



Darshan University

A Project Report on

“Phantom: Movie Streaming Website”

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Software Engineering (2305CS202)

MCA, Semester – II

Department of Computer Application

Submitted By

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Internal Guide

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DECLARATION

We hereby declare that the SRS, submitted along with the **Software Engineering (2305CS202)** for entitled “**Phantom: Movie Streaming Website**” submitted in partial fulfilment for the Semester-2 of **Master of Computer Application (MCA)** in **Department of Computer Application (DoCA)** Department to Darshan University, Rajkot, is a record of the work carried out at **Darshan University, Rajkot** under the supervision of **Prof. Devangi L. Kotak** and that no part of any of report has been directly copied from any students’ reports, without providing due reference.

Dhara Maru

Student’s Signature

Date: _____

CERTIFICATE

This is to certify that the SRS on “**Phantom: Movie Streaming Website**” has been satisfactorily prepared by **Dhara Maru (24030501025)** under my guidance in the fulfillment of the course **Software Engineering (2305CS202)** work during the academic year 2024-2025.

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Thanking You

Dhara Maru

ABSTRACT

Phantom is a next-generation OTT streaming platform that reimagines entertainment with a vast collection of movies, TV shows, and exclusive content. Designed for convenience, it provides seamless streaming across multiple devices with features like watchlists, viewing history, and personalized recommendations.

The platform ensures a secure and enjoyable experience with encrypted user data, safe payment options, and multi-language support. Accessibility features such as subtitles and adaptive streaming cater to diverse user needs, enhancing engagement for a global audience.

With a focus on performance, scalability, and user-centric design, Phantom sets a benchmark in the OTT industry. It combines innovative functionality and cutting-edge technology to deliver an immersive, reliable, and inclusive entertainment experience.

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1 Introduction

1.1 Product perspective

Phantom is a movie streaming OTT platform designed to redefine entertainment with a vast library spanning genres, languages, and categories. It offers everything from classic hits to the latest blockbusters and exclusive originals, all accessible through a user-friendly interface. With adaptive video quality, multi-device compatibility, and personalized features like watchlists and curated recommendations, Phantom ensures a seamless and immersive viewing experience.

1.2 Product features

1.2.1 There are three different users who will be using this product:

- Administrator manages the platform and ensures smooth operations.
- Subscribers are registered users with access to Phantom's features.
- Guest who will request for membership.

1.2.2 The features that are required for the Administrator are:

- Managing user accounts, including registration and subscription plans.
- Uploading, editing, and organizing content in the library.
- Monitoring streaming analytics and user engagement through dashboards.
- Managing secure payment gateways and processing transactions.
- Generating reports on subscriptions, viewership trends, and revenue.
- Customizing platform settings, including accessibility features like subtitles.
- Sending notifications and announcements to users.

1.2.3 The features that are required for the Subscriber are:

- Browsing and searching through an extensive content library.
- Creating a personalized watchlist for future viewing.
- Resuming playback from where they left off.
- Receiving AI-driven content recommendations based on their viewing history.
- Viewing movies and shows on multiple devices with adaptive video quality.
- Providing ratings and reviews for content.
- Managing subscription plans and payment details securely.

1.2.4 The features that are required for the Guest are:

- Browsing available content categories and previews.
- Viewing subscription plans and benefits.
- Requesting a subscription by registering for an account.

1.3 Functional Requirement

1.3.1 Administrator

- **Content Management:** Add, edit, and delete movies, shows, and other content in the library.
- **User Management:** Register new users, manage subscriptions, and maintain user records.
- **Analytics Dashboard:** Access reports on user engagement, viewership trends, and revenue.
- **Notification System:** Send alerts and updates to users.
- **Security Management:** Ensure secure transactions through payment gateways and data encryption.
- **Accessibility Settings:** Configure multi-language support, subtitles, and closed captions.
- **Recommendation System Management:** Oversee and update AI-driven content recommendations.

1.3.2 Subscriber

- **Authentication:** Log in securely with a unique username and password.
- **Content Discovery:** Search for content using filters like genre, language, and release date.
- **Watchlist Management:** Add or remove content from a personalized watchlist.
- **Playback Control:** Resume playback from where it was paused.
- **Feedback Mechanism:** Rate and review content for others to see.
- **Subscription Management:** Update payment details and switch subscription plans.

1.3.3 Guest

- **Browsing:** View content previews and explore available categories.
- **Subscription Request:** Register for a subscription to access premium features.

1.4 Non-Functional Requirement

1.4.1 Usability:

- The interface should be intuitive and easy to navigate, supporting multiple languages.

1.4.2 Performance:

- The system should load within two seconds and adapt video quality seamlessly based on internet speed.

1.4.3 Scalability:

- The platform should handle increased traffic and accommodate a growing user base.

1.4.4 Maintainability:

- Updates and feature additions should be easy to implement without disrupting the service.

1.4.5 Portability:

- The platform must be accessible on various devices, including smartphones, tablets, and smart TVs.

