MOVIE TICKET BOOKING SYSTEM

Project submitted to the

SRM University – AP, Andhra Pradesh

for the course project of Software Engineering

CSE305L Software Engineering Lab

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May, 2023

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Abstract

The Movie Ticket Booking System encompasses a user-friendly web-based interface, allowing users to browse available movies, select showtimes, and choose their preferred seats. It integrates with a comprehensive database that stores information on movies, theaters, showtimes, and seat availability.

The system offers several key features to enhance the user experience. Firstly, it provides real-time updates on seat availability, allowing users to select their preferred seats based on live information. Additionally, the system incorporates secure payment gateways, ensuring a safe and reliable transaction process for ticket purchases. Additionally, it gives consumers the choice to reserve tickets in advance, enabling them to schedule their movie outings well in advance. Furthermore, the system includes features for personalized user profiles, enabling users to save their preferences and view booking history.

The Movie Ticket Booking System gives theatre managers a thorough backend interface. The administration of the theatre can use this interface to modify the schedule of films, set up the showtimes, control seat allocation, and keep track of ticket sales. Additionally, it produces in-depth reports and analytics, helping administrators make data-driven decisions that optimize theatre operations.

Overall, the Movie Ticket Booking System gives people a simpler way to purchase movie tickets while providing theatre managers with effective management capabilities. In the field of movie ticket bookings, the approach improves comfort, accessibility, and general customer pleasure by utilizing technology.

1. Introduction

The movie ticket booking system is a cutting-edge software solution created to speed up and simplify the reservation and purchase of movie tickets. Viewers can use this system to browse movie lists, choose showtimes, select seats, and complete secure online transactions from the comfort of their homes or while on the road in today's digital world where smartphones have become the standard.

The days of waiting in enormous lines at movie theatres or using ticket brokers are long gone. Users have the opportunity to explore movie alternatives, monitor seat availability in real time, and make decisions about their movie experience thanks to the movie ticket booking system. The technology offers up-to-date information on movie schedules, showtimes, and seat availability by smoothly integrating with theatre databases.

Even those users who are technologically untrained can easily navigate through the booking procedure because of the system's user-friendly layout. During the ticket booking process, users can personalize their movie preferences, obtain personalized suggestions, and use discounts or promotional codes.

The online approach for purchasing movie tickets offers advantages to both viewers and theatre managers and administrators. Through a detailed backend interface, theatre owners can easily manage movie lists, set up showtimes, keep track of seat availability, and handle ticket sales. In order to improve the overall watching movies experience, they can use this to optimize theatre operations, analyze performance statistics, and make smart decisions.

In conclusion, this movie ticket booking system offers users convenience, efficiency, and an improved user experience while changing the way movie tickets are requested and bought. Viewers can explore films, choose their chosen showtimes and seats, and finish safe purchases all from the comfort of their devices.

2. Literature Review

The literature review for this project gives a brief summary of the current state of work in this field.

2.1 User Experience:

The user experience (UX) aspects of movie ticket booking systems are the subject of several research. They look at elements influencing user satisfaction like seat selection, payment process, and website design. In order to improve the overall user experience, these studies highlight the value of offering a fluid and straightforward user interface, personalized recommendations, and real-time updates on ticket availability.

2.2 Technology and Architecture:

System architectures, databases, and integration with external services are only a few of the technological aspects of movie ticket booking systems that have been investigated by researchers. They go over how to link with payment gateways, movie databases, and theatre management systems using web-based platforms, cloud computing, and APIs. Studies also illustrate how data analytics and machine learning algorithms can be used to forecast customer preferences and maximize ticket sales.

2.3 Business Models and Revenue Generation:

Various business models used by systems for purchasing movie tickets have been studied by researchers. They talk about several methods of generating income, such as advertising, agreements with movie theatres and production companies, and the sale of tickets online. Studies also examine how discounts, promotions, and dynamic pricing models affect user behavior and profitability.

2.4 Emerging Trends and Innovations:

The literature emphasizes new developments and trends in movie ticket-booking methods. These include the use of blockchain for safe transactions and ticket authentication.

2.5 Challenges and Future Directions:

Researchers list several issues and suggest the next strategies for the movie ticket booking system. Scalability of the system, data security, privacy, and providing accessibility for those with problems are some of these issues. Adopting mobile-first techniques, enhancing personalized suggestions with artificial intelligence, and investigating the potential of modern technologies like voice assistants and chatbots are some of the routes that future research will go.

3. Discussion

The desire to develop a system for booking tickets to movies seeks to improve the user interface and convenience for consumers. Users may order tickets with ease because of the system's user-friendly interface, real-time seat availability updates, and personalized recommendations.

The introduction of the online system for purchasing movie tickets results in increased operational effectiveness for both users and theatre managers. Theatre managers can improve ticket sales, control seat availability, and increase revenue while users get convenience and time savings. The project increases the opportunity for theatres to generate revenue by simplifying business procedures and integrating safe payment systems.

To guarantee the stability and scalability of the movie ticket booking system, the project takes into account a number of technological factors. Choosing appropriate programming languages, frameworks, and database management systems are a few of them. We should also make sure that our application is compatible with a variety of operating systems and web browsers. The project's technology decisions were developed with a robust and dependable system in mind. They are in accordance with industry best practices.

This project acknowledges the need of putting in place robust security measures to safeguard user information and guarantee secure online transactions. The movie ticket booking system project successfully achieves its main goals, although there is room for improvement going forward.

4. System Requirements

User Interface:

Front-end Software: HTML, CSS, JavaScript

Back-end software: PHP

Database Management System: MySQL

Server: XAMPP

Hardware Interfaces:

Windows OS

Software Interfaces:

Software used	**Description**
Operating system	We have chosen Windows operating system because of its user friendly nature and best network support.
Database	In our project we use a database to store the admin login details, customer login details, Booking details, Ticket status, payment status.

Communication Interfaces:

Movie ticket booking website **https://in.bookmyshow.com/explore/movies** (book my show) is used in this project to find information about currently playing movies, movie ratings and reviews, forthcoming movies, movie release dates, and other movies-related information.

5. Proposed Scheme

Coming to our proposed scheme, as we mentioned that we made a movie ticket booking system, we named our website "TicketTron". The main purpose of this web application is to provide an effective user experience and get their task done without any interruption.

Firstly, we created a Register page, where the user can enter his details if he further wants to proceed with accessing our website. Once, he's done filling out the registration form, the details that he has entered will get stored in the database that we created in SQL. After that, the User must log in to proceed further and now if the details entered by the user are matching with the information that we have in our database, the user logged into our application successfully. And if it doesn't match then the error message will be shown so that he can re-enter the details.

After logging in, The user will be on the home page, where he can select the movies of his wish in order to book tickets. Here, we provided a beautiful and attractive outlier design. As we mentioned that there are multiple movies that we mentioned, we kept them as an icon with their cover picture, and when the user clicks on one, he will be re-directed to the details page of that particular movie. Here, we mention the brief plot of the movie and the cast of the movie with some attractive styling designed by us.

Below the details page of each movie, we gave a button for the user to book tickets, once he clicks on it, he will be re-directed to a seat booking page. Here he can select the theater, date, and show time for the movie he's willing to watch. And we provided seats along with their respective numbers, so the user can select the seats of his wish and based on the number of seats he selected the cost automatically gets updated on the page which is shown to us. Each theater has its own ticket cost.

After he's done selecting all these that we've mentioned, he can continue with his payment by clicking on the payment icon. Once he does that, he will be redirected to a payment page where we ask the user about his card details to fill up.

