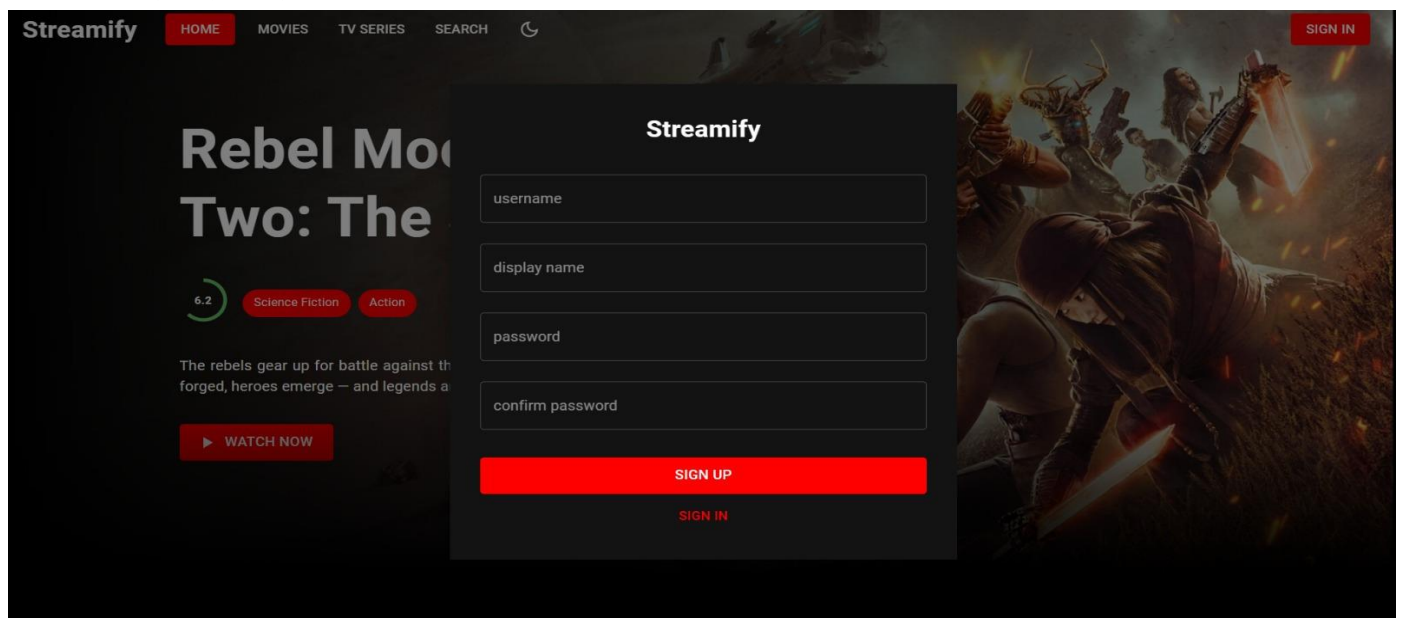


14 Project Implementation

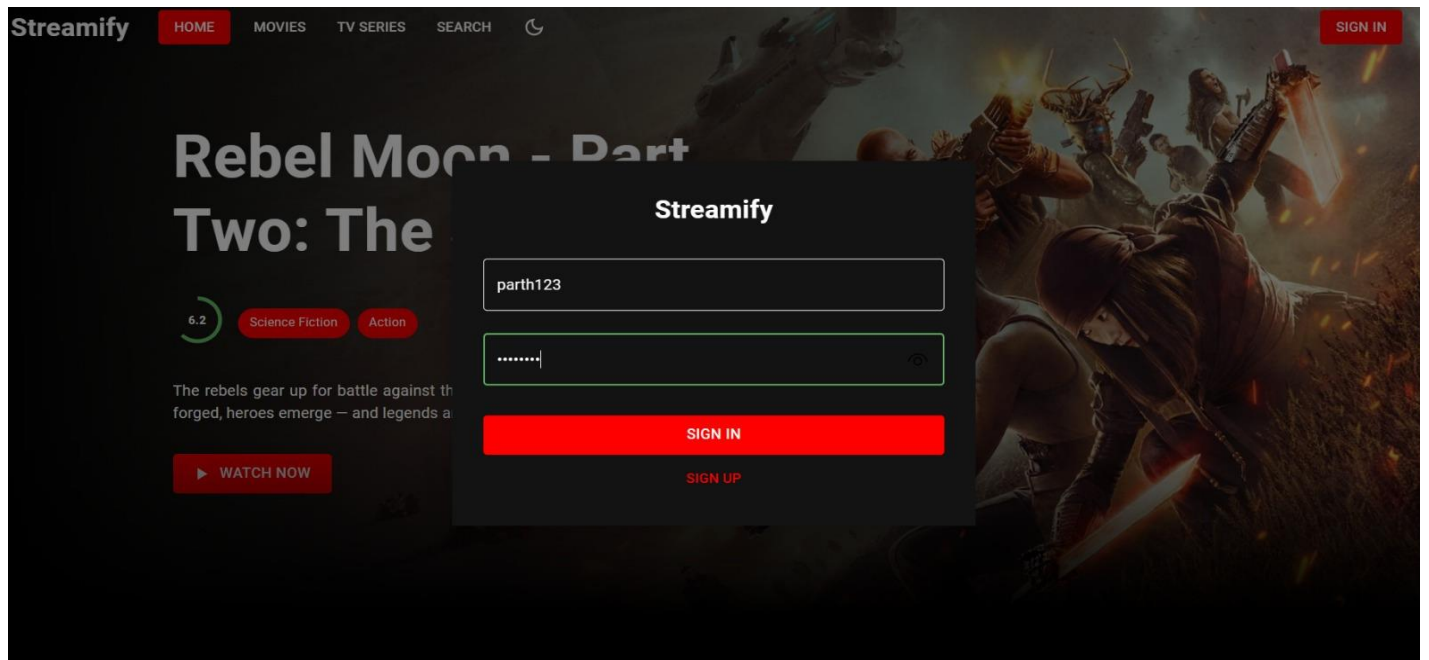
- Visitor can browse the page



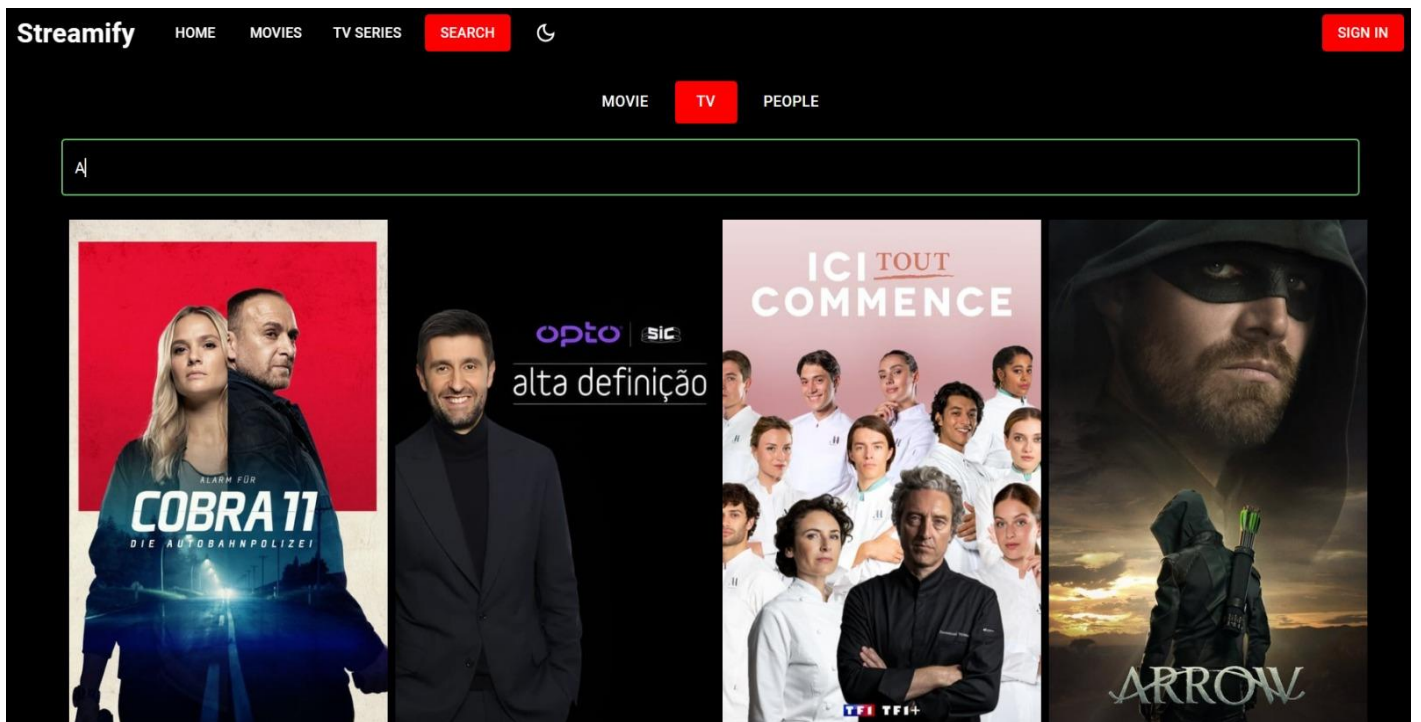
- Signup Page



- Sign in Page



- Search Page



- Add to favourite pop up

Streamify


HOME

MOVIES

TV SERIES

SEARCH

parth123



8.2


Science Fiction

Adventure


Follow the mythic journey of Paul Atreides as he unites with Chani and the Fremen while on a path of revenge against the conspirators who destroyed his family. Facing a choice between the love of his life and the fate of the known universe, Paul endeavors to prevent a terrible future only he can foresee.

WATCH NOW


CAST




Timothée Chalamet




Zendaya



Rebecca Ferguson



Javier Bardem



Josh Brolin

✓ Add favorite success

x

TWO

- Post review pop up

Streamify


HOME

MOVIES

TV SERIES

SEARCH

parth123



REVIEWS (1)

