ABC CINEMA REPORT

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PUSL2024 SOFTWARE ENGINEERING 02 GROUP AK

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ABSTRACT

The aim of the ABC Cinema Website Project is to develop the already existing web platform into an advanced solution integrated with numerous functionalities based on Java JSP and Servlets technologies. This initiative helps to solve important business problems such as booking of tickets over the internet, automatic payment via PayPal services, and reservation conflict free systems. In addition, it allows easing the strain of the customer by providing automatic reminders using SMS and email, while at the same time offering data visualization views of customer feedback to facilitate evidence-based management.
Elaborating on this, this report captures the various stages of the development process to include use cases, use case diagrams and class and ER diagrams, the sequence diagrams and the various phases of implementation. The result is a web-based application that has interactive screens and a friendly interface for users and administrators of the company while satisfying the current web standards of the company.

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INTRODUCTION

In today's competitive entertainment industry, digital transformation plays a pivotal role in enhancing operational efficiency and customer satisfaction. Recognizing the limitations of its outdated website, ABC Cinema has embarked on a redevelopment project to revolutionize its online platform. The objective is to provide a seamless user experience by integrating essential features such as online ticket booking, secure payment options via PayPal, and automated notification systems.

The development process employs Java-based technologies, specifically JSP and Servlets, ensuring robust and scalable solutions. This project follows a structured approach, starting with system analysis through diagrams (use case, class, sequence, and ER), leading to a fully implemented website with interactive functionalities. This report provides a detailed account of the project's scope, design, and implementation, highlighting its alignment with modern technological and user-centric requirements.

FUNCTIONAL REQUIREMENTS

USER ROLES
ADMINISTRATION

- Adding and removing movies also allows the facility for including details like movie title, genre, show timings, descriptions, and ratings.
- Update movie listing when there are changes in schedule, ratings, and even descriptions.

CUSTOMERS

- Search and Browse Movies.
- Select Showtimes and Cinemas.
- Ticket purchase & manage booking.
- Receive notifications about ticket reminders & available promotions or even updates.
- Providing feedback and having access to customer support.

CORE FUNCTIONALITY

- Managing Availability: Providing User Experience (UX) and Customer-Centric Features.
- Maintaining the privacy of users: Allowing the users to create an account and providing login facilities for privacy purposes.
- Recommendation according to preference.
- After the user logins to their specific account the system automatically recommends movies based on their past likings.

DETAILED FEASIBILITY REPORT

TECHNICAL FEASIBILITY

It specifies whether the developed system facilitates all technical requirements.

- Platform Independent: Ensures that the developed system could be accessed through web browser and mobile applications (iOS or Android).
- Backend Architecture: A scalable, secure, and reliable backend is needed to handle user requests, payments, booking, and data management. Here we have used technology for backend development.
- Database Management: The system requires a database for managing & storing information such as customer information, booking history, movie data, and theater schedules. Here we have used MySQL for it.
- Payment Gateway integration: Secure payment should be found to transfer payment in an effective and secure manner. Here we have used PayPal for it.

OPERATIONAL FEASIBILITY

The operational requirements are feasible, but close coordination between the technical team, cinemas, and customer support will be necessary for smooth daily operations.

- System Usability: The system must be easy to use for customers, allowing all the steps to book a movie ticket to be done with a minimal amount of clicks & effort.
- Workflow and process: Here the customer should be able to monitor the process and know what they are doing. The process needs to be smooth with real-time updates and confirmations.
- Staff Requirements: System administration team, Customer support team, Marketing team should guide the customers for the better use of the system.

ECONOMIC FEASIBILITY

Should analyze whether the system is economically feasible with the potential for profitability.

- Development Costs: It can be categorized into Initial Development, Ongoing Maintenance, Infrastructure Cost are analyzed and decided whether the project should move ahead or drop.
- Revenue Model Income: A certain amount of income can be gained by allocation for other brands related to advertising, gaining income from subscription models is also possible to go on with a system without dropping.

LEGAL FEASIBILITY

The legal feasibility is manageable, but proper care must be taken to ensure compliance with data protection laws, licensing agreements, and regional regulations.

- Protection and Privacy: The system must comply with data protection regulations, such as the General Data Protection Regulation (GDPR).
- Customers payment details should be handled using encrypted and secure method.

