



PES University, Bengaluru

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Department of Computer Science & Engineering
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**UE19CS353 – Object Oriented Analysis and Design with Java
Theory ISA (Mini Project)**

Report on

Movie Ticket Booking Management System

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6th Semester B

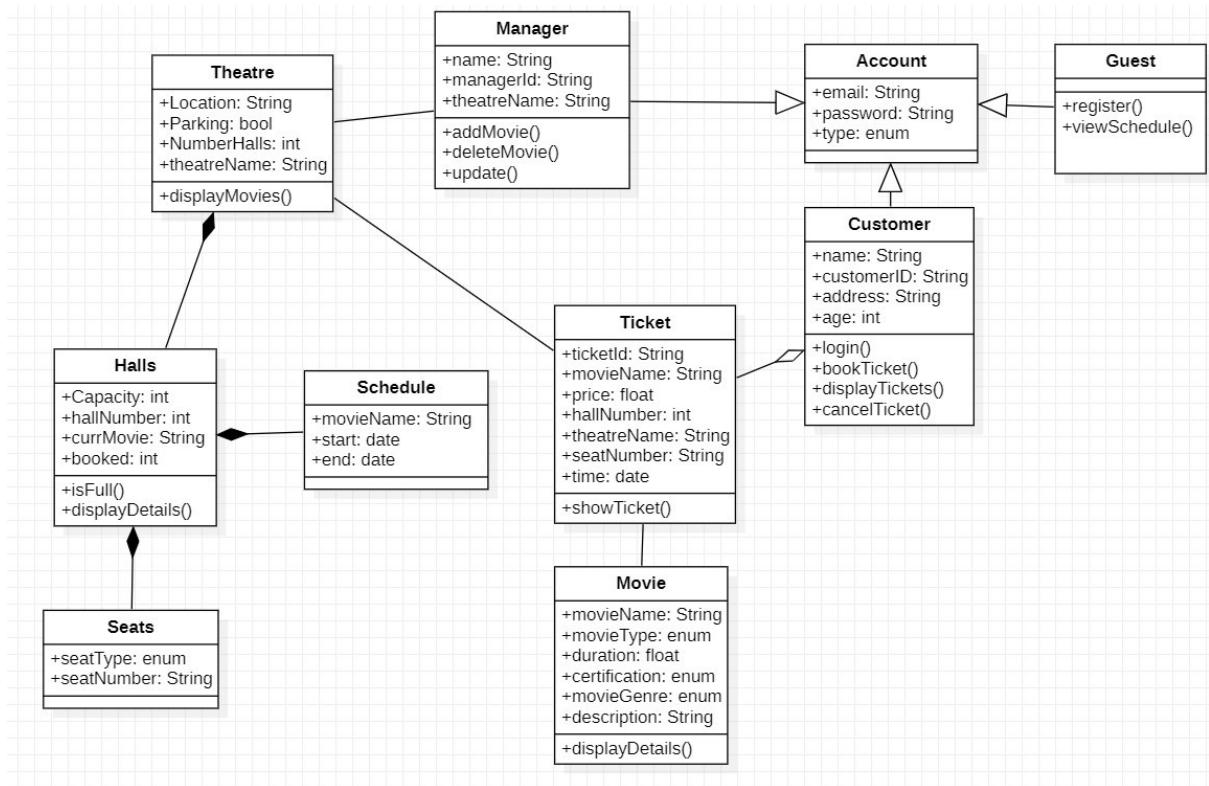
1. Project Description:

- Movie Ticket Booking Management System - a complete application where a user can book tickets to watch a movie and review them; and theatre managers can schedule their movies.
- We have two roles - User and Manager.
- If the user is a new user, then he/she must first register and then be able to login to book tickets. The logged in user can view the movies available and book tickets for movies that have been added to the schedule by the manager. After successfully booking the tickets and doing the payment for the tickets, the user can review/rate the movies he/she has watched as well.
- A manager can view the current movie schedule for the theatre. He can add new movies to be scheduled or remove existing movies from schedule.
- Both the manager and user views are in sync when a movie gets updated.
- [**Github repository link**](#)

