



GET MY PADAM



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Problem Statement



- Booking movie tickets traditionally requires customers to visit theaters in person, leading to long queues and limited convenience.
- Customers and administrators should be able to perform different operations such as viewing movies, selecting seats, managing shows, and confirming bookings online.
- A user-friendly movie reservation web application provides the perfect solution to this problem.

Challenges Faced



Real-time Seat Management: Ensuring seats are not double-booked when multiple users book simultaneously.

Email Automation: Designing dynamic, user-friendly email templates for booking confirmation.

Authentication & Authorization: Protecting user data and restricting admin functionalities.

Frontend–Backend Sync: Maintaining smooth communication between Angular and .NET Core APIs.

Scalability: Designing the system to handle high traffic during popular movie releases

Functional Requirements



- Admin:

Should be able to login using credentials and access dashboard.

Can add, edit, delete and view movies.

Can assign movies to theatres with timings.

Can view list of registered users.

Can manage shows

- User:

Should be able to register and login using credentials.

Can view movies with posters and basic info.

Can view theatres and showtimes .

Can book tickets for available shows.

Can view and download their bookings .

Non - Functional Requirements



Performance: Quick response; bookings and searches load within 3 seconds.

Scalability: Supports growing users, theatres, and bookings without performance drop.

Security: Secure authentication; encrypt passwords & payment details.

Availability: Minimum 99.9% uptime for users and admins.

Usability: Clean, intuitive interface accessible via desktop & mobile.

Maintainability: Modular design for easy updates and bug fixes.

Data Integrity: Accurate, consistent, and protected booking & payment records.

Scope



Scope of Admin:

- Manage Movies:
 - Add, update, and delete movie details.
- Manage Theaters:
 - Add, update, and delete theater details.
- View Users:
 - Search and view registered user details.
- Authentication:
 - Secure login using JWT token-based authentication.


Scope





Scope of User:

- Register and Login:
 - Register with required credentials and login using email and password.
- Browse Movies:
 - View list of all available movies with posters and basic details.
- Browse Theaters:
 - View theaters screening a particular movie.
- Bookings and Payments.
 - Book tickets, select seats, make payments, view booking history.

Database Tables

 Update | Script File: dbo.Admin.sql

	Name	Data Type	Allow Nulls	Default
	AdminID	int	<input type="checkbox"/>	
	Username	varchar(100)	<input type="checkbox"/>	
	Password	varchar(255)	<input type="checkbox"/>	
	Email	varchar(100)	<input type="checkbox"/>	
			<input type="checkbox"/>	

 **Keys** (2)

<unnamed> (Primary Key, Clustered: AdminID)

<unnamed> (Username)

Check Constraints (0)

Indexes (0)

Foreign Keys (0)


Triggers (0)

Booked Seats table

Update

Script File:

dbo.BookedSeats.sql


	Name	Data Type	Allow Nulls	Default	
	BookedSeatID	int	<input type="checkbox"/>		<div><div>▲ Keys (1)</div><div><unnamed> (Primary Key, Clustered: BookedSeatID)</div><div>Check Constraints (0)</div><div>Indexes (0)</div><div>▲ Foreign Keys (2)</div><div><unnamed> (Booking: BookingID)</div><div><unnamed> (Seat: SeatID)</div><div>Triggers (0)</div></div>
	BookingID	int	<input type="checkbox"/>		
	SeatID	int	<input type="checkbox"/>		
			<input type="checkbox"/>		

Booking Table

Update

Script File:

dbo.Booking.sql

	Name	Data Type	Allow Nulls	Default
	BookingID	int	<input type="checkbox"/>	
	UserID	int	<input type="checkbox"/>	
	ShowID	int	<input type="checkbox"/>	
	BookingDate	date	<input type="checkbox"/>	
	TotalPrice	decimal(10,2)	<input type="checkbox"/>	
	PaymentStatus	varchar(20)	<input checked="" type="checkbox"/>	
			<input type="checkbox"/>	

▲ **Keys** (1)

<unnamed> (Primary Key, Clustered: BookingID)

▲ **Check Constraints** (1)

<unnamed> (PaymentStatus)

Indexes (0)

▲ **Foreign Keys** (2)

<unnamed> (Users: UserID)

<unnamed> (ShowTime: ShowID)


Triggers (0)

