



PES University, Bengaluru

Department of Computer Science & Engineering

Session: Jan - May 2022

UE20CS353 – Object Oriented Analysis and Design with Java

Theory ISA (Mini Project)

Report on

Movie Ticket Booking Management System

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PES2UG20CS177

6th Semester D

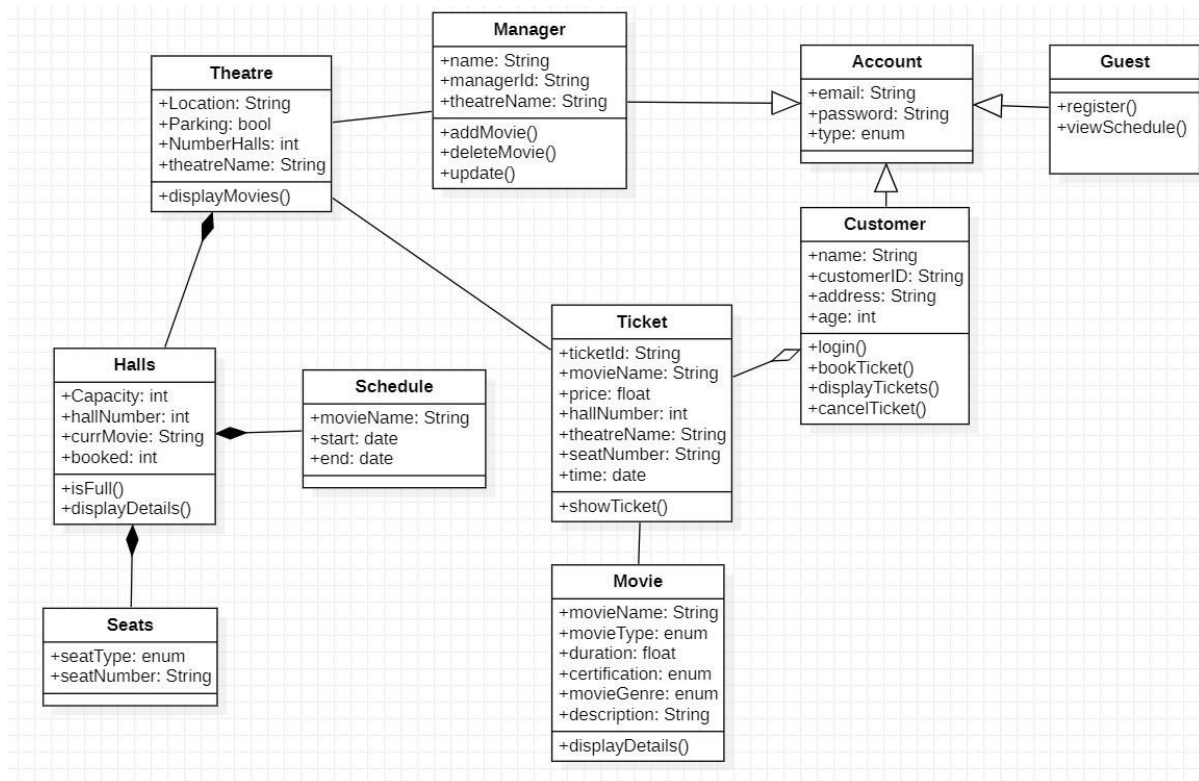
1. Project Description:

- 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.

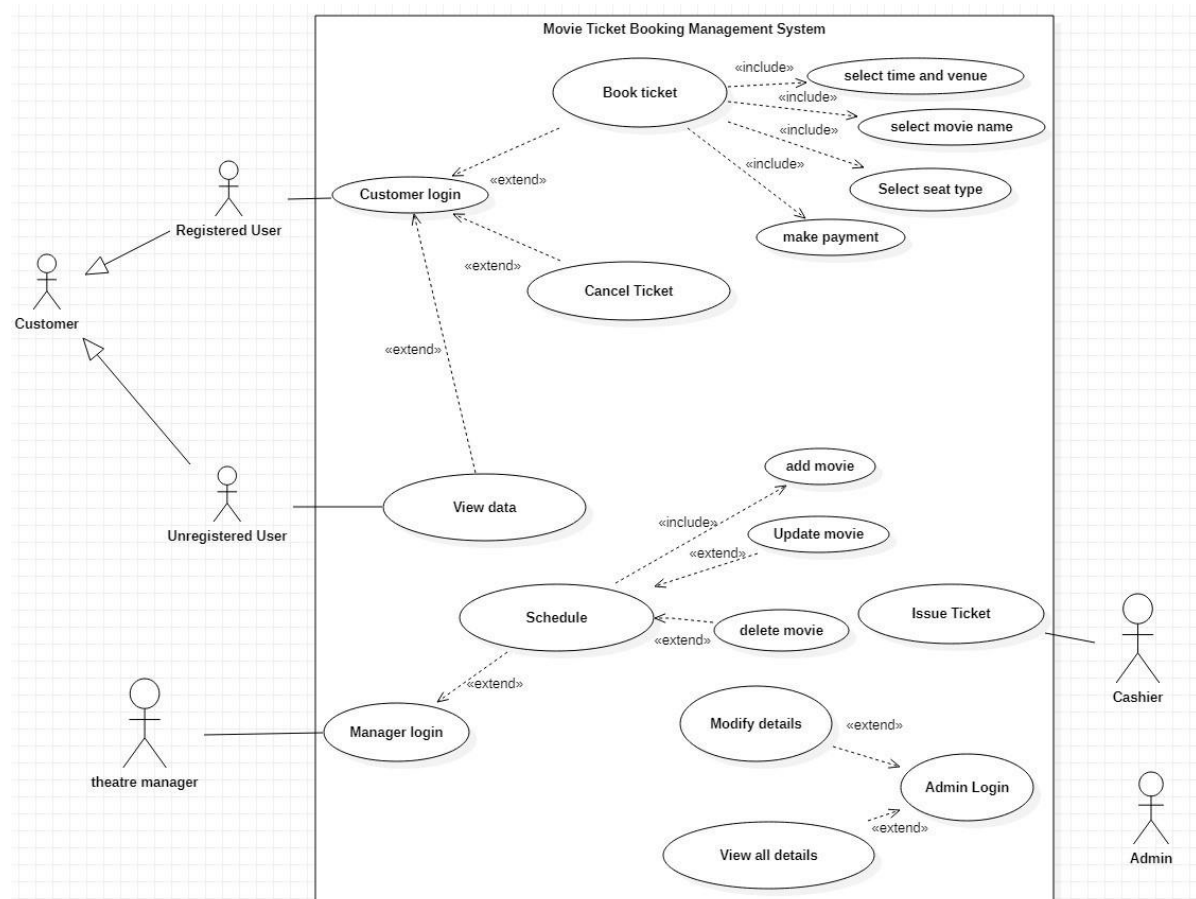
2. Analysis and Design Models:

- 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.

