

BHARATIYA VIDYA BHAVAN'S
SARDAR PATEL INSTITUTE OF TECHNOLOGY
Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai – 400058-India
Department of Computer Engineering

Name:	RAI DEV BRAJESHKUMAR
UID No:	2024301022
Division & Batch:	Division - D & Batch - D
Experiment No:	07
Title:	Implementation of Theatre Management System

Project Abstract

The Theatre Management System (TMS) is a comprehensive, full-stack web application designed to streamline theatre operations. It provides a seamless interface for both customers and administrators. The system is built using modern web technologies, including React for the frontend, Node.js and Express for the backend, and MySQL for the database.

The primary goal of TMS is to offer a complete solution for movie browsing, ticket booking, and reservation management. For users, it offers an intuitive interface to browse movies, view details, watch trailers, select seats using an interactive map, and book tickets securely. The system supports payment processing and automatically generates PDF tickets with QR codes for verification. Users can also manage their profiles and booking history, including the option to cancel reservations.

For administrators, TMS provides a powerful dashboard with analytics on bookings, revenue, and theatre occupancy. It allows for easy management of movie listings, show scheduling, and monitoring of all customer bookings. The system incorporates role-based access control to ensure that only authorized personnel can access administrative features. This project aims to provide a robust and user-friendly platform that enhances the movie-going experience and simplifies theatre management.

Screenshots and Feature Explanation

Here are some screenshots of the application, illustrating its key features and workflow.

1. Home Page

- **Screenshot:**



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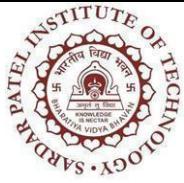
The screenshot shows the homepage of the Theatre Management System. At the top, there is a navigation bar with links for HOME, MOVIES, MY BOOKINGS, and PROFILE. Below the navigation bar, there is a large red film reel icon. The main heading "Theatre Management System" is displayed prominently. Below the heading, the tagline "Book your favorite movies online with ease" is shown. There are two buttons: "BROWSE MOVIES" (in red) and "REGISTER NOW" (in white). Below these buttons, there are three sections: "Easy Booking" (Select your seats, choose your show time, and book tickets in just a few clicks.), "Secure Payments" (Multiple payment options with secure gateway integration powered by Razorpay.), and "Digital Tickets" (Download your e-tickets with QR codes for quick and contactless entry.).

- **Explanation:** The landing page presents a clean and engaging interface, showcasing currently running movies. Users can easily browse through the available films and select one to view more details.

2. User Authentication

- **Screenshots:**
 - **Registration:**

The screenshot shows the "Create Account" registration form. The form fields include: Full Name * (Dev Rai), Email Address * (dev.sample@gmail.com), Phone Number * (9999955555), Password * (*****), and Confirm Password * (*****). A password strength indicator shows "Strong". At the bottom of the form, there is a "REGISTER" button and a link "Already have an account? Login".



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o **Login:**

The screenshot shows a browser window titled "Theatre Management System" with the URL "localhost:3000/login". The page has a dark blue header with the text "Theatre MS" and navigation links for "HOME", "MOVIES", and "ADMIN". The main content area is a "Welcome Back" form. It includes fields for "Email Address" (containing "dev.sample@gmail.com") and "Password" (containing "*****"). There is a "Remember me" checkbox and a red "SIGN IN" button. Below the form, a small note says "Demo Account: test@example.com / password123". At the bottom of the page, there is a link "Don't have an account? Register".

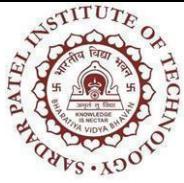
- o **Explanation:** The system includes a secure user authentication process. New users can register for an account, and existing users can log in to access their profiles and booking information.

3. Movie Details and Trailer

- **Screenshots:**

o **Movie Details:**

The screenshot shows a browser window titled "Theatre Management System" with the URL "localhost:3000/movies/movie-006". The page has a dark blue header with the text "Theatre MS" and navigation links for "HOME", "MOVIES", "MY BOOKINGS", and "PROFILE". The main content area displays movie details for "Dangal". It includes a large movie poster featuring four people, the title "Dangal", the release date "23rd DEC, 2016", and the tagline "Former wrestler Mahavir Singh Phogat and his two wrestler daughters struggle towards glory at the Commonwealth Games in the face of societal oppression.". Below the poster, it shows the genre "Action, Biography, Drama", rating "PG", and runtime "161 min". There is a red "WATCH TRAILER" button. At the bottom of the page, there is a section titled "Select Showtime" for "Screen 3 - IMAX" on "15/11/2025, 01:54:24" with a price of "₹400.00 • 148 seats" and a red "BOOK NOW" button.



