Final Project Report

Date	14.04.25
Team ID	SWTID1744365286
Project Name	Online movie ticket booking system
Maximum Marks	4 marks

1. **INTRODUCTION**

   1.1 Project Overview

   The Online Movie Booking System is a web-based application designed to automate and streamline the movie ticket booking process for users and theater administrators. It allows users to browse currently available movies, view showtimes, select preferred seats, and make secure online payments for tickets. The system provides real-time seat availability, reduces manual effort, and eliminates the need to stand in queues.

   For administrators, the platform offers functionalities to manage movie listings, schedule show timings, monitor bookings, and generate reports. The system aims to enhance user convenience, improve operational efficiency for cinema halls, and offer a smooth, responsive, and secure booking experience.

   The Online Movie Ticket Booking System is a dynamic, interactive, and scalable web application, and the MERN Stack provides an ideal framework to build and manage it efficiently. Here's how each component contributes to the system:

   The **MERN stack** (MongoDB, Express.js, React.js, Node.js) plays a crucial role in building a robust and efficient **Online Movie Ticket Booking System**. In this system, **MongoDB** is used as the database to store structured data such as user information, movie details, show timings, seat layouts, and booking records. Its flexible document-based structure makes it ideal for managing nested data like multiple showtimes and seat arrangements. **Express.js** serves as the back-end framework, handling server-side routing, RESTful API creation, and processing client requests such as booking tickets, retrieving show details, and handling user authentication. **React.js** powers the front-end, offering a dynamic and user-friendly interface where users can browse movies, select showtimes, view available seats in real-time, and complete bookings. React's component-based architecture ensures fast rendering and a seamless user experience. **Node.js** serves as the runtime environment for executing server-side code and managing asynchronous operations such as database access and API responses. It allows real-time interaction between the client and server, especially during critical processes like seat selection and booking confirmation. Together, the MERN stack provides a full JavaScript-based solution that ensures scalability, maintainability, and a smooth end-to-end user experience for online movie ticket booking.

   1.2 Purpose

   The purpose of an **Online Movie Booking System** is to streamline and digitalize the traditional process of purchasing movie tickets by providing users with an efficient, user-friendly, and accessible platform. This system allows users to explore currently running and upcoming movies, view detailed information such as genre, language, rating, and duration, and select their preferred showtimes and seats—all from the comfort of their home or on-the-go. With real-time seat availability and instant booking confirmation, it eliminates the need to stand in long queues at cinema counters, saving both time and effort.

   The system also enhances the experience by allowing users to securely pay for tickets online

using integrated payment gateways, and even receive digital receipts or tickets via email or SMS. On the administrative side, the platform equips theater operators with a centralized dashboard to manage movie listings, screen layouts, pricing, seat arrangements, and booking records efficiently. It reduces manual errors, prevents overbooking, and provides valuable insights through booking analytics and reports. The system is scalable, allowing integration with multiple theaters and multiplexes. Ultimately, the Online Movie Booking System benefits both customers and cinema owners by providing convenience, security, transparency, and improved overall management through automation and modern web technologies.
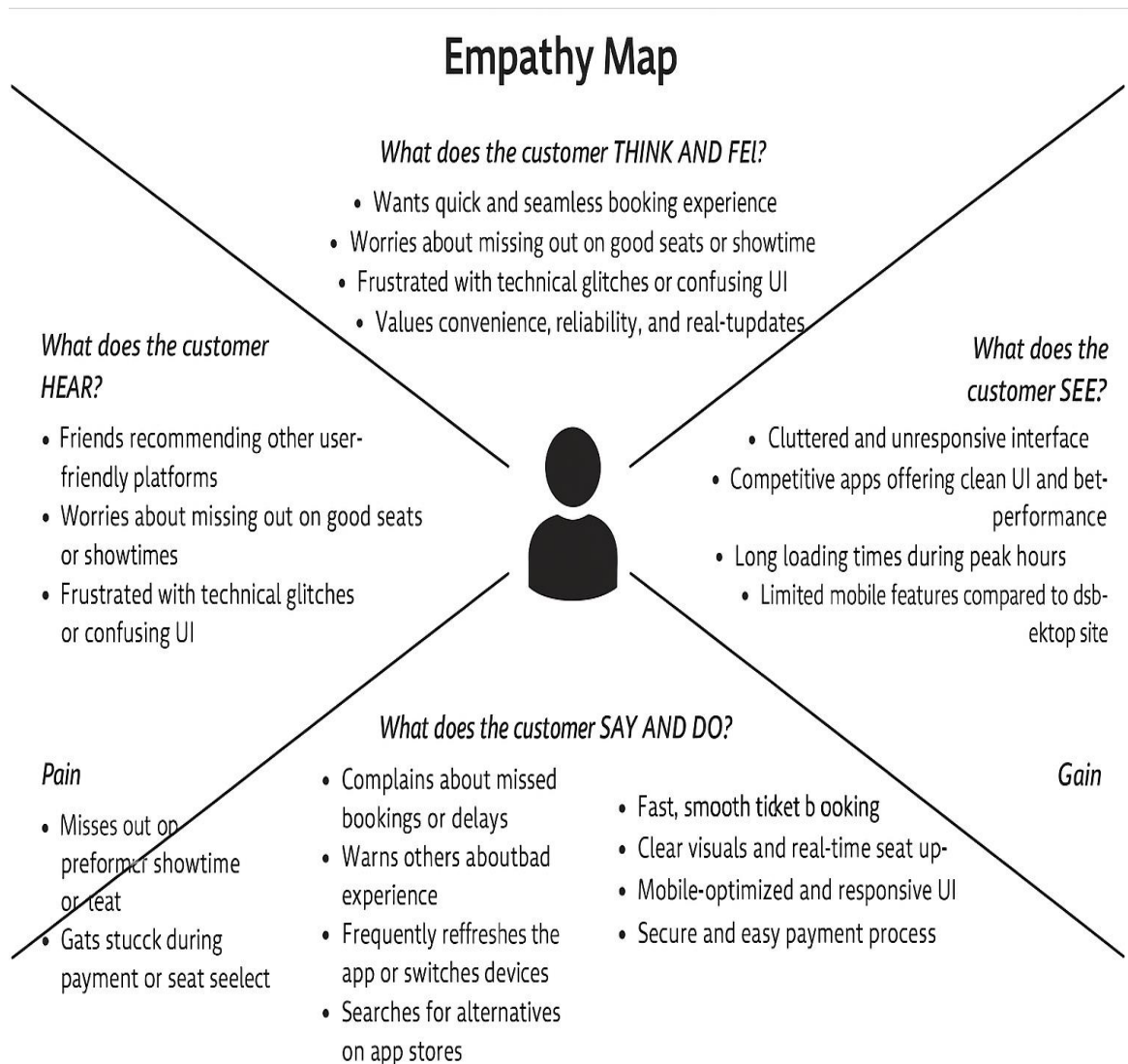
2. IDEATION PHASE