Movie Table

Update

Script File:

dbo.Movie.sql

	Name	Data Type	Allow Nulls	Default
	MovieID	int	<input type="checkbox"/>	
	Title	varchar(100)	<input type="checkbox"/>	
	Genre	varchar(50)	<input type="checkbox"/>	
	Language	varchar(50)	<input type="checkbox"/>	
	Duration	varchar(20)	<input type="checkbox"/>	
	ImageUrl	nvarchar(255)	<input checked="" type="checkbox"/>	
			<input type="checkbox"/>	

▲ **Keys** (1)

<unnamed> (Primary Key, Clustered: MovieID)


Check Constraints (0)

Indexes (0)

Foreign Keys (0)


Triggers (0)

Payments Table

 Update

Script File:

dbo.Payment.sql

	Name	Data Type	Allow Nulls	Default
	PaymentID	int	<input type="checkbox"/>	
	BookingID	int	<input type="checkbox"/>	
	PaymentDate	date	<input type="checkbox"/>	
	Amount	decimal(10,2)	<input type="checkbox"/>	
	PaymentMode	varchar(20)	<input checked="" type="checkbox"/>	
	PaymentStatus	varchar(20)	<input checked="" type="checkbox"/>	
			<input type="checkbox"/>	

▲ **Keys** (1)
 <unnamed> (Primary Key, Clustered: PaymentID)

▲ **Check Constraints** (1)
 <unnamed> (PaymentStatus)

Indexes (0)

▲ **Foreign Keys** (1)
 <unnamed> (Booking: BookingID)

Triggers (0)

Screen Table


Update Script File: dbo.Screen.sql					
	Name	Data Type	Allow Nulls	Default	
PK	ScreenID	int	<input type="checkbox"/>		Keys (1) <unnamed> (Primary Key, Clustered: ScreenID) Check Constraints (0) Indexes (0) Foreign Keys (1) <unnamed> (Theater: TheaterID) Triggers (0)
	TheaterID	int	<input type="checkbox"/>		
	ScreenName	varchar(50)	<input type="checkbox"/>		
	TotalSeats	int	<input type="checkbox"/>		
	Type	varchar(20)	<input checked="" type="checkbox"/>		
			<input type="checkbox"/>		

Seat Table

Update Script File: dbo.Seat.sql					
	Name	Data Type	Allow Nulls	Default	
PK	SeatID	int	<input type="checkbox"/>		Keys (1) <unnamed> (Primary Key, Clustered: SeatID) Check Constraints (0) Indexes (0) Foreign Keys (1) <unnamed> (Screen: ScreenID) Triggers (0)
	ScreenID	int	<input type="checkbox"/>		
	SeatNumber	varchar(10)	<input type="checkbox"/>		
			<input type="checkbox"/>		


ShowTime Table

Update Script File: dbo.ShowTime.sql

	Name	Data Type	Allow Nulls	Default	
	ShowID	int	<input type="checkbox"/>		<div>▲ Keys (1) <unnamed> (Primary Key, Clustered: ShowID) Check Constraints (0) Indexes (0) ▲ Foreign Keys (3) <unnamed> (Movie: MovieID) <unnamed> (Screen: ScreenID) FK_ShowTime_Theater (TheaterID) Triggers (0)</div>
	MovieID	int	<input type="checkbox"/>		
	ScreenID	int	<input type="checkbox"/>		
	ShowDate	date	<input type="checkbox"/>		
	StartTime	time(7)	<input type="checkbox"/>		
	TicketPrice	decimal(10,2)	<input type="checkbox"/>		
	TheaterId	int	<input checked="" type="checkbox"/>		

Theatre Table

Update Script File: dbo.Theater.sql


	Name	Data Type	Allow Nulls	Default	
	TheaterID	int	<input type="checkbox"/>		<div>▲ Keys (1) <unnamed> (Primary Key, Clustered: TheaterID) Check Constraints (0) Indexes (0) Foreign Keys (0) Triggers (0)</div>
	Name	varchar(100)	<input type="checkbox"/>		
	City	varchar(50)	<input type="checkbox"/>		
			<input type="checkbox"/>		

Users Table

Update

Script File:

dbo.Users.sql

	Name	Data Type	Allow Nulls	Default	
	UserID	int	<input type="checkbox"/>		
	Name	varchar(100)	<input type="checkbox"/>		
	Email	varchar(100)	<input type="checkbox"/>		
	Phone	varchar(20)	<input type="checkbox"/>		
	Password	varchar(255)	<input type="checkbox"/>		
	Address	varchar(255)	<input checked="" type="checkbox"/>		
			<input type="checkbox"/>		