For this, we came up with a good approach. We all know that bank information is stored in a complex database. So for our project, we created a table in our database that consists of all the bank information (owner name, CVV, card number, expiry month, and year). We inserted some values of our own into the database. So now when the user enters the correct details in the payment form and if they are matching with the information that we've inserted in the database, then we redirect the user to another page showing that the transaction is successful. Otherwise, if any information typed by the user is not matching with the information stored in the

database, then the user will be redirected to a page showing that the transaction is not successful.

If the user lands on the transaction successful page he can be redirected back to the main page since his transaction is done. And if he lands on the transaction unsuccessful page, he will be redirected to the payment page to retry his payment.

After the transaction is complete, he stores the username, email, movie name, theater name, date, showtime, seat numbers, and the amount paid into our database. This makes it clear to the administrator that indeed the tickets are booked if any conflict occurs between the user and the administrator.

Roles:

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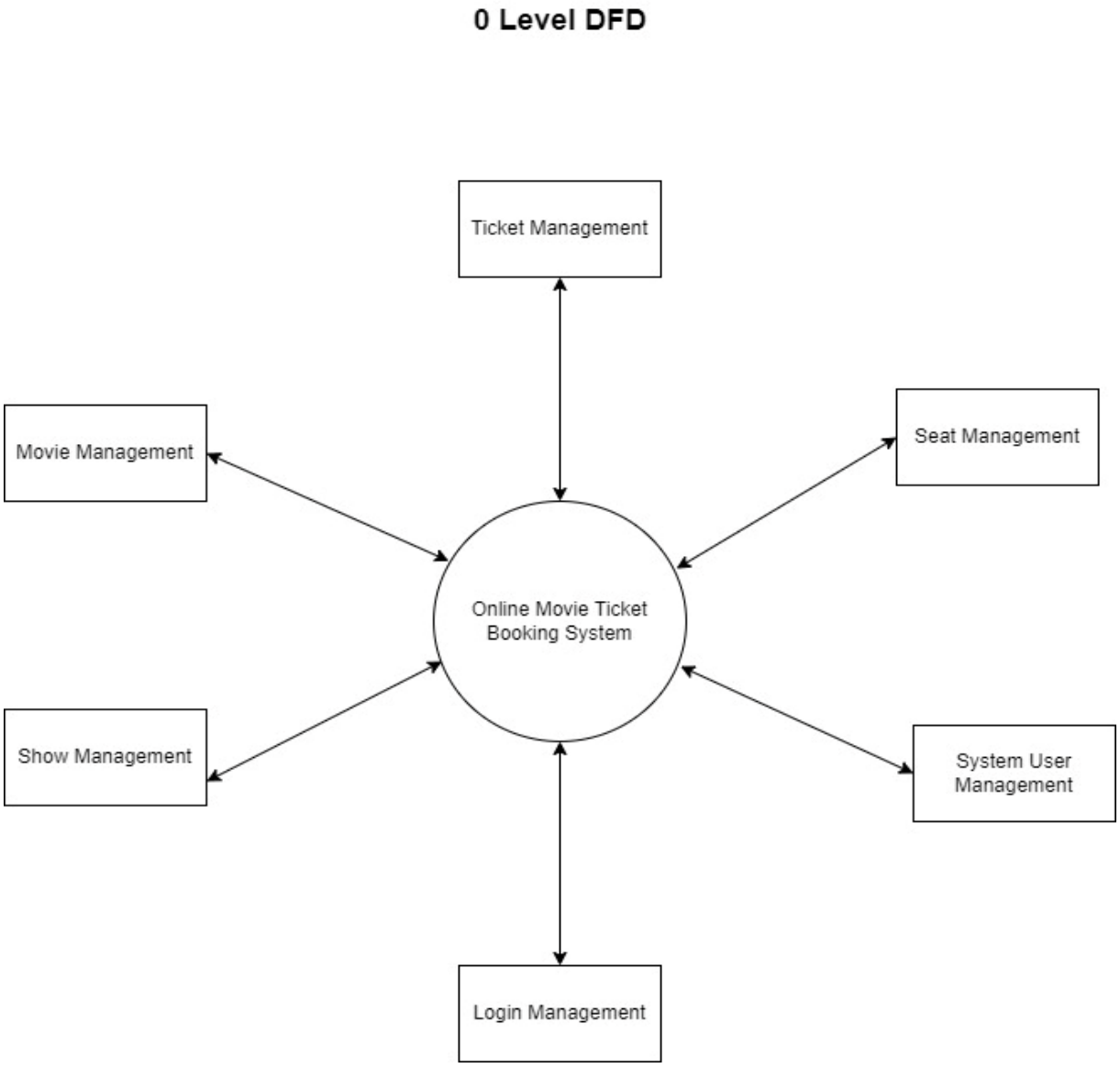
Chandramouli Malladi (AP20110010541): Backend Developer and Documentation

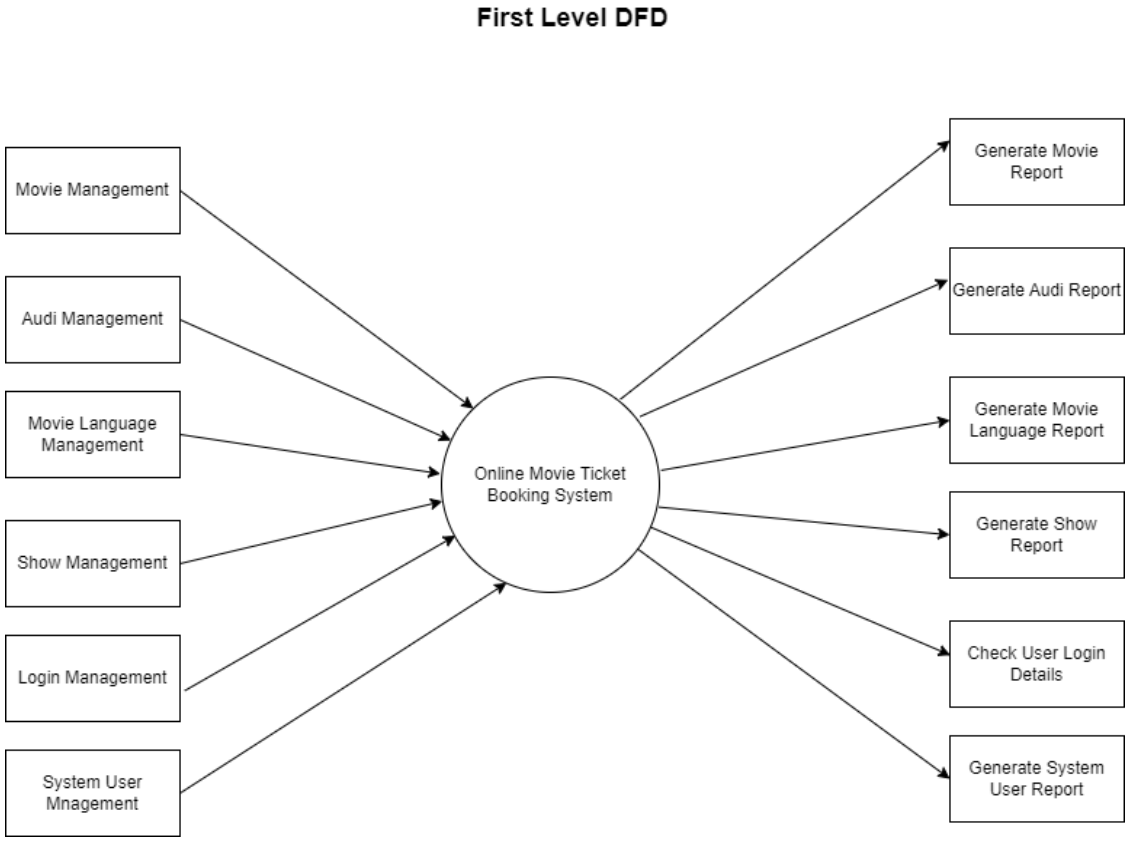
Manogna Marneni (AP20110010542): Backend Developer and Documentation

