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<u>Movie Ticket Booking System</u>

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1.Problem Statement:

The current movie ticket booking process is plagued by inefficiencies and inconvenience, resulting in a cumbersome user experience and fragmented administrative oversight. Moviegoers encounter difficulties in accessing comprehensive movie information and face challenges in making reservations, while cinema administrators struggle with decentralized movie listing management and inadequate transaction monitoring.

This calls for the development of a user-friendly online platform that streamlines the booking process, provides comprehensive movie information, and enhances reservation management efficiency. Simultaneously, the platform must offer cinema administrators a centralized system for effective movie listing management, booking monitoring, and transaction oversight, thereby fostering an improved user experience and simplified administrative operations.

2.Requirements/Features:

1. User Authentication and Authorization:

- Ensure secure user login and registration.
- Implement basic user roles: regular users and administrators.

2. Movie Listing and Details:

- Display a list of movies with essential information such as title, synopsis, and genre.

3. Booking Management:

- Enable users to select movie showtimes and reserve seats.
- Provide a simple interface to modify or cancel reservations.

4. Payment Processing:

- Support secure payment methods such as credit/debit cards and digital wallets.

5. Admin Interface:

- Develop a basic dashboard for administrators to manage movie listings and view booking information.

3.Technologies:

- Language: JavaScript
- Framework: Node.js with Express
- Database: MongoDB
- Payment Integration: Stripe API/PayPal API

APIs to be Developed:

1. **User Authentication API:**
   - Responsible for user registration, login, and authentication.
2. **Movie Management API:**
   - Handles storing and retrieving movie details, including title, synopsis, and genre.
3. **Booking Management API:**
   - Manages the reservation process, including seat selection and booking modifications.
4. **Payment Processing API:**
   - Integrates with Stripe API or PayPal API for secure payment processing.
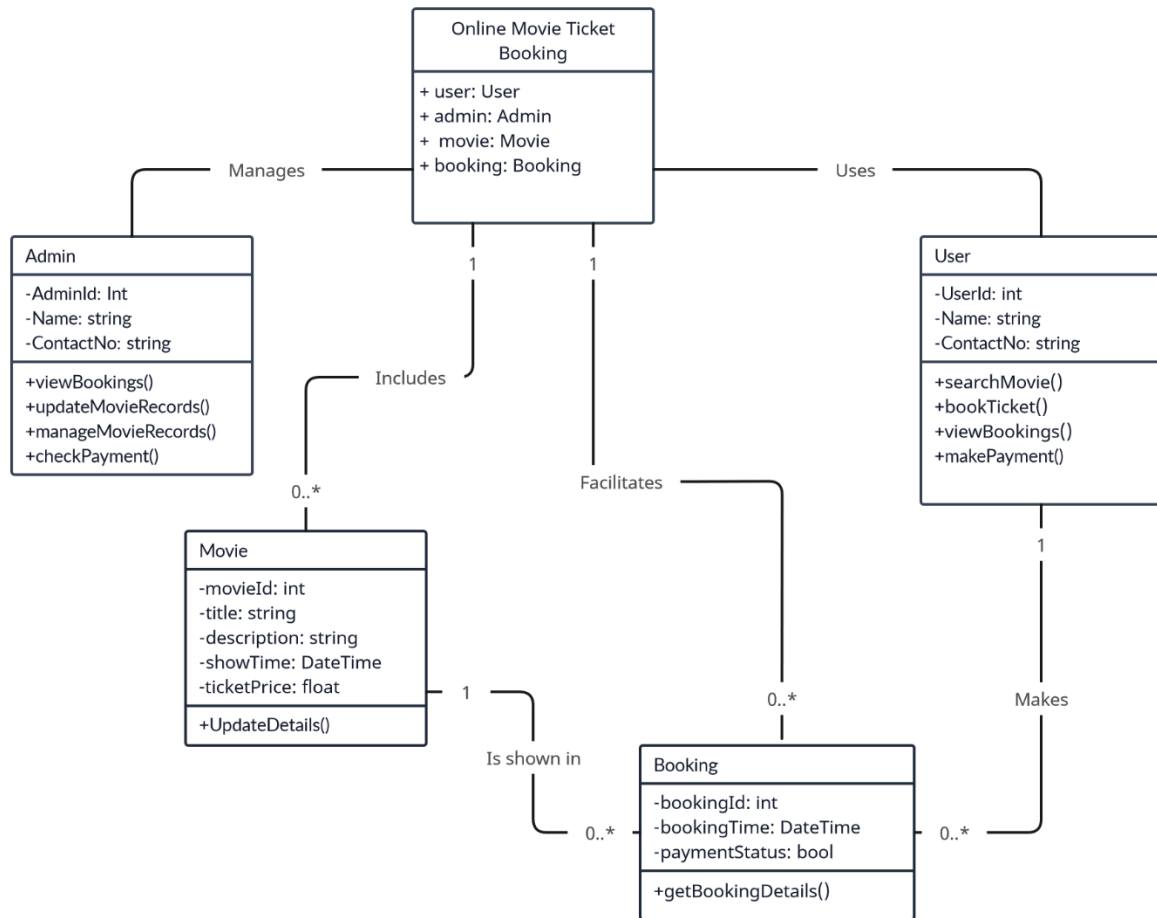
Modules:

1. **User Management Module:**
   - Handles user authentication and basic profile management.
2. **Movie Management Module:**
   - Manages the storage and retrieval of movie information from the MongoDB database.
3. **Booking Management Module:**
   - Facilitates the booking process, including seat selection and reservation modifications.
4. **Payment Management Module:**
   - Integrates the Stripe API or PayPal API for secure payment processing and transaction management.
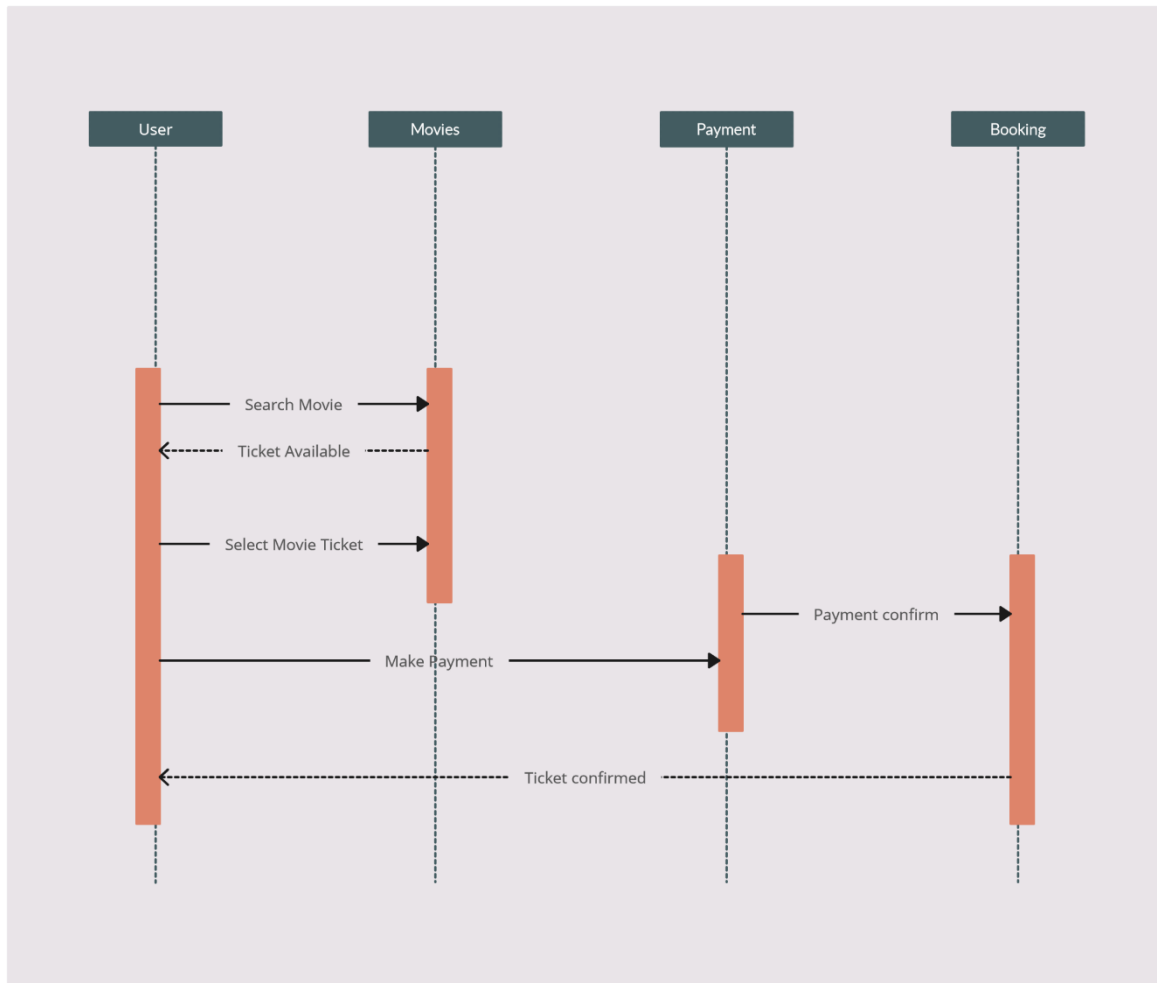
4.Use Case Diagram:

5.Class Diagram:

Online Movie Ticket Booking
+ user: User
+ admin: Admin
+ movie: Movie
+ booking: Booking

Admin
-AdminId: Int
-Name: string
-ContactNo: string

+viewBookings()
+updateMovieRecords()
+manageMovieRecords()
+checkPayment()

User
-UserId: int
-Name: string
-ContactNo: string

+searchMovie()
+bookTicket()
+viewBookings()
+makePayment()

Movie
-movieId: int
-title: string
-description: string
-showTime: DateTime
-ticketPrice: float

+UpdateDetails()

Booking
-bookingId: int
-bookingTime: DateTime
-paymentStatus: bool

+getBookingDetails()

Manages
Uses
Includes
Facilitates
Is shown in
Makes

6.Sequence Diagram:

7.Future Scope:

- Implementing advanced user authentication methods
- Integrating additional payment gateways
- Enhancing the UI/UX for better user experience
- Adding support for multiple languages