Web Engineering Final Project

Cinema Management System Proposal

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Introduction

As the name states, the Cinema Management System is an application that deploys a stream of data to work and operate cinema management activities. It offers administrators, employees, and users with multiple functionalities to manage the smooth running of the cinema operations. This system is based on MERN stack: MongoDB, Express.js, React, and Node.js. This system contains movie schedules management and user bookings management modules, employee tasks management, and many more. The system included third-party APIs to provide features such as online payment, SMS notification, and integration with social logins.

Modules and Panel Overview

The project will be divided into three major panels. These panels will have some specific modules so that work could easily be divided between the members.

1. Admin Panel

Admin panel will provide administrators with holistic control features for the cinema which will help them to manage movies, schedules, employee information, and viewing reports. This panel also hosts user-related administrative tasks.

Modules and Features:

- Login/Authentication
- Admin login using secure authentication
- Forgot password/recover password
- Dashboard
- Overview of system metrics such as movies, bookings, revenue, etc.
- Management of Movies
- Adding, editing, and deletion of listings
- Viewing and filtering for genres, showtimes, and availability
- Management of Shows
- Set and update the showtimes for various movies
- The same movie show to be blocked or open based on ticket availability
- Employee Management
- Add, view, edit, and delete employee details

- Reports on Bookings
- Generate reports every day, week, and month
- Export to CSV/PDF so that record-keeping would be ensured
- Management of Notifications
- Set automatic reminders for user notifications
- Messaging before the movie as well as any offer with the viewers

2. User Panel

User Panel would be the section where users may view movie schedules, book tickets and manage profiles. The integration of a payment gateway along with SMS API will add to the ease of access as transactions will be made securely with real-time notices.

Modules and Features

- User Registration and Login
- Login via third-party API-social login (e.g., Google, Facebook)
- Registration via mail
- Profile Management
- View and Edit profile (e.g., name, contact addresses)
- Movie Browsing and Search
- Movie browsing by genre, date, rating
- Movie details by clicking on them
- Access to search and filter to quickly find movies
- Booking and Payments
- Option to select showtime, seat and book
- Is integrated with a payment gateway for online payments
- Booking History and E-Tickets
- Access to previous bookings and downloading of e-tickets
- Cancellation/Modification in booking
- Notifications
- SMS/email notifications for confirmations and reminders of bookings
- Marketing notifications about any new movie as well as offers from us
- Review and Rate movies for other users to see
- Maintain a wishlist

3. Employee Panel

Purpose: The Employee Panel is to equip cinema staff with the capacity to make bookings, assist customers, and keep cinema schedules.

Modules and Features:

- Login
- Secure login for Employees using credentials
- Dashboard
- Summary view of bookings of the day, assigned duties, alerts of the day
- Booking Management
- Ability to view bookings and either make changes or rebook on behalf of the customer
- Ability to print out tickets for walk-in customers
- Customer Support
- Access booking records to answer queries and better support the customer
- Shift Management
- Employees can view assigned shift and request changes of schedule
- Report Generation
- To create end-of-day reports on trends for booking and customer inquiries.

Work Division

Each group member will design some modules relevant to the board. They will work on both front-end and back-end development of their modules in such a manner that the implementation of every module will be independent of others. This final database design will be provided, and modularity boundaries will ensure that the work of no one member is dependent on the completion of other modules.

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Admin Panel	Employee Panel	User Panel

Third Party Integrations APIs

Payment Gateway - Secure payment transactions for bookings.

SMS API - Generates real-time messages for confirming booking and reminding them of their pending reservation.

Social Login API - Allows users to register or login through Google/Facebook.

Github Repository

https://github.com/WaleedAbdullah2215/22i2446_22i2613_22i2714_WebProject.git