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- **Trailer Playback:**

The screenshot shows a web browser window titled 'Theatre Management System'. The main content is a movie listing for 'Avengers: Endgame'. On the left is a large movie poster featuring the Avengers team. To the right of the poster, the title 'Avengers: Endgame' is displayed in a large font, followed by genre tags 'Action, Adventure, Sci Fi', rating 'PG-13', and duration '181 min'. Below this is a synopsis: 'After the devastating events of Avengers: Infinity War, the universe is in ruins. With the help of remaining allies, the Avengers assemble once more to reverse Thanos actions and restore balance.' Underneath the synopsis, it says 'Language: English' and has a red 'WATCH TRAILER' button. At the bottom of the page, there is a section titled 'Select Showtime' with a dropdown menu showing 'Screen 1 - Premium'.

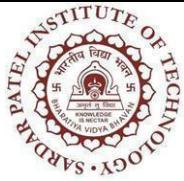
The screenshot shows a video player window titled 'Avengers: Endgame - Trailer'. The video frame displays a scene from the movie showing multiple characters in a destroyed environment. The video player interface includes a play bar at the bottom showing '0:07 / 2:27'. Above the video frame, the Marvel Studios logo and the text 'Marvel Studios' Avengers: Endgame - Official Trailer' are visible. To the right of the video frame are 'Watch Later' and 'Share' buttons. The bottom right corner of the video frame shows the YouTube logo.

- **Explanation:** When a user selects a movie, they are presented with a detailed view that includes the synopsis, genre, duration, and ratings. The system also allows users to watch the movie trailer directly on the page.

4. Seat Selection and Booking

- **Screenshots:**

- **Seat Selection Interface:**



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The screenshot shows a movie listing for 'Avengers: Endgame'. The movie poster is displayed at the top, followed by a brief description: 'After the devastating events of Avengers: Infinity War, the universe is in ruins. With the help of remaining allies, the Avengers assemble once more to reverse Thanos actions and restore balance.' Below the description, the language is set to English, and there is a 'WATCH TRAILER' button. The main section is titled 'Select Showtime' and lists 'Screen 1 - Premium' with the date '14/11/2025, 17:54:24' and a price of '₹300.00 - 86 seats'. A 'BOOK NOW' button is present at the bottom.

The screenshot shows the 'Book Tickets' page for 'Avengers: Endgame' on 'Screen 1 - Premium' on '14/11/2025, 17:54:24'. The title 'Select Your Seats' is at the top, followed by a 'SCREEN' button. Below is a grid of 6 rows (A-F) and 10 columns (1-10) representing seats. Seats 1, 2, 5, 6, 7, 8, 9, and 10 in row A are highlighted in red, indicating they are booked.

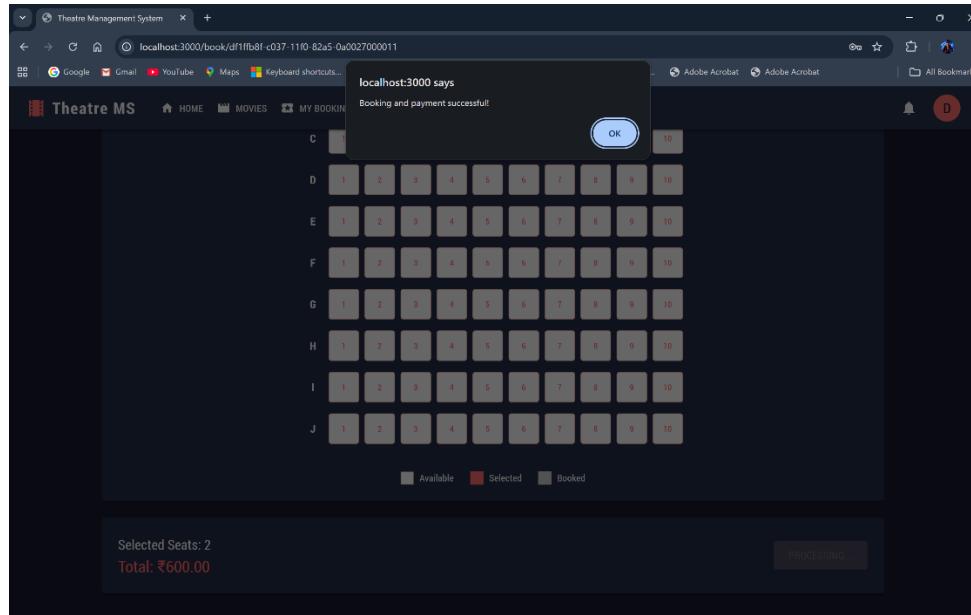
○ Booked Seat Layout:

The screenshot shows the 'Book Tickets' page for 'Avengers: Endgame' on 'Screen 1 - Premium' on '14/11/2025, 17:54:24'. The title 'Select Your Seats' is at the top, followed by a 'SCREEN' button. Below is a grid of 6 rows (A-F) and 10 columns (1-10) representing seats. Seats 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10 in row A are highlighted in grey, indicating they are booked.