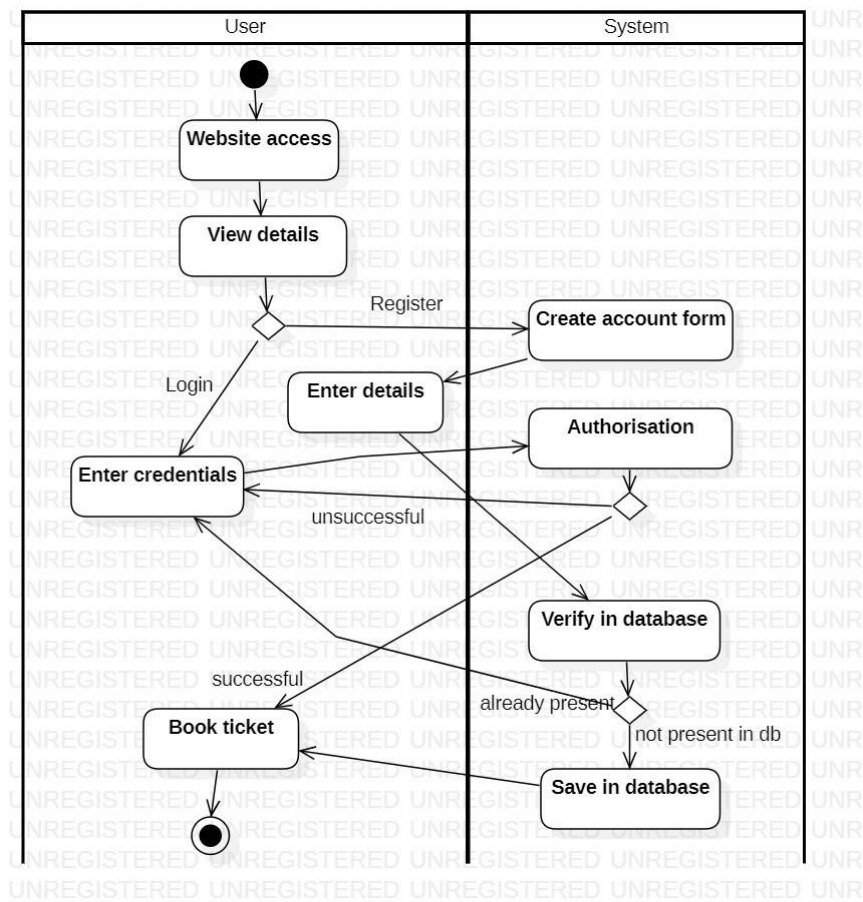
Class Diagram:



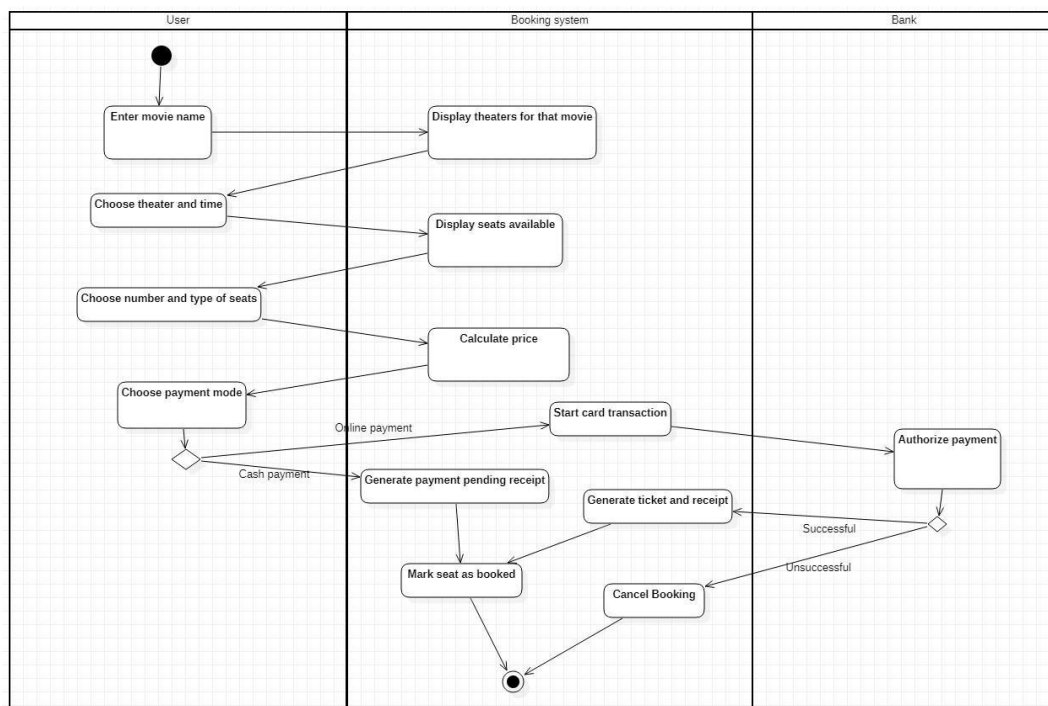
Use cases:



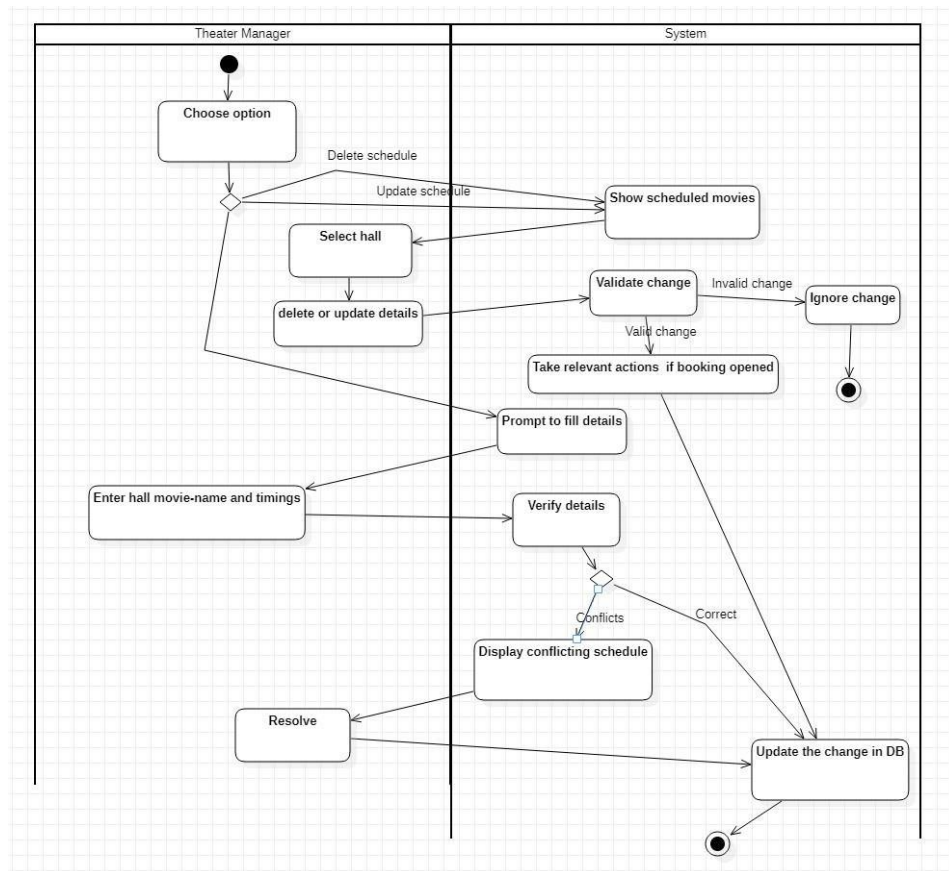
○ Login/Register Activity Diagram:



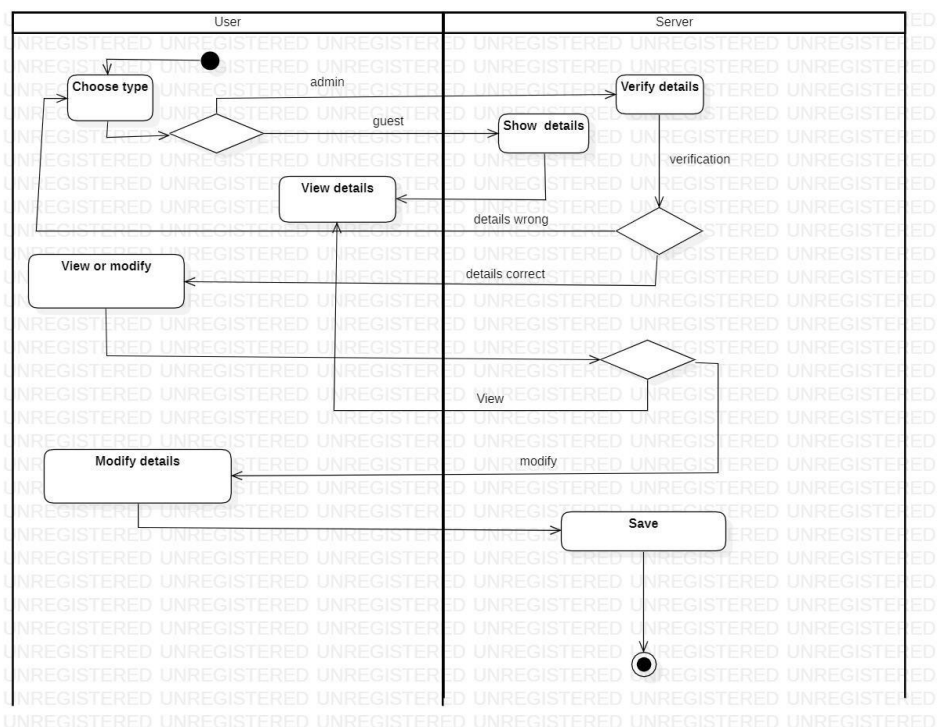
○ Book Ticket Activity Diagram:



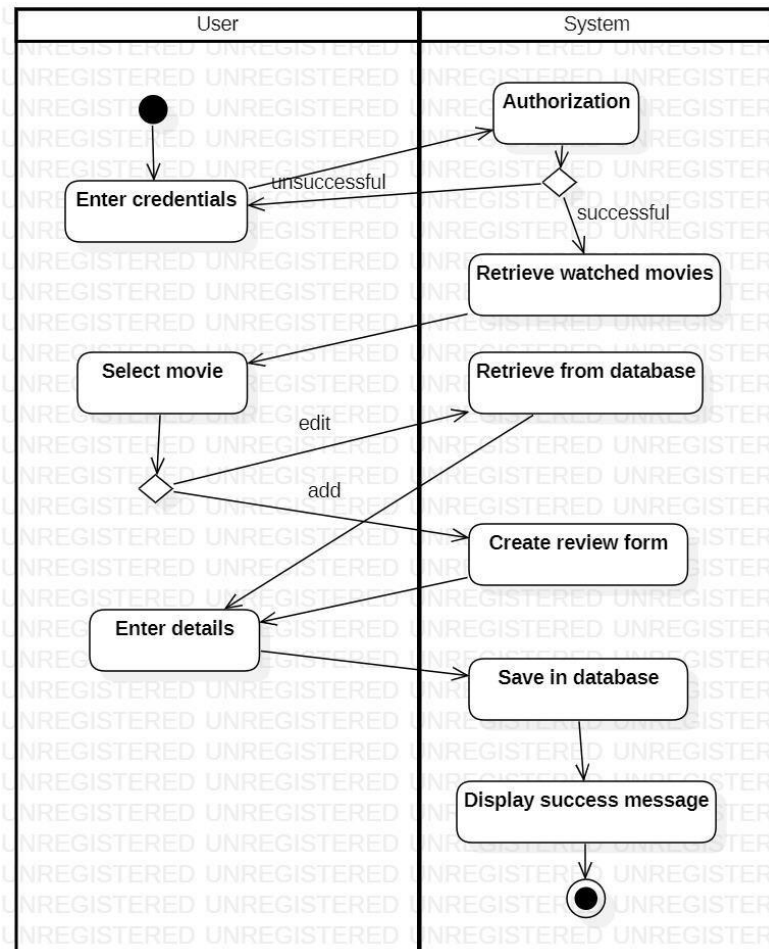
○ Schedule Activity Diagram:



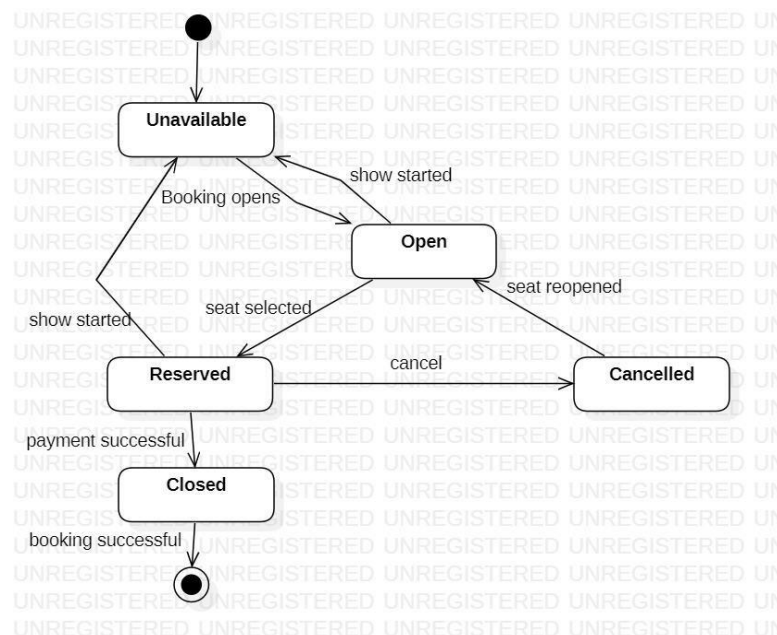
○ View/modify details Activity Diagram:



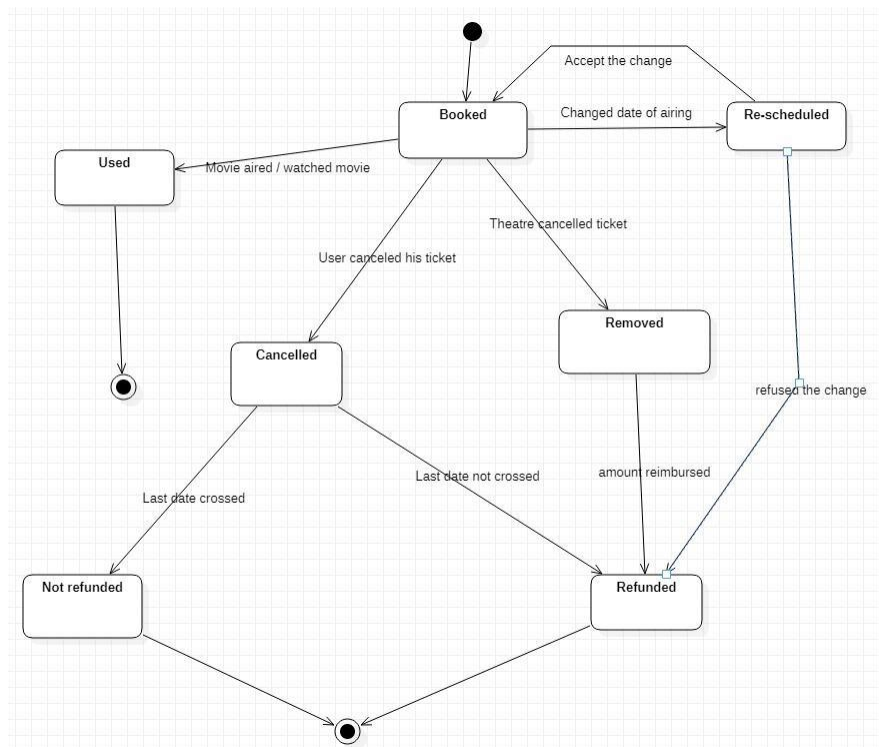
○ **Review movie Activity Diagram:**



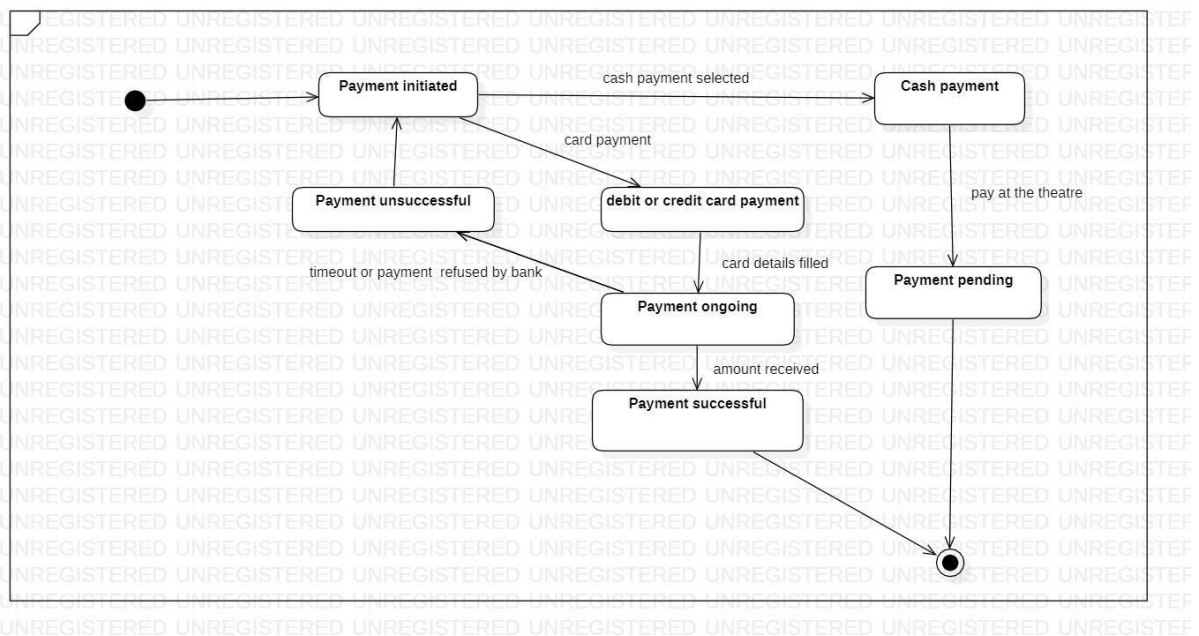
○ **Theatre seat State Diagram:**



○ Ticket State Diagram:



○ Payment State Diagram:



3. Tools and Frameworks Used:

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

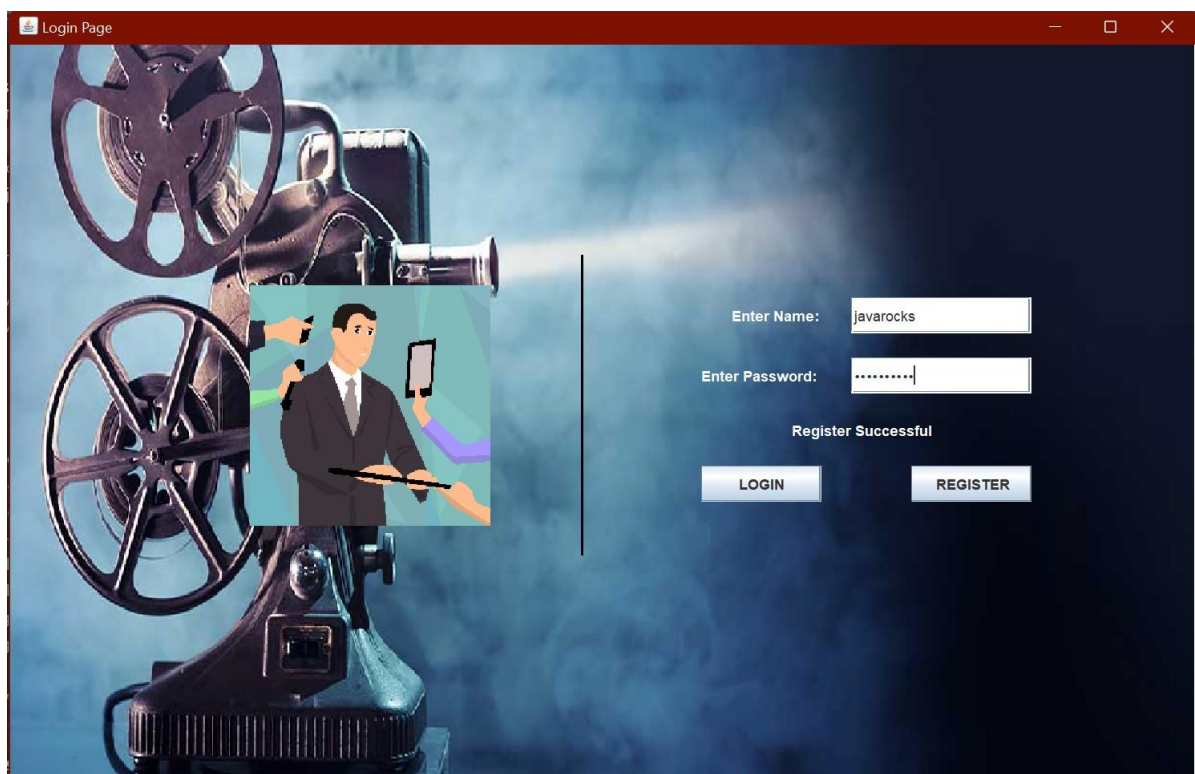
4. Design Principles and Design Patterns Applied

We have mainly used two Design Patterns among others:

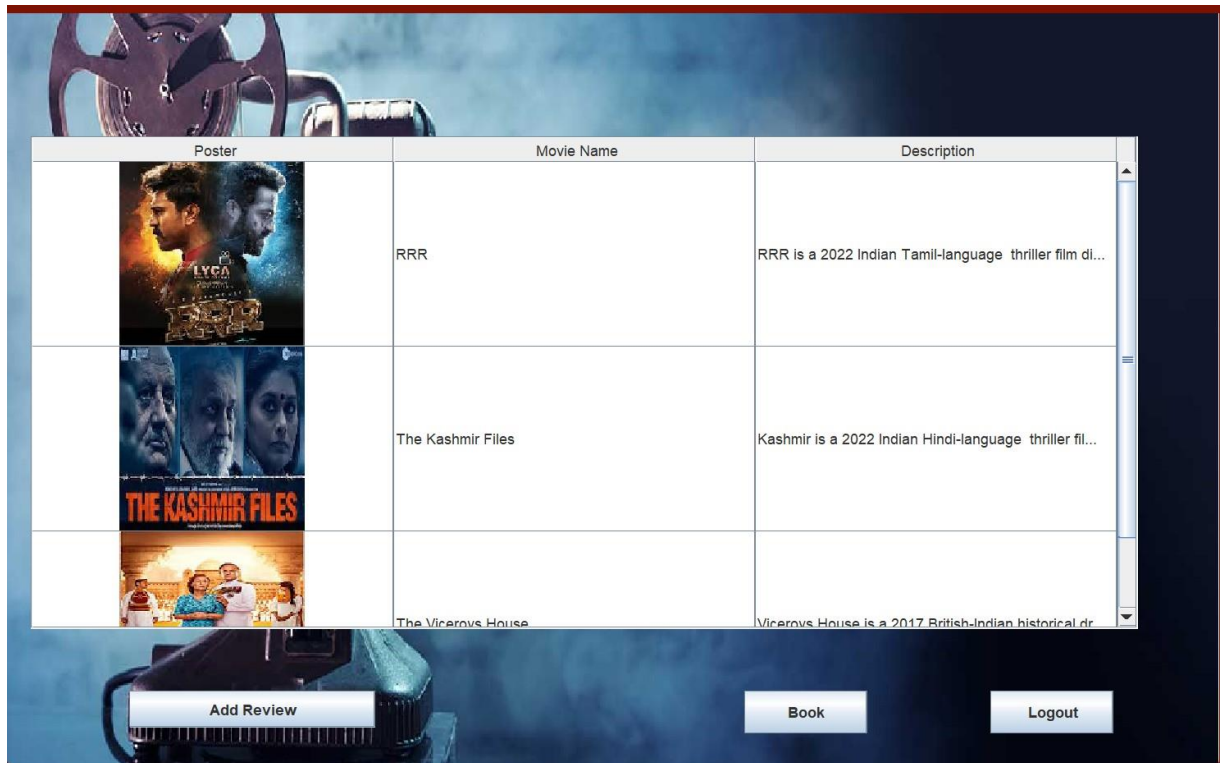
- **Singleton:** (SingleDatabase class) We have made the database connection and operations class as a singleton class. This will avoid efficiency loss by having unnecessary multiple connections and keep a single connection to the DB during the application lifetime.
- **Factory:** (UserTypeFactory class) 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:**