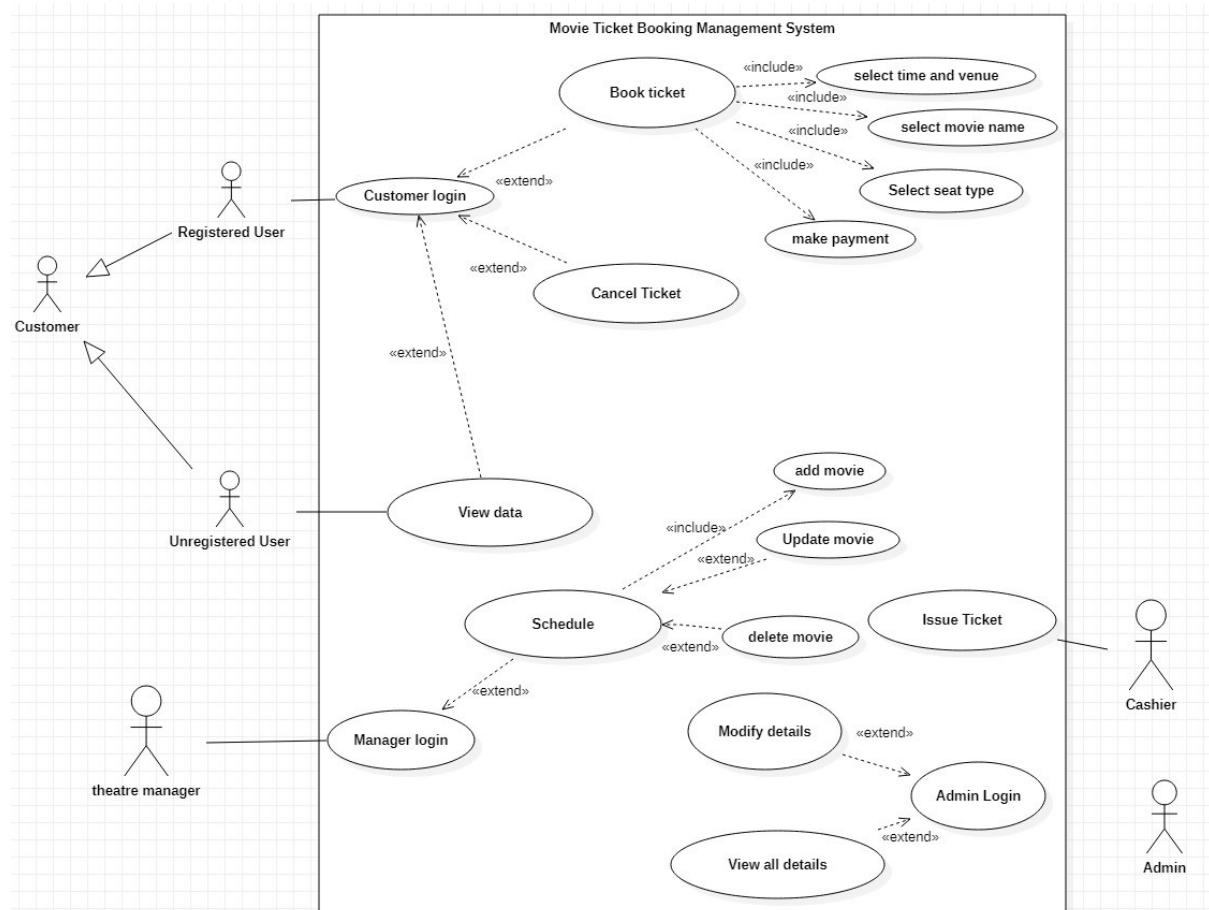
2. Analysis and Design Models:

- Our architecture pattern is MVC.
- Decomposition of our project was done based on functionality.
- The below diagrams give an understanding as to how we designed our application and its use cases.

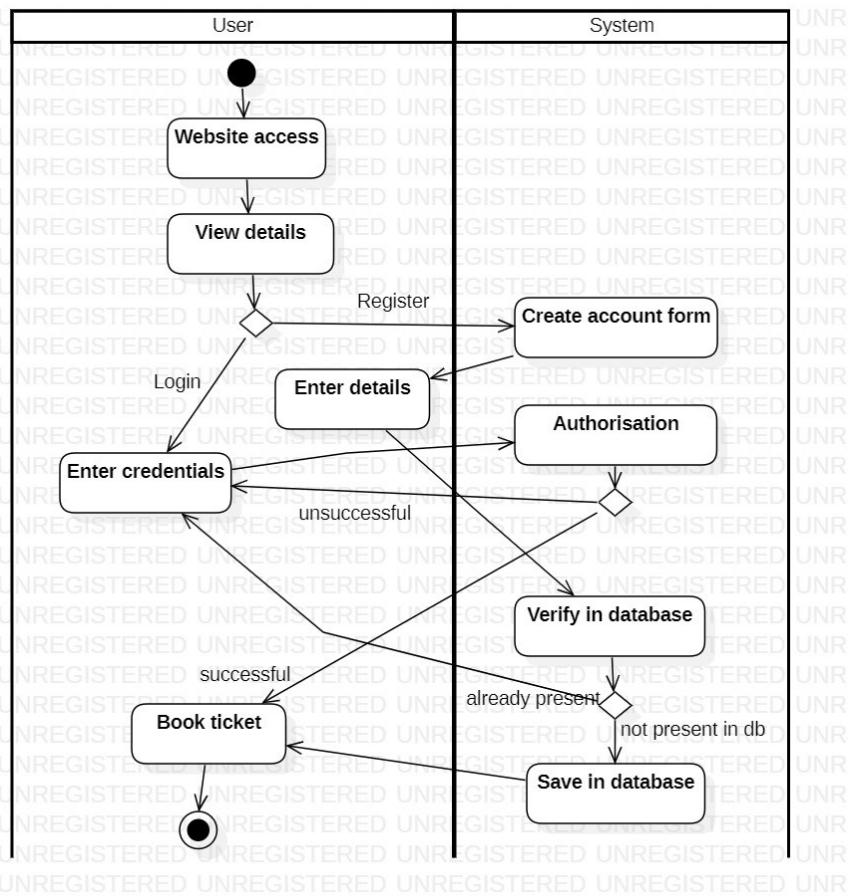
Class Diagram:



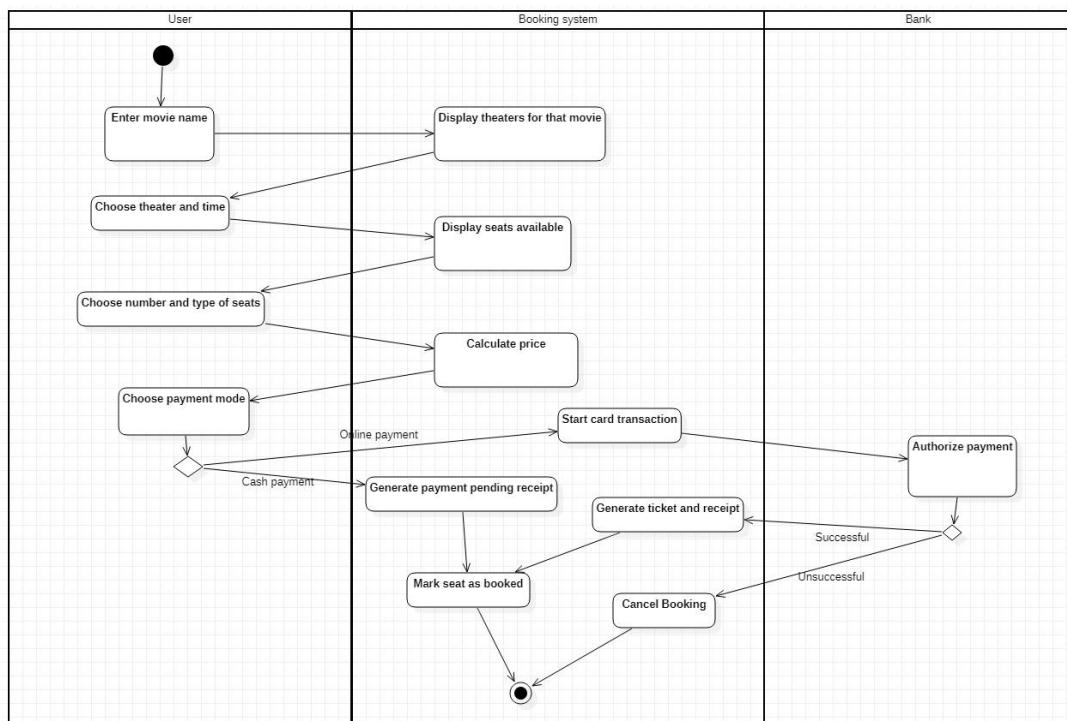
Use cases:



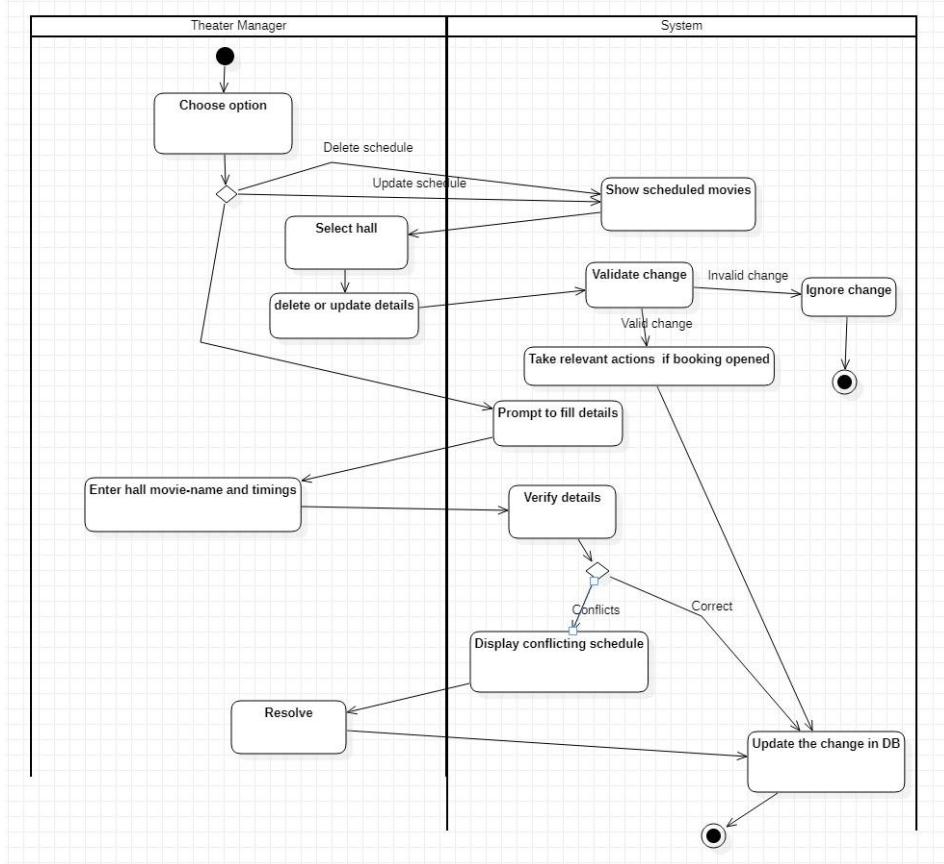
○ Login/Register Activity Diagram:



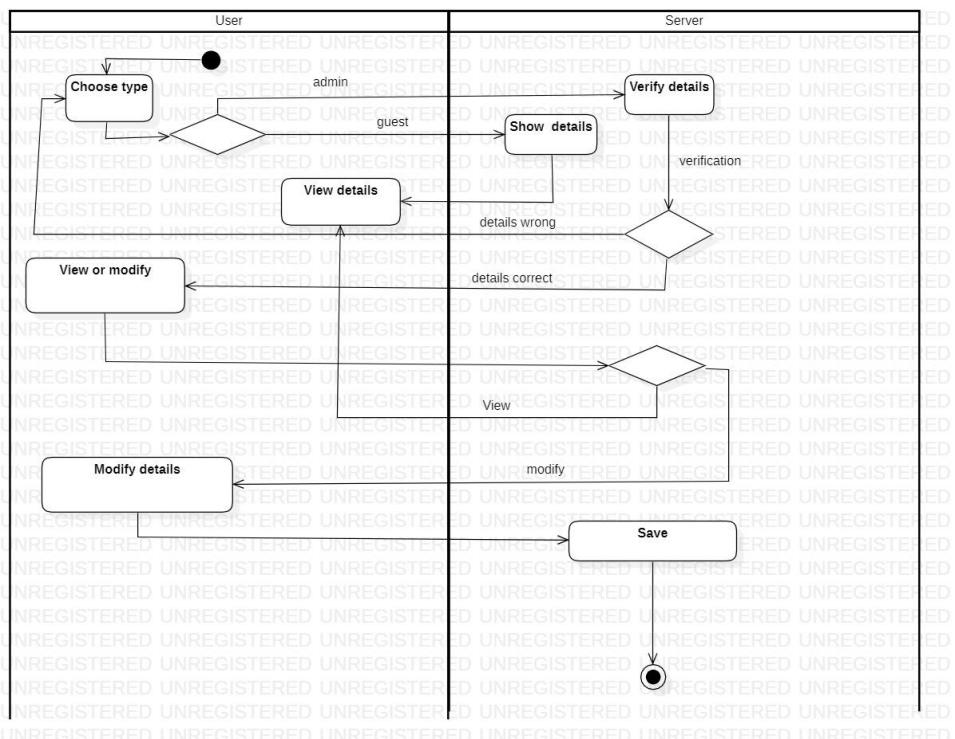
○ Book Ticket Activity Diagram:



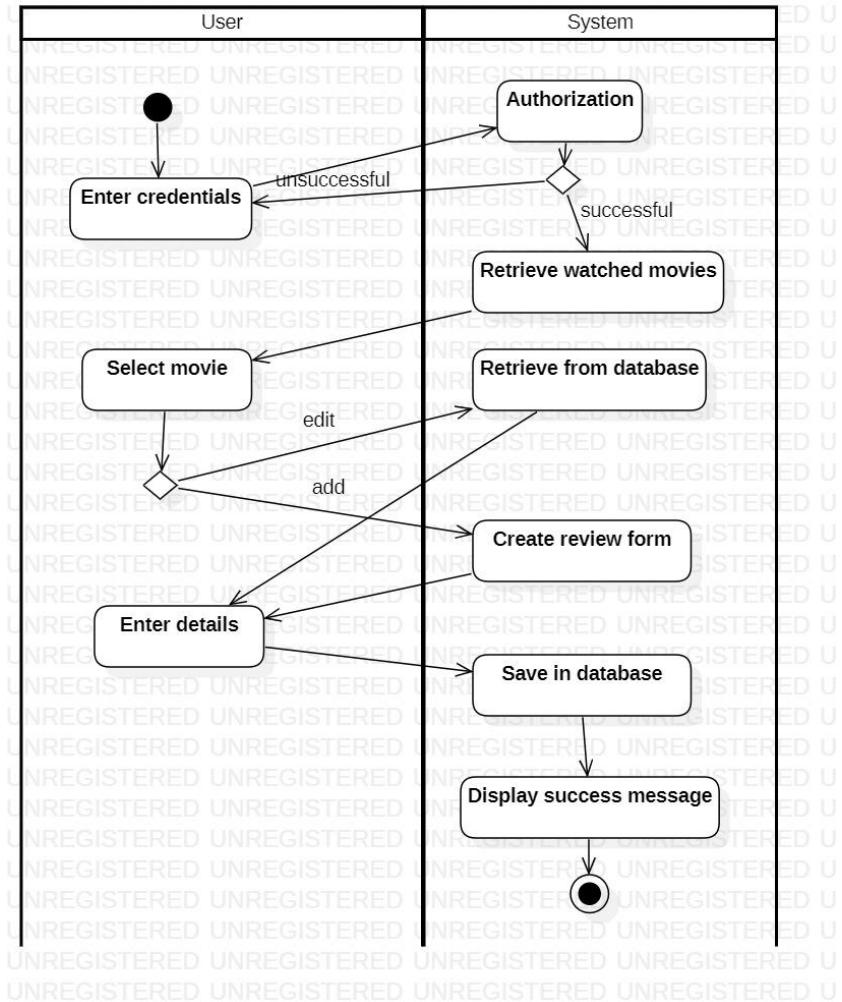
○ Schedule Activity Diagram:



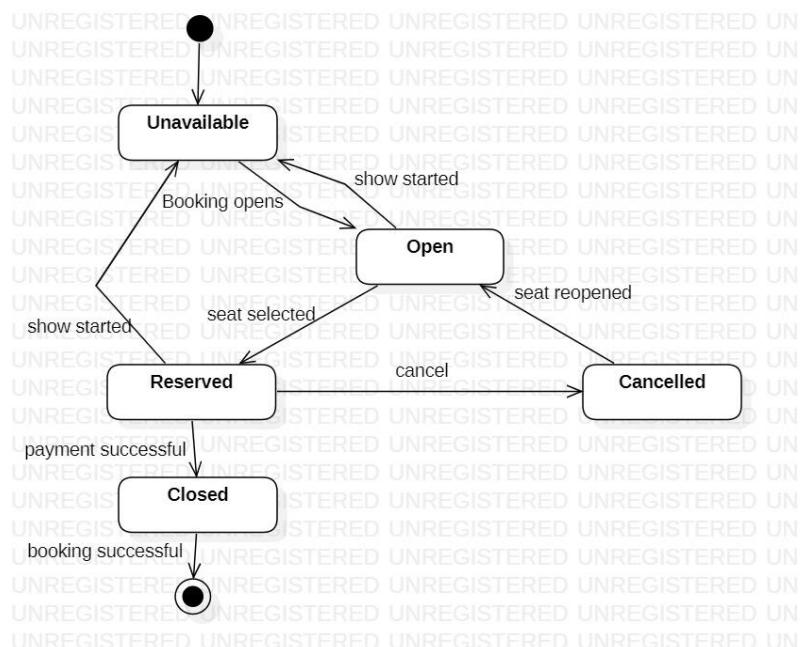
○ View/modify details Activity Diagram:



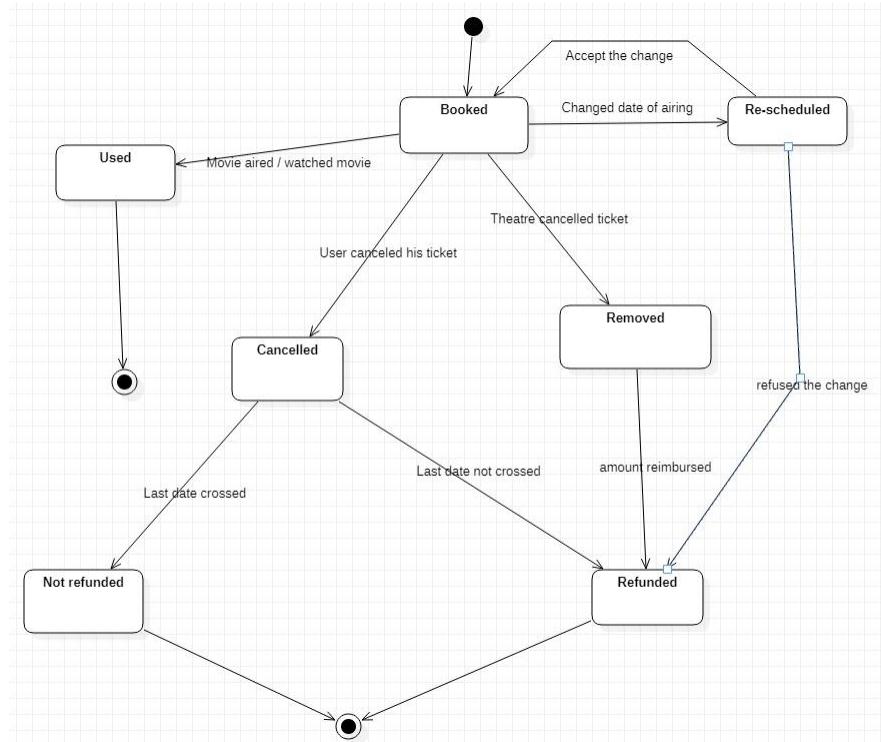
○ Review movie Activity Diagram:



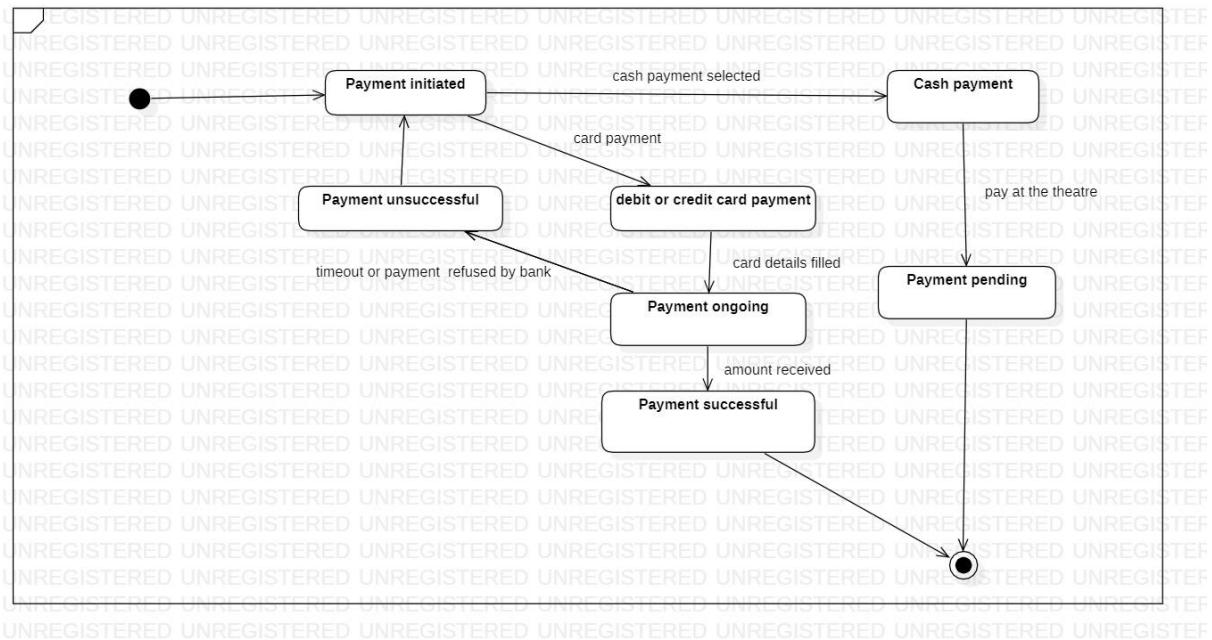
○ Theatre seat State Diagram:



○ Ticket State Diagram:



○ Payment State Diagram:



3. Tools and Frameworks Used:

- Visual Studio Code
- Swing and AWT - for interactive UI
- PostgreSQL as database component

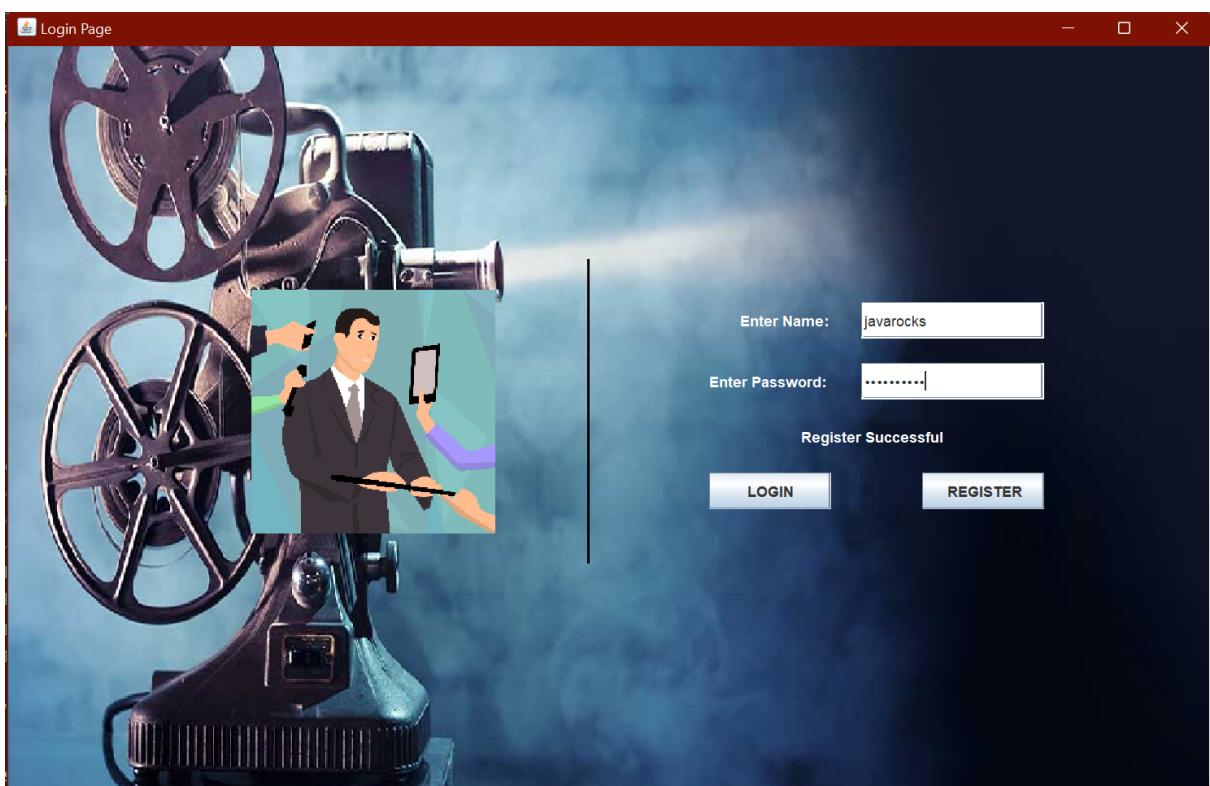
4. Design Principles and Design Patterns Applied