2.1 Problem Statement:

Customers who enjoy watching movies and prefer booking tickets online often face difficulties when using current platforms. They want a quick and hassle-free way to search for movies, select seats, and make payments—especially from their phones while on the go. However, they frequently encounter problems like unresponsive mobile interfaces, confusing seat layouts, app crashes, or payment failures. These barriers cause frustration and may lead them to abandon the process entirely. A better, more intuitive solution is needed to enhance their booking experience and meet their expectations for speed, ease, and reliability.
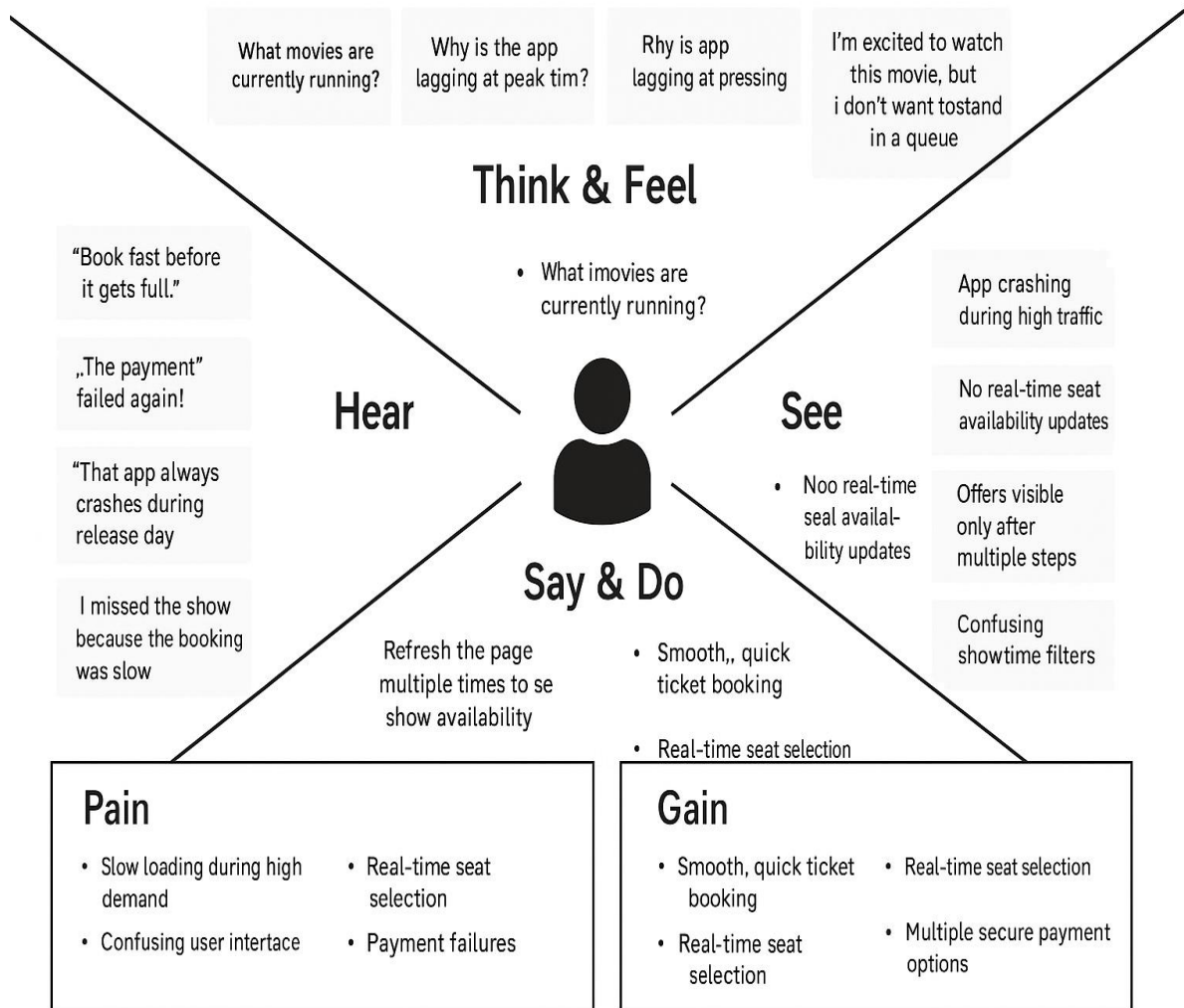
I am	a busy, tech-savvy movie enthusiast who values convenience and digital experiences
I'm trying to	book movie tickets quickly and choose the best seats without standing in long queues
but	I often face limited seat availability and confusing interfaces that slow down my booking
because	current platforms either lack real-time seat tracking, are not personalized, or are cluttered
which makes me feel	frustrated and stressed, making me avoid booking or miss good shows

I am A busy, tech-savvy movie enthusiast who values convenience and digital experiences	I am trying to book movie tickets smoothly using a mobile app or website without delays or confusion.	But I often face last-minute booking failures, poor seat layouts, and payment issues.	Because the platform lacks real-time seat updates, is poorly optimized for mobile, and crashes during high traffic	Which makes me feel irritated, anxious, and disappointed—especially when I miss out on my preferred movie or showtime

Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	a movie lover	book a movie ticket quickly from my mobile	the app keeps crashing or freezing	it is not optimized for mobile and cannot handle peak traffic	frustrated
PS-2	a working professional	book a last-minute ticket for an evening show	I face delays and confusing seat selection	UI not user friendly	anxious and annoyed

2.2 Empathy Map Canvas

Empathy Map

What does the customer THINK AND FEl?

- Wants quick and seamless booking experience
- Worries about missing out on good seats or showtime
- Frustrated with technical glitches or confusing UI
- Values convenience, reliability, and real-tupdates

What does the customer HEAR?

- Friends recommending other user-friendly platforms
- Worries about missing out on good seats or showtimes
- Frustrated with technical glitches or confusing UI

What does the customer SEE?

- Cluttered and unresponsive interface
- Competitive apps offering clean UI and bet-performance
- Long loading times during peak hours
- Limited mobile features compared to dsb-ektop site

What does the customer SAY AND DO?

- Complains about missed bookings or delays
- Warns others aboutbad experience
- Frequently reffreshes the app or switches devices
- Searches for alternatives on app stores

Pain

- Misses out on preformer showtime or teat
- Gats stucck during payment or seat seelect

Gain

- Fast, smooth ticket b ooking
- Clear visuals and real-time seat up-
- Mobile-optimized and responsive UI
- Secure and easy payment process

Empathy map diagram

Think & Feel
- What movies are currently running?
- Why is the app lagging at peak tim?
- Rhy is app lagging at pressing
- I'm excited to watch this movie, but i don't want tostand in a queue
- What imovies are currently running?

Hear
- "Book fast before it gets full."
- „The payment" failed again!
- "That app always crashes during release day
- I missed the show because the booking was slow

See
- App crashing during high traffic
- No real-time seat availability updates
- Offers visible only after multiple steps
- Confusing showtime filters
- Noo real-time seal availal-bility updates

Say & Do
- Refresh the page multiple times to se show availability
- Smooth,, quick ticket booking
- Real-time seat selection

Pain
- Slow loading during high demand
- Confusing user intertace
- Real-time seat selection
- Payment failures

Gain
- Smooth, quick ticket booking
- Real-time seat selection
- Real-time seat selection
- Multiple secure payment options

2.3 Brainstorming

Brainstorm & Idea Prioritization Template:
Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich amount of creative solutions.

