

A
PROJECT REPORT ON
ONLINE MOVIE TICKET BOOKING

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Subject: System Design Practice

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CERTIFICATE

This is to certify that the practical / term work carried out in the subject of
SYSTEM DESIGN PRACTICE and recorded in this journal is the
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With Sincere Regards,
Hetshree Parmar
Dhvani Patel
Isha Patel

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1. ABSTRACT

Today an increasing number of businesses are realizing the benefits of having their own online booking system. One such is Online Movie Ticket Booking Website which has nowadays become a convenient way of booking tickets for users. Users can see currently released movies, their availability of shows and book seats accordingly anytime. Also, such enhancements result in less workload on staff members and business keeps running smoothly. In addition to that, they can make their booking at any time of day or night, without having to worry if it's within business hours or not. An application like Cinemagic - an Online Movie Ticket Booking website is an application where users can book tickets of their favorite movies hassle free. It allows users to select showtime and seats for a particular movie in a cinema and confirm their booking by completing payment procedure.

2. INTRODUCTION

The purpose of Online Movie Ticket Booking System is to automate the existing manual system by the help of computerized equipment and full-fledged computer software, fulfilling their requirements, so their valuable data/information can be stored for a longer period with easy accessing and manipulation of the same. The required software and hardware are easily available and easy to work with. An Online Movie Ticket Booking website named “Cinemagic” that allows users to book tickets for various movies at ease. Registered users can view currently released movies. Apart from that they can select showtime and seats for a movie and confirm their booking after successfully completing the payment process. Also, the system admin that handles the whole system can add movies and approves theater admin’s requests and after approval of system admin, theater admins can add different shows with different prices for a particular movie for their cinema. It can assist the user to concentrate on their activities rather to concentrate on the record keeping. Thus, it will help organization in better utilization of resources. “Cinemagic”, an online movie ticket booking system, as described above, can lead to error free, secure, reliable and fast management system. Basically, the project describes how to manage good for performance and better services of clients.

Technologies used:

- MongoDB
- ExpressJs
- ReactJs
- NodeJs
- CSS

Tools used:

- Git
- Visual Studio Code

3. SOFTWARE REQUIREMENT SPECIFICATIONS

Users of the system:

1. User
2. System Admin
3. Theater-admin

Functional Requirements:

1. Authentication of Users

Users will be able to register themselves.

R1.1 User Registration

Description: Users will be able to sign up into the system.

Users: User, System Admin, Theater-admin

Input: User credentials

Output: Redirected to homepage

R1.2 Login

Description: User can login into the system using username/email and password.

Users: User, System Admin, Theater-admin

Input: Email id and password

Output: Successfully logged in.

2. Manage Movies

Users will be able to see the list of currently available shows of different movies and book them accordingly. Also, system admin will be able to add movies and theater-admin will be able to add showtimes for their cinemas for a particular movie.

R2.1 Display movies

Description: User will be able to see the list of movies.

Users: User, System Admin, Theater-admin

Input: User selection

Output: List of Movies

R2.2 Add Movie

Description: System admin can add a newly released movie.

User: System Admin

Input: Details of new movie to be added

Output: Successful addition of movie in database

R2.3 Add Showtime

Description: Theater-admins can add showtime of a particular movie.

User: Theater-admin

Input: Selection of movie whose showtime is to be added

Output: Addition of showtime

R2.4 View shows available

Description: Users can see the showtimes available for a particular movie.

User: User

Input: User Selection

Output: List of available showtimes is displayed

R2.5 Update Movie

Description: System admin can update the details of the existing movie.

User: System admin

Input: Details of the movie to be updated

Output: Updated details of the movie

3. Manage Bookings

Users can book tickets for a movie and display past bookings.

R3.1 Book ticket

Description: Users will be able to book the seats of a show.

Users: User

Input: Selection of number of seats to be booked for a particular showtime of a movie

Output: Redirected to payment page

R3.2 Display Past Bookings

Description: Users will be able to view their past bookings

User: Users

Input: User Selection

Output: List of all the past bookings of that user

4. Manage Cinemas

Theater-admins can request system admin for registration of their cinemas.

R4.1 Add Cinema

Description: Theater-Admin will be able to send a request to System admin for registration of their cinema

Users: Theater-admin

Input: Details of new cinema to be added

Output: Successful addition of cinema (if system admin accepts the request)

R4.2 Approve/Reject requests

Description: System Admin will be able to accept or reject the request sent by theater-admin after verifying the details.

User: System admin

Input: Request received by system admin from theater-admin

Output: Confirmed addition of cinema based on system admin's response

5. Manage Profile

Registered users will be able to update their profile.

R5. Update Profile

Description: Registered users will be able to update their profile.

User: Users

Input: Details of the fields to be updated

Output: Updated details of user

6. Manage Payment

Upon selection of seats, users will be redirected to the payment page where he/she will add payment details and confirm their booking.

R6.1 Make Payment

Description: User is required to add payment details for confirming their booking

User: User

Input: Payment details

Output: Booking confirmed message

Non-Functional Requirements:

- 1) Performance:** The website will be interactive and it may take a delay of less than 5-6 seconds to respond to users' actions.
- 2) Security:** Users' sensitive information is highly confidential.
- 3) Capacity:** The database used for storing data has enough memory space to store a high amount of data.
- 4) Compatibility:** This website is highly compatible with the Windows operating system.
- 5) Scalability:** The system will still perform as expected under high workloads too.
- 6) Usability:** The system is user-friendly and the UI is simple.

4. DATABASE DESIGN

- Use Case Diagram:

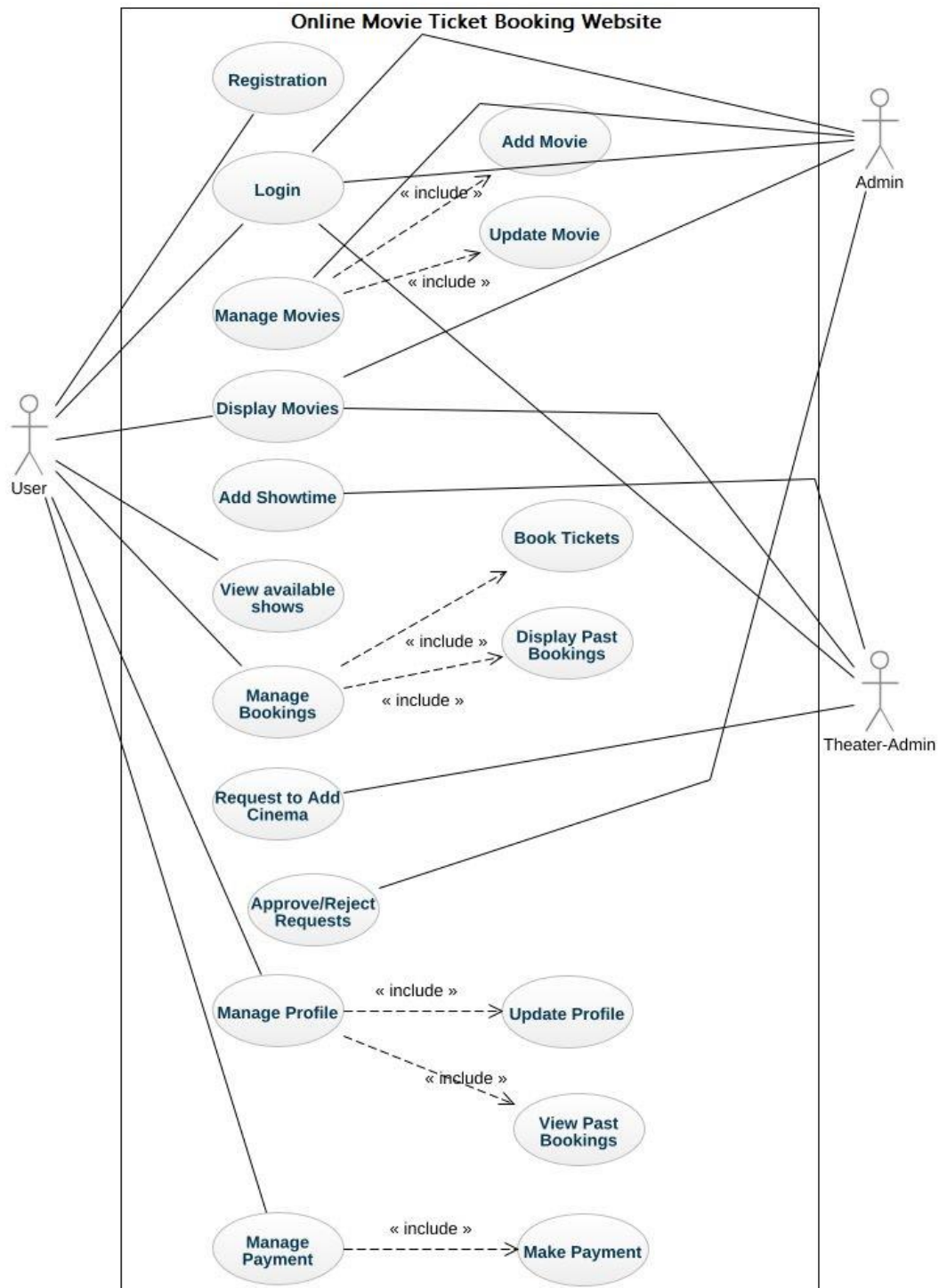


Figure 4.1 (Use Case Diagram)

- **Sequence Diagrams:**
→ **Registration:**

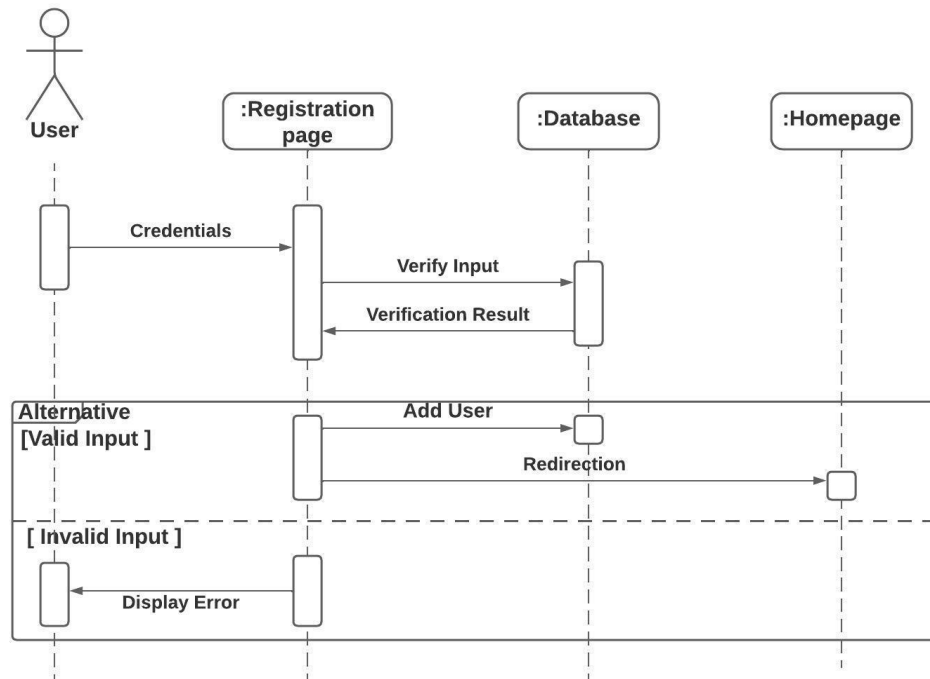


Figure 4.2 (Sequence diagram for Registration)

- **Login:**

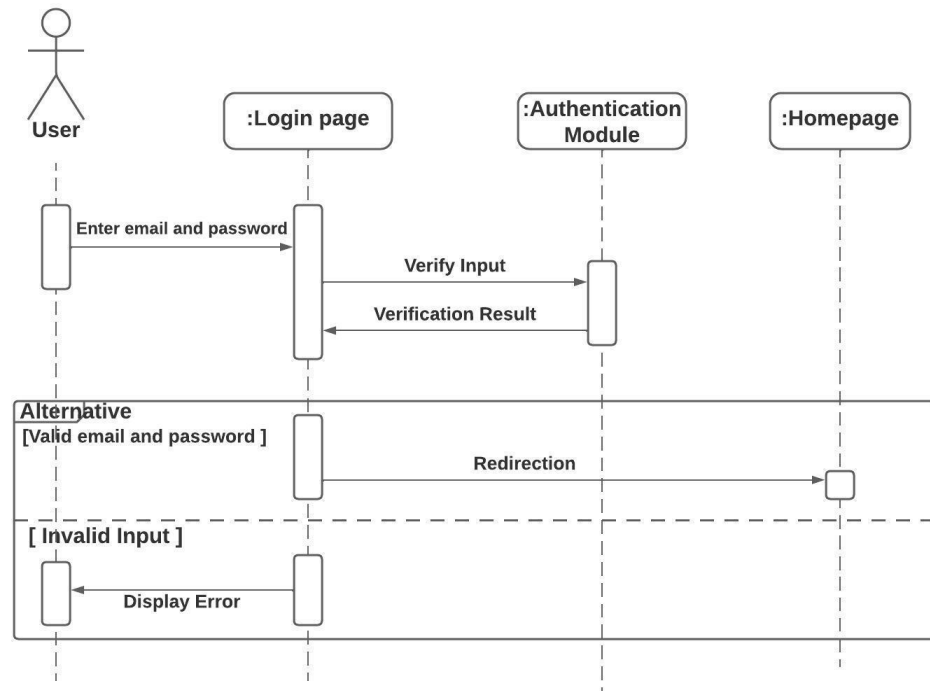


Figure 4.3 (Sequence diagram for Login)