USE CASE DIAGRAM
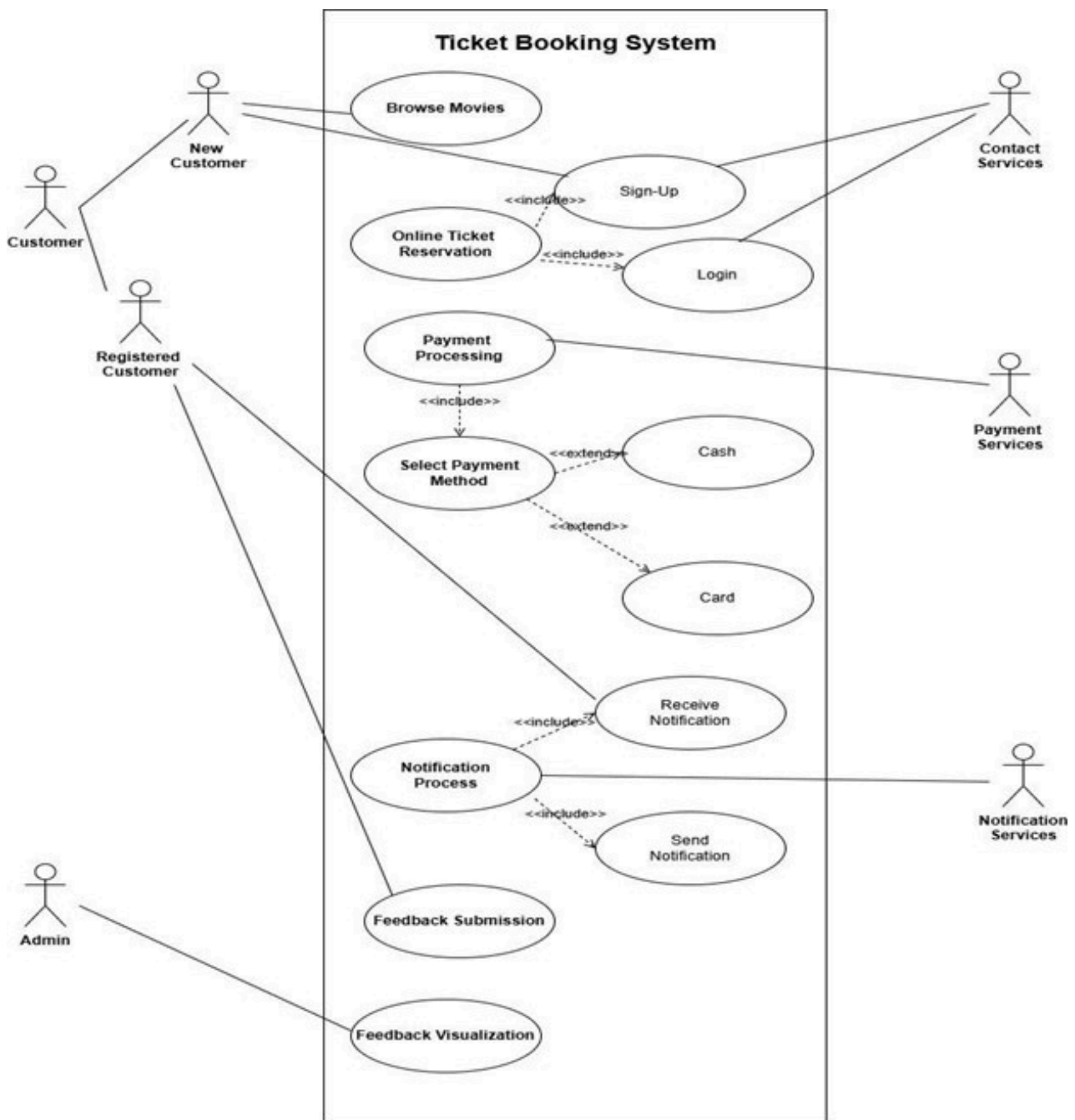
ABC cinema is an established business in the film industry. They decided to update the system by considering various features and facilities. It consist of customers and admin as actors and also consist of service such as Payment Services , Contact Services and also notification Service. In customers there two category such as new customer and registered customer. Here the new customer and allowed to Browse movies , Login to reserve their tickets and able to process their payment made. since online ticket reservation include login and sing up facilities. It is managed by contact service. Registered customers will receive notification from cinema which is sent by notification service sector. Admin can only also visualize the feedback received from the customer.

