Online Cinema Hall Ticket Booking System

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INTRODUCTION

- Atomic is an online Movie Ticket Booking Web App designed using the MERN stack.
- It provides an easy and efficient way to browse, book, and manage movie tickets while offering a powerful Admin Dashboard for managing cinemas, movies, showtimes, and reservations.

KEY FEATURES

For Users:

- Browse Movies & Showtimes View available & upcoming movies, genres, and showtimes.
- Book Tickets Online Select seats get instant confirmation.
- Get Email Confirmations Receive booking details via emails.
- Receive QR Code for Check-In Use a QR code to enter the cinema.
- Dark Mode UI A modern and easy-on-the-eyes interface.

KEY FEATURES

For Admins:

- Add/Update/Delete Movies Manage movie database dynamically.
- Add/Update/Delete Cinemas Control cinema branches and locations.
- Manage Showtimes Define timings for different movies.
- Handle Reservations Approve/cancel customer bookings.
- Manage Users Create, update, or remove user accounts.
- Generate & Export QR Codes as PDFs Secure check-in system.

TECH STACK OVERVIEW

Frontend (Client-side):





• TailwindCSS – Ensures a clean and responsive design.



Security Features:

- JWT Authentication Secure user logins.
- Data Encryption Protects sensitive user information.







TECH STACK OVERVIEW

Backend (Server-side):

 NodeJS – Handles APIs, authentication, and server logic



 MongoDB – Stores user data, bookings, movies, etc.



Mongoose – Simplifies database interactions.