Step-1: Team Gathering, Collaboration and Select the Problem Statement:
Problem Statement: In a fast-paced world where people value convenience and efficiency, moviegoers face challenges such as long queues at theaters, lack of real-time seat availability, and poor booking interfaces. Our aim is to develop an intuitive and responsive online movie ticket booking platform, iMovies, that streamlines the process of selecting movies, showtimes, and seats, while providing a personalized and seamless user experience.

Step-2: Brainstorm, Idea Listing and Grouping
Raw Ideas:
- User authentication and profile management

- Browse movies by genre, language, or theater

- Real-time seat availability visualization

- Showtimes filtering by location and timing

- Add movies to a watchlist

- Secure payment integration

- Booking history and digital tickets

- Backend API for managing users, bookings, movies, and shows

- Admin panel for adding/editing shows and theaters

- Notifications for upcoming shows or booking reminders

- Mobile responsive design

- Dark/light theme toggle

- Guest login or OTP-based login

- Rating & reviews for movies

Grouped Ideas:

User Experience & Interface:
- Browse/filter movies

- Watchlist

- Rating/reviews

- Theme toggle

- Responsive design

Booking Functionality:
- Real-time seat layout

- Showtimes by location

- Secure payment gateway

- Booking history

Backend & Infrastructure;
- RESTful APIs with Express.js
- MongoDB collections for users, bookings, theaters, etc.

- Admin dashboard

- Notifications

- Discount code management

Brainstorm
& idea prioritization

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

- 🕐 **10 minutes** to prepare
- ⏳ **1 hour** to collaborate
- 👤 **2-8 people** recommended

Before you collaborate

A little bit of preparation goes a long way with this session. Here's what you need to do to get going.

🕐 10 minutes

A **Team gathering**
Define who should participate in the session and send an invite. Share relevant information or pre-work ahead.

B **Set the goal**
Think about the problem you'll be focusing on solving in the brainstorming session.

C **Learn how to use the facilitation tools**
Use the Facilitation Superpowers to run a happy and productive session.

Open article →

1

Define your problem statement

What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

🕐 5 minutes

PROBLEM

How might we [your problem statement]?

Key rules of brainstorming
To run an smooth and productive session

Stay in topic.   Encourage wild ideas.

Defer judgment.   Listen to others.

Go for volume.   If possible, be visual.

2

Brainstorm

Write down any ideas that come to mind that address your problem statement.

🕐 10 minutes

TIP
You can select a sticky note and hit the pencil [switch to sketch] icon to start drawing!

Amar   Yuktesh   Person 3   Person 4

Person 5   Person 6   Person 7   Person 8

3

Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. In the last 10 minutes, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you break it up into smaller sub-groups.

🕐 20 minutes

Person 4

TIP
Add customizable tags to sticky notes make it easier to find, browse, organize, and categorize important ideas as themes within your mural.

3. **REQUIREMENT ANALYSIS**

3.1 Solution Requirement

Functional Requirements:
Following are the functional requirements of the proposed movie ticket booking system.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form, Registration through Gmail, Registration through LinkedIn
FR-2	User Confirmation	Confirmation via Email, Confirmation via OTP
FR-3	Movie Selection	Browse Movies by Genre, Language, Rating
FR-4	Seat Selection	Select Available Seats, Show Seat Layout
FR-5	Payment Processing	Payment via Credit/Debit Card, Payment via UPI/Wallets, Apply Discount Coupons
FR-6	Ticket Generation	Generate e-Ticket, Send Ticket via Email/SMS
FR-7	Booking History	View Past Bookings, Download Invoices
FR-8	Cancellation & Refund	Cancel Ticket, Process Refund Based on Policy
FR-9	Admin Panel	Manage Movie Listings, Manage User Bookings, View Revenue Reports
FR-10	Customer Support	AI Chatbot for FAQs, Live Agent Support

Non-functional Requirements:
Following are the non-functional requirements of the proposed solution.

| FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Intuitive UI/UX, Mobile-friendly Interface
NFR-2	Security	Secure Payment Gateway, Data Encryption, Role-based Access Control
NFR-3	Reliability	99.9% Uptime, Robust Error Handling
NFR-4	Performance	Optimized Response Time, Load Balancing, Caching Mechanisms
NFR-5	Availability	Multi-Region Deployment, Failover Mechanisms
NFR-6	Scalability	Microservices Architecture, Auto-scaling of Resources

3.2 Data Flow Diagram

Data Flow Diagrams:
A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.
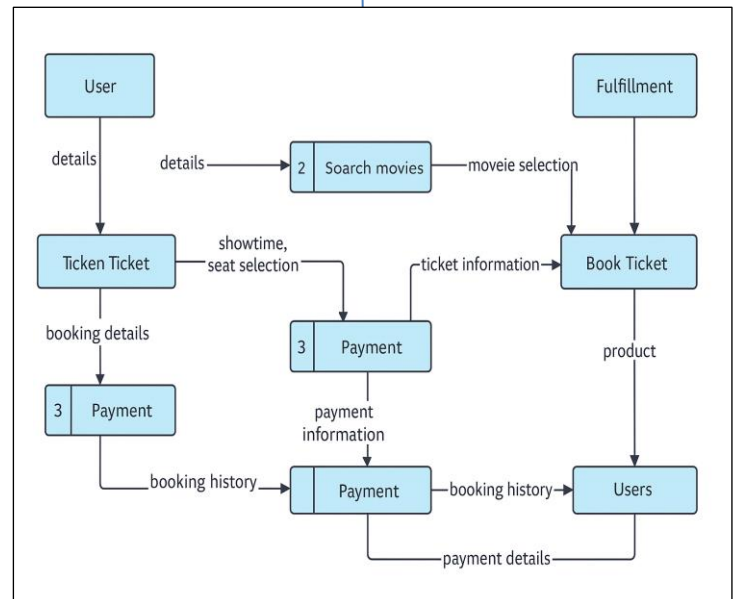
Example: (Simplified)
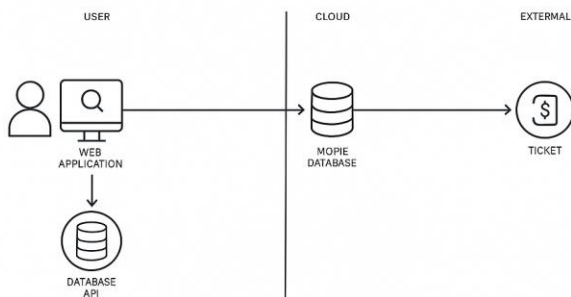
Example: DFD Level 0(Industry Standard)

User Stories
Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Mobile user)	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint-1
		USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Sprint-1
		USN-3	As a user, I can register for the application through Facebook	I can register & access the dashboard with Facebook Login	Low	Sprint-2

