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A Cinema - Online Movie Ticket Booking System

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Abstract- This paper presents the design and implementation of an online movie ticket booking system. The system is designed to provide a convenient and user-friendly platform for customers to purchase movie tickets online, eliminating the need to wait in long lines or visit physical ticket counters. The system includes features such as movie selection, seat selection, payment processing, ticket confirmation, ticket rescheduling, ticket transferring. The system also employs various recommendation algorithms to suggest movies to users based on their previous selections and browsing history. Additionally, the system includes security features such as user authentication, data encryption, and secure payment processing to ensure the protection of customer information. The implementation of the system involved the use of various programming languages, frameworks, and databases. Overall, the system offers an efficient and streamlined approach to movie ticket booking, enhancing the overall movie going experience for customers.

Keywords- Movie ticket booking, Ticket transferring, Ticket rescheduling, Ticket cancellation, E-ticketing, User interface, User experience, Customer satisfaction, Database management, Software development, Agile methodology, Usability testing, Performance optimization

I. INTRODUCTION

The project Online Movie Ticket Booking system is a web-based application that allows the movie theatre owner and the viewers to handle all the movie activities online quickly and safely. Online Movie Ticket Booking System enables user to book movie tickets using Laptop or Mobile without going to the theatre. With the development of technologies, increasing digitalization, and increasing social networking, information sharing on internet has become quiet. As a result of that all the online system has become very popular in the last 6-10 years.

The application has two interfaces. The user interface and theatre interface. The user can use the ACinemas application for free. The theatre owner has to pay for using the application and to upload the movies. The user can book desired seats from the available seats and proceed to payment also, the user can cancel the seats. The user can reschedule the ticket for his convenient timing, or he can gift the ticket to another user. Suppose a user wishes to watch a movie at a particular time but the show is houseful, then he can click on interested. If any user cancels the ticket, then the person who is interested is notified to book the ticket.

Coming to the theatre owner interface the theatre owner can add screens and add shows, manage the user data and the movie details. The ticket validation feature is enabled so that a person is not allowed to use another person's ticket to enter the cinema hall. Also, the movie recommendation system is implemented in our project. Lots of movie release every month but only few movies are recommended to the user based on his interest. The project Online Movie Ticket Booking system is a web-based application that allows the movie theatre owner and the viewers to handle all the movie activities online quickly and safely.

II. LITERATURE SURVEY

BookMyShow is the most popular movie ticket booking platform in India. More than 60% of movie viewers, book their ticket using BookMyShow, and more than 80% of movie viewers in PVR, book their ticket online. More than 70% of BookMyShow users are of the age 18-34 years. The reason why the BookMyShow has no competitors in India is because of it'sbeautiful User Interface. The UI is very engaging with the audience. Average time spent by a user is just 5 minutes. Also, the payments are safer, and the user details are secure.

Fig 1. **Distribution of BookMyShow users based on their age and gender.**

Ticketplease.com is a one is one of the most famous online movies booking system which not only books movie tickets but also books ticket for Concerts and Sports Event. Ticketplease.com has tied up with leading multiplexes along with several single screen theatres across India.
The website not only focuses to film fans but also intends to digitalize the passion of music and sports fans to buy tickets to concert and events across India.Fandango is a famous movie booking site in USA. The reason for its success is, it is not just the movie booking platform. It provides the information about movies, interesting facts about movies, entertainment news like top 10 directors of all time, top 10 series of 2022, top 10 horror movies etc. It is a very interactive website.

According to the research in a month average of 130 movies are releasing, the big budget movies will do promotions and will reach to audience. But the low budget movies are not reaching. There are many low budget movies which failed in box office but became success after releasing in OTT. The reason is movie recommendation system used by many OTT platforms like Netflix, Amazon Prime, Hotstar etc.

According to the research there are some issues in the existing online ticket booking system. Sometimes when a star hero's or a highly rated movie is released due to high traffic server gets down and users are unable to book the tickets and even payments are failed, and the amount is deducted from the user account. Another issue is that the rating and the reviews of the movie are not honest sometimes.

The movie team sometimes buys the rating and positive reviews. Also, even in the PVR there is no proper ticket validation method, the same digital ticket is used by multiple users to enter the show.