CLASS DIAGRAM

SEQUENCE DIAGRAM
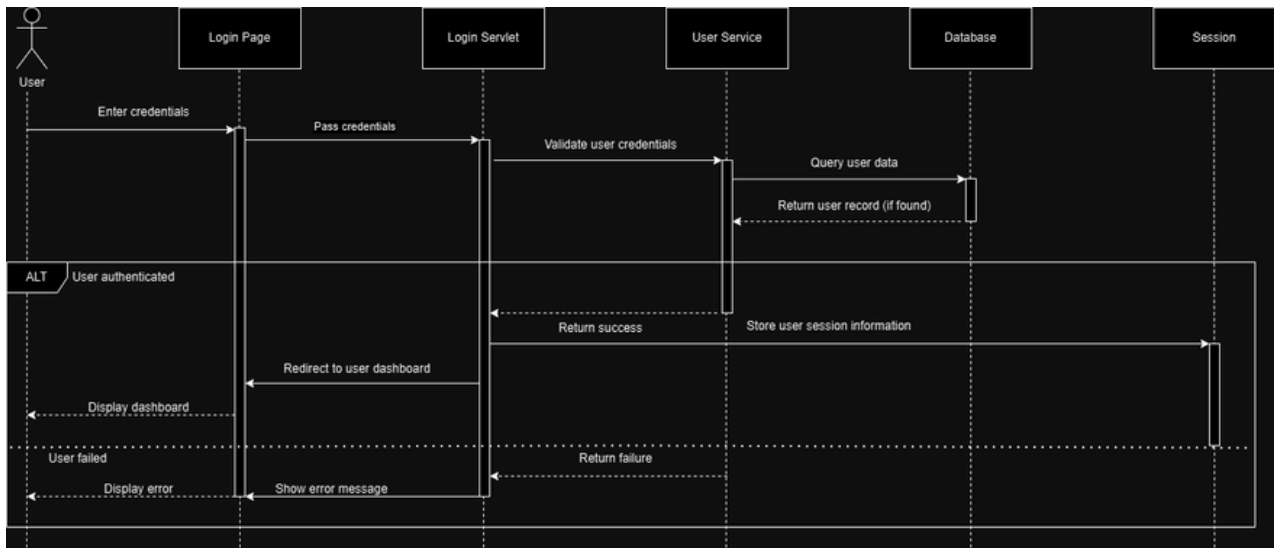
ER DIAGRAM (ENTITY RELATIONSHIP)
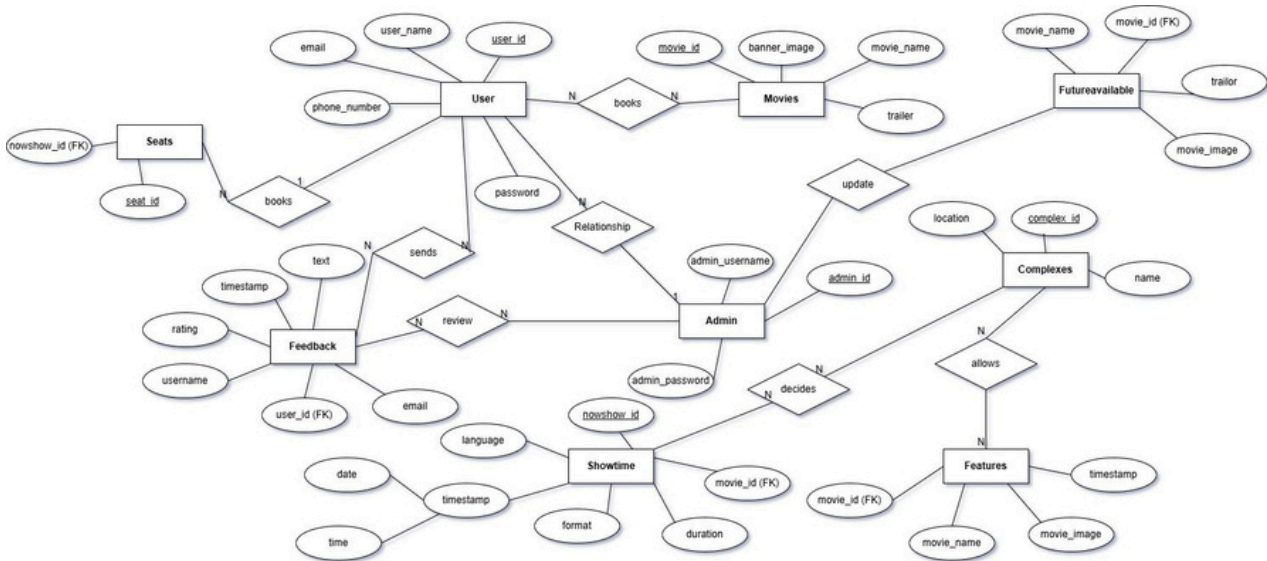
NARRATION FOR ER DIAGRAM

ABC cinema's system stores details about Users, Movies, Admin, Seats, Complexes, Feedback, Future available and show time for the convenience of the user & administration.