We have mainly used two Design Patterns among others:

- **Singleton: (SingleDatabase class)** We have made the database connection and operations class as a singleton class. This will avoid efficiency loss by having unnecessary multiple connections and keep a single connection to the DB during the application lifetime.
- **Factory: (UserTypeFactory class)** Since this application has two types of user the movie watcher and theatre manager, based on the credentials entered the factory class will determine which class the new instance should belong to and which view should be displayed

5. Application Screenshots:

- **Login Page:**



- User Dashboard:

The dashboard displays a grid of movie information. The columns are labeled "Poster", "Movie Name", and "Description".

Poster	Movie Name	Description
	RRR	RRR is a 2022 Indian Tamil-language thriller film di...
	The Kashmir Files	Kashmir is a 2022 Indian Hindi-language thriller fil...
	The Viceroys House	Viceroy's House is a 2017 British-Indian historical dr...

At the bottom, there are three buttons: "Add Review", "Book", and "Logout".

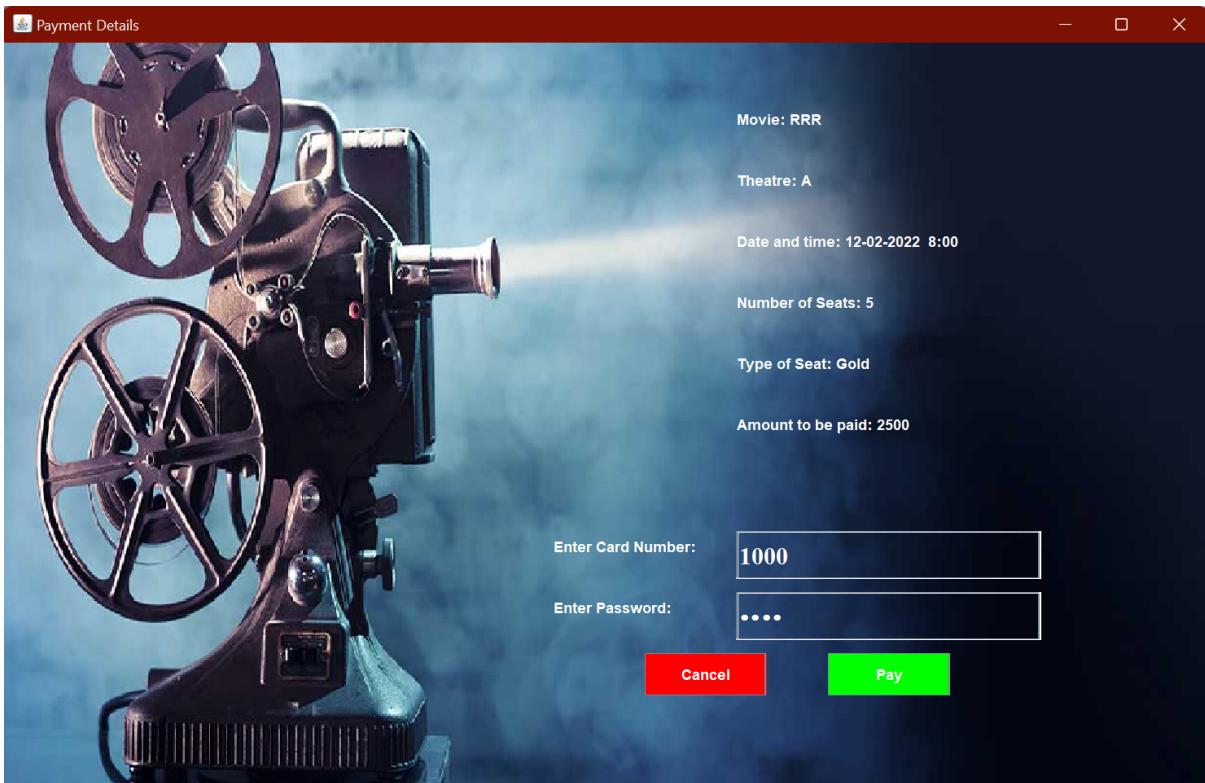
- Book Ticket Page:

The page is titled "Book tickets" and features a large background image of a vintage movie projector.