▲ **Keys** (2)

<unnamed> (Primary Key, Clustered: UserID)

<unnamed> (Email)

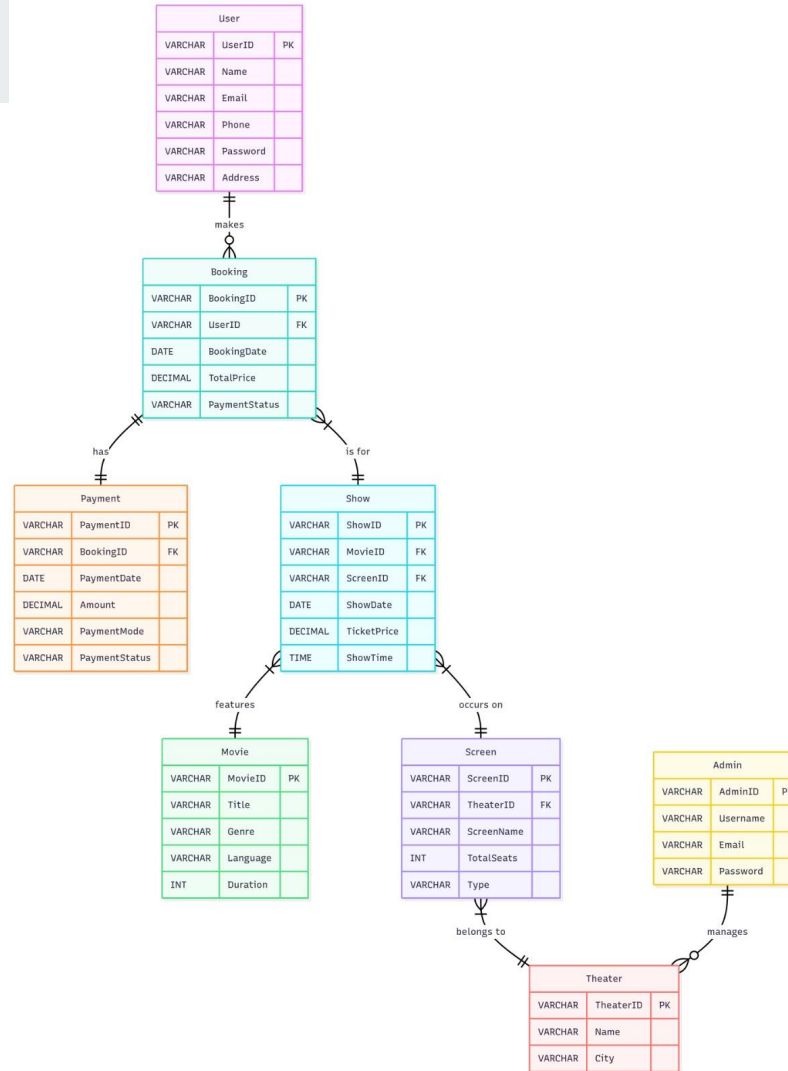
Check Constraints (0)

Indexes (0)

Foreign Keys (0)

Triggers (0)