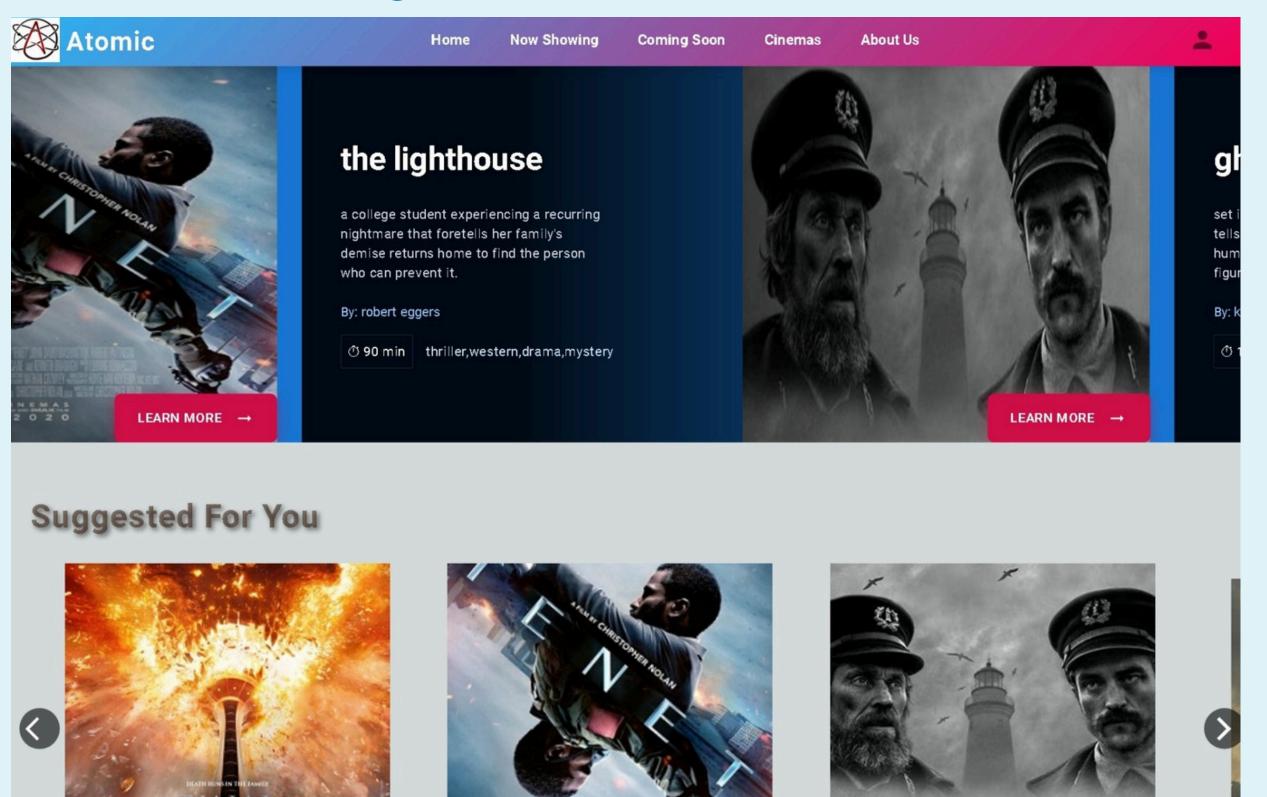
SYSTEM ARCHITECTURE

- User Requests: User interacts with the website via ReactJS
- API Calls to Backend: Requests are sent to ExpressJS and NodeJS.
- Database Operations: MongoDB stores and retrieves required data.
- Response Handling: Data is sent back to ReactJS for display.
- QR Code & Email Handling: The system generates and emails booking confirmations.