III. PROPOSED SOLUTION

We propose a system which is more reliable than the existing system. We have implemented many new features into our application.

1. Ticket Rescheduling:
A user will be able reschedule the ticket if he is not able to watch the movie on a booked time. If a user wants to reschedule, they have to do it at least 1 hour before the movie screening.

2. Ticket Transfer:
Instead of transferring the ticket by sharing the screenshot, the user can transfer the ticket in the application itself by providing the other user's ID.

3. Ticket Validation:
Ticket will be validated before the user enters the theatre and can be validated once.

4. Movie Recommendation system:
The movies are recommended based on the user age and interest. So, it is convenient for the user to choose the movie.

5. Filtering Movie reviews:
The users can review to the movie by rating or by adding comments. The other user reading the comments can filter the positive and negative comments.

IV. IMPLEMENTATION

1. Content based filtering for recommendation system:
This recommendation system utilizes various attributes of movies, such as genre, director, description, actors, and more, to provide personalized suggestions to users. The idea behind this type of system is that if a user enjoys a particular movie or show, they may also enjoy other movies or shows that share similar characteristics. Many other algorithms like Demographic filtering recommends the movie based on the popularity of the actors, director, and budget but not the user's interest.

Content based filtering recommends based on the user's interest. Some limitations of content-based filtering are that it can only make recommendations based on existing interests of the user, it does not consider the fact that what do other users think of an item, thus low-quality item recommendations may occur sometimes.

2. Natural Language Processing for Sentiment Analysis:
By examining the sentiment of a movie review, it is possible to determine whether it is positive or negative and use this information to calculate an overall rating for the movie. This process of determining the sentiment of a review can be automated using Natural language processing. Many movie-goers rely on the reviews of other users to make a decision about whether to watch a particular movie or not. The text reviews are more effective than the rating. In this algorithm we have used NLTK library, TfidfVectorizer and Naïve Bayes sklearn models.

3. Algorithm for Ticket Rescheduling:
The person who wants to reschedule the ticket provides their Ticket ID and user ID. The application verifies the ticket information and checks availability for the new showtime. If there are availability the application allows the user to select the new showtime. Once the user selects the new showtime the application updates the ticket information and sends a confirmation message to the person who requested the reschedule.

If there is no availability for the new showtime, the ticket provider offers alternative showtimes or refunds the ticket

cost. This algorithm ensures that the ticket is rescheduled securely and that the ticket provider has verified the availability of the new showtime before updating the ticket information. Additionally, it provides the person who requested the reschedule with alternative options if the desired showtime is not available.

4. Algorithm for Ticket Transferring:

For Ticket transfer we have used simple algorithm. The person who wants to transfer the ticket provides their Ticket ID and user ID of both the users to the application. The application checks if the ticket is valid and updates the ticket information with the recipient's name. The application sends a confirmation message to both the transferor and the transferee, verifying that the ticket has been transferred.

This algorithm ensures that the ticket is transferred securely and that the ticket provider has verified the transfer before updating the ticket information.