2 Design and Implementation Constraints

2.1 Use case diagram

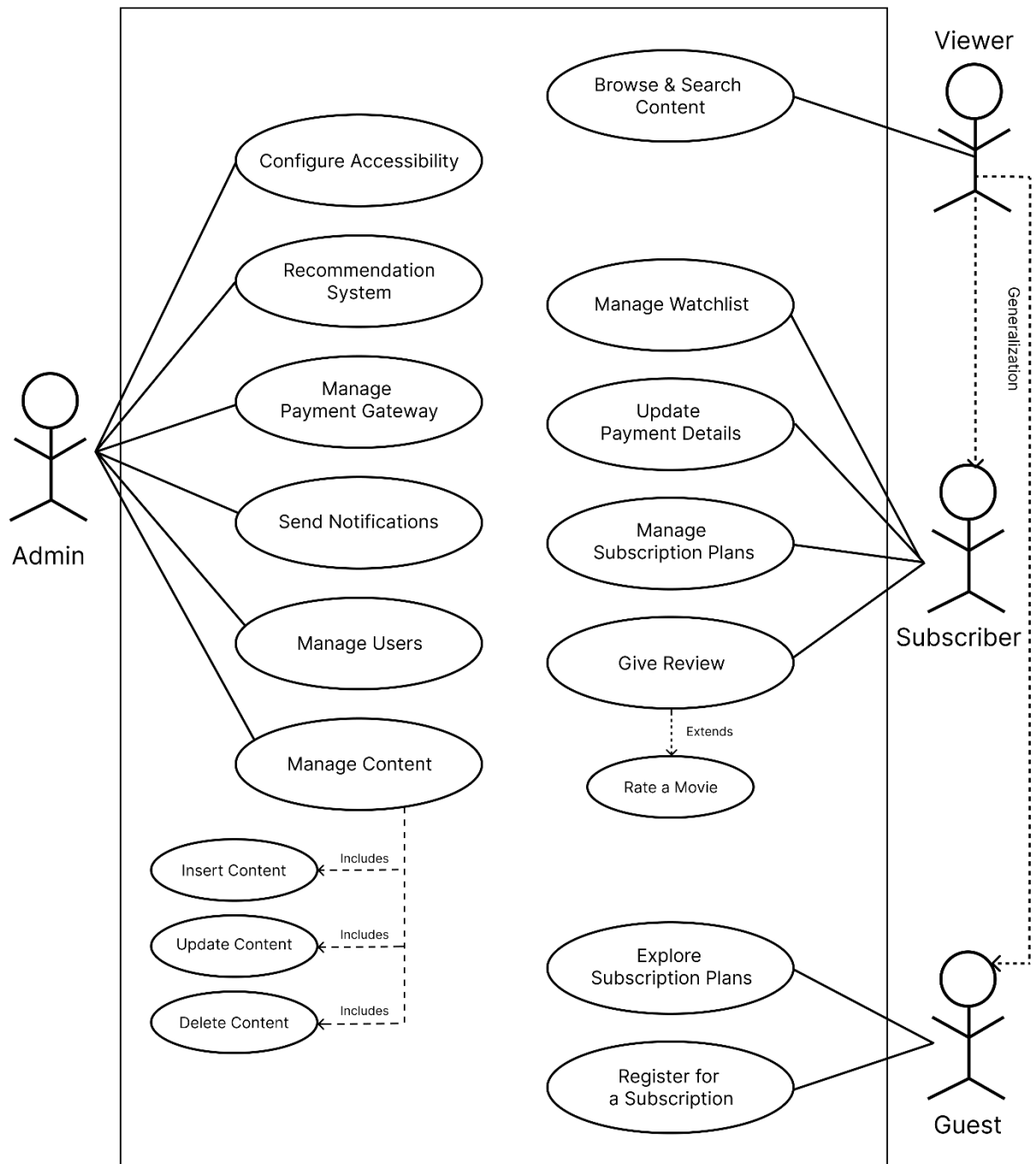


Figure 2.1-1 Use case diagram for Movie streaming system

2.2 Activity diagram and Swimlane diagram

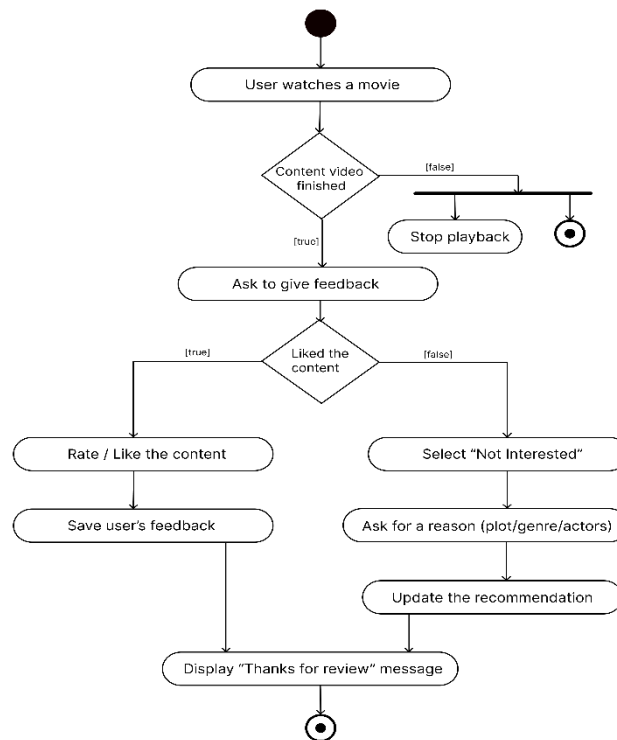


Figure 2.2-1 Activity diagram for Reviewing a movie (User)