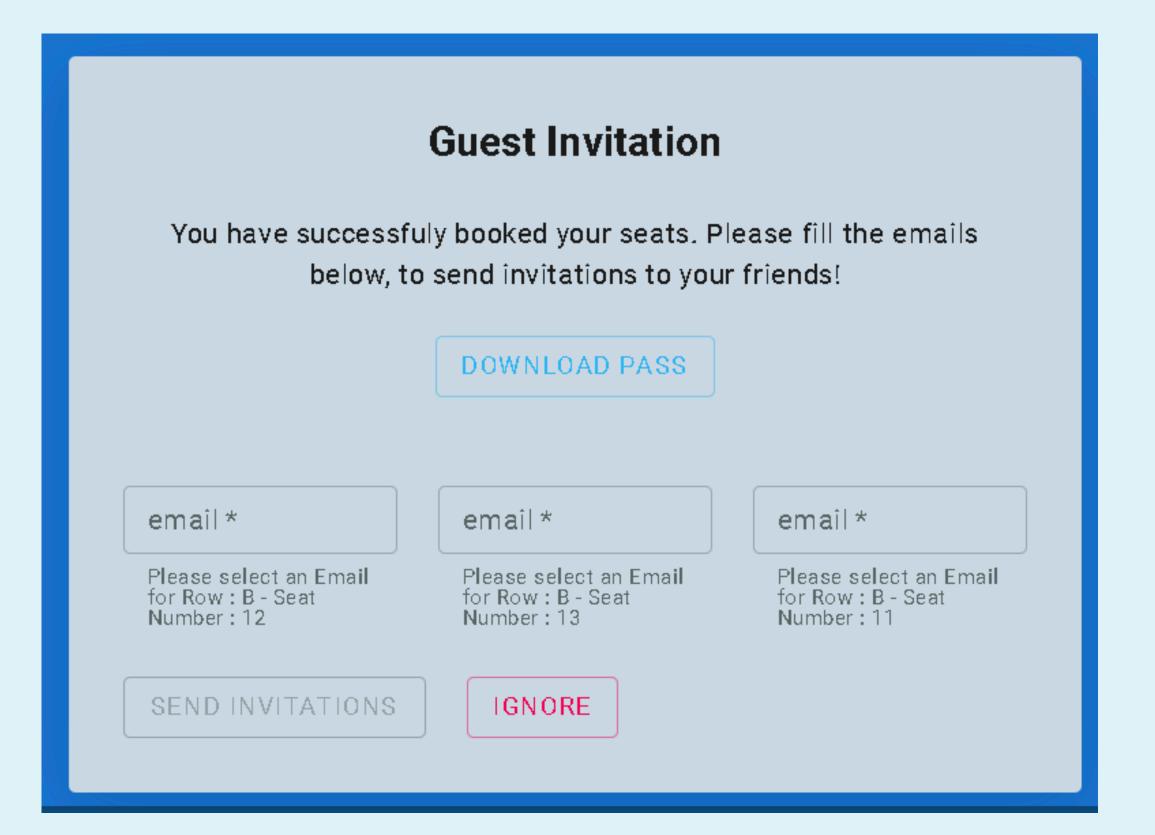
FUNCTIONAL REQUIREMENTS

- User Authentication:
 - Secure registration, login, logout
 - Password encryption
 - Account recovery via email
- Dashboard:
 - User profile management
 - Basic navigation
- Admin Management:
 - View and delete users

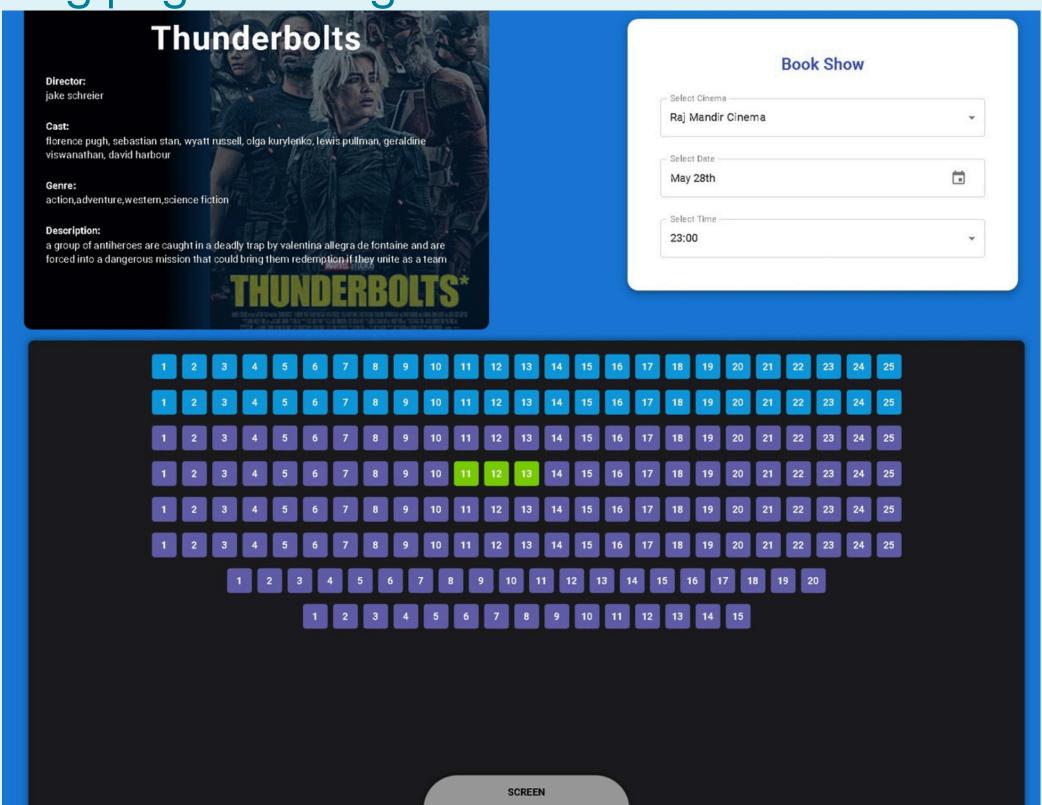
• Title: Movie Details Page (User View)