5.1 DFD Diagrams:

5.1.1 Level-0 DFD:



5.1.2 Level-1 DFD:



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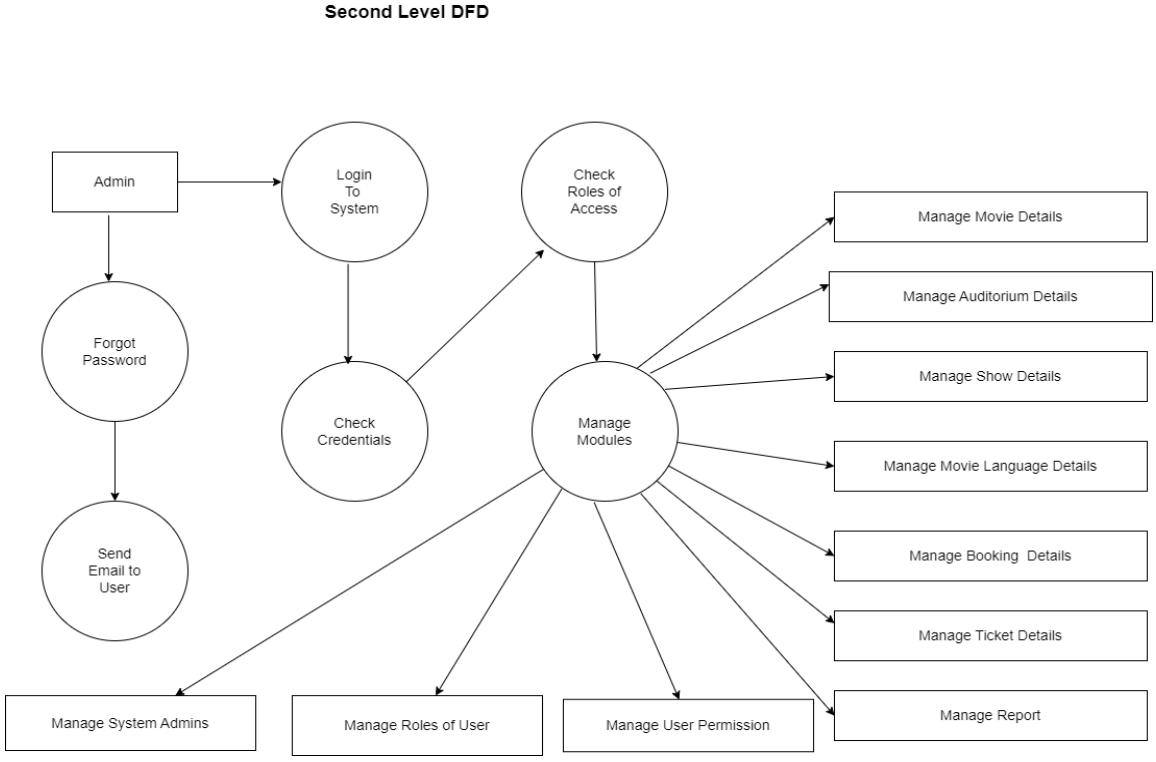
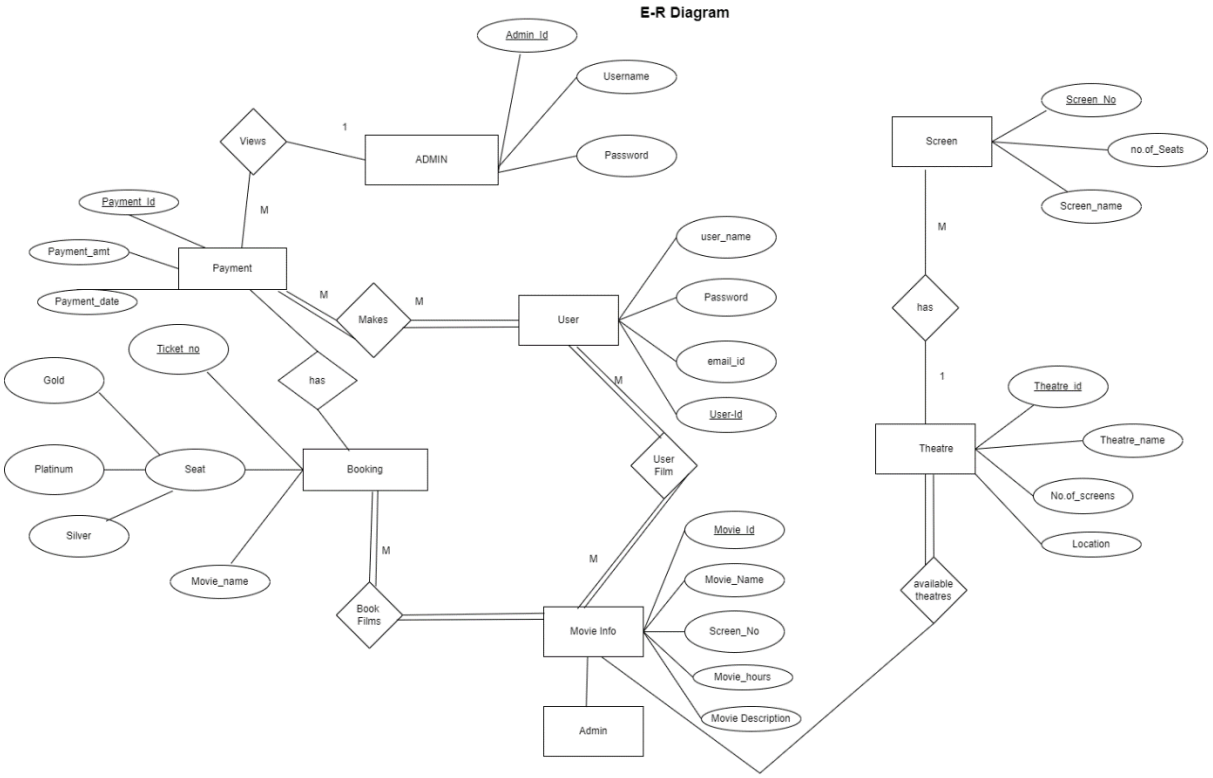
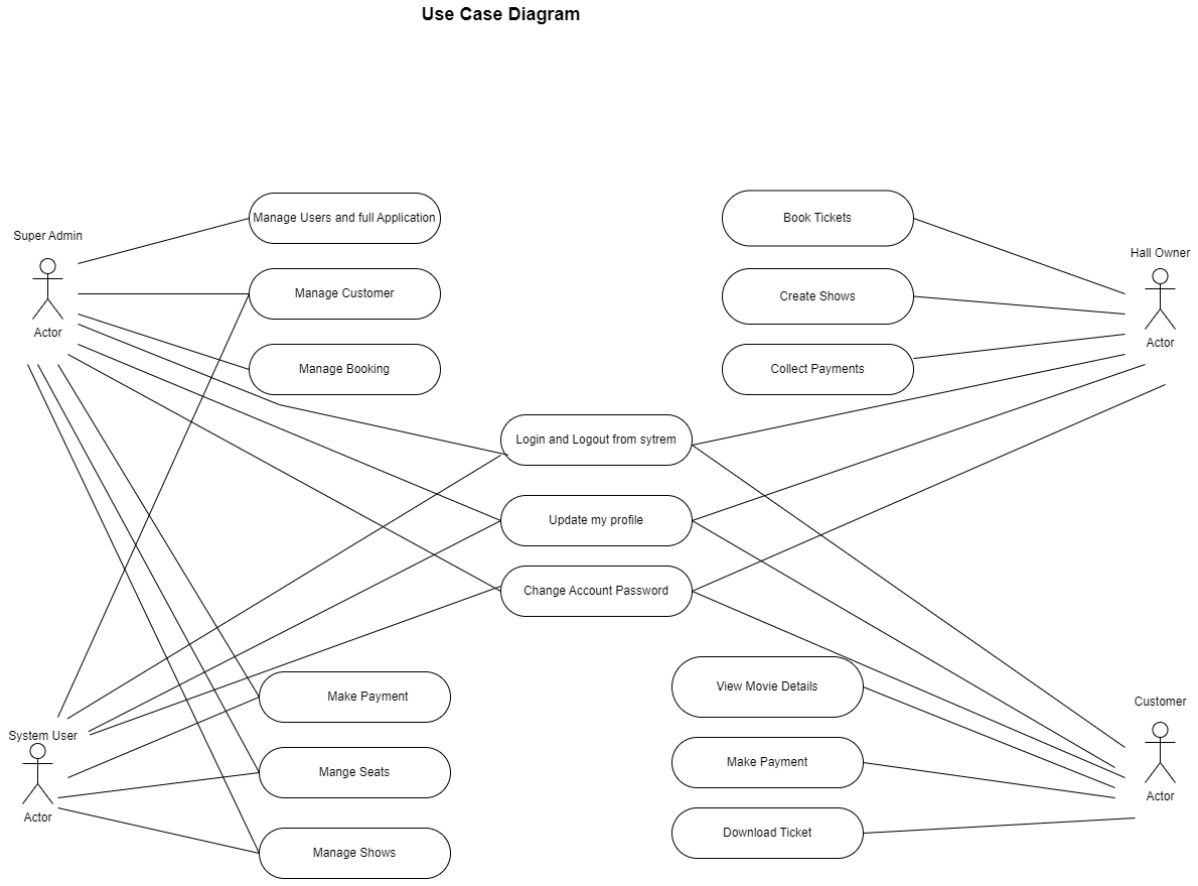