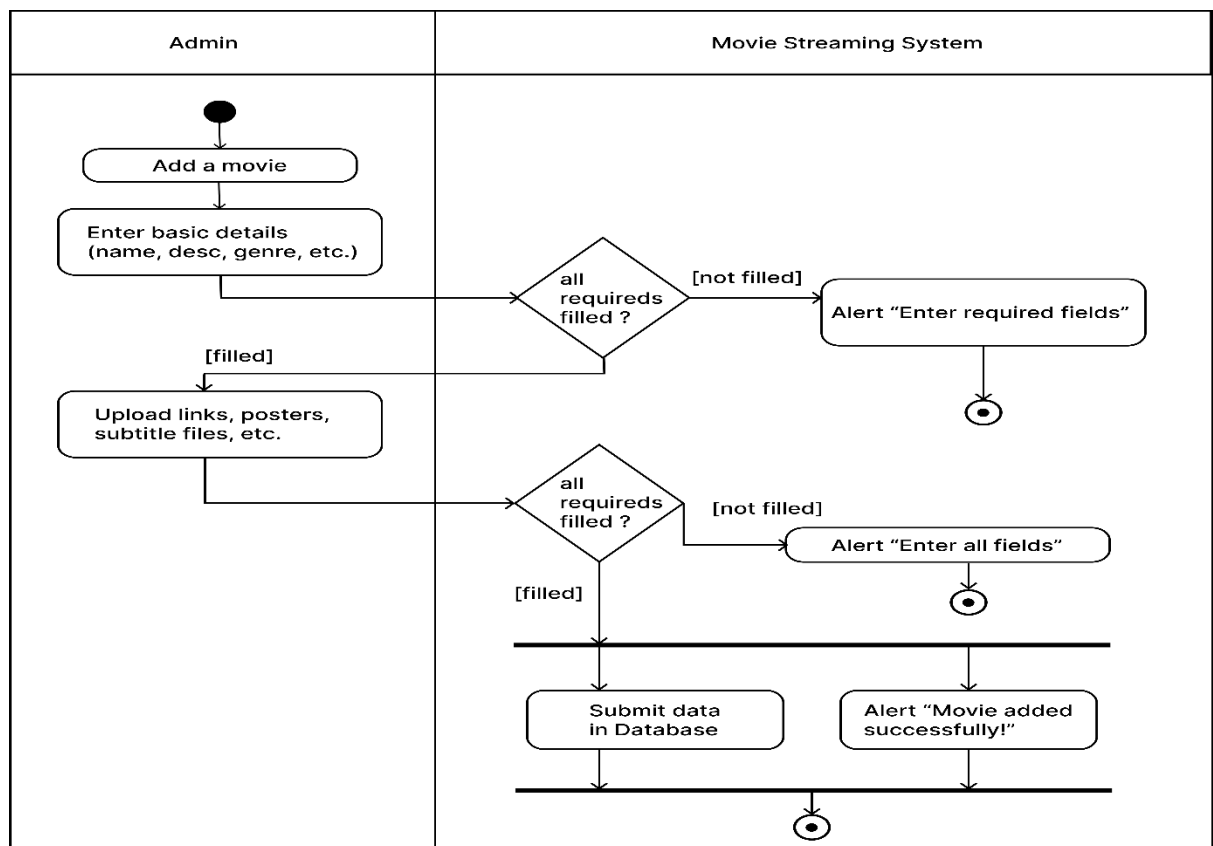


Figure 2.2-2 Swimlane diagram for Uploading a movie (Admin)