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
		USN-4	As a user, I can register for the application through Gmail	I can register & access the dashboard with Gmail Login.	Medium	Sprint-1
	Login	USN-5	As a user, I can log into the application by entering email & password	I can successfully log in and access my account.	High	Sprint-1
	Search & Browse Movie	USN-6	As a user, I can browse currently available movies by genre, language, and format (2D/3D/IMAX).	I can view and filter movies based on my preferences.	High	Sprint-1
	Seat selection	USN-7	As a user, I can select my preferred seats before booking.	I can view the seating layout and pick available seats.	High	Sprint-1
	Payment	USN-8	As a user, I can pay for my ticket using a credit card, debit card, UPI, or digital wallets.	I receive a successful transaction message and my ticket is booked.	High	Sprint-1
	Ticket Confirmation	USN-9	As a user, I receive an email and SMS confirmation after booking my ticket.	I get a ticket with a QR code and details of my movie.	Medium	Sprint-2
Customer (Web user)	User Support	USN-10	As a web user, I can register and log in using email, Gmail, or Facebook.	I can access my account and book tickets.	High	Sprint-1
Customer Care Executive	Manage Movies & Shows	USN-11	As an admin, I can add, update, and delete movie listings and showtimes.	I can see my ticket history and upcoming shows.	Medium	Sprint-2
Administrator		USN-12	As a support agent, I can view user details and assist with booking issues.	I can resolve user issues and update their booking status.	Medium	Sprint-2

3.3 Technology Stack

Technical Architecture:
The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2
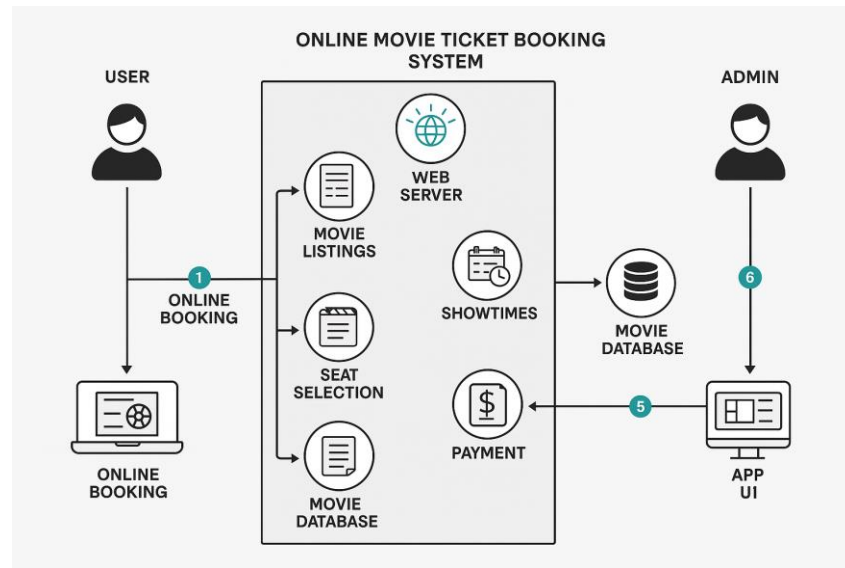
Example: Movie Ticket Booking System

Table-1: Components & Technologies

S.No	Component	Description	Technology
1	User Interface	How user interacts with the application, e.g., Web UI, Mobile App	HTML, CSS, JavaScript / React.js / Angular.js / Flutter / Swift
2	Application Logic-1	Logic for user authentication and profile management	Java / Python / Node.js
3	Application Logic-2	Logic for ticket booking, seat selection, and payment processing	IBM Watson STT service, Payment Gateway APIs
4	Application Logic-3	AI-powered chatbot for customer support	IBM Watson Assistant
5	Database	Data storage for users, bookings, movie details, etc.	MySQL, PostgreSQL, NoSQL
6	Cloud Database	Cloud-based data storage solution	IBM DB2, IBM Cloudant, Firebase Firestore
7	File Storage	Storing user-generated content, e.g., ticket receipts	IBM Block Storage, Local Filesystem, AWS S3
8	External API-1	Third-party API for real-time movie listings	IMDb API, TMDb API
9	External API-2	Identity verification during booking	Aadhar API, OAuth 2.0 Authentication
10	Machine Learning	Personalized movie recommendations based on user behavior	Recommendation Engine (TensorFlow, PyTorch)

	Model		
11	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud	Cloud Foundry, Kubernetes, AWS, IBM Cloud

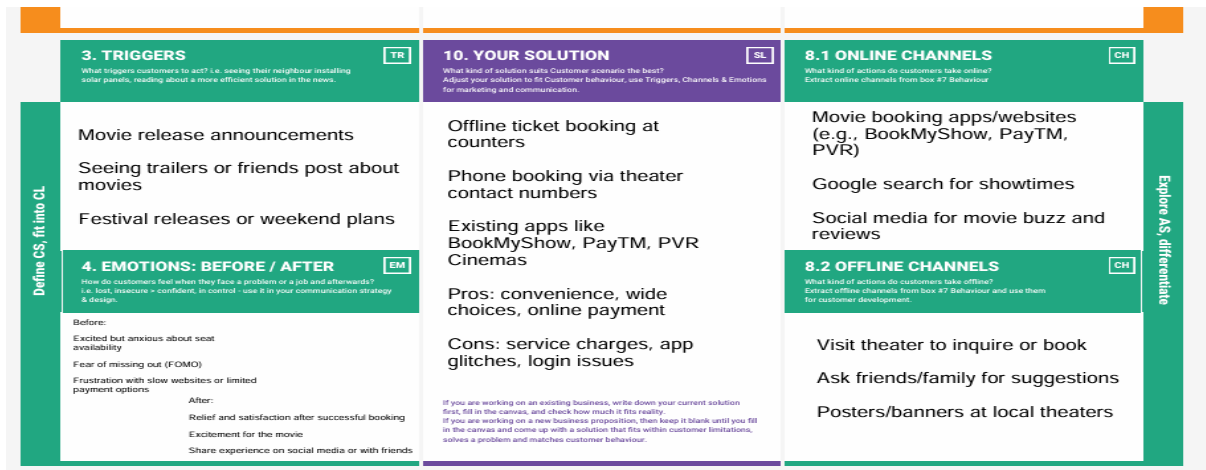**Table-2: Application Characteristics:**

S.No	Characteristics	Description	Technology
1	Open-Source Frameworks	Frameworks used for development	React.js, Node.js, Express.js, Django
2	Security Implementations	Security controls for user data and transactions	SHA-256 encryption, IAM Controls, OAuth, Firewalls
3	Scalable Architecture	Ensuring the system scales for high demand	Microservices, Load Balancing
4	Availability	High availability with redundancy measures	Distributed Servers, Failover Mechanisms
5	Performance	Optimization techniques for fast response times	Caching (Redis, Memcached), CDN Integration

4. PROJECT DESIGN

4.1 Problem Solution Fit

3. TRIGGERS `TR`
What triggers customers to act? i.e. seeing their neighbour installing solar panels, reading about a more efficient solution in the news.