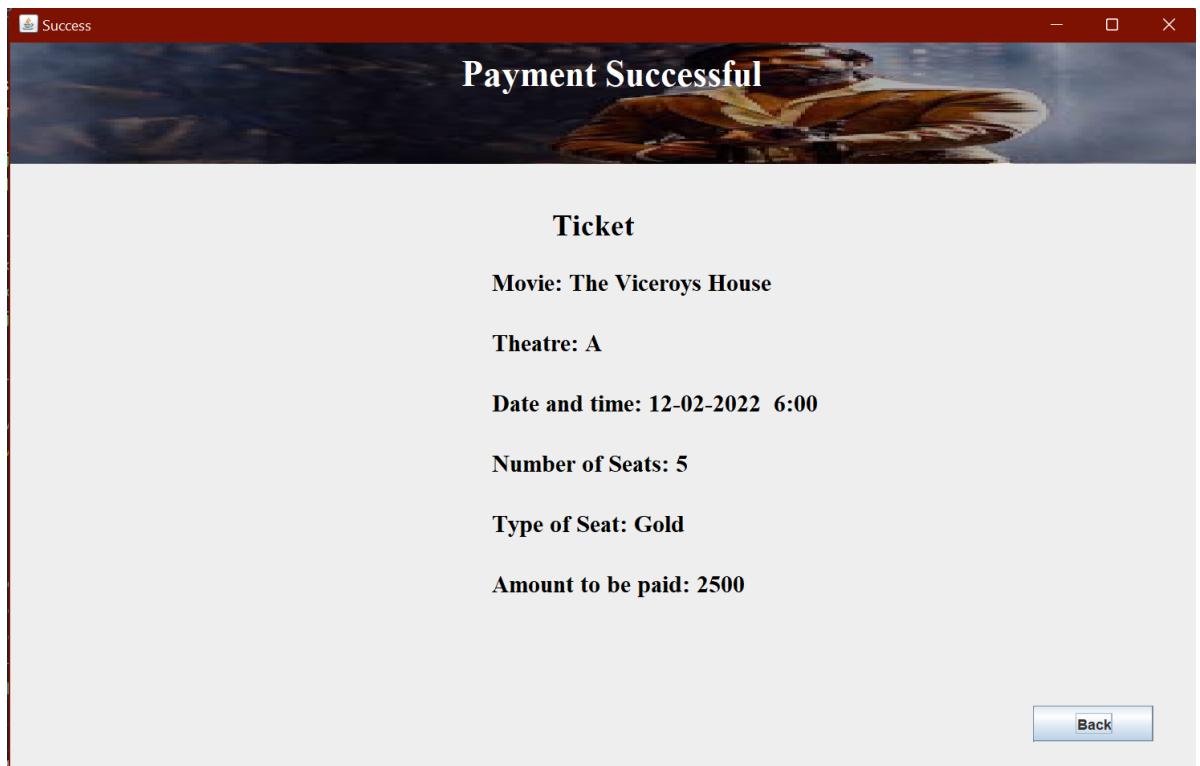
Form fields include:

- Select seat type: Gold (dropdown menu)
- Gold Price: 500
- Enter number of seats: 5 (text input field)
- Select theatre: A (dropdown menu)
- Select date: 12-02-2022 (dropdown menu)
- Select timing: 8:00 (dropdown menu)
- Amount: Rs. 2500
- Buttons: Confirm, Book