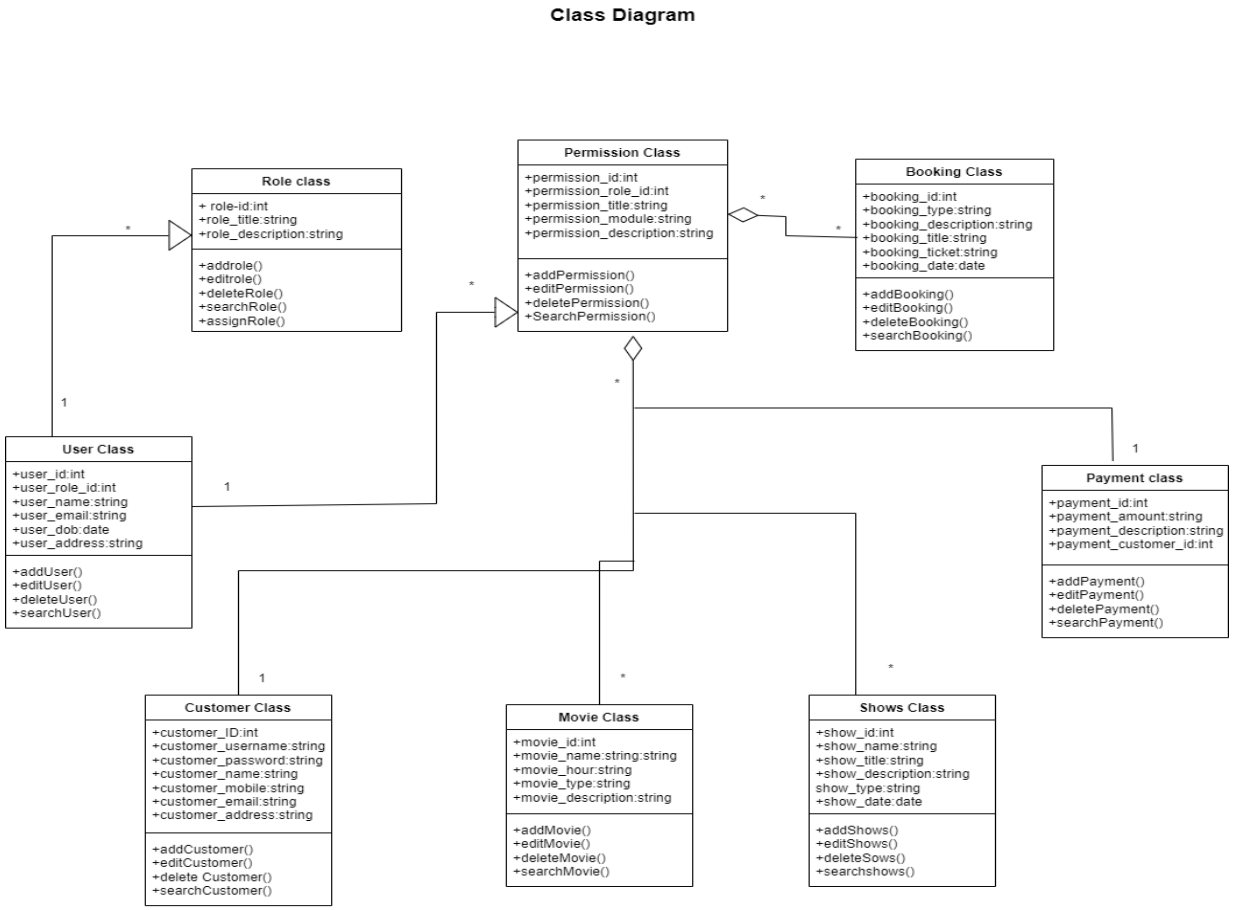
5.2 ER-Diagram:



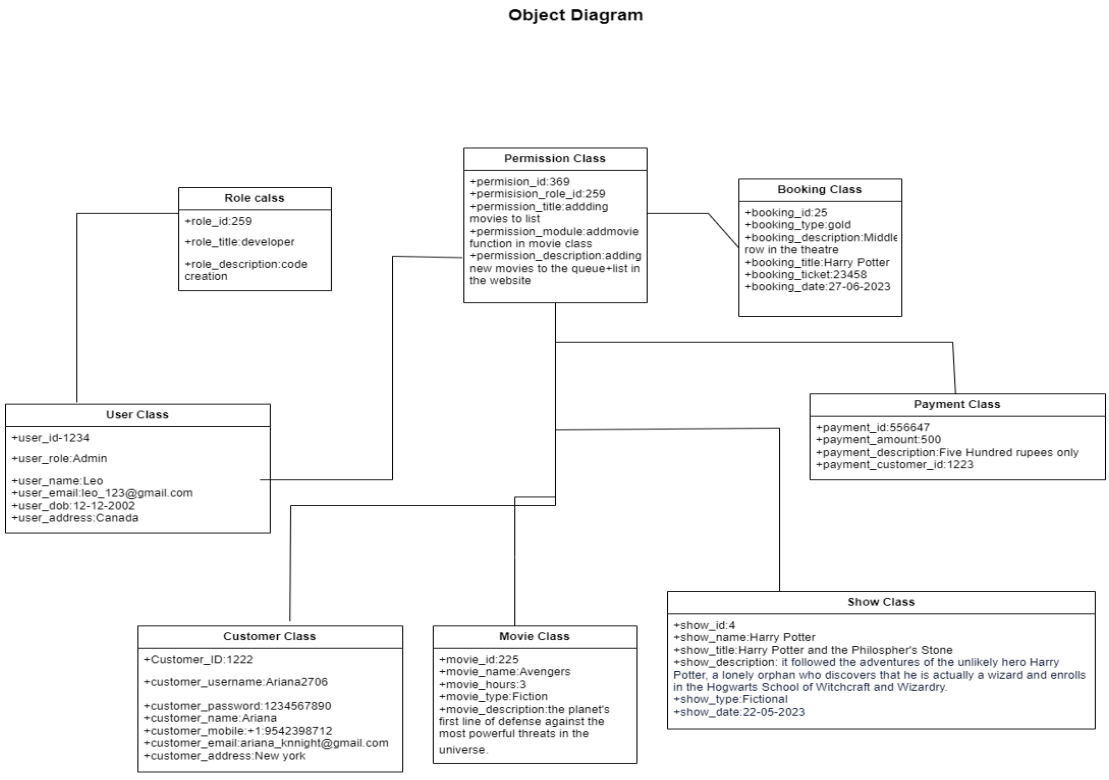
5.3 Use Case Diagram:



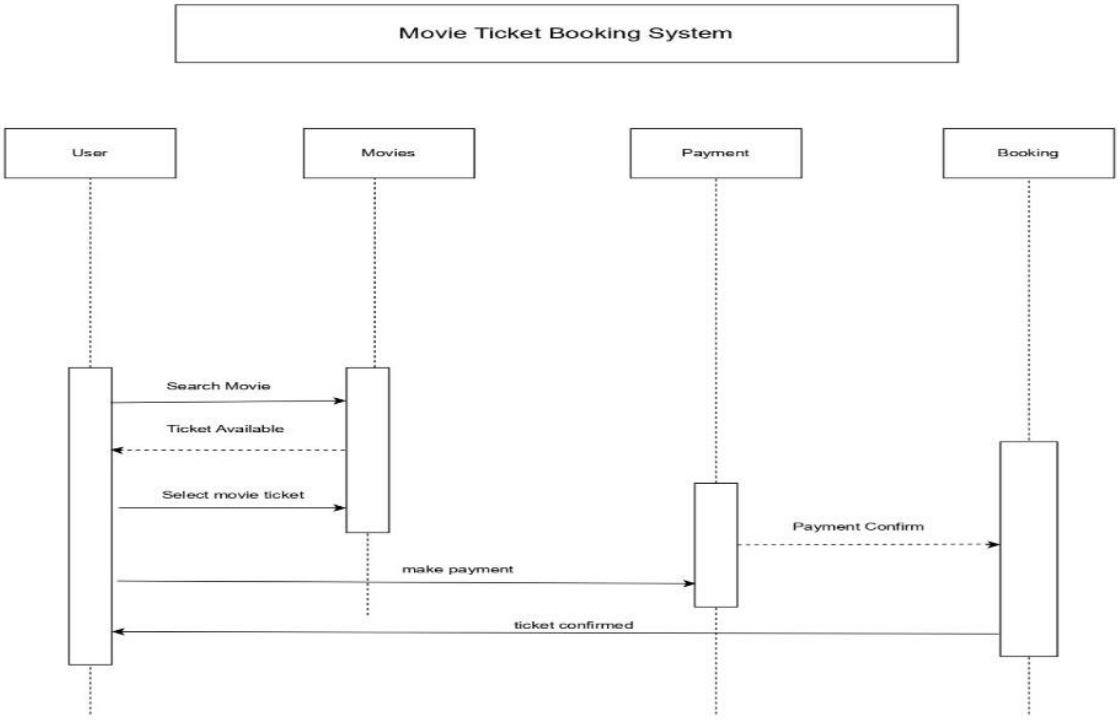
5.4 Class Diagram:



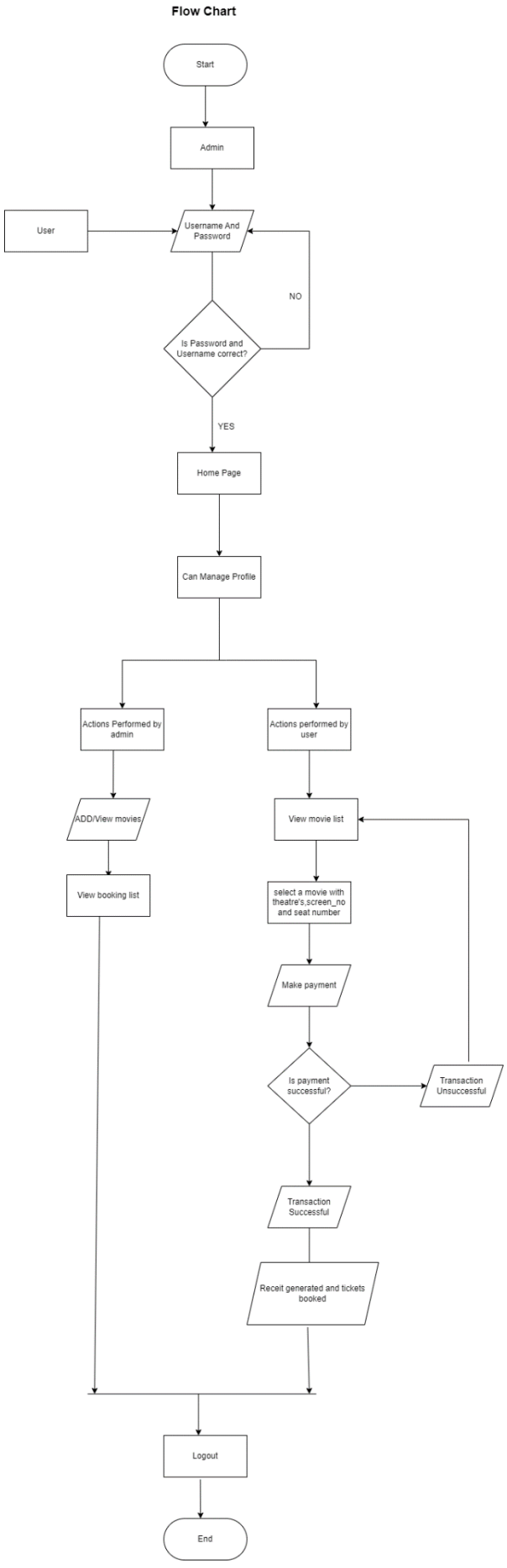
5.5 Object Diagram:



5.6 Sequence Diagram:



5.7 Activity Diagram:



6. Results/Screenshots

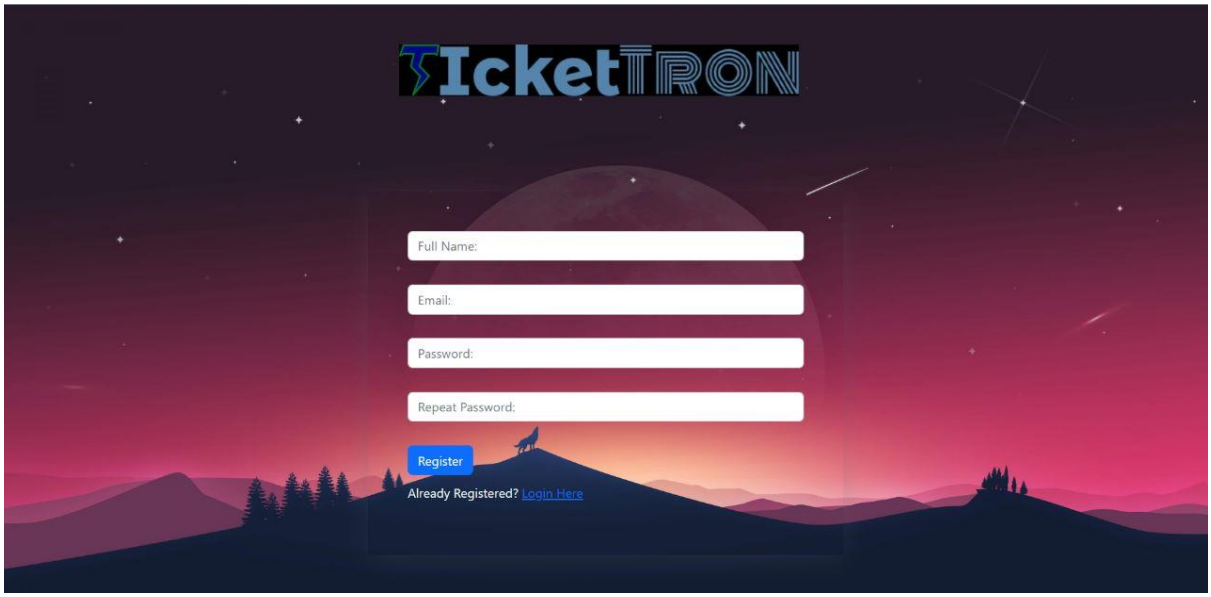


Figure 1. Register page

Figure 2. Login page

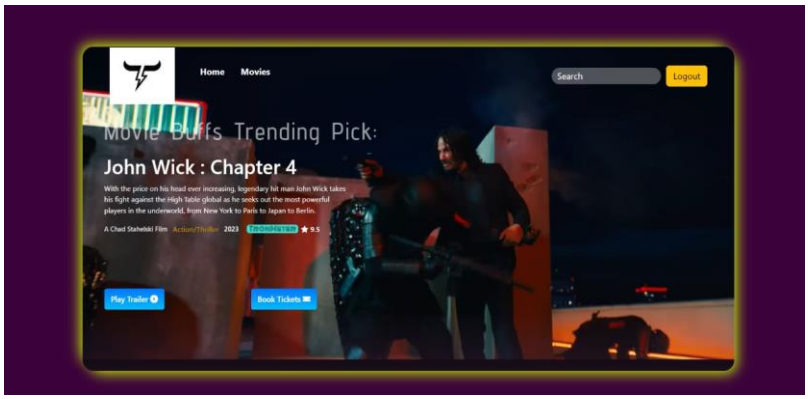


Figure 3. Home page

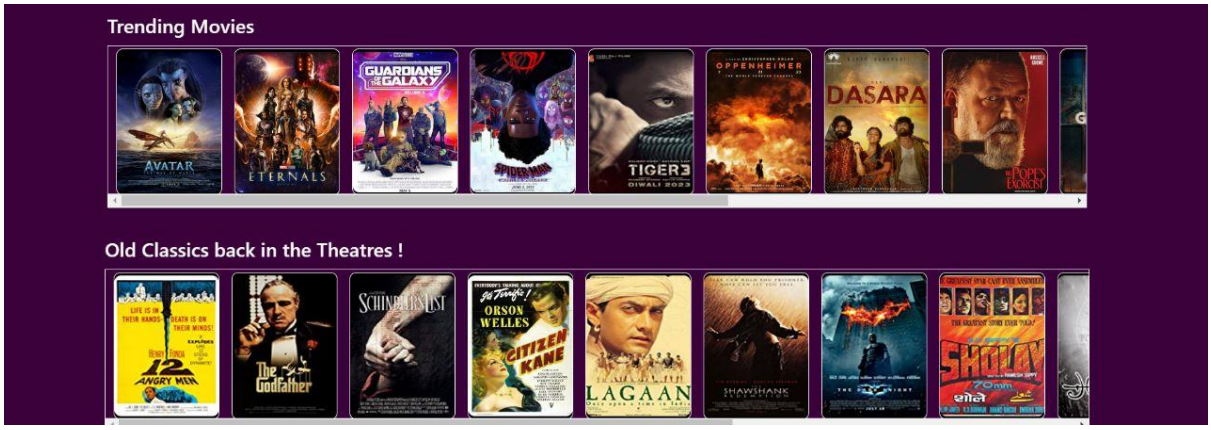


Figure 4. Home page

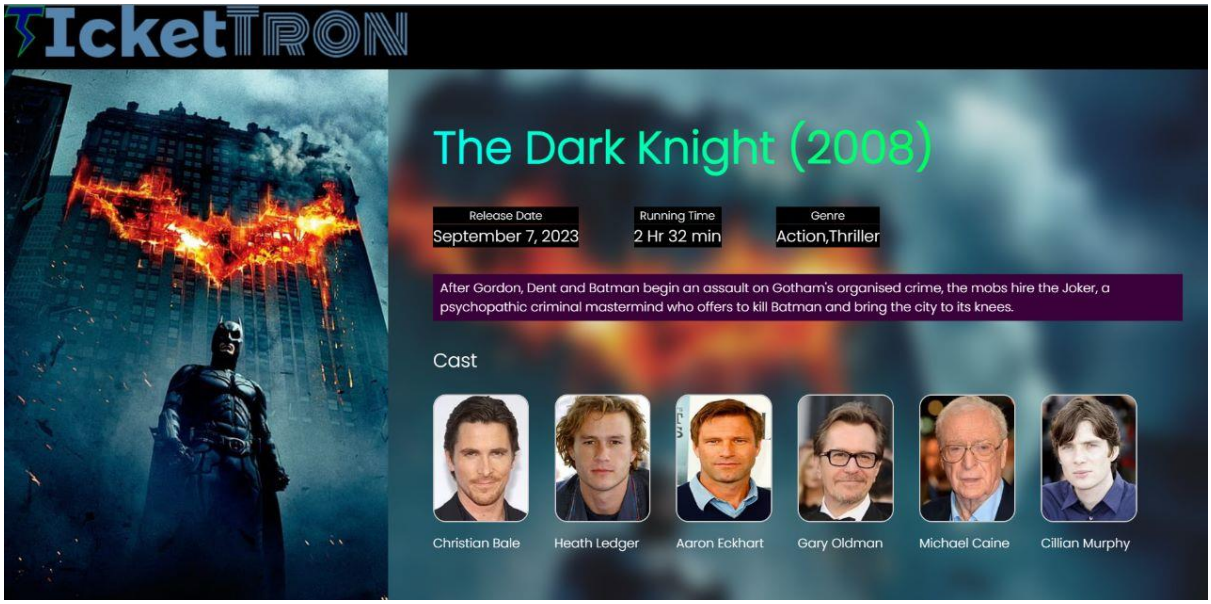


Figure 5. Webpage with specific movie information

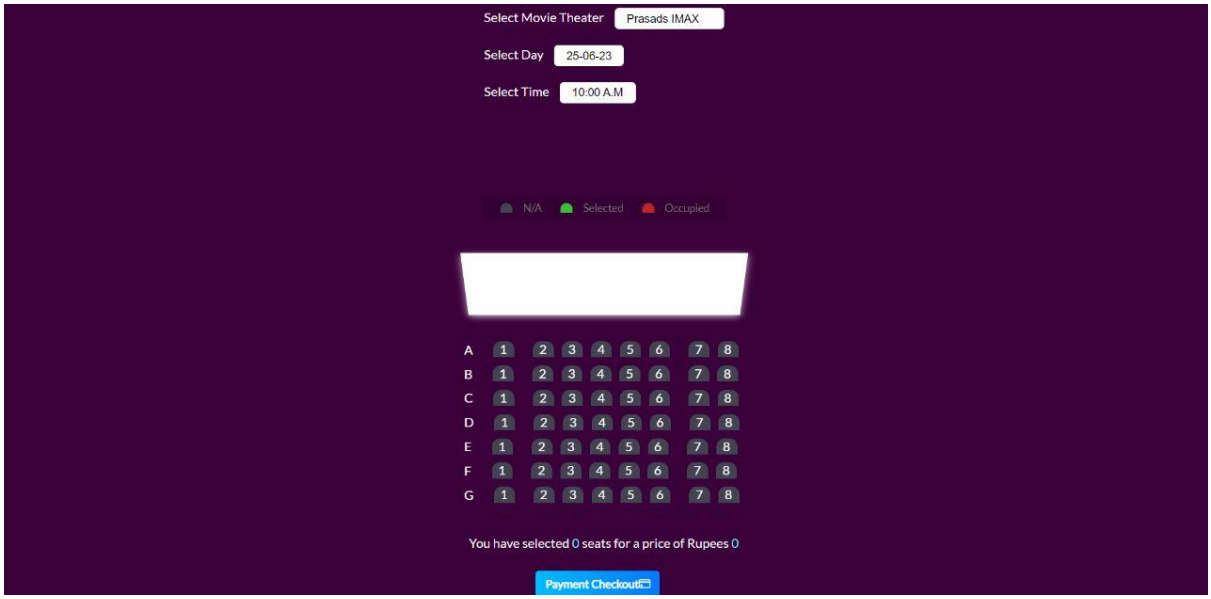


Figure 6. Ticket booking

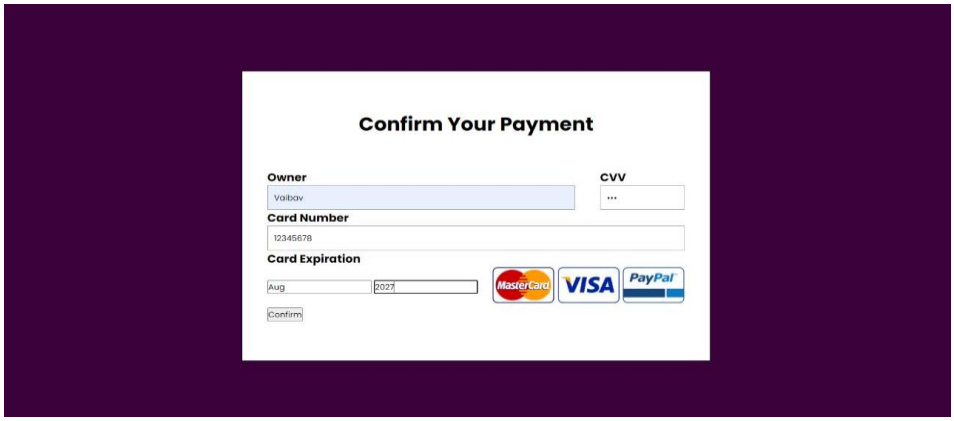


Figure 7. Payment

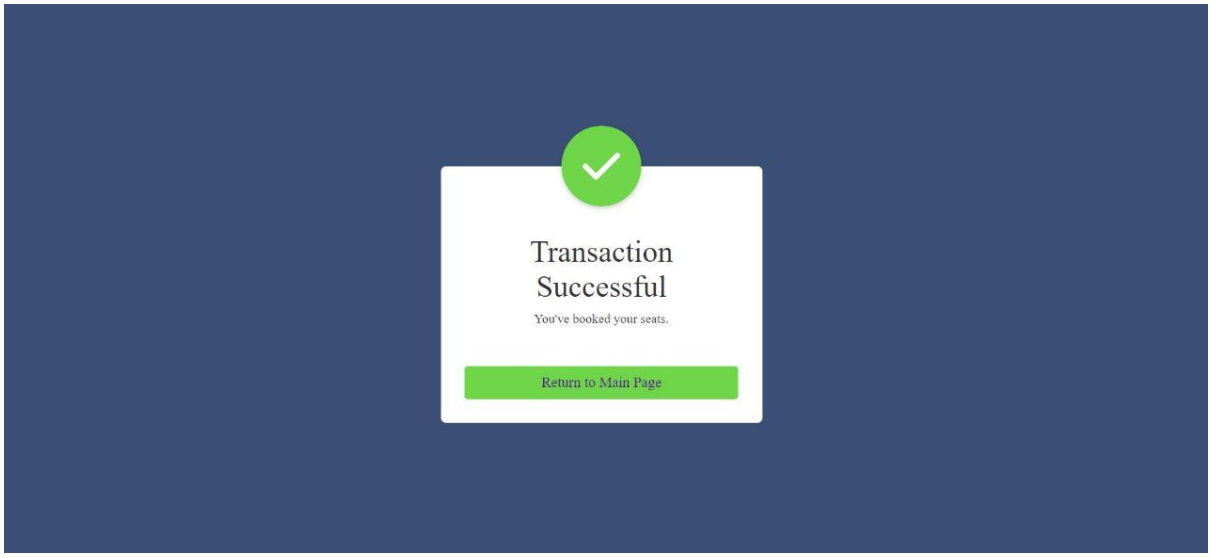


Figure 8. Transaction Successful

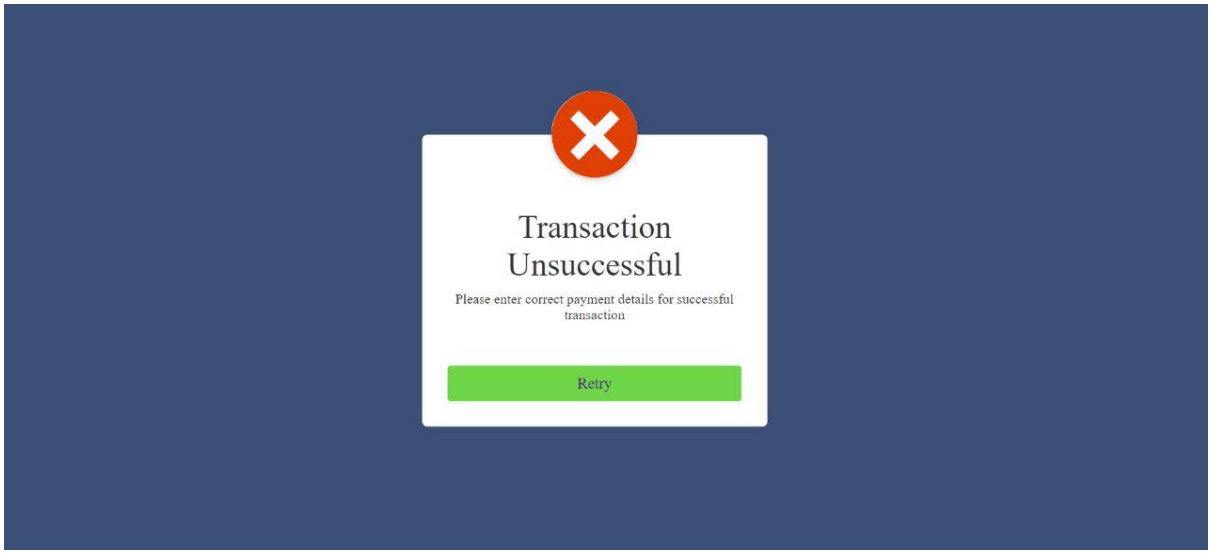


Figure 9. Transaction Unsuccessful

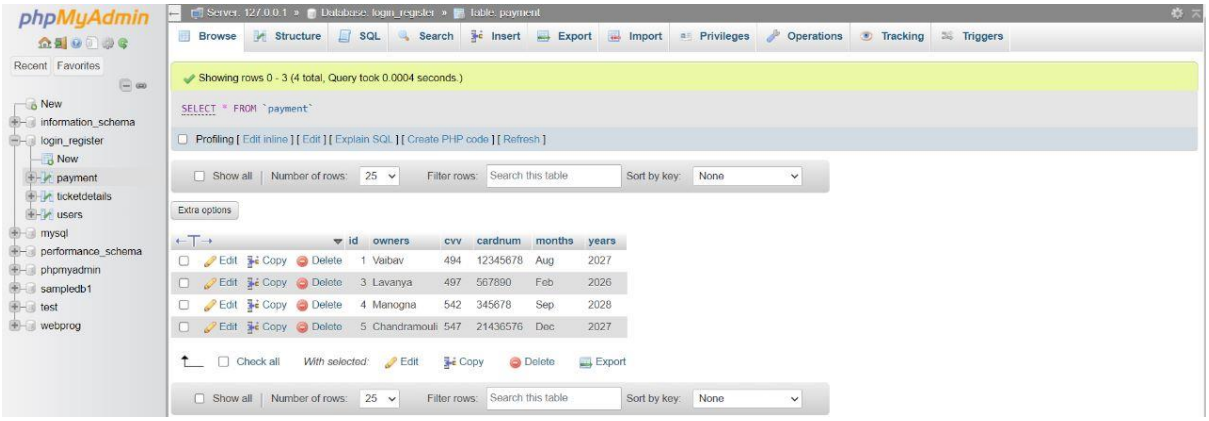


Figure 10. Database

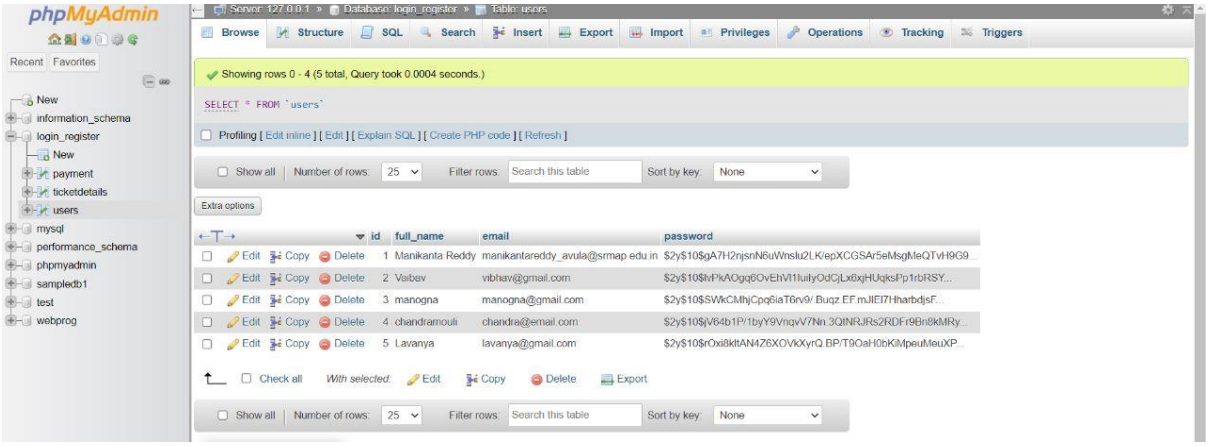


Figure 11. Registered Details

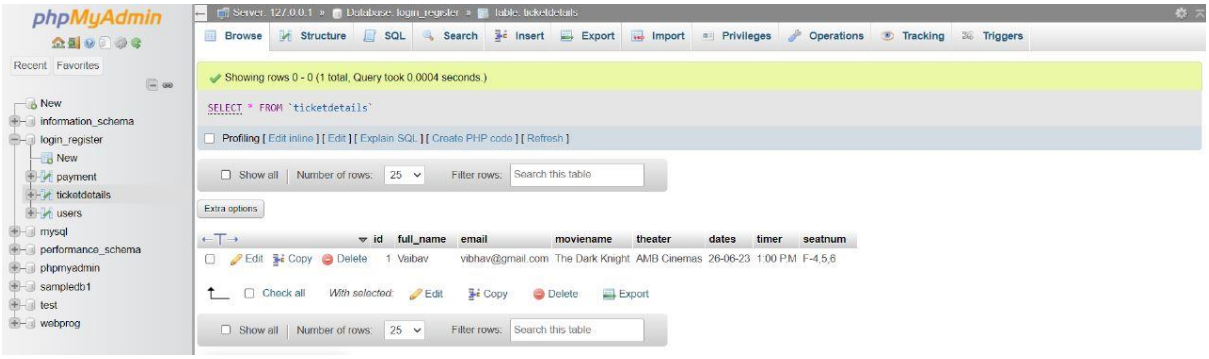


Figure 12. Details stored in database after successful transaction

7. Conclusion

In conclusion, the initiative to create a platform for viewers to reserve and buy tickets succeeds in meeting its goals of being convenient, user-friendly, and effective. This project improves the experience of purchasing movie tickets for both users and theatre managers by utilizing technology and implementing user-centric design concepts.

This project's implementation consists of crucial components such as user registration and authentication, complete movie listings with real-time seat availability, secure online booking and payment processes, and ticket production. By simplifying the ticket ordering procedure, these features not only save users time but also help theatre managers handle reservations efficiently.