Movie release announcements

Seeing trailers or friends post about movies

Festival releases or weekend plans

4. EMOTIONS: BEFORE / AFTER `EM`
How do customers feel when they face a problem or a job and afterwards? i.e. lost, insecure = confident, in control - use it in your communication strategy & design.

Before:
Excited but anxious about seat availability
Fear of missing out (FOMO)
Frustration with slow websites or limited payment options
After:
Relief and satisfaction after successful booking
Excitement for the movie
Share experience on social media or with friends

Define CS, fit into CL

10. YOUR SOLUTION `SL`
What kind of solution suits Customer scenario the best? Adjust your solution to fit Customer behaviour, use Triggers, Channels & Emotions for marketing and communication.

Offline ticket booking at counters

Phone booking via theater contact numbers

Existing apps like BookMyShow, PayTM, PVR Cinemas

Pros: convenience, wide choices, online payment

Cons: service charges, app glitches, login issues

If you are working on an existing business, write down your current solution first, fill in the canvas, and check how much it fits reality.
If you are working on a new business proposition, then keep it blank until you fill in the canvas and come up with a solution that fits within customer limitations, solves a problem and matches customer behaviour.

8.1 ONLINE CHANNELS `CH`
What kind of actions do customers take online? Extract online channels from box #7 Behaviour

Movie booking apps/websites (e.g., BookMyShow, PayTM, PVR)

Google search for showtimes

Social media for movie buzz and reviews

8.2 OFFLINE CHANNELS `CH`
What kind of actions do customers take offline? Extract offline channels from box #7 Behaviour and use them for customer development.

Visit theater to inquire or book

Ask friends/family for suggestions

Posters/banners at local theaters

Explore AS, differentiate

4.2 Proposed Solution

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Customers often struggle with slow, unreliable, or non-intuitive movie booking platforms that fail to offer real-time seat tracking, secure payments, or a personalized experience.
2.	Idea / Solution description	iMovies is a smart, user-friendly movie ticket booking platform that allows users to browse movies, select showtimes, and book seats with real-time availability. The app integrates secure payments, booking history, and user preferences using Express.js (backend), MongoDB (database), and a responsive frontend.
3.	Novelty / Uniqueness	Real-time seat availability, seamless payment integration, intuitive interface, and a customizable user experience make iMovies stand out. Personalized movie recommendations and loyalty rewards further enhance engagement.
4.	Social Impact / Customer Satisfaction	Reduces physical queues and booking stress, especially for elderly or busy users. Promotes digital convenience, enhances user satisfaction, and supports safer, contactless ticketing.
5.	Business Model (Revenue Model)	iMovies can generate revenue through service charges, in-app promotions, theater partnerships, and optional premium features (e.g., early access to bookings, cashback offers) .
6.	Scalability of the Solution	The solution is highly scalable, with a modular architecture built on Express.js and MongoDB. It can support regional theater integrations, international language support, and user expansion through cloud hosting.

4.3 Solution Architecture

Solution Architecture Diagram:

Solution Architecture: IMovies: Smart Movie Ticket Booking System

Frontend
- React.js / HTML / CSS / JS
- User Authentication
- Browse Movies
- Seat Selection
- Booking History & Profile

Axios/Fetch

Backend
- Node.js / Express
- API Endpoints
- Users
- Movies
- Shows
- Seats
- Bookings
- Favorites

Axios/Fetch

Database
- MongoDB
- Collections
- Users
- Movies
- Shows
- Movies
- Theaters
- Bookings

Payment Gateway
- Options
- Razorpay, Stripe

Socket.IO/ WebSockets (optional)

5. PROJECT PLANNING & SCHEDULING

5.1 Project Planning

Product Backlog, Sprint Schedule, and Estimation

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	2	High	Aniket
Sprint-1	Registration	USN-2	As a user, I will receive confirmation email once I have registered for the application	1	High	Aprajita
Sprint-2	Registration	USN-3	As a user, I can register for the application through Facebook	2	Low	Komal
Sprint-1	Registration	USN-4	As a user, I can register for the application through Gmail	2	Medium	Arpita
Sprint-1	Login	USN-5	As a user, I can log into the application by entering email & password	1	High	Komal
Sprint-2	Movie Browsing	USN-6	As a user, I can browse a list of movies and showtimes	2	High	Aprajita
Sprint-2	Seat Selection	USN-7	As a user, I can view seating layout and select my seats	3	High	Aniket
Sprint-2	Ticket Booking	USN-8	As a user, I can book tickets for selected movie, show, and seats	3	High	Arpita
Sprint-3	Payments	USN-9	As a user, I can pay securely via an integrated payment gateway	5	High	Aniket
Sprint-3	Confirmation	USN-10	As a user, I receive a confirmation with all booking details	2	Medium	Aprajita
Sprint-3	Deployment	USN-11	As a user, I can access the deployed application online	3	Medium	Komal

Project Tracker, Velocity & Burndown Chart: (4 Marks)

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	10	5 Days	01 Apr 2025	05 Apr 2025	10	05 Apr 2025
Sprint-2	15	5 Days	06 Apr 2025	10 Apr 2025	15	10 Apr 2025
Sprint-3	13	5 Days	11 Apr 2025	15 Apr 2025	13	15 Apr 2025

| Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-4	0	-	-	-	-	-

Velocity:

Imagine we have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint).
Let's calculate the team's average velocity (AV) per iteration unit (story points per day)

$$AV = \frac{sprint\ duration}{velocity} = \frac{20}{10} = 2$$

Burndown Chart:

A burn down chart is a graphical representation of work left to do versus time. It is often used in agile software development methodologies such as Scrum. However, burn down charts can be applied to any project containing measurable progress over time.