→ **Book Ticket:**

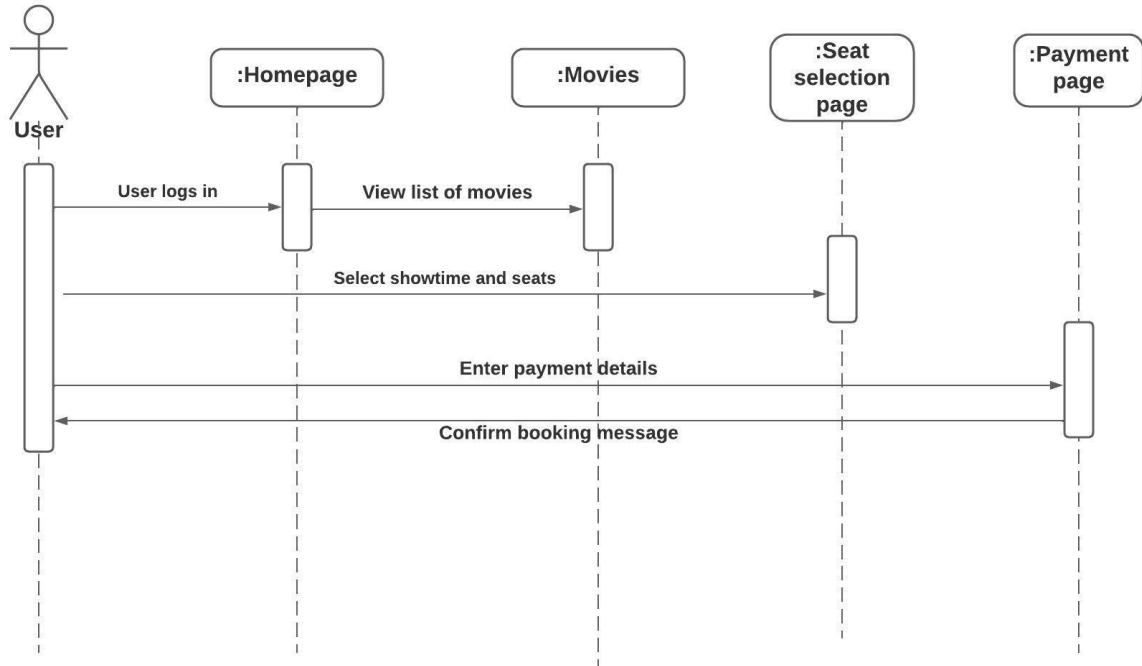


Figure 4.4 (Sequence diagram for Book Ticket)

→ **Add Movie:**

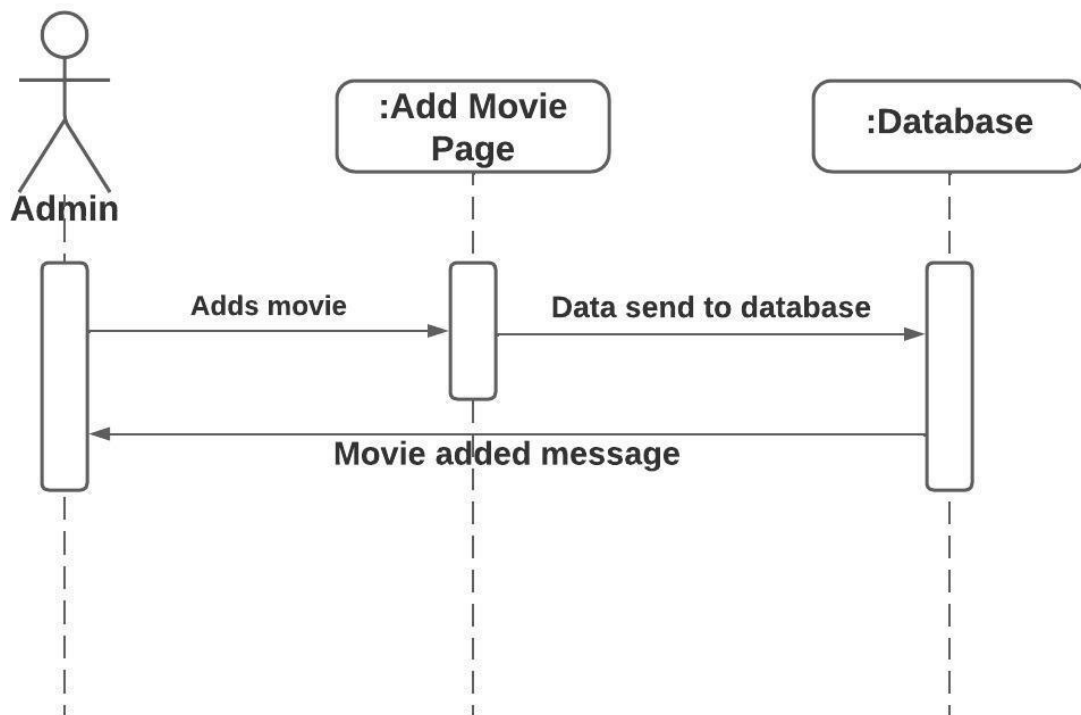


Figure 4.5 (Sequence diagram for Add Movie)

→ Add Show:

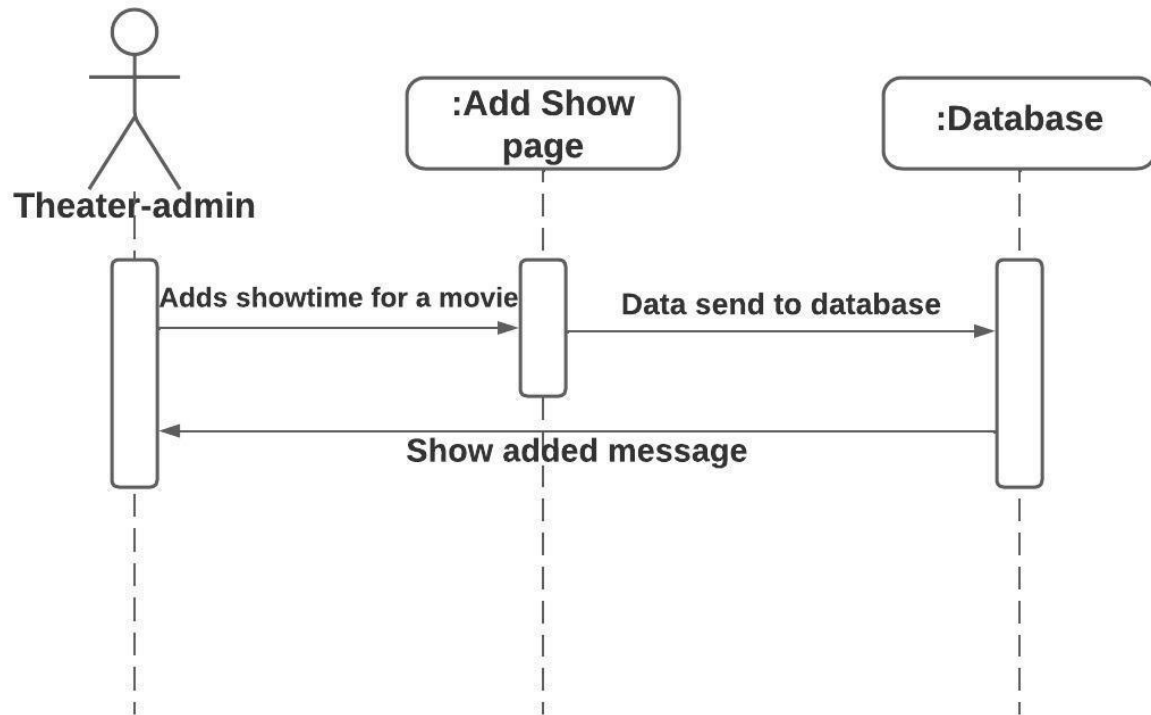


Figure 4.6 (Sequence diagram for Add Show)

- **Activity Diagram:**

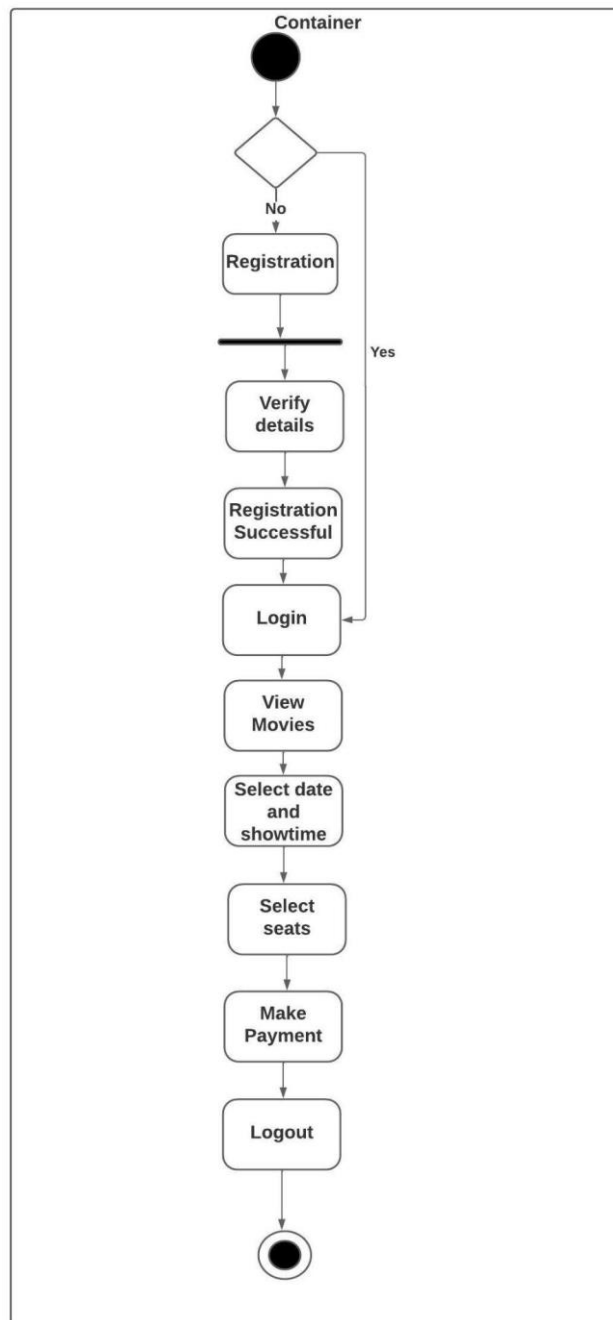


Figure 4.7 (Activity Diagram)

5. IMPLEMENTATION DETAILS

Modules:

System Admin:

1. Accept/ Decline request:

System admin can accept or decline the theater admin's request.

2. Add movie:

System admin can add movies.

Theatre-admin:

1. Request for add cinema:

The theater admin will submit a request to add the theater by giving the theater's information, including the theater's name, GST number, email address, and password.

2. Add Show:

Theater admin can add a show for movies added by the admin.

3. Show payment:

Theater admin can see all the payment details.

User:

1. Registration and Login:

The user will register by giving their email and password. Information will be kept in the database as they register. When a user requests to log in, the system verifies their information, generates a JWT auth token, and then directs them to the home page.

2. Manage profile:

Users can update their profile.

3. View movie:

Users can view all the movies and their descriptions.

4. Book Ticket:

Users can choose seats and confirm booking.

5. History:

Users can see their past bookings.

6. Request for add cinema:

The theater admin will submit a request to add the theater by giving the theater's information, including the theater's name, GST number, email address, and password.

6. TESTING

Manual testing was performed in order to find and fix the bugs in the development process.

Test Case ID	SRS ID	Test Case Objective	Expected Output	Actual Output	Status
01	R1.1	Registration with empty or invalid field	User should not be able to register and data is not stored in the database	Error message is shown	PASS
02	R1.1	Registration with valid fields	User's is successfully registered and data is stored in the database	User is redirected to login page	PASS
03	R1.2	Login with incorrect credentials	User should not be able to log into the system	Error message is shown	PASS
04	R1.2	Login with correct details	User is logged in successfully	User is redirected to homepage	PASS
05	R2.2	System Admin tries to add a new movie with invalid or empty fields	New movie's details are not stored in the database	Error message is shown	PASS
06	R2.2	System Admin add new movie with valid fields	Movies' details are stored in database	Movie added to the list displayed on the movies page	PASS