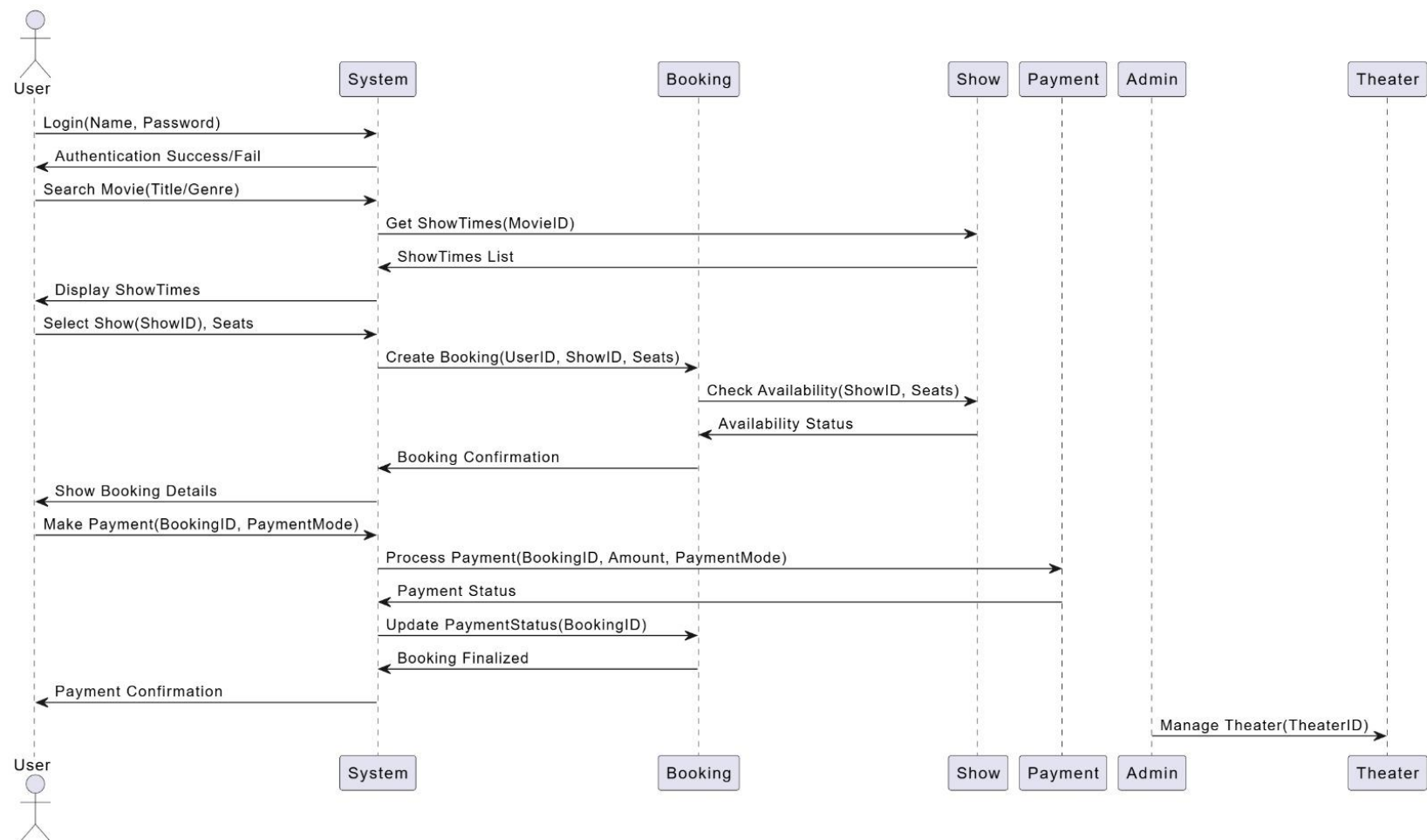
ER Diagram



Use Case Diagram



Sequence Diagram



Software and Hardware Requirements

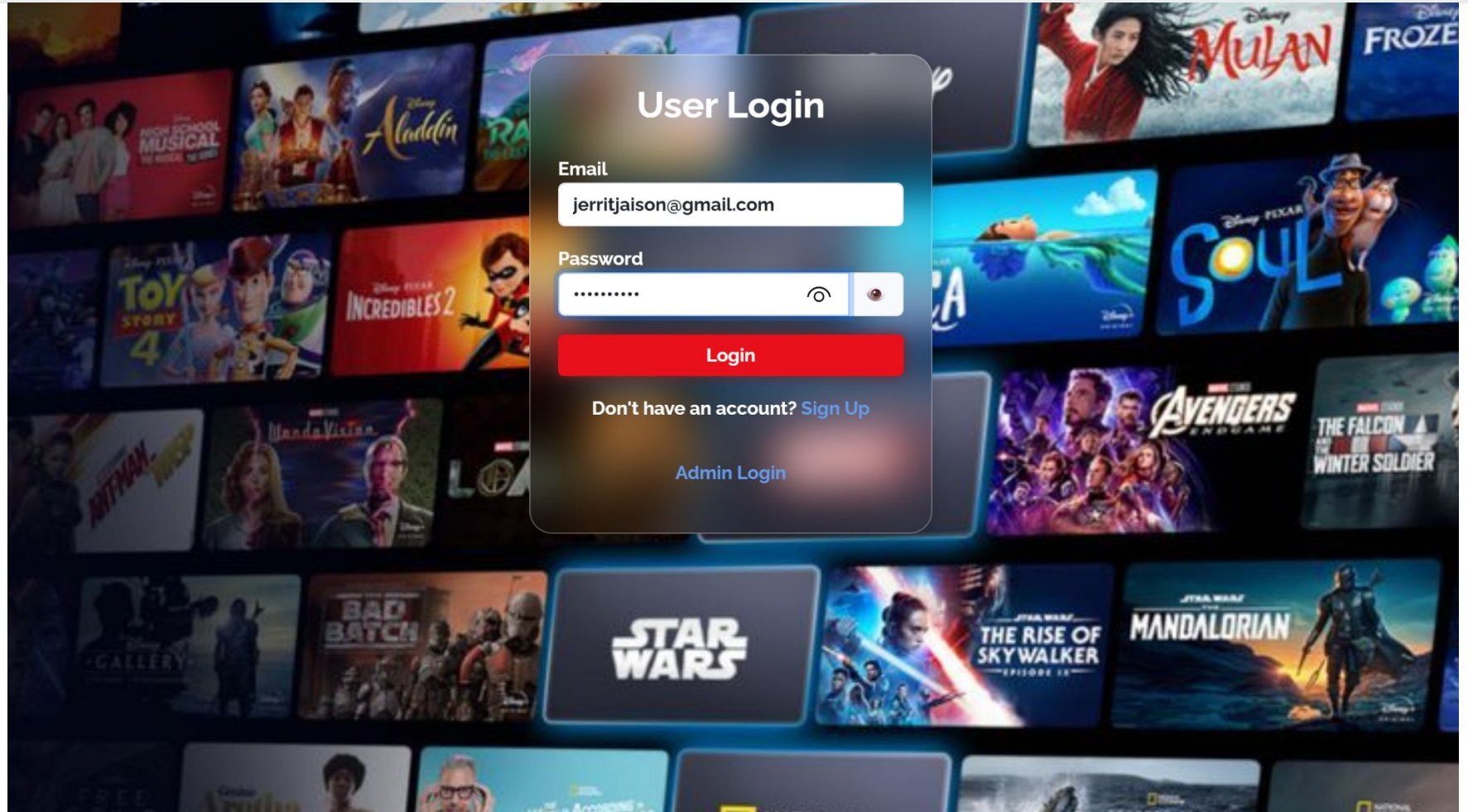


- Operating system : Windows.
- Language : C#, Type Script.
- Framework : Angular, ASP.Net
- Softwares : SQL management studio.
Visual studio.
Visual studio code.



SCREEN FLOW(UI)

Login Page



User Login

Email

jerritjaison@gmail.com

Password

.....



Login

Don't have an account? [Sign Up](#)

[Admin Login](#)

Home Page



All Genres

All Languages

View Profile

View Ticket

Logout

MARVEL STUDIOS SPIDER-MAN BRAND NEW DAY

Coming Soon...



Home Page - Search Option



All Genres



All Languages



View Profile

View Ticket

Logout

AVATAR
Coming Soon... FIRE AND ASH

FROM THE DIRECTOR OF "TITANIC"

AVATAR

User Profile



Update Profile

Name

jerrit

Email

jerritjaison@gmail.com

Phone

1234567890

Address

Kerala

Password

.....

Show

Update

Cancel

Theatres Page



Available Shows




PVR Orion Mall

Screen: Screen 1