2.3 Sequence diagram

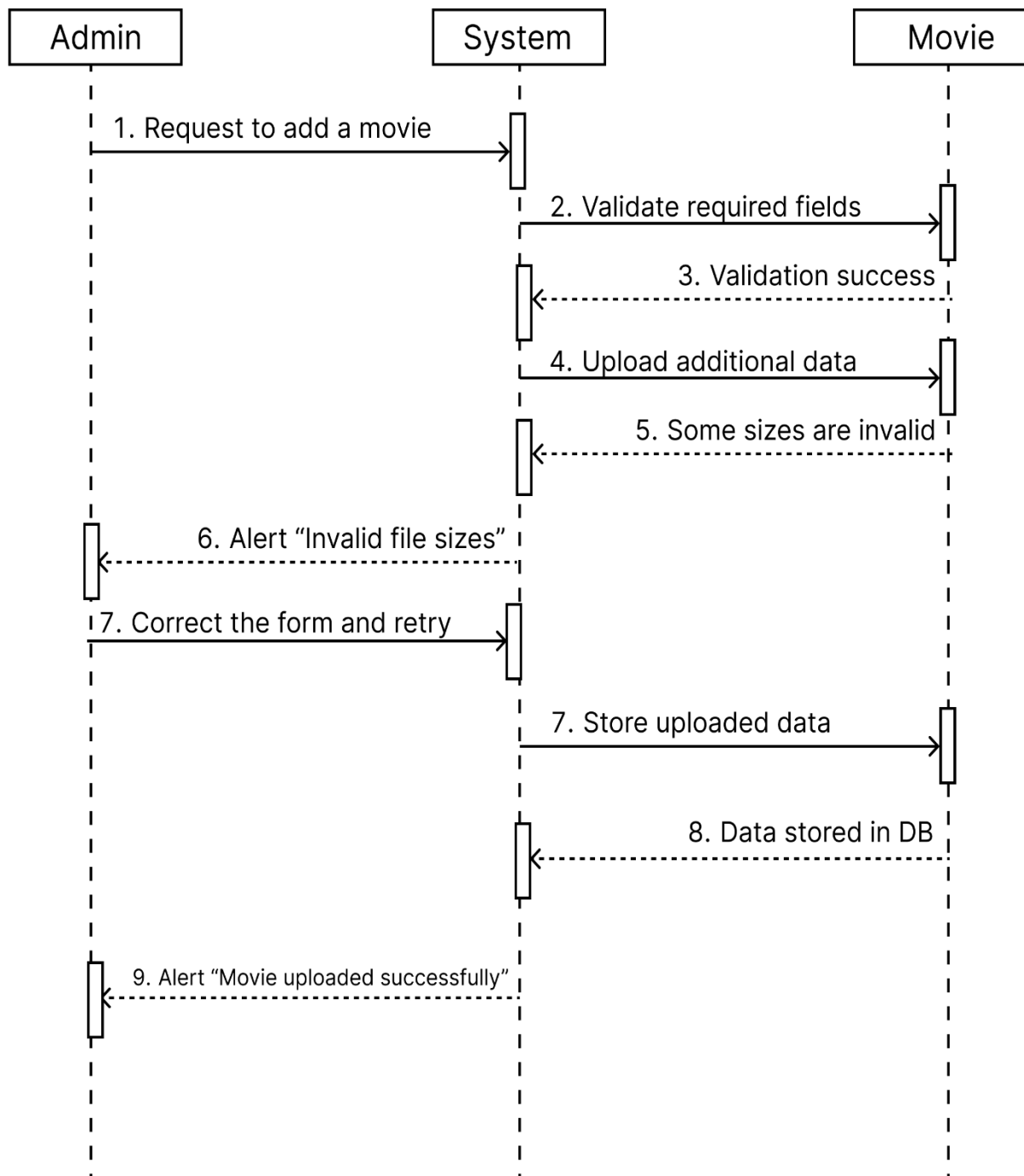


Figure 2.3-1 Sequence diagram for uploading a movie

2.4 State diagram

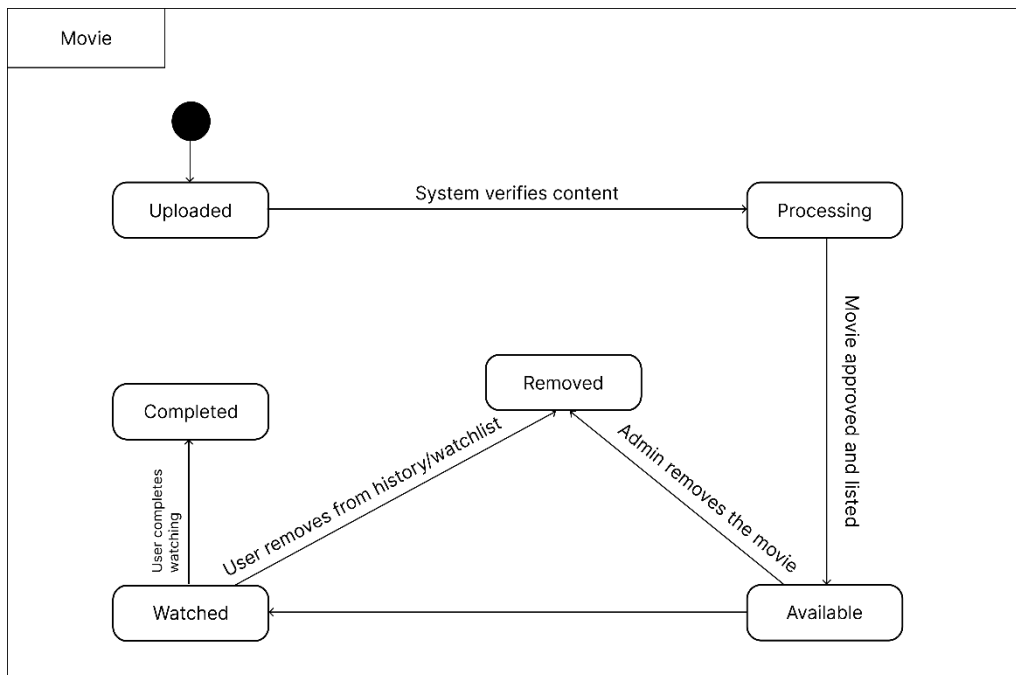


Figure 2.4-1 State diagram of Movie

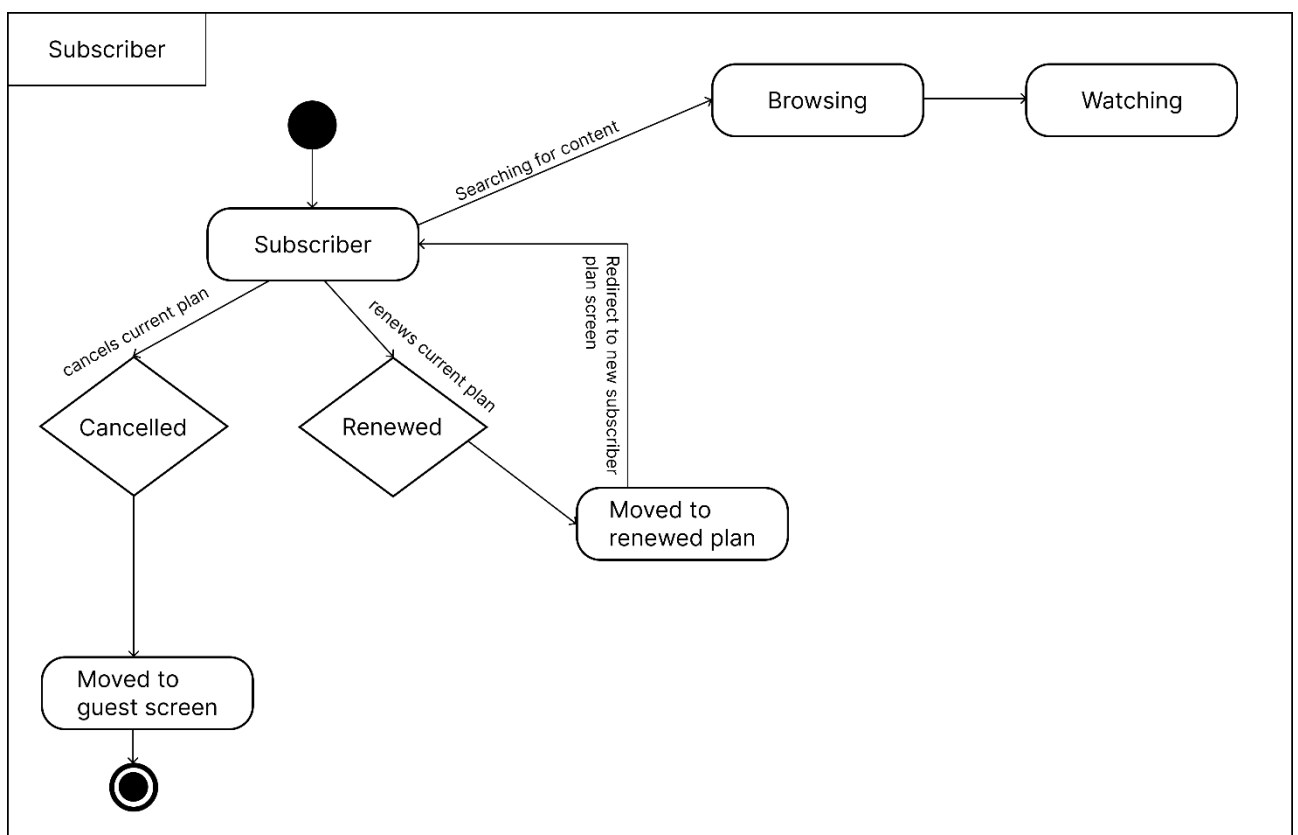


Figure 2.4-2 State diagram for Subscriber

2.5 Class diagram

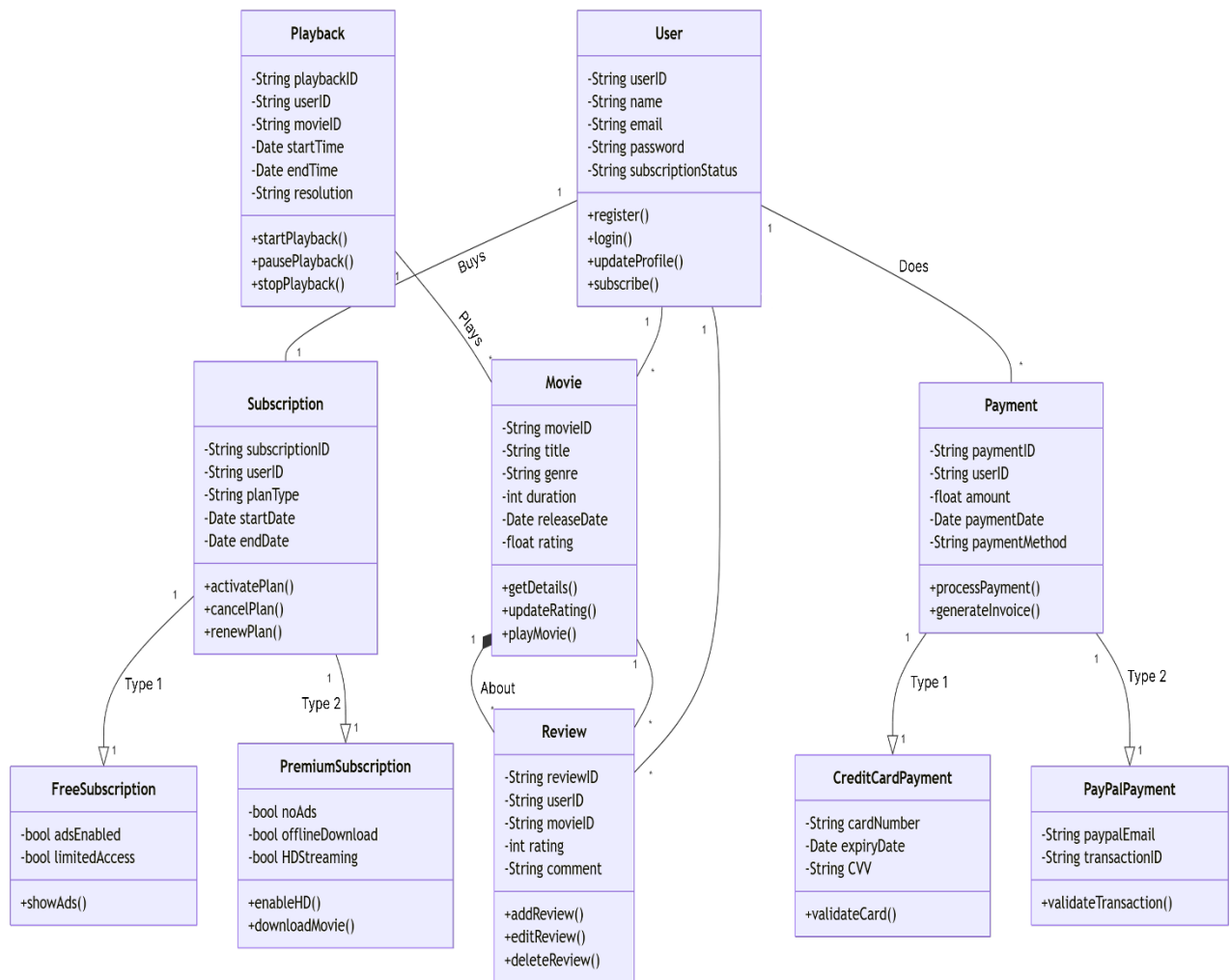


Figure 2.5-1 Class diagram for Movie Streaming System

2.6 Data flow diagram

2.6.1 Context diagram (level-0)

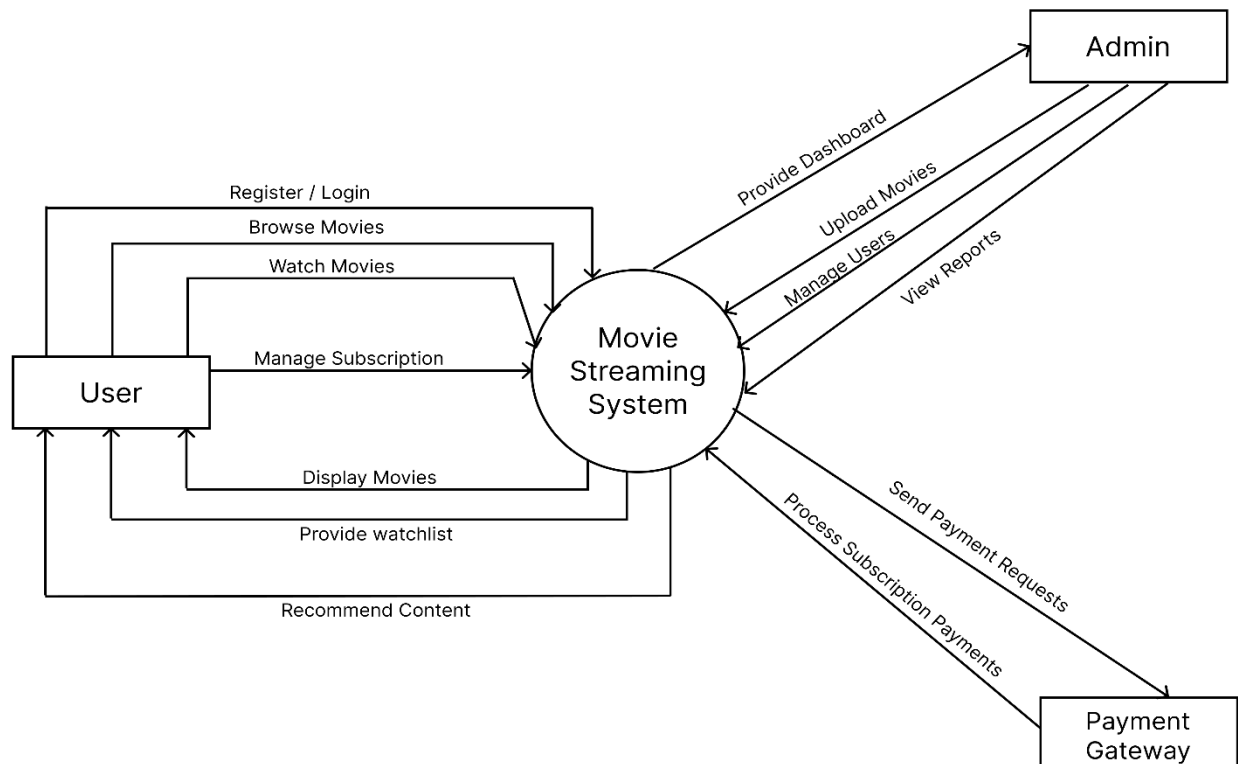


Figure 2.6-1 Context diagram for Movie Streaming system

2.6.2 DFD Level-1

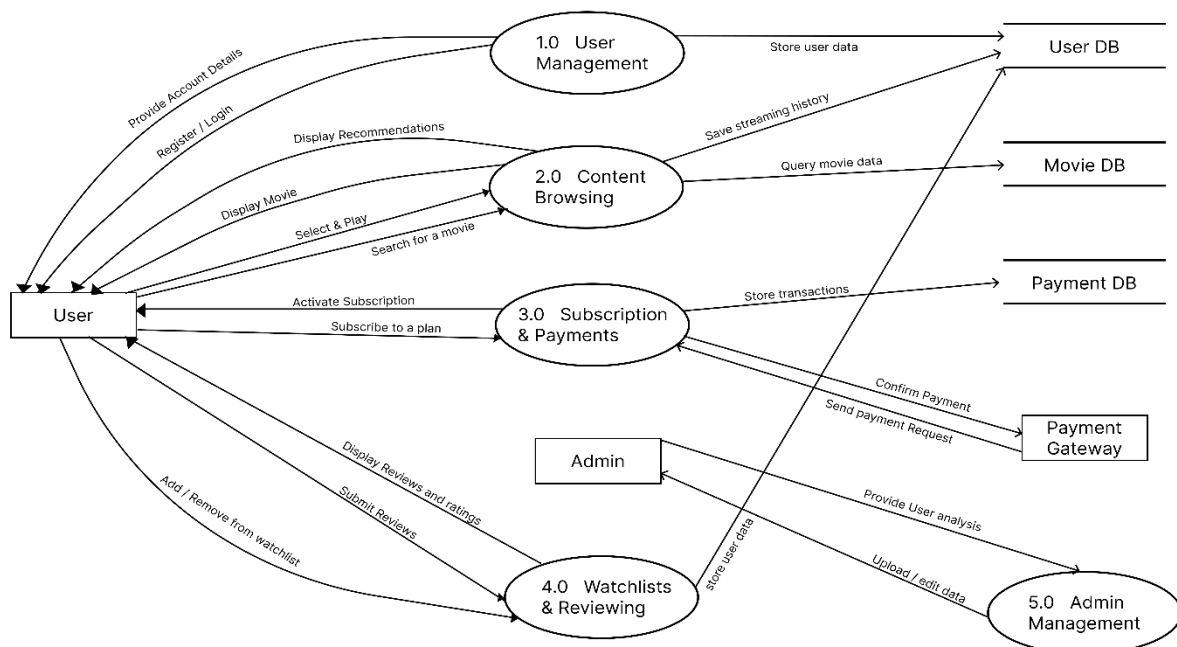


Figure 2.6-2 DFD level-1 for Movie Streaming system

2.6.3 DFD Level-2

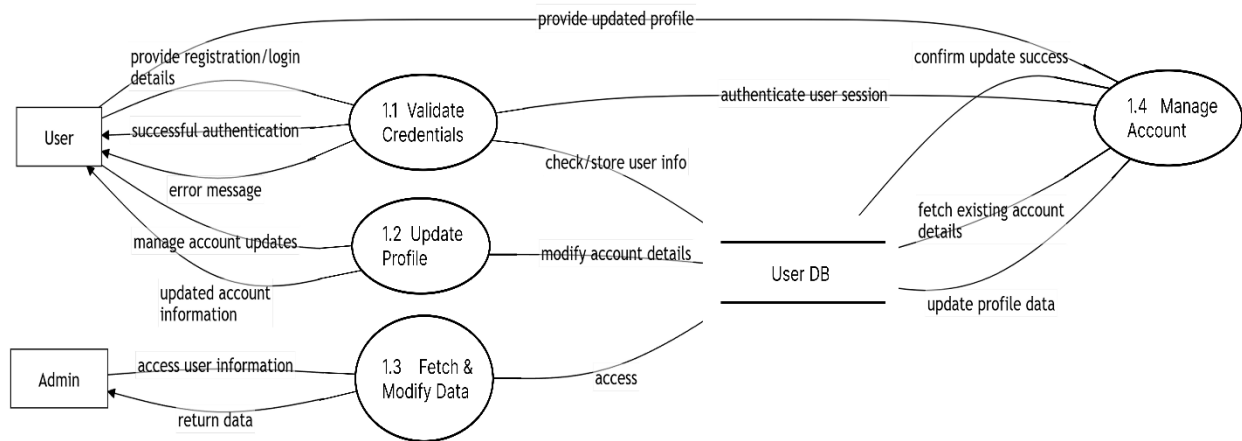