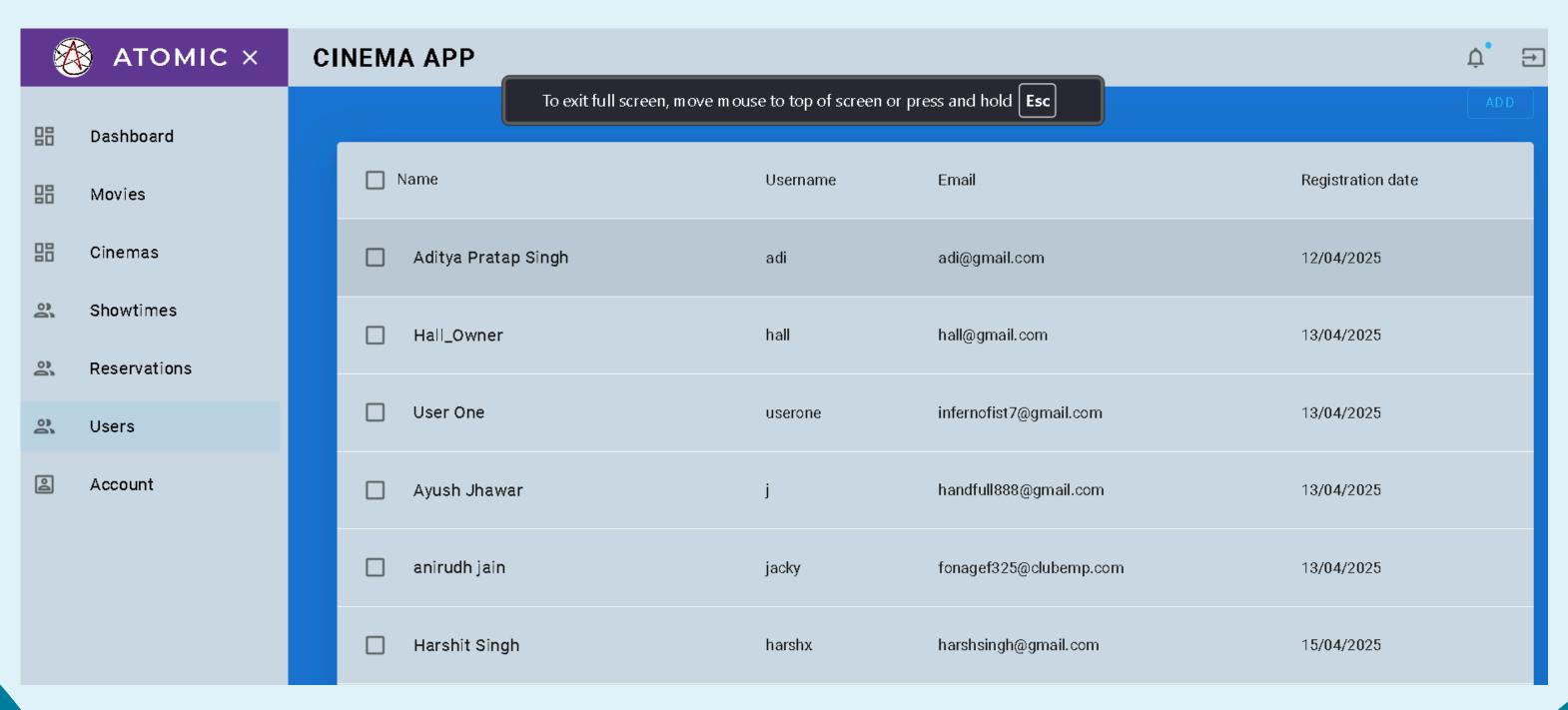
• Title: Guest Email Invitation Form



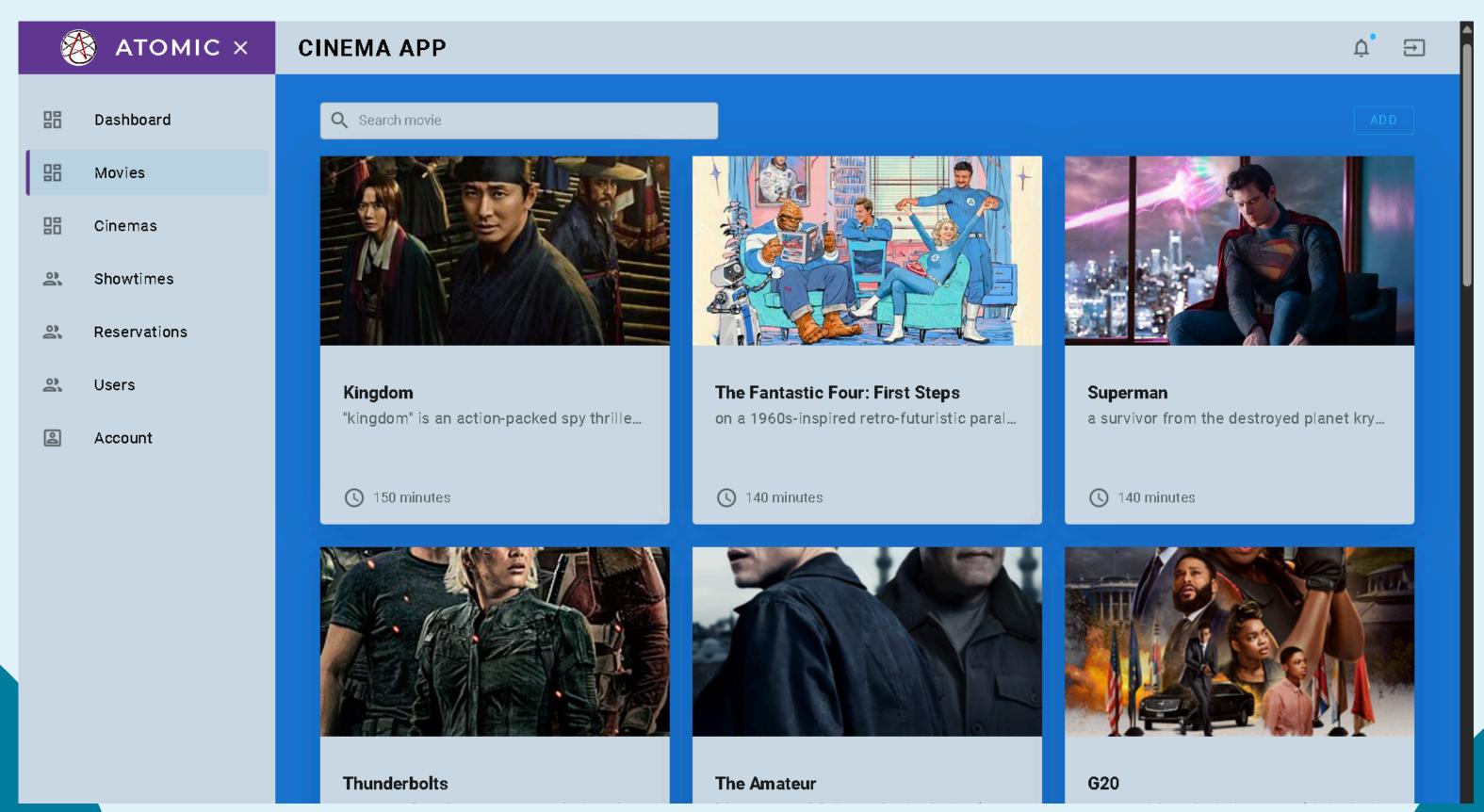
• Title: Booking page & Navigation Bar



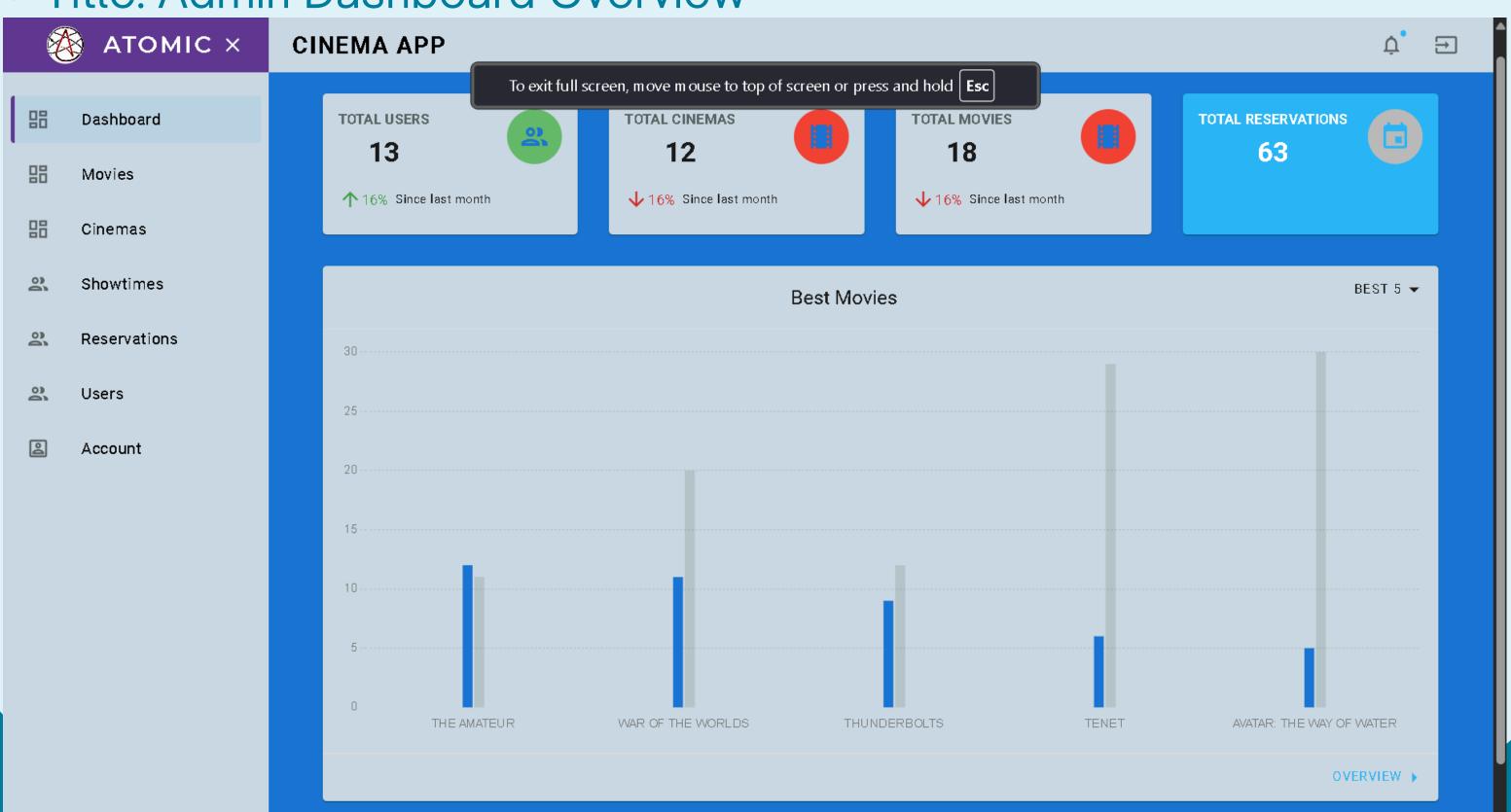
• Title: Reservation Summary (Admin View)



• Title: Admin Panel – Manage Movies



• Title: Admin Dashboard Overview



CONCLUSION

Atomic is a full-featured, secure, and scalable movie ticket booking system. Built with MERN stack, it offers a smooth user experience and a powerful admin panel for managing movie reservations. With features like QR code check-ins, automated email confirmations, and dark mode UI, it provides modern and efficient ticket booking.

THANK YOU