Date: 2025-08-01

Show Time: 14:30:00

 Ticket: ₹250

 Book Now




PVR Orion Mall

Screen: Screen 1

Date: 2025-08-02

Show Time: 14:30:00

 Ticket: ₹250

 Book Now

Seat Selection

Movie Booking

Theater: PVR Orion Mall

Date: 2025-08-01

Time: 18:00:00



RRR

Genre

Action

Language

Telugu

Duration

3h 2m



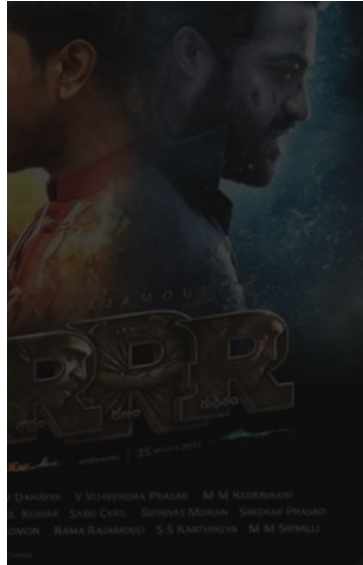
Screen This Way

A	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
B	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
C	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10
D	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
E	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10
F	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10
G	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10
H	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10
I	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10
J	J1	J2	J3	J4	J5	J6	J7	J8	J9	J10
K	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10
L	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10