07	R2.3	Theater admin adds show time without login	Theater admin should be redirected to login page	Theater admin is redirected to login page	PASS
08	R2.3	Theater admin adds show time after login	The data is added to the database	Confirmation message is shown	PASS
09	R3.1	User tries to book a ticket without logging into the system or without choosing the seats	Booking is not accepted	Error message is shown	PASS
10	R3.1	Logged in user books a ticket with valid selection of seats	Booking should be confirmed	Booking is confirmed and a success message is shown	PASS
11	R4.1	System Admin tries to update details which are invalid	No updates in details	Error message is shown	PASS
12	R4.1	System Admin tries to update details which are valid	Updated details in database	Movie's details are updated successfully in the list	PASS
13	R4.1	Request for theater admin with empty or invalid field	Theater admin should not be able to send request	Error message is shown	PASS

			and data is not stored in the database		
14	R4.1	Request for theater admin with valid fields	Theater admin's request data stored in database and is successfully sent request to system admin	Theater admin gets confirmation message about request	PASS
15	R4.2	Theater admin tries to login when request is not approved	Theater admin should not be able to log into the system	Error message is shown	PASS
16	R4.2	Theater admin tries to login when request is approved and credentials are correct	Theater admin should be able to logged in and redirected to home page	Theater admin is redirected to home page	PASS
17	R5.1	Unregistered users do not have access to User Profile section	User should be redirected to error page	User is redirected to error page	PASS
18	R1	Logout	User should not be able to access the system	User is successfully logged out of the system	PASS

7. SCREENSHOTS

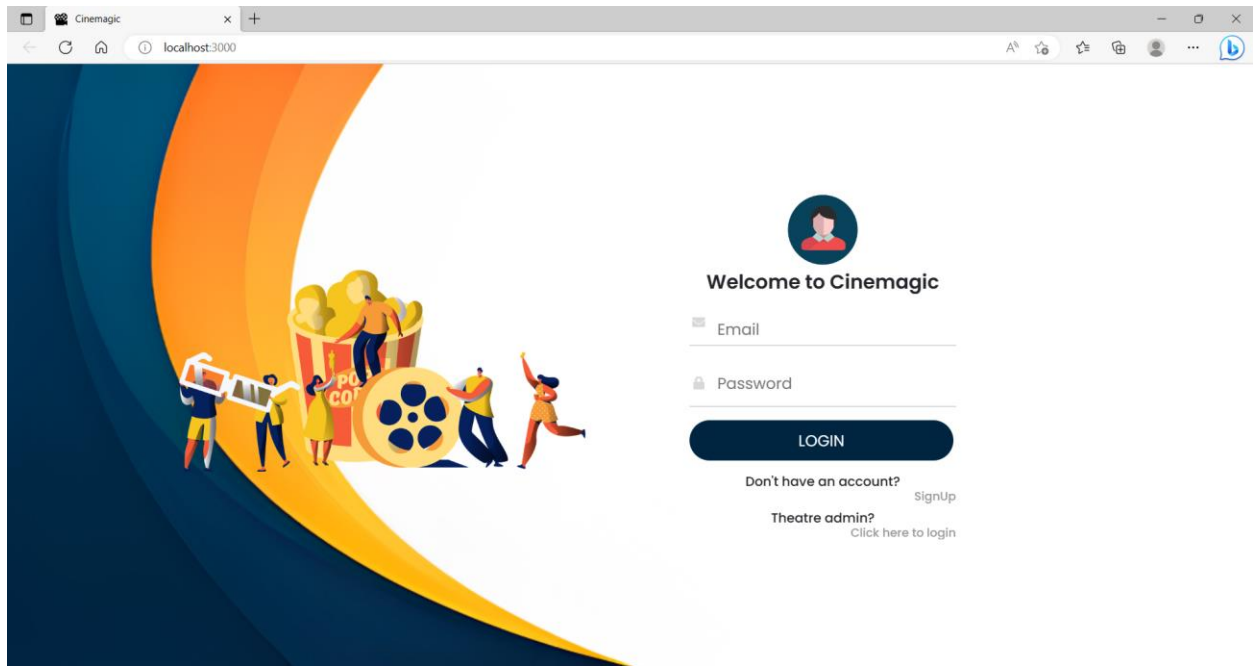


Figure 7.1 (Login for user)

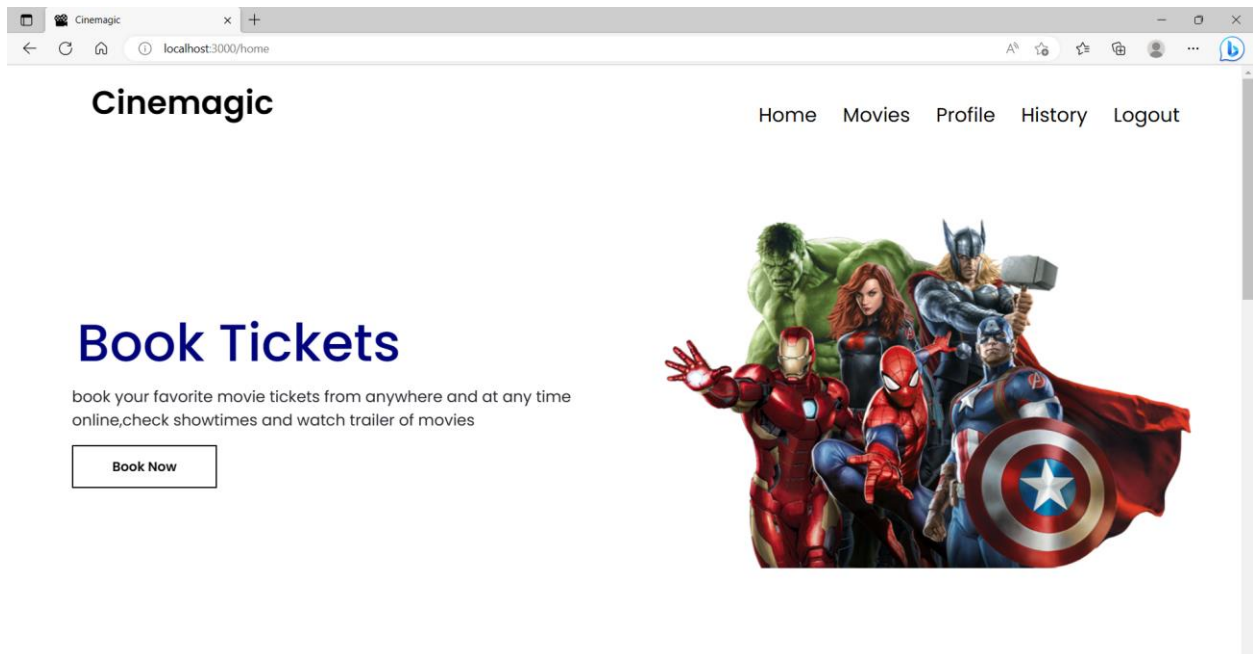


Figure 7.2 (Home page for User)