p

parth123

23-04-2024 16:57:12

This movie was good

REMOVE

p

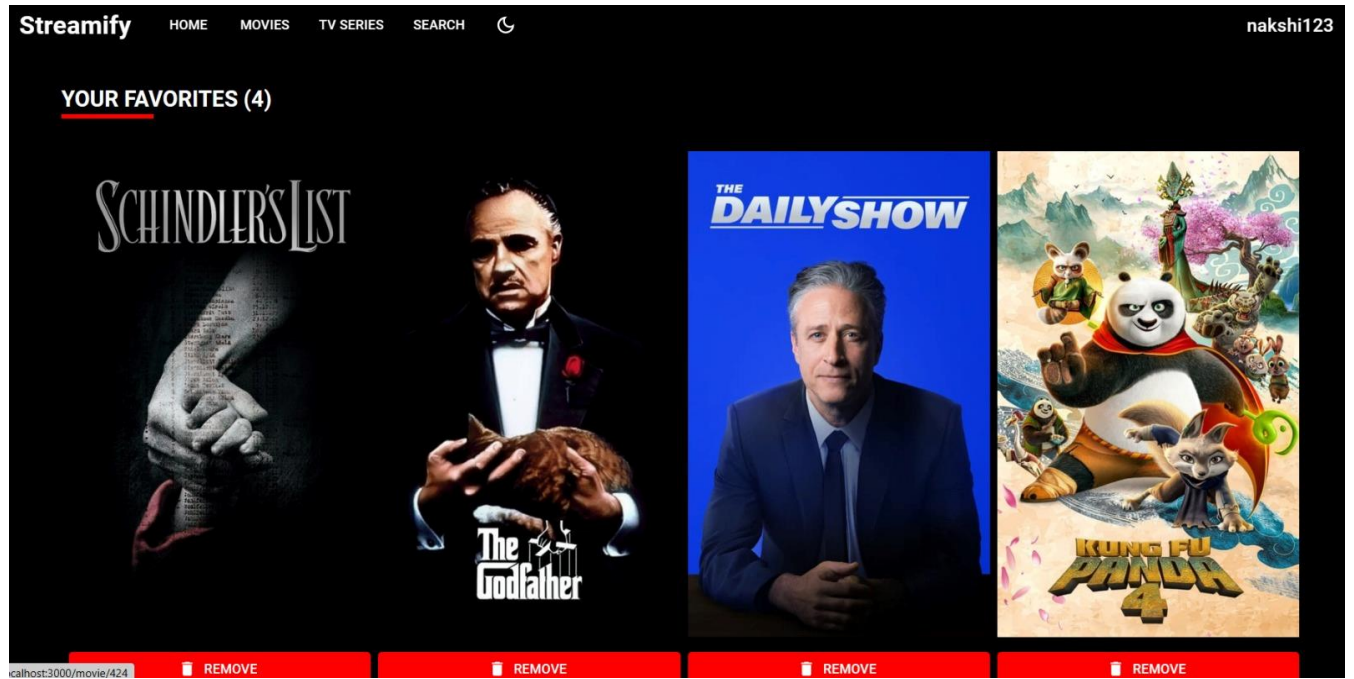
parth123

Write your review

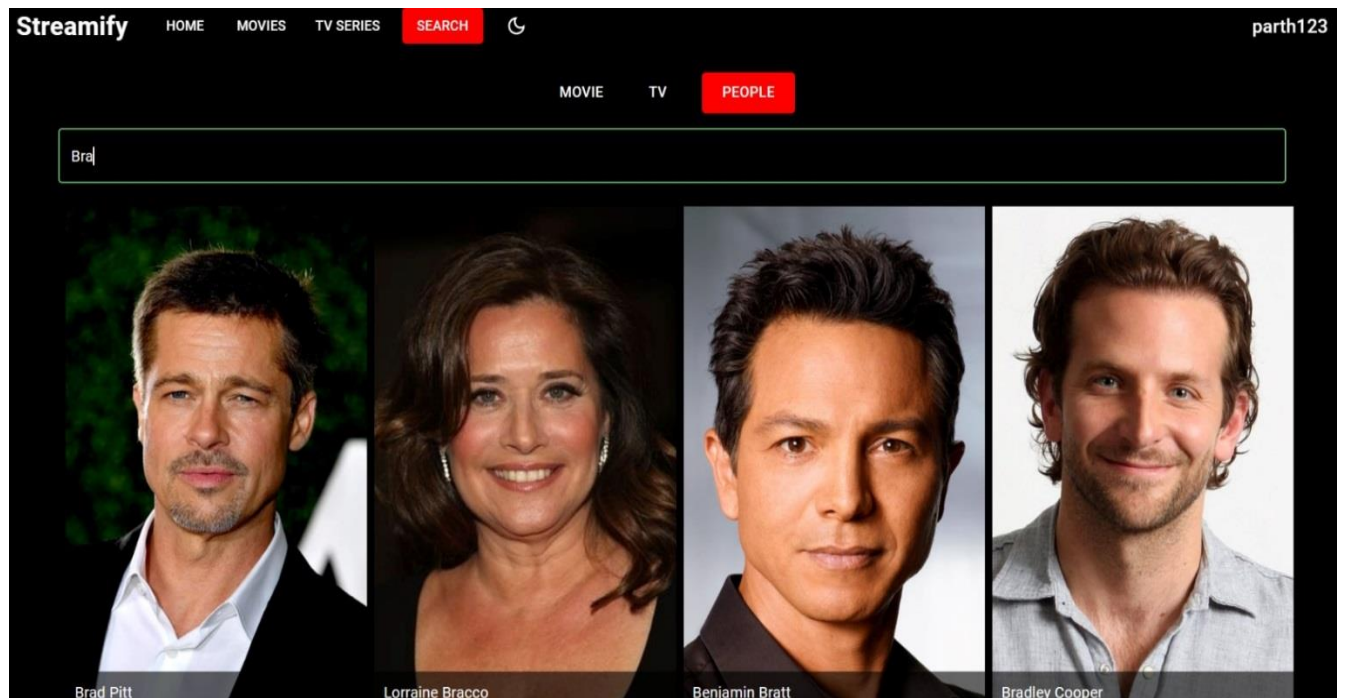
✓ Post review success

x

- Favourites Page



- Search Based on Caste



15 Assumption

Technological Stack: Streamyfy likely utilizes a modern tech stack such as the MERN (MongoDB, Express.js, React, Node.js) stack for its web development, along with additional technologies for streaming and content delivery.

2. *Content Licensing: Streamyfy secures licensing agreements with various content creators, studios, and distributors to legally stream movies, TV shows, and other media on its platform.

3. Content Curation: Streamyfy employs a team of content curators and algorithms to select and organize content, ensuring a diverse and engaging library that appeals to a wide range of users.

4. User Authentication and Authorization: Streamyfy implements robust authentication and authorization mechanisms to protect user accounts and ensure only authorized users can access premium content.

5. Payment Integration: Streamyfy integrates with payment gateways to facilitate subscription payments and transactions securely, supporting various payment methods such as credit cards, PayPal, and possibly cryptocurrencies.

6. Content Delivery Network (CDN): Streamyfy utilizes a CDN to deliver high-quality streaming content efficiently, reducing latency and buffering issues for users worldwide.

7. Analytics and User Insights: Streamify collects and analyzes user data to gain insights into user behavior, preferences, and viewing habits, which inform content recommendations and platform improvements.

8. Accessibility Features: Streamify includes accessibility features such as closed captioning, audio descriptions, and customizable subtitles to cater to users with disabilities and diverse needs.

9. Internationalization and Localization: Streamify supports multiple languages and regional content, adapting its platform to different cultural contexts and markets to attract a global audience.

10. Content Moderation: Streamify implements content moderation policies and tools to monitor and filter inappropriate or offensive content, ensuring a safe and inclusive environment for all users.

Limitation

1. Content Licensing Restrictions:** Acquiring licenses for streaming copyrighted content can be expensive and complex. Streamify may face limitations in offering certain popular titles due to licensing agreements with content creators and distributors.