Total Amount: ₹400

Confirm Booking

Seat Selection



RRR

A	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
B	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
C	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10
D	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
E	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10
F	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10
G	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10
H	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10
I	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10
J	J1	J2	J3	J4	J5	J6	J7	J8	J9	J10

Confirm Your Booking

Seats: D4, D5

Total Amount: ₹400

By confirming, you agree to our terms and conditions.
Tickets once booked cannot be cancelled or refunded.

Yes, Confirm

Cancel

Confirm

Payment Gateway

M Movie Booking

Price Summary

₹400

Using as +91 81295 13982 >

Secured by  Razorpay

Payment Options

... x

Recommended

UPI



Cards



Netbanking



Wallet



Pay Later



UPI QR

🕒 11:53



Scan the QR using any UPI App



Recommended

 Bank of Baroda - Retail Banking Netbank... >

 UPI - Google Pay >

 Canara Bank Netbanking >

Payment Gateway

M Movie Booking

Price Summary

₹400

Using as +91 81295 13982 >

You will be redirected in 3 seconds

Payment Successful



Movie Booking

₹400

Aug 1, 2025, 12:10 AM

UPI | pay_QzmDROeAnFxxZb 

ⓘ Visit razorpay.com/support for queries

Secured by  Razorpay

Secured by  Razorpay

Booking Confirmation Page

Booking Confirmed



Screen: 3D

Theatre: PVR Orion
Mall

Show Time: 18:00:00

Movie: RRR



Seat No: C5, C6

Confirmation sent via
email/SMS/WhatsApp

[Home Page](#)



Booking Cancellation Page

Booking Confirmation



Screen: Screen 1
Theatre: INOX Lulu
Mall
Show Time: 10:30 AM
Movie: Interstellar



Seat No: D4, D5
Confirmation sent via
email/SMS/WhatsApp

[Cancel Booking](#)

[Home Page](#)

localhost:4200 says

Are you sure you want to cancel this booking?

OK

Cancel



Admin Panel

Admin Panel

[View Admin](#)[Add Admin](#)[Logout](#)

User

Movie

Theatre

Admin - User Section

Users

Search users by name or email...

Back

Name	Email	Phone	Address	Action
vivek	vvsasikumar1@gmail....	1234567890	kollM	Delete
jerrit	jerritjaison@gmail.com	1234567890	Kerala	Delete

Admin - Movie Section

Movies

Search movies by title, genre, or language...

Add Movie

Back

Title	Genre	Language	Duration	Action
Inception	Sci-Fi	English	2h 28m	Delete
RRR	Action	Telugu	3h 2m	Delete
Leo	Action Thriller	Tamil	2h 40m	Delete
Avatar	Sci-Fi	English	2h 42m	Delete
Batman	Action	English	2h 56m	Delete
Interstellar	Sci-Fi	English	2h 49m	Delete
Avesham	Action Comedy	Malayalam	2h 35m	Delete
Yeh Jawaani Hai Deew...	Romance/Drama	Hindi	2h 40m	Delete

Admin - Theatre Section

Theaters, Movies & Showtimes

[Back](#)

Theater	Movie	Show Date	Start Time
PVR Orion Mall (Bangalore)	Inception	8/1/25	14:30:00
	Inception	8/2/25	14:30:00
	Inception	8/3/25	14:30:00
	RRR	8/1/25	18:00:00
	Leo	8/1/25	21:00:00
	Interstellar	8/2/25	17:30:00
	Avesham	8/1/25	11:00:00
	Yeh Jawaani Hai Deewani	8/1/25	22:30:00
INOX Lulu Mall (Kochi)	Interstellar	8/3/25	10:30:00
	Avesham	8/2/25	19:45:00

Conclusion



- The Movie Reservation System project successfully streamlines the process of browsing movies, viewing theater availability, and managing user and admin operations.
- With a secure authentication mechanism, well-structured APIs, and an interactive Angular frontend, the system provides a seamless experience for both users and admins.
- This project demonstrates effective full-stack development using ASP.NET Core and Angular, and lays a strong foundation for future enhancements such as seat booking, payment integration, and user notifications.