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○ **Booking Confirmation:**

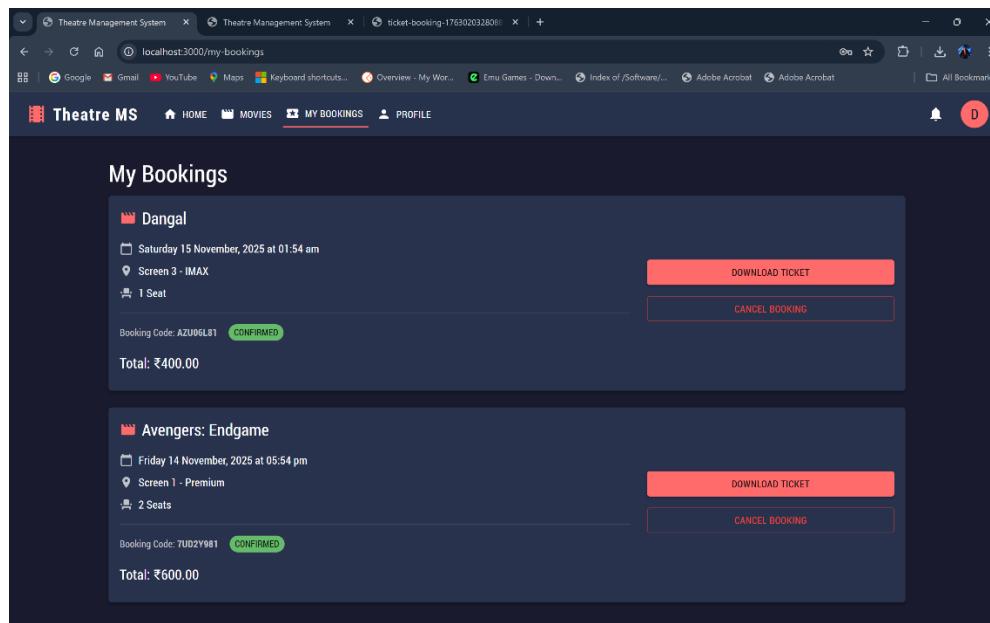


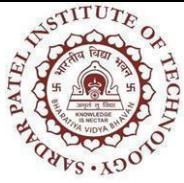
- **Explanation:** The booking process features an interactive seat map that displays real-time availability. Users can select their preferred seats, which are then reserved. After a successful booking, a confirmation message is displayed.

5. Booking Management

• **Screenshots:**

○ **My Bookings:**





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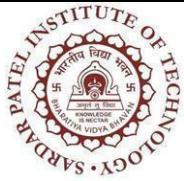
○ Booking Cancellation:

- **Explanation:** Users can view their booking history in the "My Bookings" section. From here, they have the option to cancel a booking if needed, with a confirmation prompt to prevent accidental cancellations.

6. PDF Ticket Generation

• Screenshot:

- **Explanation:** Upon successful payment, the system automatically generates a PDF ticket containing all the relevant booking details and a unique QR code for verification at the theatre.



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7. Admin Dashboard and Movie Management

- Screenshots:

- Admin Dashboard:

The screenshot shows the Admin Dashboard of the Theatre Management System. At the top, there are three summary cards: 'Total Movies' (7), 'Total Bookings' (3), and 'Total Revenue' (₹1600). Below these are navigation links for MOVIES, SCREENINGS, and REPORTS, and buttons for '+ ADD MOVIE' and 'REFRESH'. The main section is titled 'Manage Movies' and lists three movies: Iron Man, Avengers: Endgame, and Dangal. Each movie entry includes its title, genre, duration, language, status (Active), and edit/delete icons.

- Add New Movie:

The screenshot shows the 'Add New Movie' form. The movie details entered are: Title - Iron Man, Synopsis - After being captured in an Afghan cave, billionaire engineer Tony Stark builds a high-tech suit of armor to escape captivity and becomes the superhero Iron Man., Duration (minutes) - 126, Genres - Action, Sci-Fi, Language - English, Rating - PG-13, Poster URL - <https://image.tmdb.org/t/p/original/3aiUXtIDNjzpzbDB4vHHERyHaya.jpg>, Trailer URL (YouTube) - <https://www.youtube.com/watch?v=BugaeAnMTc>, Release Date - 07-11-2025, and Status - Active. The form also includes fields for Title, Synopsis, Duration (minutes), Genres, Language, Rating, Poster URL, Trailer URL (YouTube), Release Date, and Status. There are 'CANCEL' and 'ADD MOVIE' buttons at the bottom.

- Explanation:** The admin dashboard provides a comprehensive overview of the theatre's operations. Administrators can add new movies to the system by filling out a form with all the necessary details, such as the title, poster, and release date.