2. Bandwidth and Infrastructure Costs:** Streaming high-quality video content requires substantial bandwidth and server infrastructure. Streamify may encounter limitations in scaling its platform to accommodate a growing user base while managing the associated costs.

3. Geographical Restrictions:** Content licensing agreements often come with geographical restrictions, limiting the availability of certain titles to specific regions. Streamify may face challenges in providing a consistent content library across different countries and complying with local regulations.

4. Technical Challenges:** Streaming platforms must deliver content smoothly across various devices and internet connections. Streamify may encounter technical limitations such as buffering issues, playback errors, or compatibility issues with certain devices or browsers.

5. Competition:** The streaming industry is highly competitive, with established players like Netflix, Amazon Prime Video, and Disney+ dominating the market. Streamify may face challenges in attracting and retaining subscribers amidst intense competition.

6. Content Discovery:** With a vast library of content, users may struggle to discover new titles that align with their interests. Streamify may face limitations in providing effective content recommendation algorithms or user-friendly browsing interfaces.

7. Piracy and Copyright Infringement:** Protecting copyrighted content from piracy and unauthorized distribution is a significant challenge for streaming platforms. Streamify may face limitations in preventing piracy or enforcing copyright claims effectively.

8. User Engagement and Retention:** Retaining subscribers and keeping them engaged with the platform is crucial for long-term success. Streamify may encounter limitations in offering compelling original content,

personalized recommendations, and exclusive features to keep users satisfied.

9. Monetization Strategies:** Generating revenue through subscription fees, advertising, or partnerships is essential for sustaining a streaming service. Streamify may face limitations in monetization strategies, especially if subscriber growth or advertising revenue falls short of expectations.

10. Regulatory Compliance:** Streaming platforms must comply with various regulations related to data privacy, content censorship, and consumer protection. Streamify may face limitations in navigating regulatory complexities, especially in international markets with diverse legal frameworks.

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17 Future Scope

1. Enhanced Content Offering: Streamify can expand its content library by acquiring licenses for a diverse range of movies, TV shows, documentaries, and original productions. This includes partnering with content creators, studios, **and** distributors to offer exclusive titles and niche content that cater to diverse audience interests.

2. Personalization and Recommendation Systems: Leveraging advanced data analytics and machine learning algorithms, Streamify can enhance its recommendation systems to deliver personalized content recommendations based on user preferences, viewing history, and behavior patterns. This can improve user engagement, satisfaction, and retention rates.

3. Interactive and Immersive Experiences: Streamify can explore interactive and immersive content formats, such as interactive storytelling, virtual reality (VR), and augmented reality (AR) experiences. By integrating interactive elements into its platform, Streamify can offer unique and engaging viewing experiences that differentiate it from competitors.

4. Global Expansion and Localization: Streamify can pursue international expansion strategies to tap into new markets and reach a broader audience worldwide. This involves localizing its platform, content, and marketing efforts to cater to the cultural, linguistic, and regulatory preferences of diverse regions.

5. Multi-Platform Accessibility: Streamify can prioritize accessibility by offering seamless streaming experiences across multiple devices and platforms, including smart TVs, mobile devices, gaming consoles, and web

browsers. This ensures that users can access Streamify's content anytime, anywhere, on their preferred devices.

6. Community Engagement and Social Features: Streamify can foster a sense of community among its users by introducing social features such as watch parties, discussion forums, user-generated content (UGC) sharing, and social media integrations. This encourages user interaction, engagement, and user-generated content creation.

7. Monetization Strategies: Streamify can explore various monetization strategies beyond subscription fees, including advertising, sponsorship deals, pay-per-view events, merchandise sales, and premium content offerings. Diversifying its revenue streams can enhance Streamify's financial sustainability and profitability.

8. Technological Innovations: Streamify can leverage emerging technologies such as artificial intelligence (AI), blockchain, edge computing, and 5G networks to enhance its streaming platform's performance, security, and scalability. This includes optimizing content delivery, reducing latency, and improving streaming quality.

9. Data Privacy and Security: Streamify can prioritize data privacy and security by implementing robust data protection measures, encryption standards, and user consent mechanisms. This builds trust and confidence among users, ensuring the confidentiality and integrity of their personal information.

10. Corporate Social Responsibility (CSR) Initiatives:

Streamify can demonstrate its commitment to social responsibility by supporting environmental sustainability, diversity and inclusion, and community outreach initiatives. This includes reducing its carbon footprint, promoting diversity in content production, and supporting charitable causes.

THANK YOU