V. RESULTS

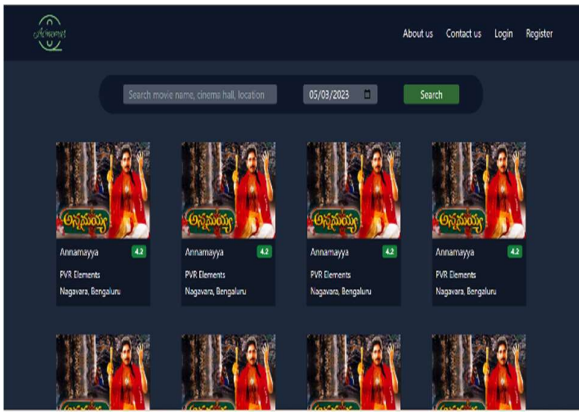

Fig 2. Home Page

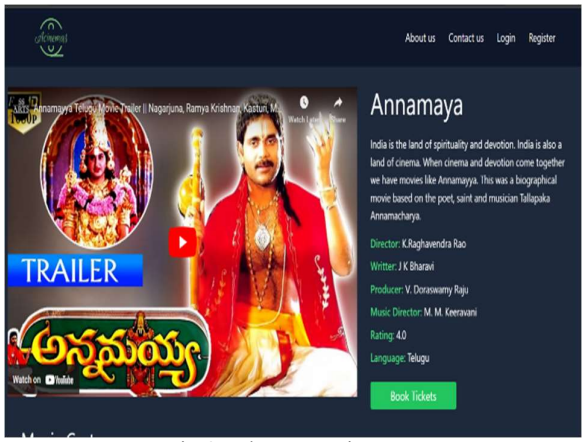

Fig 3. About Movie Page

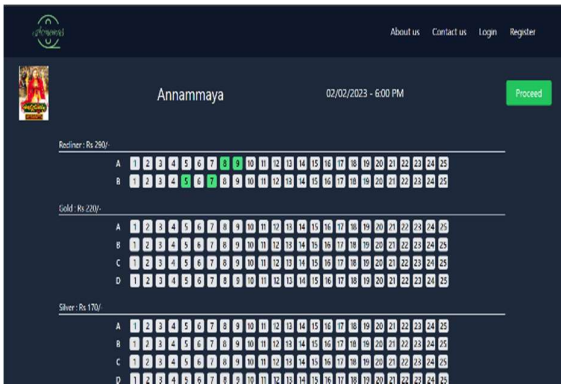

Fig 4. Seat Selection Page

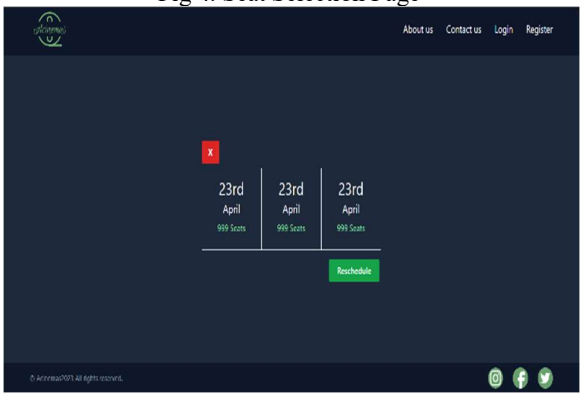

Fig 5. Ticket Rescheduling Page

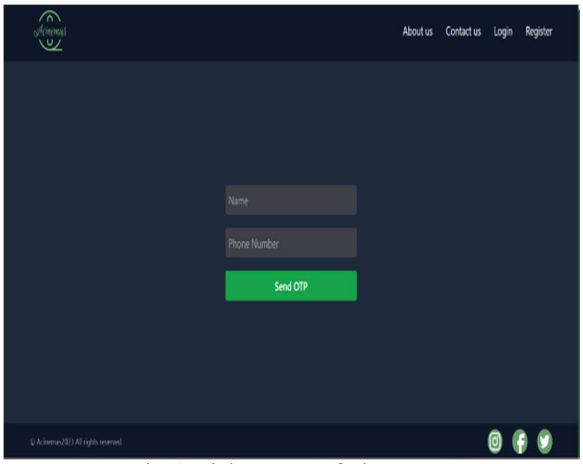

Fig 6. Ticket Traansfering Page

VI. CONCLUSION

Nowadays, traditional system of movie ticket booking is declining. In this age the payments have become easier and safer. The widespread adoption of technology in various aspects of daily life has led to even non-technical individuals becoming more comfortable with using technological tools and systems. Also, people prefer easy, quick and safe way for every part of his life. This project

is designed to meet the requirements of a cinema ticket booking system.

The implementation of an online movie ticket booking system has numerous benefits for both customers and movie theatres. The system offers a convenient and user-friendly approach to ticket booking, allowing customers to easily select and purchase tickets from the comfort of their homes. Additionally, the system offers various features such as movie recommendations, seat selection, and ticket rescheduling, which enhance the overall movie-going experience for customers. From a business perspective, the system allows movie theatres to efficiently manage ticket sales, reducing the need for physical ticket counters and long lines.
The implementation of the system involves the use of various programming languages, frameworks, and databases, and the incorporation of security features such as user authentication and data encryption.

Overall, the implementation of an online movie ticket booking system is a valuable addition to the movie industry, offering numerous benefits for customers and theatres alike.

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