- For users, the details such as user id, phone number, email, username, and password are stored. A user can book seats, send feedback, watch movies and the records of them will be monitored by the admin.
- For the admin the details such as admin id, admin username, admin password are stored. An admin can update further available, review the feedback, and access the user records.
- Movies consist of movie id, movie name, banner image and trailer. It can be booked by the user and Admin can update the movie information.
- Further available consist of movie names, movie id, trailer, movie image.
- Complexes consist of complex id, location, and name. It decides the show time and features.
- Feedback consists of used id, username, email, ratings, text, and timestamp.
- Show time consists of show id, movie id, duration, language, format, and timestamp. Timestamp includes date and time.
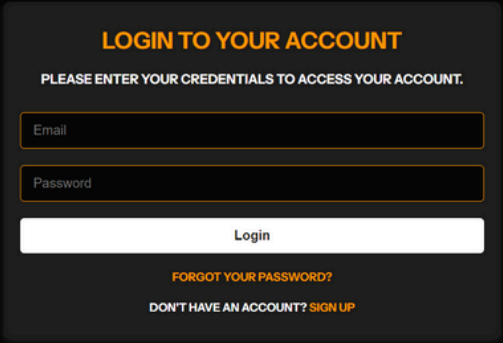
SCREENSHOTS

DASHBOARD
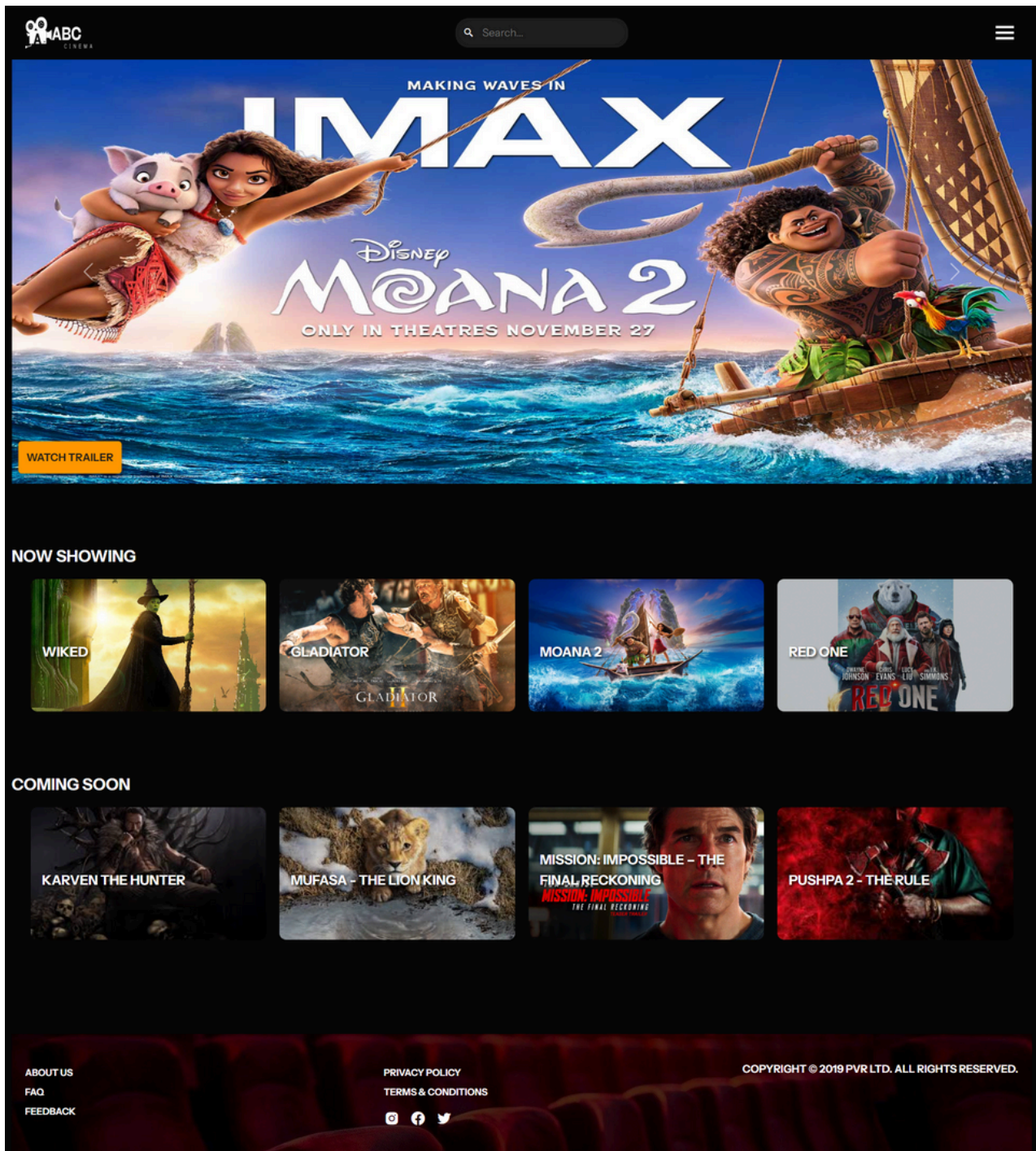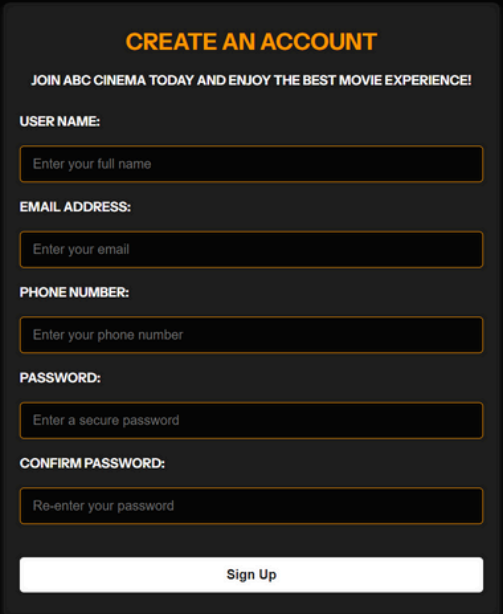
This is the dashboard of the website. Whether users are registered or not, they land on the dashboard. Here, they can log in, sign up, or access their profile through the side menu, which is accessible via the 3-line icon at the top right-hand corner. The carousel displays banners along with a trailer button to watch previews. Next is the "Now Showing" section, where users can browse currently running movies, book tickets, or watch trailers. The "Upcoming" section highlights movies that are yet to be released, where users can only view trailers. Finally, there is a footer section with links to relevant parts of the website.

LOGIN & SIGN UP

Sign-up and login pages connect to the same database table. To be able to complete the login action, users are required to input certain valid details, namely email and password. Null values or invalid email formats are not acceptable. If a user forgets his or her password, it is possible to go to the reset password page and change it. In addition, there is a page for signing up where all the necessary information must be provided. Usernames and email must be new, otherwise an error message saying "Cannot sign up" will be shown. Just like the login page, the email and phone number must be put in an acceptable format in order for submission to go through; else, an error message will be generated. The two pages are able to intercept one another and verify each of the input fields to the users and enforce the policies of the company in question.