Sprint Burndown Chart - iMovies
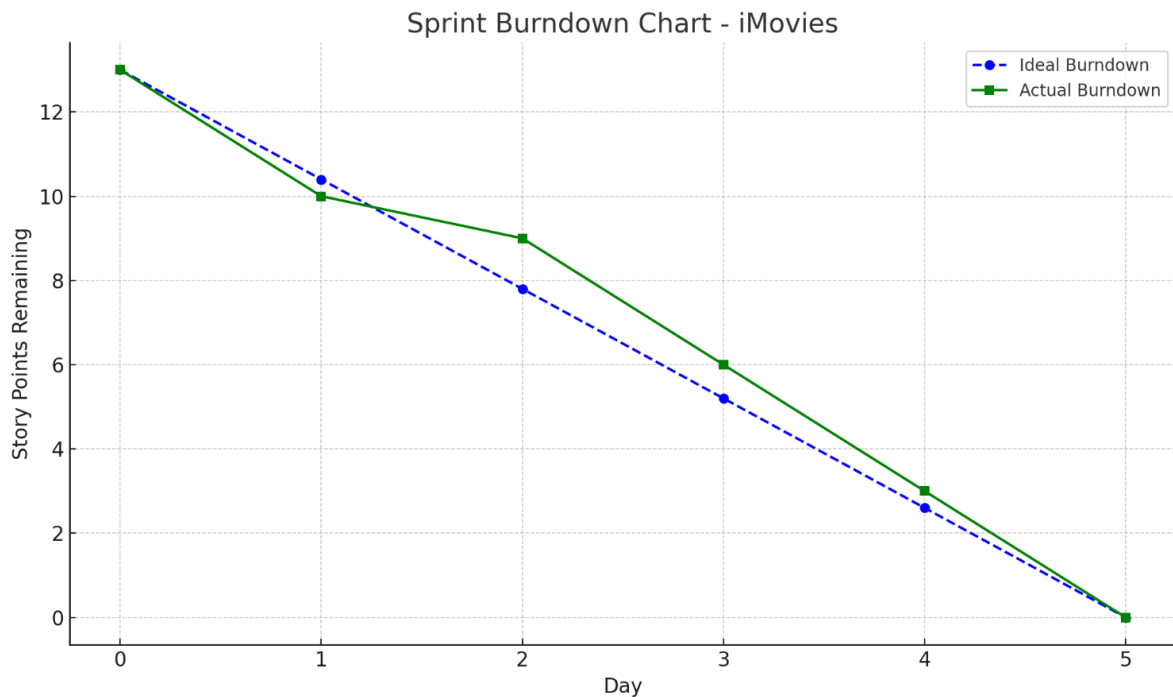
6. FUNCTIONAL AND PERFORMANCE TESTING

6.1 Performance Testing

Testing Period: 1.02.25 to 14.04.25

Testing Scope:
List of Features and Functionalities to be Tested:

- User registration and login

- Movie listing and search functionality

- Movie details page (including showtimes, ratings, etc.)

- Seat selection and booking flow

- Payment gateway integration

- Booking confirmation and email/SMS notifications

- User profile management (viewing past bookings, updating details)

- Ticket cancellation and refund process

- Mobile responsiveness and cross-browser compatibility

- Admin panel functionalities (manage movies, shows, and booking

List of User Stories or Requirements to be Tested:

- As a user, I want to browse movies and view showtimes so I can choose the right movie and time.

- As a user, I want to securely make payments for tickets online.

- As a user, I want to receive a booking confirmation via email and SMS.

- As an admin, I want to add, edit, or remove movies from the platform.

Testing Environment:
URL/Location: [Web URL or Application Location]
Credentials (if required): [Username/Password]
Test Cases:

Test Case ID	Test Scenario	Test Steps	Expected Result	Actual Result	Pass/Fail
TC-001	User Registration	1. Navigate to the registration page. 2. Enter valid user details. 3. Click "Submit".	User should be registered successfully and redirected to the login page.	[Record Result]	[Pass/Fail]
TC-002	Movie Search	1. Navigate to the movie listing page. 2. Enter a movie title in the search bar. 3. Click "Search".	Matching movies should be displayed based on the search term.	[Record Result]	[Pass/Fail]
TC-003	Seat Selection	1. Select a movie. 2. Choose a showtime. 3. Select available seats. 4. Click "Book Tickets".	Seats should be booked, and a booking summary should be shown.	[Record Result]	[Pass/Fail]
TC-004	Payment Process	1. Select seats and proceed to checkout. 2. Enter payment details. 3. Click "Pay Now".	Payment should be processed, and a confirmation page should be shown.	[Record Result]	[Pass/Fail]
TC-005	Admin Adding Movie	1. Log in as admin. 2. Navigate to the admin panel. 3. Click "Add Movie". 4. Fill in movie details and click "Save".	Movie should be added to the movie list in the system.	[Record Result]	[Pass/Fail]
TC-006	Responsive Design	1.Open the site on different devices (mobile, tablet, desktop).	The webte should be fully responsive	[Record Result]	[Pass/Fail]

Test Case ID	Test Scenario	Test Steps	Expected Result	Actual Result	Pass/Fail
		2. Verify if the UI adapts to different screen sizes.	and display correctly on all devices.		

Bug Tracking:

Bug ID	Bug Description	Steps to Reproduce	Severity	Status	Additional Feedback
BG-001	Payment gateway not processing payments correctly	1. Select seats. 2. Proceed to checkout. 3. Enter payment details and click "Pay Now". 4. Error message displayed.	High	Open	Payment processing fails intermittently.
BG-002	Movie search returns incorrect results	1. Enter a movie title in the search bar. 2. Click "Search". 3. Incorrect or no results displayed.	Medium	In Progress	Search algorithm might need refinement.
BG-003	Admin unable to remove movies from the list	1. Log in as admin. 2. Navigate to the admin panel. 3. Attempt to delete a movie. 4. Movie is not removed.	High	Open	There may be a backend issue with movie deletion.