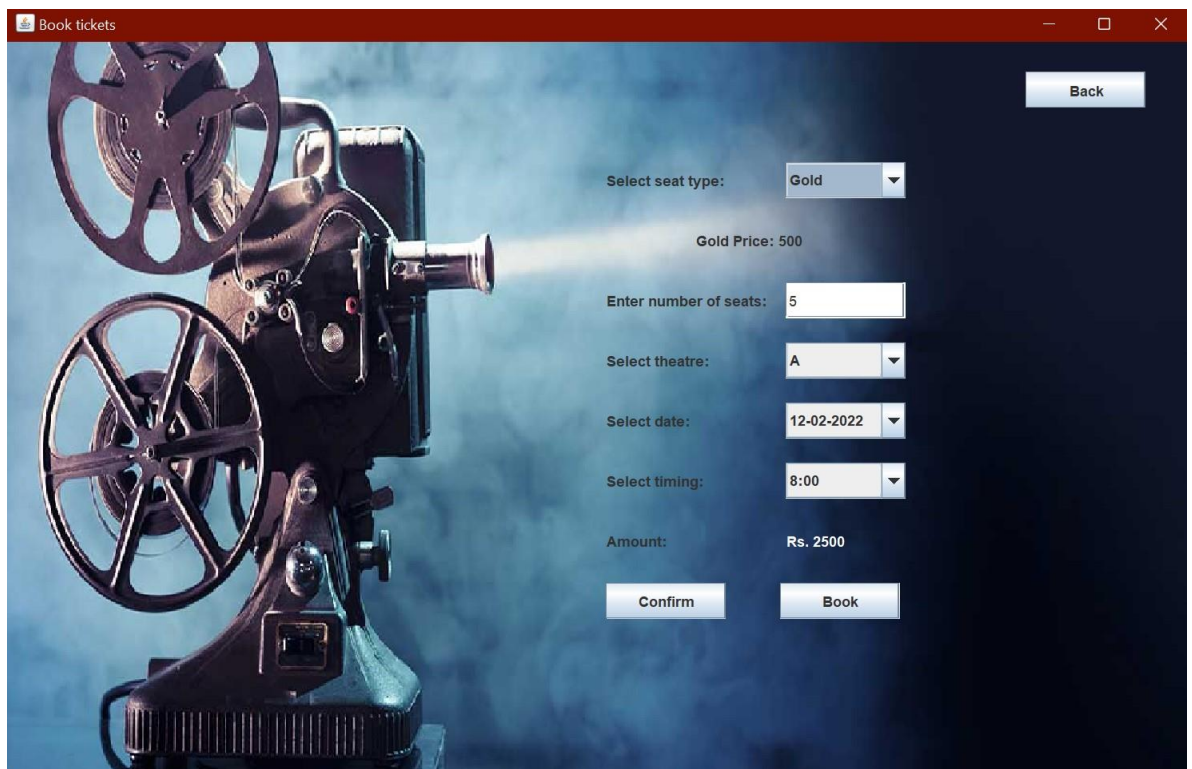


- **User Dashboard:**



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 Viceroy's House	Viceroy's House is a 2017 British-Indian historical dr

- **Book Ticket Page:**



Select seat type: Gold

Gold Price: 500

Enter number of seats:

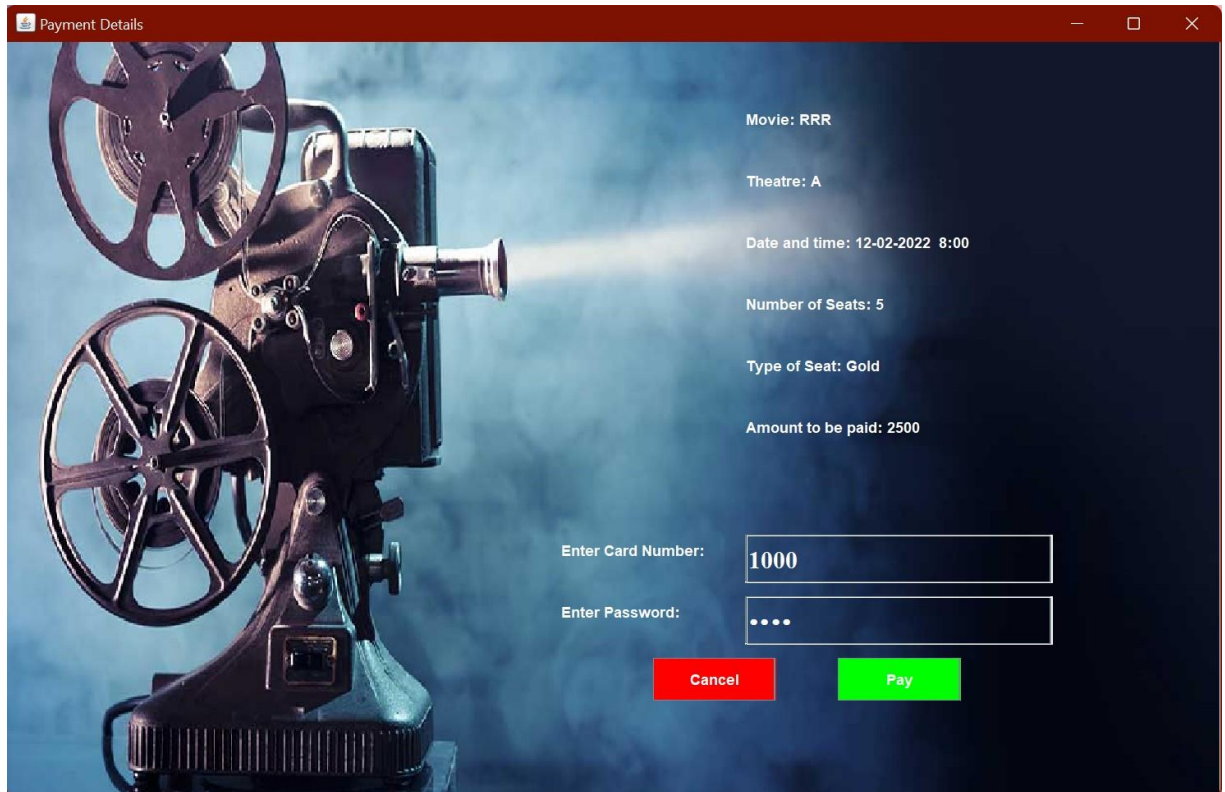
Select theatre: A

Select date: 12-02-2022

Select timing: 8:00

Amount: Rs. 2500

- **Payment Page:**



A screenshot of a web application window titled "Payment Details". The window has a dark blue background with a vintage movie projector on the left. On the right, there is a list of transaction details: "Movie: RRR", "Theatre: A", "Date and time: 12-02-2022 8:00", "Number of Seats: 5", "Type of Seat: Gold", and "Amount to be paid: 2500". Below this, there are two input fields: "Enter Card Number:" with the value "1000" and "Enter Password:" with four dots. At the bottom right, there are two buttons: a red "Cancel" button and a green "Pay" button.