BOOK-CONFIRM
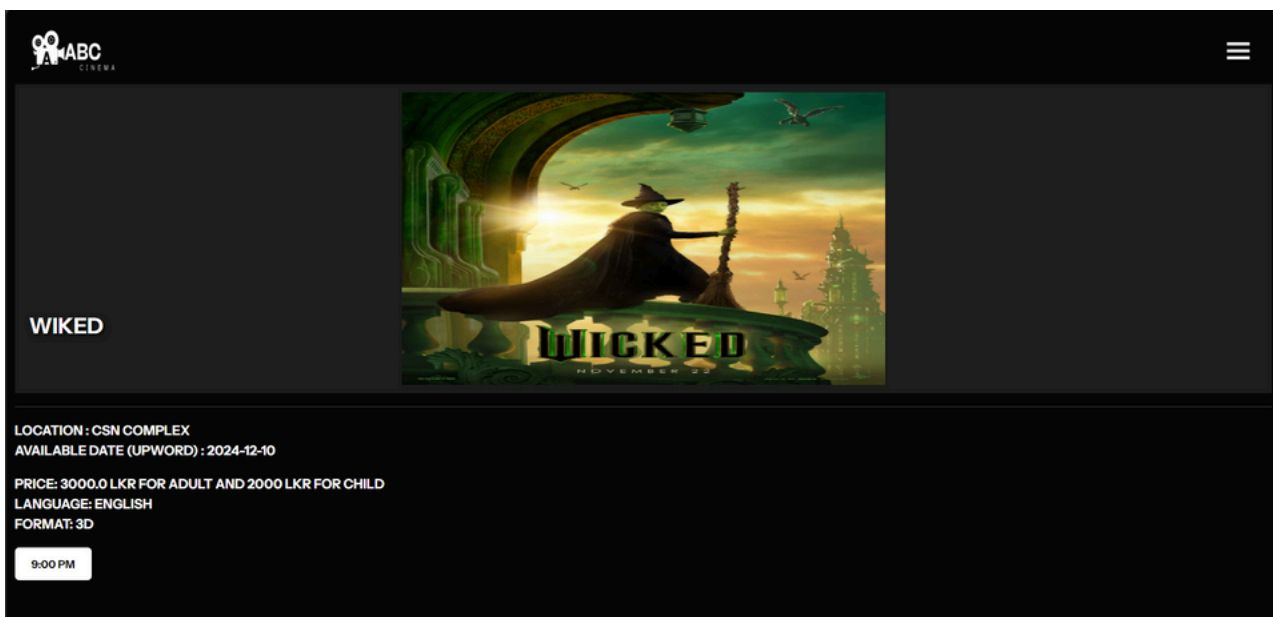
The booking page appears when a user clicks the 'Book Now' button on the dashboard only. A movie image is first displayed at the top of the page, followed by the movie name, its location, and the date it is expected to be available. Also shown are ticket prices for children and adults, language, and format of the movie. It is assumed that the ticket price for children remains constant, while the price for adults is fetched dynamically from the database. Below these details, the user must select a suitable time from the shows available to complete the booking.
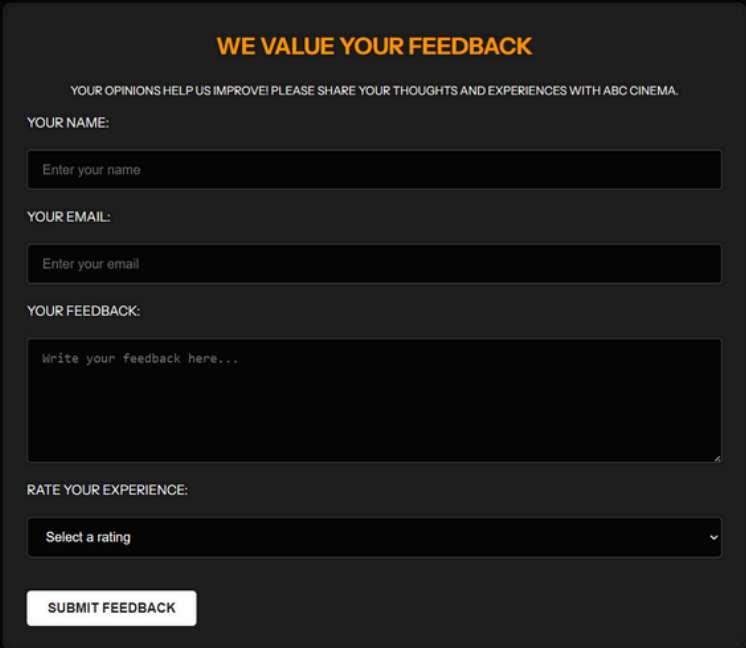
SEAT-SELECT

The seat selection page has options for the selection of seats. If a seat has already been selected, then it will get automatically disabled for selection from the database. After choosing a seat or seats, the user is required to click the Proceed button to progress. If the user goes back or closes the browser, the chosen tasks will automatically be deselected.