Sign-off:
Tester Name: Aniket Ranjan
Date: 14.04.25

7. RESULTS

7.1 Output screenshots
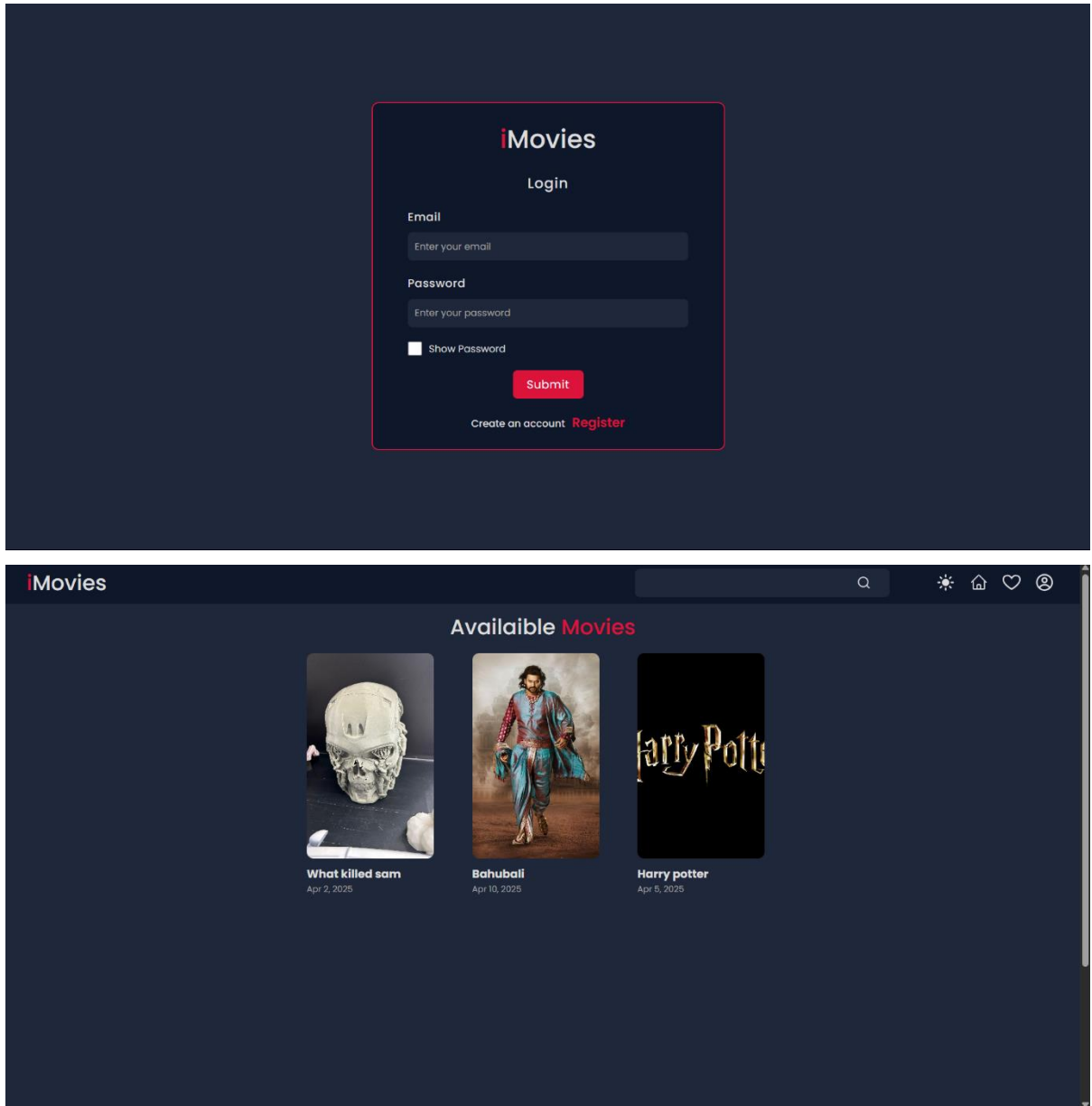
iMovies

Bahubali (2025)

Baahubali is a two-part Indian epic action film directed by S.S. Rajamouli, consisting of Baahubali: The Beginning (2015) and Baahubali: The Conclusion (2017). The film, set in the fictional kingdom of Mahishmati, follows the story of Amarendra Baahubali and his son Mahendra Baahubali, who fight for justice, honor, and their rightful place on the throne.

Adventure

Release Date:
Apr 10, 2025

Runtime:
145 Min

Write a review...

Send

No Reviews

Book Tickets

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iMovies

Available Shows

Theatre: Imax
Showdate: Apr 11, 2025
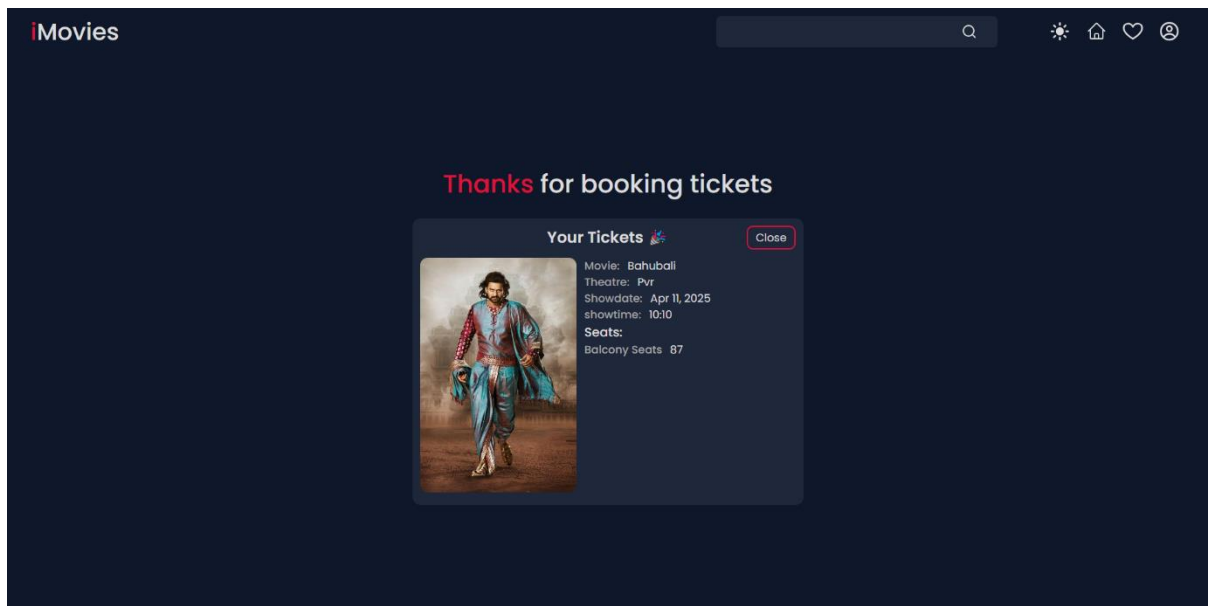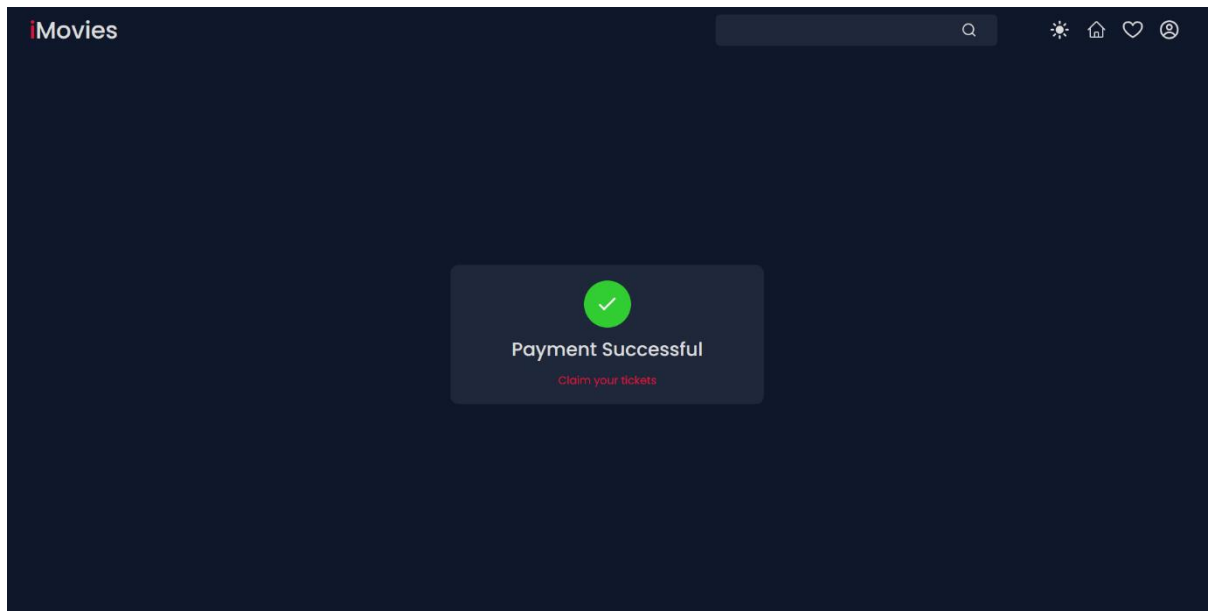Showtime: 2:45 AM
Buy Tickets

Theatre: Pvr
Showdate: Apr 11, 2025
Showtime: 10:10 AM
Buy Tickets

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iMovies

Balcony Seats

Balcony Seats Price: 300 ₹/-
Middle Seats Price: 0 ₹/-
Lower Seats Price: 0 ₹/-

Pay 300 ₹/-

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Experience the future of entertainment at your fingertips with Streamify's intuitive interface, empowering users to navigate effortlessly through a vast library of high-quality, on-demand content.