This project also addresses non-functional requirements, including usability, performance, security, scalability, reliability, compatibility, and accessibility. By ensuring an intuitive user interface, fast response times, robust security measures, and compatibility with different devices and browsers, the system provides a seamless and reliable experience for users.

By providing helpful knowledge, best practices, and a functional system that can be further expanded and customized based on particular business requirements and market trends, the project's successful completion adds to the larger domain of movie ticket booking systems.

This project movie ticket booking system gives viewers the ability to explore movies with ease, choose showtimes, select seats, and finish safe transactions. Both the operational effectiveness of theatre managers and the quality of the overall watching movies experience are improved. The project's conclusions and consequences provide a framework for additional analysis, development, and commercial application of online ticketing systems.

We've included wonderful facilities for customers in our proposal. Effective communication is facilitated to complete the ticketing process by the interaction between the theatre management, staff member, and customer. We expect that the online system we developed will reduce down on time-wasting, avoid misunderstandings, enable simple data flow, increase customer satisfaction, and require less work. We are satisfied with the code we developed and feel that we have accomplished our goals.

8. Future Work

We believe that no project can ever be thought of as finished forever since our minds are constantly thinking of new ideas and because our needs are increasing daily. We constantly desire for more than we now possess. Even though the application appears to be complete at first glance, we want to continue to develop it until it is totally independent.

The following are some of the additions we have considered:

We wish to improve our home page, as it is the major feature that draws in all users.

By implementing real-time updates on ticket availability, showtime adjustments, and promotions, users may get the most recent information and have a better overall experience. Future efforts can concentrate on integrating real-time features and notifications to inform consumers about relevant news and deals.

The number of users can be increased and a wider audience can be served by adding localization features and support for additional languages, especially in areas with a diverse language and cultural environment.

We may include well-known digital wallets and payment systems like Google Pay, or PayPal in the future to give customers more flexible and convenient payment alternatives, speed up the checkout process, and boost conversion rates.

9. References

https://in.bookmyshow.com/explore/movies

https://www.imdb.com/

https://www.amctheatres.com/

https://www.inoxmovies.com/