Payment Details

Movie: RRR

Theatre: A

Date and time: 12-02-2022 8:00

Number of Seats: 5

Type of Seat: Gold

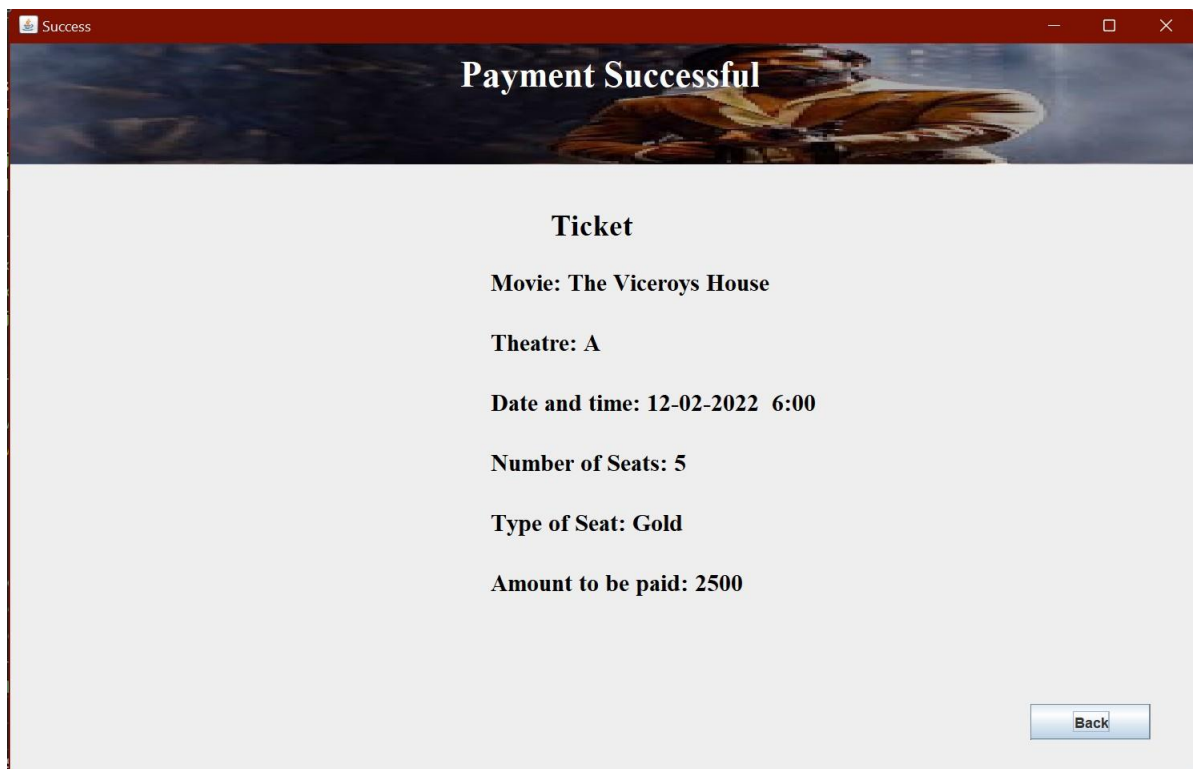
Amount to be paid: 2500

Enter Card Number: 1000

Enter Password:

Cancel Pay

- **Payment Success Page:**



A screenshot of a web application window titled "Success". The window has a dark blue header with the text "Payment Successful" in white. Below the header, the word "Ticket" is centered. Underneath, the transaction details are listed: "Movie: The Viceroy's House", "Theatre: A", "Date and time: 12-02-2022 6:00", "Number of Seats: 5", "Type of Seat: Gold", and "Amount to be paid: 2500". At the bottom right, there is a "Back" button.