FEEDBACK

On feedback page, users have an opportunity to provide their feedback. All fields must be filled in to submit the feedback, otherwise the feedback will not be sent.
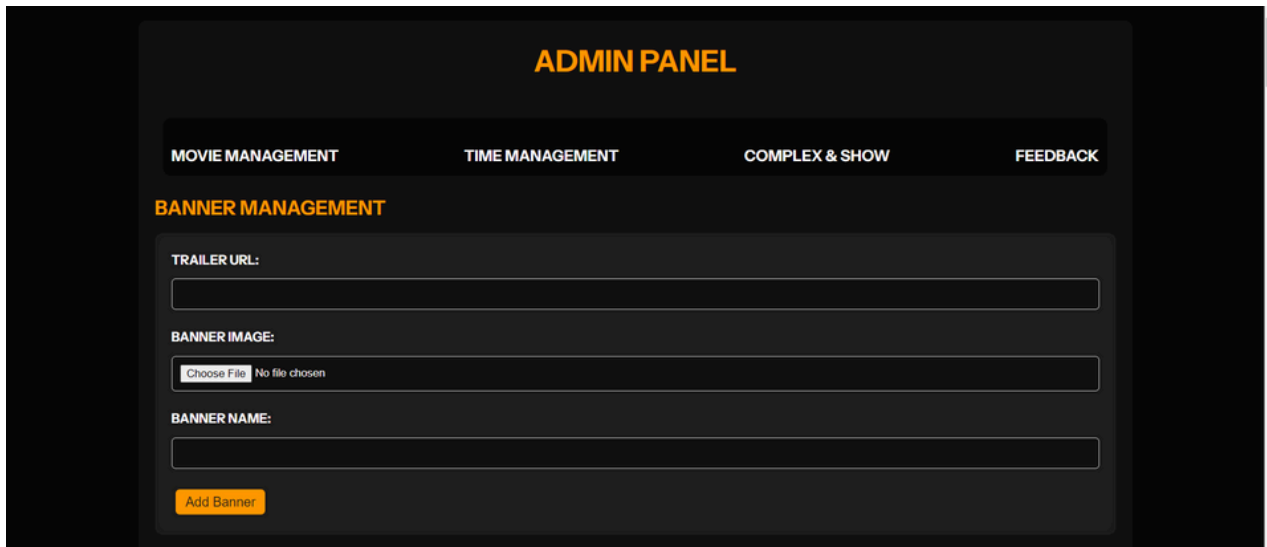
VIEW-PROFILE
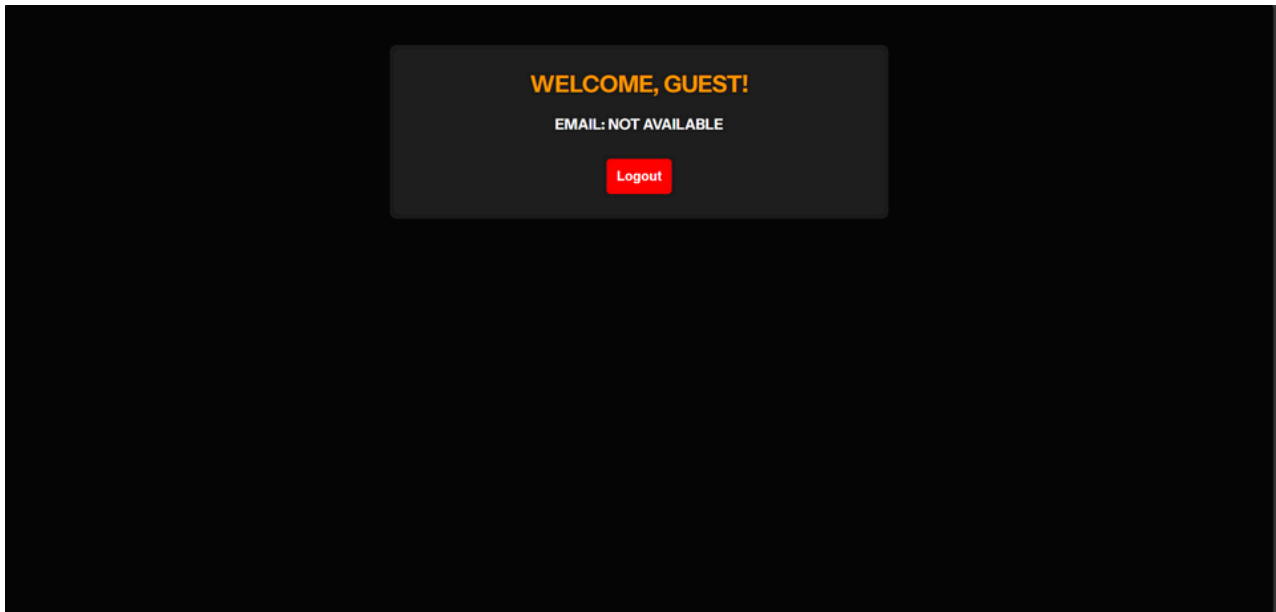
On View Profile page, users can see the email and username. Also, they may log off from this page. However, in case a user types the direct URL of the View Profile page, and he/she has not logged on or been registered, he/she would only see Guest and 'Email not available' sent for security reasons. These are provided by the session to safely keep sensitive data.