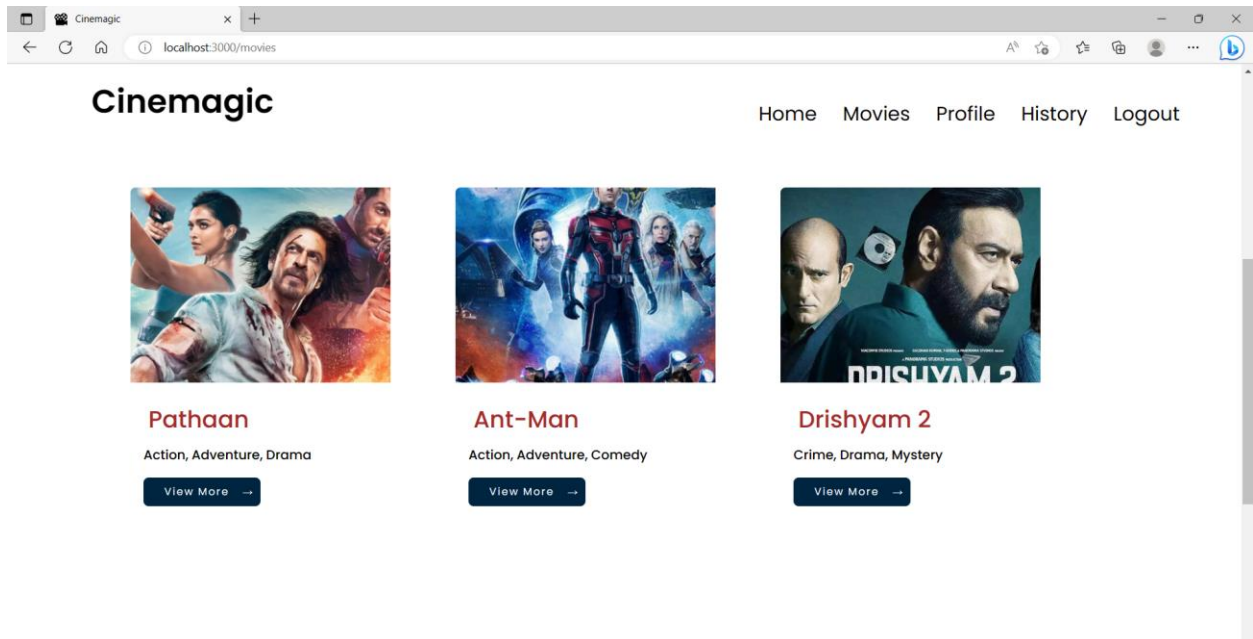


Figure 7.3 (Movies Page)

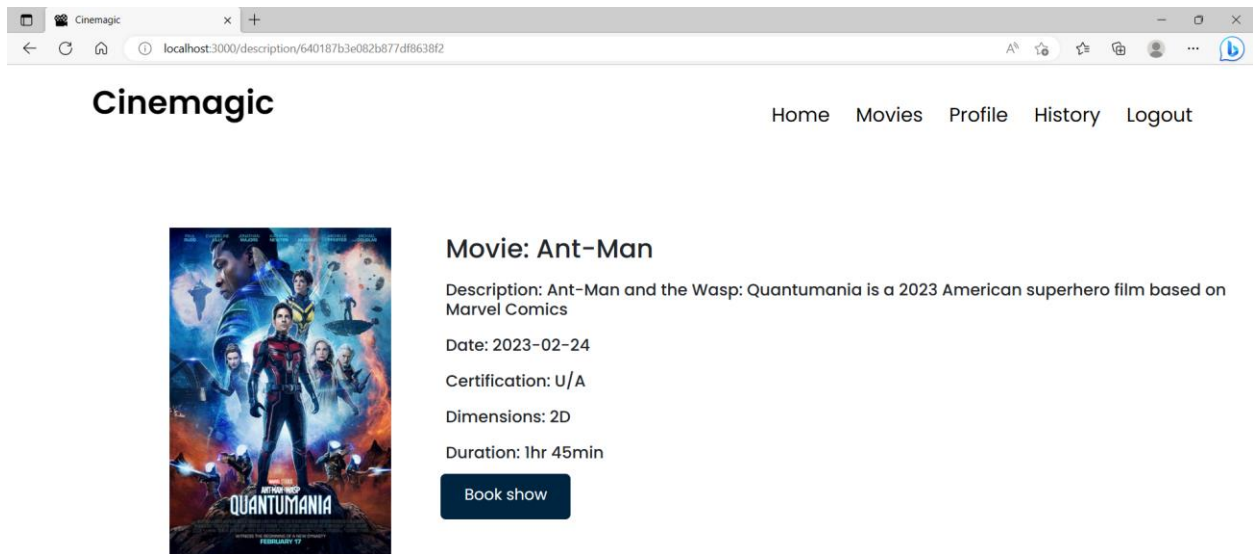


Figure 7.4 (Description for Movie)

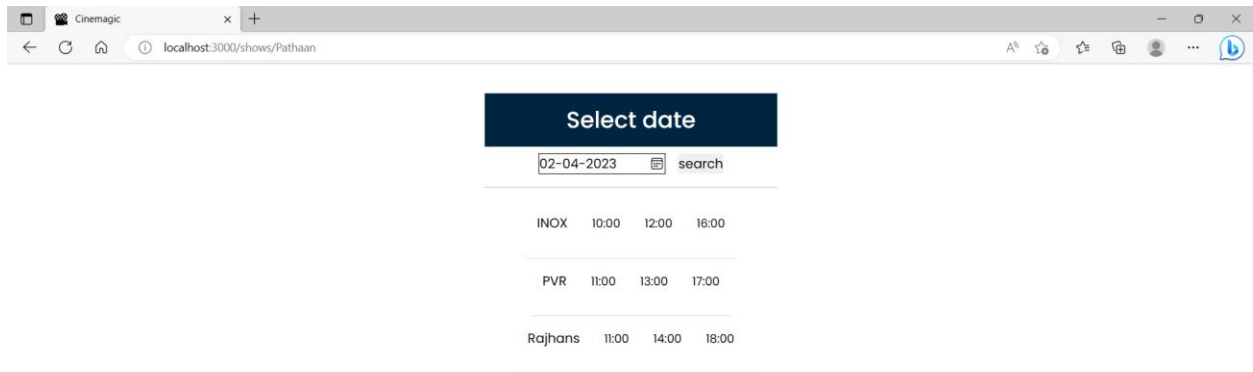


Figure 7.5 (Available shows)