Show desktop

✓

Payment Successful

Claim your tickets

Thanks for booking tickets

Your Tickets 🎉   Close

Movie: Bahubali
Theatre: Pvr
Showdate: Apr 11, 2025
showtime: 10:10
Seats:
Balcony Seats 87

iMovies

Add Movie

Movie
Enter movie name

Description
Enter movie description

Genres
Enter movie genres seperated by comma.

Release Date
dd-mm-yyyy

Runtime
Enter runtime in minutes

Certification
Enter movie certification

Submit

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iMovies

Admin Shows

Movie: Bahubali
Theatre: Imax
Showdate: Apr 11, 2025
Showtime: 2:45 AM

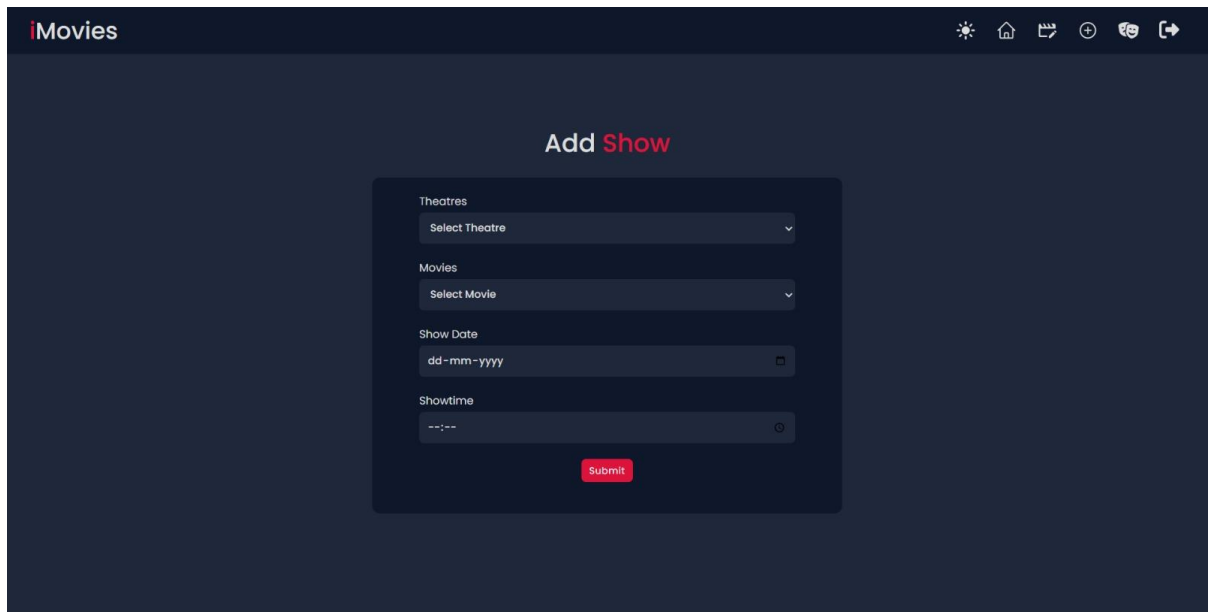Movie: Bahubali
Theatre: Pvr
Showdate: Apr 11, 2025
Showtime: 10:10 AM

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iMovies

Add Theatre

Theatre Name

Theatre Location

Balcony Seat Price
0

Balcony Seat Count
0

Middle Seat Price
0

Middle Seat Count
0

Lower Seat Price
0

Lower Seat Count
0

Submit

8. ADVANTAGES & DISADVANTAGES

Advantages:

1. 24/7 Availability

   Users can book tickets anytime without depending on office hours.

2. Real-Time Seat Management

   Shows up-to-date seat availability and prevents overbooking through dynamic updates.

3. User Convenience

   Reduces queue time and provides a seamless booking experience via web/mobile.

4. Automated Payment Integration

   o   Secures transactions through payment gateways (e.g., Razorpay, Stripe).

5. Centralized Data Management

   o   Admins can manage movie listings, showtimes, user data, and transactions in one place (via MongoDB/SQL).

6. Paperless System

   o   E-tickets reduce printing costs and are eco-friendly.

7. Scalable Architecture

   o   Supports thousands of concurrent users using technologies like MongoDB, React, and Node.js.

8. Reports & Analytics

   o   Tracks user behavior, peak showtimes, and revenue statistics for better decision-making.

Disadvantages:

1. Internet Dependency

   o Requires stable internet access for both users and system operations.

2. Security Concerns

   o Sensitive data like payment and personal details need protection from cyber threats (must implement SSL, encryption, etc.).

3. Technical Glitches

   o Downtime or bugs in the system can lead to booking failures or user frustration.

4. Initial Development Cost

   o Requires time and investment in web hosting, backend, UI/UX, and security.

5. Digital Literacy Requirement

   o Not all users (especially elderly) may be comfortable using online platforms.

6. High Server Load During Peak Times

   o May slow down or crash if not scaled with load balancers or cloud resources.

9. CONCLUSION

The Online Ticket Booking System offers a convenient, user-friendly platform for customers to browse movies, select showtimes, and book tickets effortlessly. It streamlines the ticketing process, eliminating long queues and manual operations. With real-time availability and secure payment options, it provides a seamless booking experience. This system enhances operational efficiency for cinemas, improves customer satisfaction, and allows businesses to manage bookings and data more effectively, offering a modern solution to the entertainment industry.

10. FUTURE SCOPE

The future scope of an online ticket booking system includes:

1. **Integration with AI & ML**: Personalized recommendations and predictive analytics for better user experiences.
2. **Mobile App Enhancements**: More advanced mobile apps with features like augmented reality (AR) for virtual seat selection and location-based services.
3. **Blockchain**: For enhanced security, preventing fraud, and ensuring transparency in ticket transactions.
4. **Event & Multi-platform Integration**: Integration with multiple event platforms for a wider range of bookings (e.g., concerts, conferences).
5. **Voice & Chatbot Booking**: Enabling users to book tickets via voice assistants or chatbots, making the system more accessible.
6. **Green Initiatives**: E-ticketing with eco-friendly policies, reducing paper usage.
7. **Global Expansion**: Extending the system's reach to more regions and languages, offering multi-currency and multi-lingual support.

11. APPENDIX

Source code:
https://github.com/AniketRanjan-Creates/iMovie-Movie-Ticket-Booking.git

Demo link:
https://drive.google.com/file/d/1njEv2iaXIvOHSztpjdL7SAvaJx1-XF3-/view?usp=drivesdk