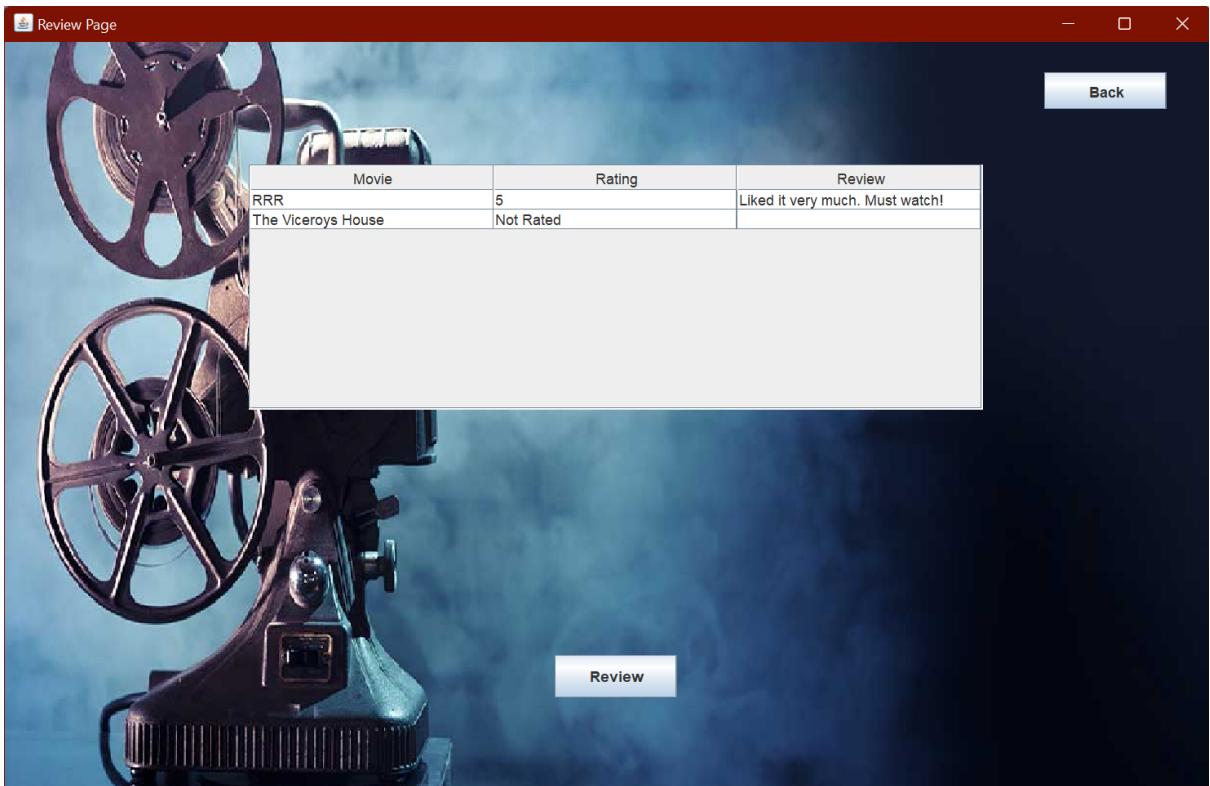
- **Payment Page:**



- **Payment Success Page:**



- **Review Page:**

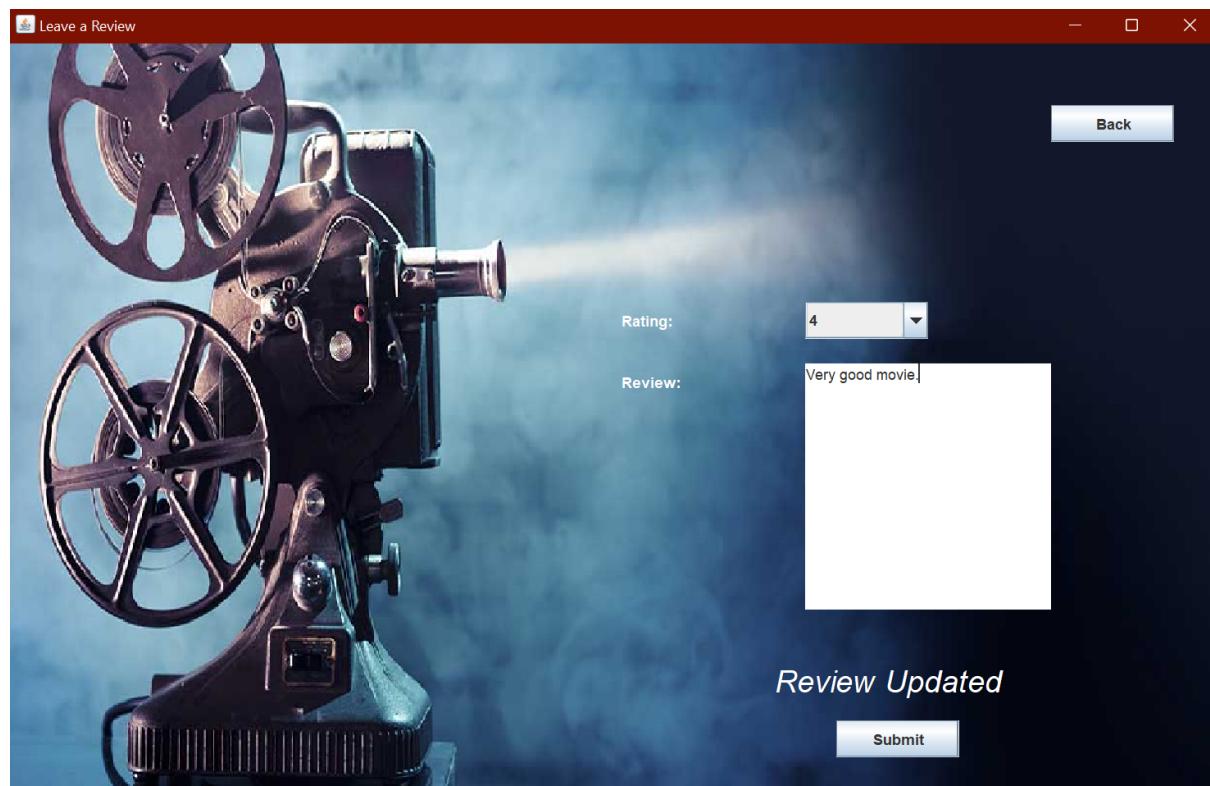


A screenshot of a Windows application window titled "Review Page". The background features a dramatic image of a vintage movie projector with film reels, set against a dark blue, smoky background. In the center, there is a table with three columns: "Movie", "Rating", and "Review". The table contains two rows of data:

Movie	Rating	Review
RRR	5	Liked it very much. Must watch!
The Viceroy's House	Not Rated	

At the bottom right of the table is a "Review" button. In the top right corner of the window is a "Back" button.

- **Add Review Page:**



A screenshot of a Windows application window titled "Leave a Review". The background is the same dramatic image of a vintage movie projector. On the right side, there are input fields for "Rating:" (a dropdown menu showing "4") and "Review:" (a text area containing "Very good movie."). At the bottom right, there is a "Submit" button. A message "Review Updated" is displayed at the bottom center of the screen.

- Manager Dashboard Page:

The screenshot shows a software interface titled "Manager View". At the top right are standard window controls (minimize, maximize, close) and a "Logout" button. The main area features a background image of a vintage film projector. Overlaid on the image is a table showing movie bookings:

name	theatre	seats	showdate	showtime
RRR	A	10	12-02-2022	6:00
RRR	A	5	12-02-2022	8:00
The Viceroy's House	A	5	12-02-2022	6:00

Below the table is a large, semi-transparent white rectangular box, likely a modal for adding new bookings. At the bottom right of the interface are two buttons: "Delete" and "ADD".

- Add Movie Page:

The screenshot shows a software interface titled "Operations Page". At the top right are standard window controls (minimize, maximize, close) and a "Back" button. The main area features a background image of a vintage film projector. On the right side, there are input fields for adding a new movie entry:

Movie Name:	<input type="text" value="The Kashmir Files"/>
Theatre:	<input type="text" value="PES University"/>
Seats:	<input type="text" value="200"/>
About:	<input type="text" value="Special screening at PES University."/>
Date:	<input type="text" value="29-02-2024"/>
Time:	<input type="text" value="22:00"/>

At the bottom right of the input area is a blue "Add Movie" button.

6. Team member contributions:

Functionality	Done By
Login Page(User and Manager)	Archit, Ashwin
User Dashboard	Ashwin, Arpan
Manager Dashboard	Arpan
Book Ticket	Archit
Ticket Payment	Arpan
Add movie	Ashwin, Archit
Add review/rating	Arpan
Single Database and UserTypeFactory	Arpan
UI Design	Archit