Figure 2.6-3 DFD level-2 for User process

3 External interface requirement (Screens)

3.1 Screen-1: Movie Upload Form

 **Upload a Movie**

Movie Name

Enter movie name

Movie Description

Short movie description

Language

Select Language

Genre

Select Genre

Release Date

dd-mm-yyyy

Director Name

Enter director name

Upload Movie File

Choose file No file chosen

Upload Subtitle File (Optional)

Choose file No file chosen

Upload Thumbnail

Choose file No file chosen

Duration (Minutes)

Enter duration

Upload

Cancel

Figure 3.1.1 Screen-1: Movie upload Form

Purpose: This form will allow the Administrator to upload a movie with its detail in database.

Table 3.1-1 Screen element of Movie upload form


Sr.	Screen Element	Input Type	O/M	1/N	Description
1	Movie Name	Textbox	M	1	Textbox to enter the name of the movie.
2	Movie Description	Text area	M	1	Text area to enter a short description of the movie.
3	Language	Dropdown	M	1	Dropdown to select the language of the movie.
4	Genre	Dropdown	M	1	Dropdown to select the genre of the movie.
5	Release Date	Date Picker	M	1	Allows the user to select the release date (format: dd-mm-yyyy).
6	Director Name	Textbox	M	1	Textbox to enter the name of the movie director.

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7	Upload Movie File	File Upload	M	1	File upload field to upload the movie file (e.g., video file).
8	Upload Subtitle File	File Upload	O	N	Optional file upload field to upload a subtitle file.
9	Upload Thumbnail	File Upload	M	1	File upload field to upload a thumbnail image for the movie.
10	Duration	Textbox	M	1	Textbox to enter the duration of the movie in minutes.
11	Upload	Button	-----	-----	Button to upload the movie details (highlighted in red).
12	Cancel	Button	-----	-----	Button to cancel the upload process (grayed out).

Screen-2: Subscribe to a Plan Form


 **Subscribe to a Plan**


Premium Plan - Rs. 399/month

Validity: 30 Days

Features: Unlimited Streaming, No Ads, 4K Quality

Select Payment Method

 **Credit Card**

 **PayPal**

Card Number

1234 5678 9012 3456

Cardholder Name

John Doe

Expiry Date

-----, ----

CVV

123

Subscribe

Cancel

Figure 3.1.2 Screen-2: Subscribe to a Plan Form

Purpose: This form is titled "Subscribe to a Plan" and includes fields for subscribing to a premium plan.