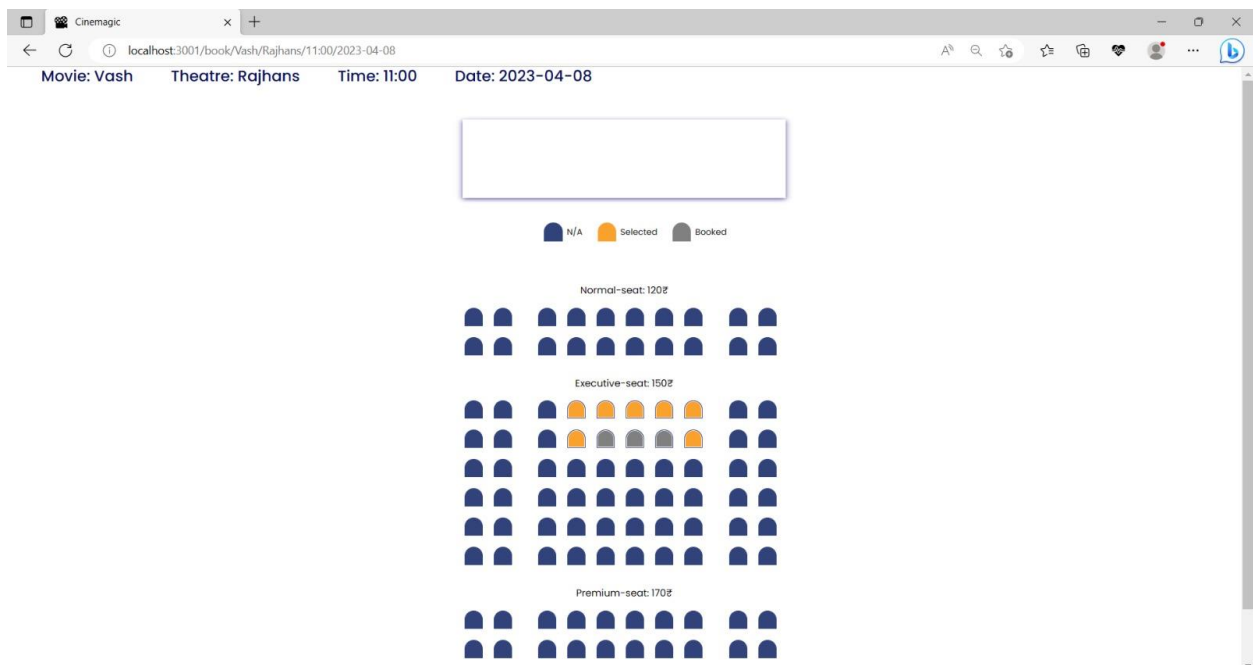


Figure 7.6 (Seat Booking)

Payment

Selected tickets:

Movie: Vash Theatre: Rajhans Seat: D8 Date: 2023-04-08 Time: 11:00 Price: 150 ₹	Movie: Vash Theatre: Rajhans Seat: D4 Date: 2023-04-08 Time: 11:00 Price: 150 ₹	Movie: Vash Theatre: Rajhans Seat: C4 Date: 2023-04-08 Time: 11:00 Price: 150 ₹	Movie: Vash Theatre: Rajhans Seat: C5 Date: 2023-04-08 Time: 11:00 Price: 150 ₹
Movie: Vash Theatre: Rajhans Seat: C6 Date: 2023-04-08 Time: 11:00 Price: 150 ₹	Movie: Vash Theatre: Rajhans Seat: C7 Date: 2023-04-08 Time: 11:00 Price: 150 ₹	Movie: Vash Theatre: Rajhans Seat: C8 Date: 2023-04-08 Time: 11:00 Price: 150 ₹	

Sub-total: 1050 ₹
Booking-fee: 50 ₹
Final amount: 1100 ₹

Pay **Cancel**

Figure 7.7 (Bill)

BILL

Full name
Enter name

Email
Enter email

City
Enter City

State Choose State..

Zip code Zip code

PAYMENT

Accepted Card
VISA

Card number
Enter card number

Exp month
Enter Month

Exp year Choose Year..

CVV CVV

Pay **Cancel**

Figure 7.8 (Payment)

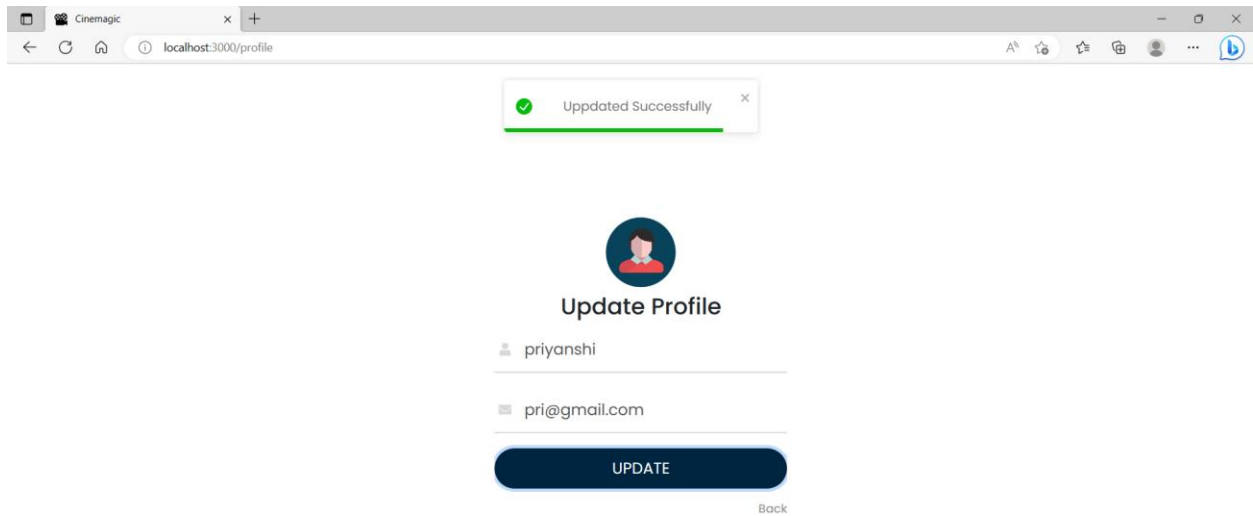


Figure 7.9 (Update Profile)

Past bookings

Movie Name	Thaetre Name	Show Time	Booking date	Show date	seat number	Total Price
Ant-Man	INOX	11:00	2023-03-29	2023-03-30	B7 H7 J8	450
Ant-Man	Time Cinema	13:00	2023-03-29	2023-03-30	G6 G7	290

Back

Figure 7.10 (Past Bookings)