PAYMENT-RECEIPT
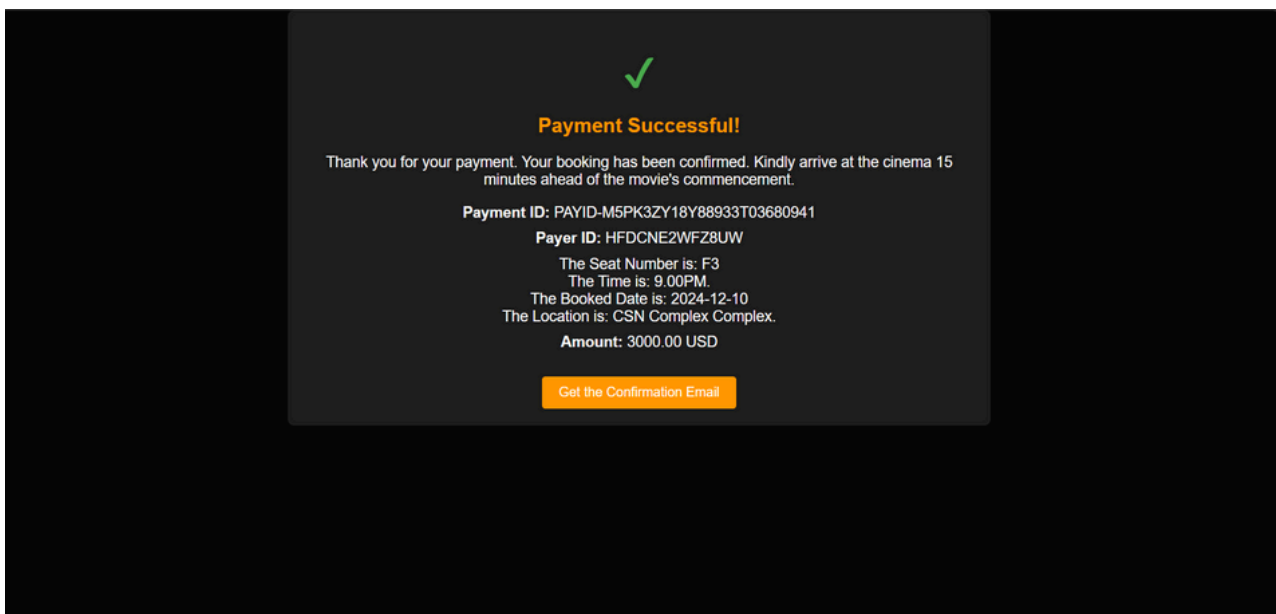
After making the payment, a receipt of that transaction gets generated automatically with all the particulars of that transaction. The customer can then click on send to have the email page confirmations sent as an email.

ADMIN-PANEL

The Admin Panel comprises four parts. The section of movie management enables the admin to manage banners, now showing and upcoming movies with full CRUD capability. In Time Management, the admin can perform (CRUD) for showtimes and formats, dates, and showtimes of now showing movies which are kept in a separate table for data integrity. The Price and Show Details Management section enables the admin to manage pricing and show related details, kept at another table. Finally, the Feedback Management section allows the admin to access all the feedback received from users.

CONCLUSION

The ABC Cinema website provides an invaluable resource for movie enthusiasts, offering up-to-date information on showtimes, film listings, and upcoming releases. Its user-friendly design ensures easy navigation for all audiences, from casual viewers to cinema fans. The site's commitment to regular updates and comprehensive content makes it a reliable tool for planning movie outings. Whether it is browsing for the latest films, checking schedules, or purchasing tickets, the ABC Cinema website enhances the overall movie-going experience, establishing itself as a trusted and efficient platform for all movie-related needs.

The site's role in fostering a deeper connection between cinemas and their audiences is also noteworthy, making it an indispensable tool for anyone seeking information about the latest films and showtimes. With its easy-to-navigate interface and timely updates, the ABC Cinema website has established itself as a trusted and reliable source for moviegoers, ensuring that everyone can enjoy a hassle-free and enjoyable cinema experience.

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