Success

Payment Successful

Ticket

Movie: The Viceroy's House

Theatre: A

Date and time: 12-02-2022 6:00

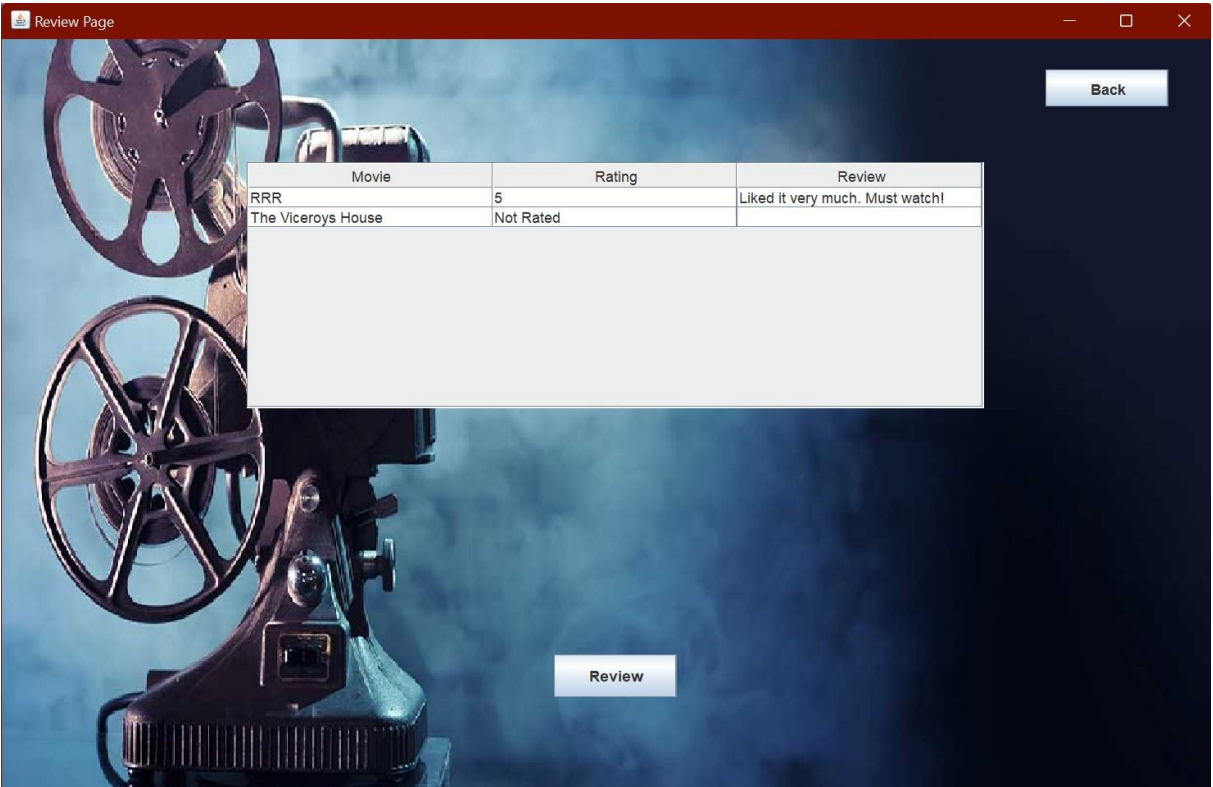
Number of Seats: 5

Type of Seat: Gold

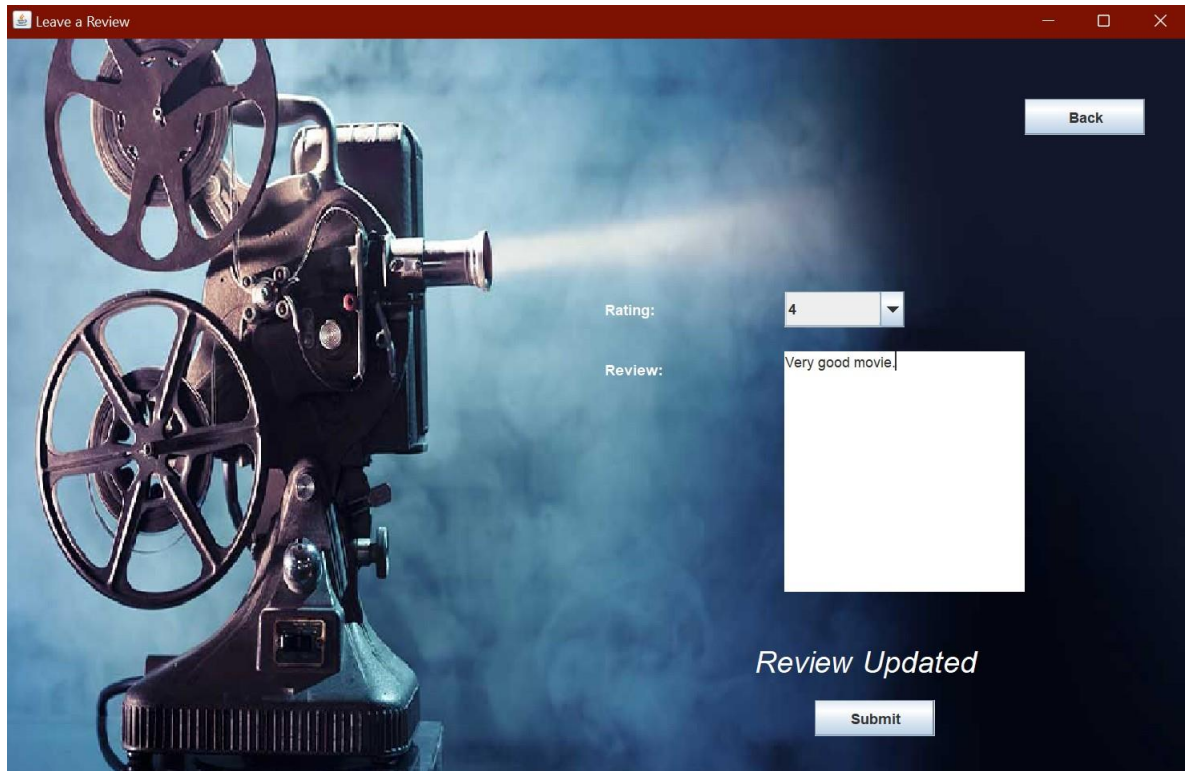
Amount to be paid: 2500

Back

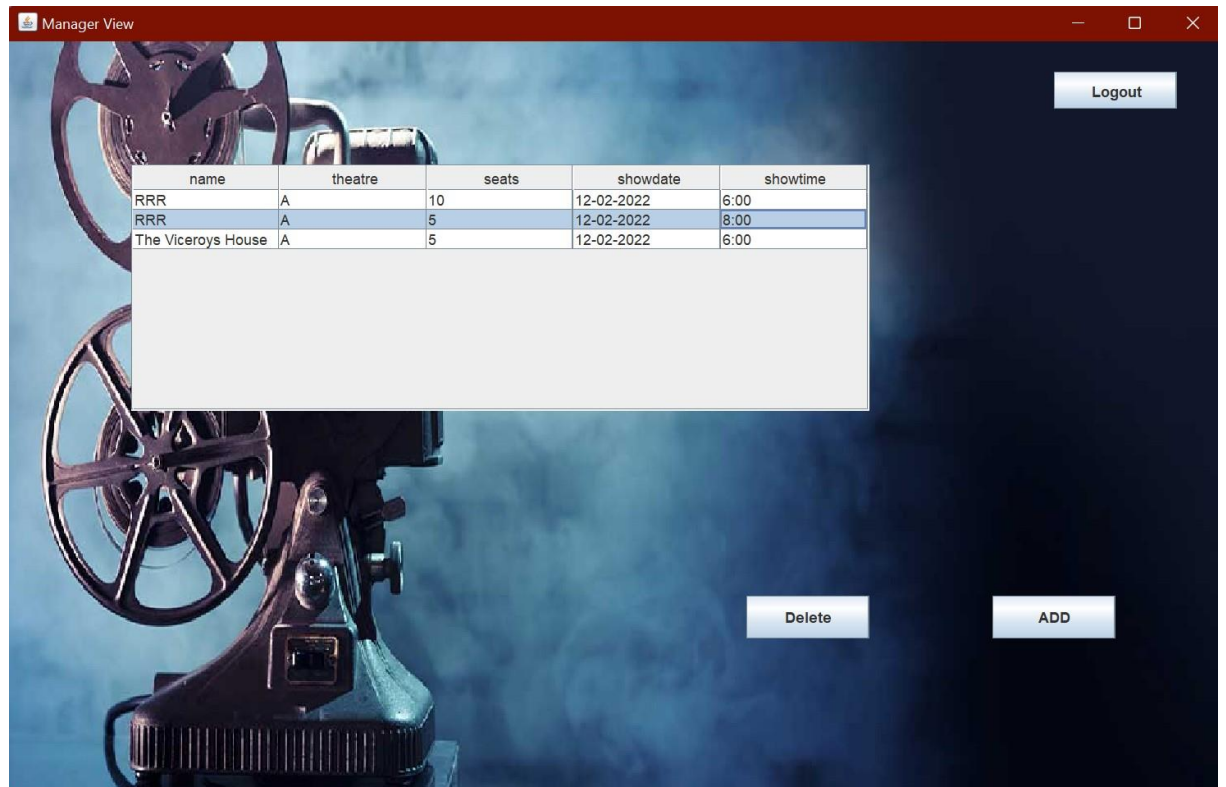
● **Review Page:**



● **Add Review Page:**



- **Manager Dashboard Page:**



- **Add Movie Page:**

The screenshot shows a web application window titled "Operations Page". The background features a close-up of a vintage movie projector. In the top right corner, there is a "Back" button. The form contains the following fields and labels:

- Movie Name:** The Kashmir Files
- Theatre:** PES University
- Seats:** 200
- About:** Special screening at PES University.
- Date:** 29-02-2024
- Time:** 22:00

At the bottom right, there is an "Add Movie" button.