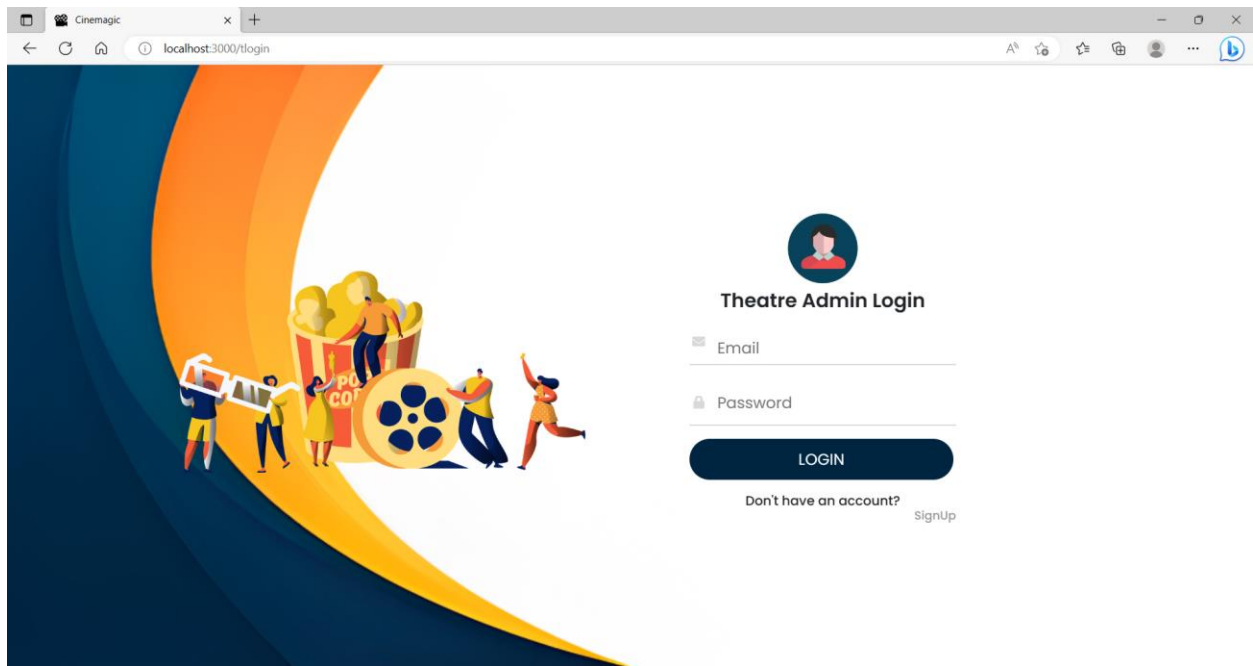


Figure 7.11 (Theatre Admin Login)

A screenshot of a web browser showing the 'Add Show' page. The browser's address bar displays 'localhost:3000/addShow'. The page has a title 'Add Show' and a form with the following elements: a 'Select movie' dropdown menu, a 'Date' input field with a placeholder 'dd-mm-yyyy' and a calendar icon, a 'Timing' input field with a placeholder '--:--' and a clock icon, and three text input fields labeled 'Normal Price', 'Executive Price', and 'premium Price'. At the bottom of the form is a 'Submit' button.

Figure 7.12 (Add Show)

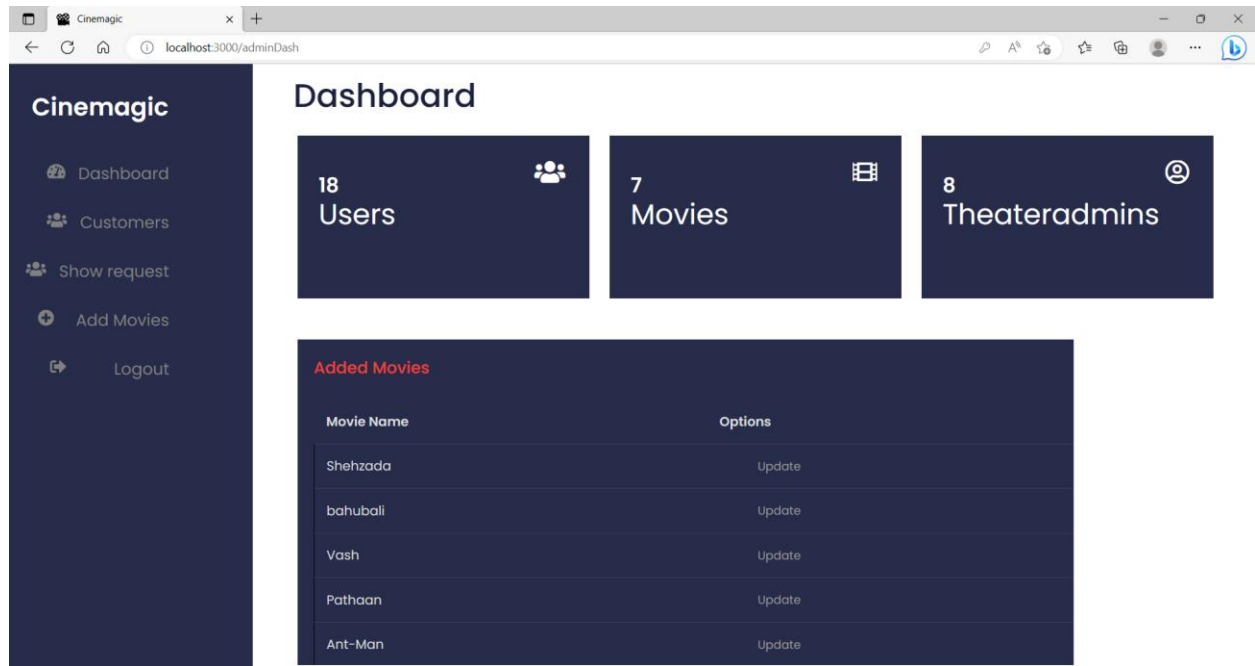


Figure 7.13 (System Admin Dash Board)

8. CONCLUSION

The functionalities are implemented in the system after understanding all the system modules according to the requirements. Functionalities that are successfully implemented in the system are User Registration, Login, Logout, Add Movie for system admin, View movies, book ticket, Add shows for theatre admin, Past bookings for users, Update profile for users. After the implementation and coding of the system, comprehensive testing was performed on the system to determine the errors and possible flaws in the system.

9. LIMITATIONS AND FUTURE EXTENSIONS

➤ **Limitations:**

- One of the limitations of the system is that the seat arrangement is the same in all the theaters.
- Also, users are not able to add reviews of the movies.
- Payment Gateway is not yet implemented.
- Forget password functionality is not implemented

➤ **Future Extensions:**

- Add Payment Gateway
- Add functionality for forgot Password
- Reviews section can be added
- Discount Coupons can be given to the users
- Filter based on location of the user
- Movie recommendation
- Some games can be added on confirmed booking

10. BIBLIOGRAPHY

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