Table 01-2 Screen element of Subscribe to a Plan form

Sr.	Screen Element	Input Type	O/M	1/N	Description
1	Plan Name	Text	M	1	Displays the plan name and price (e.g., "Premium Plan - Rs. 399/month").
2	Validity	Text	M	1	Displays the validity of the plan (e.g., "30 Days").
3	Features	Text	M	1	Displays the features of the plan (e.g., "Unlimited Streaming, No Ads").
4	Select Payment Method	Button	M	1	Buttons to select payment method (e.g., Credit Card, PayPal).

5	Card Number	Textbox	M	1	Textbox to enter the credit card number (e.g., "1234 5678 9012 3456").
6	Cardholder Name	Textbox	M	1	Textbox to enter the cardholder's name (e.g., "John Doe").
7	Expiry Date	Date Picker	M	1	Field to enter the card's expiry date (format: mm-yyyy).
8	CVV	Textbox	M	1	Textbox to enter the card's CVV number (e.g., "123").
9	Subscribe	Button	-----	-----	Button to subscribe to the plan (highlighted in red).
10	Cancel	Button	-----	-----	Button to cancel the subscription process (grayed out).

Screen-3: Movie Review Submit Form

The image shows a 'Movie Review' form for the movie 'Bhavesh Joshi Superhero'. The form includes a star rating section with 5 stars (4 are filled), a spoiler alert toggle (off), a review text area, a date of review picker (format: dd-mm-yyyy), a 'Liked' heart icon, an 'Add to List' text input (placeholder: 'e.g. My Favorite Movies, Must Watch'), an 'Add Tags' text input (placeholder: 'e.g. Action, Mind-blowing, Masterpiece'), and a toggle for 'I've Watched This Before' (on). At the bottom are 'Submit Review' and 'Cancel' buttons.

Movie Review

Bhavesh Joshi Superhero
Action, Drama

Star Rating
★★★★★

Spoiler Alert
☐

Review Text
Write your review...

Date of Review
dd-mm-yyyy

Liked

Add to List
e.g. My Favorite Movies, Must Watch

Add Tags
e.g. Action, Mind-blowing, Masterpiece

I've Watched This Before
☒

Submit Review **Cancel**

Figure 3.1.3 Screen-3: Movie review submit form

Purpose: This form is titled "Movie Review" and includes fields for reviewing a movie.

Table 3.1-3 Screen element of Movie review submit form

Sr.	Screen Element	Input Type	O/M	1/N	Description
1	Star Rating	Star Rating	M	1	Allows the user to rate the movie using stars (e.g., 1 to 5 stars).
2	Spoiler Alert	Toggle Switch	O	N	Toggle to mark the review as containing spoilers (default: off).
3	Review Text	Text area	M	1	Text area for the user to write their review of the movie.
4	Date of Review	Date Picker	M	1	Allows the user to select the date of the review (format: dd-mm-yyyy).

5	Liked	Button	O	N	Button to mark the movie as liked (heart icon, toggleable).
6	I've Watched This Before	Toggle Switch	O	N	Toggle to indicate if the user has watched the movie before (default: on).
7	Add Tags	Textbox	O	N	Textbox to add tags for the movie (e.g., "Action, Mind-blowing").
8	Add to List	Textbox	O	N	Textbox to add the movie to a list (e.g., "My Favourite Movies").
9	Submit Review	Button	-----	-----	Button to submit the movie review (highlighted in red).
10	Cancel	Button	-----	-----	Button to cancel the review submission (grayed out).

4 Database design

4.1 List of Tables

- Movie
- User
- Review
- Subscription
- Payment

Table 4.1-1 Table: Movie

Column	Data Type	Null	Keys & constrains	Default Value & Description
MovieID	Varchar(50)	NN	PK (Auto Increment)	
Title	Varchar(100)	NN		
Genre	Varchar(100)	AN		
Duration	Int	AN		
ReleaseDate	Date	AN		

Table 4.1-2 Table: User

Column	Data Type	Null	Keys & constrains	Default Value Description
UserID	Varchar(50)	NN	PK (Auto Increment)	
Name	Varchar(100)	NN		
Email	Varchar(100)	AN	Unique	
Password	Varchar(255)	AN		
SubscriptionStatus	Varchar(50)	AN		

Table 4.1-3 Table: Review

Column	Data Type	Null	Keys & Constrains	Default Value & Description
ReviewID	Varchar(50)	NN	PK (Auto Increment)	
UserID	Varchar(50)	NN	Foreign Key (User)	Reference to User Table
MovieID	Varchar(50)	NN	Foreign Key (Movie)	Reference to Movie Table
Rating	Int	NN	Check (1 to 5)	3
Comment	Text	AN		

Table 4.1-4 Table: Subscription

Column	Data Type	Null	Keys & Constrains	Default Value & Description
SubscriptionID	Varchar(50)	NN	PK (Auto Increment)	
UserID	Varchar(50)	NN	Foreign Key (User)	Reference to User Table
PlanType	Varchar(50)	NN		Free
StartDate	DateTime	NN		CURRENT_DATE()
EndDate	DateTime	NN		NULL

Table 4.1-5 Table: Payment

Column	Data Type	Null	Keys & Constrains	Default Value & Description
PaymentID	Varchar(50)	NN	PK (Auto Increment)	
UserID	Varchar(50)	NN	Foreign Key (User)	Reference to User Table
Amount	Decimal(8,2)	NN		0.0
PaymentDate	DateTime	NN		CURRENT_DATE()
PaymentMethod	Varchar(50)	NN		CreditCard

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