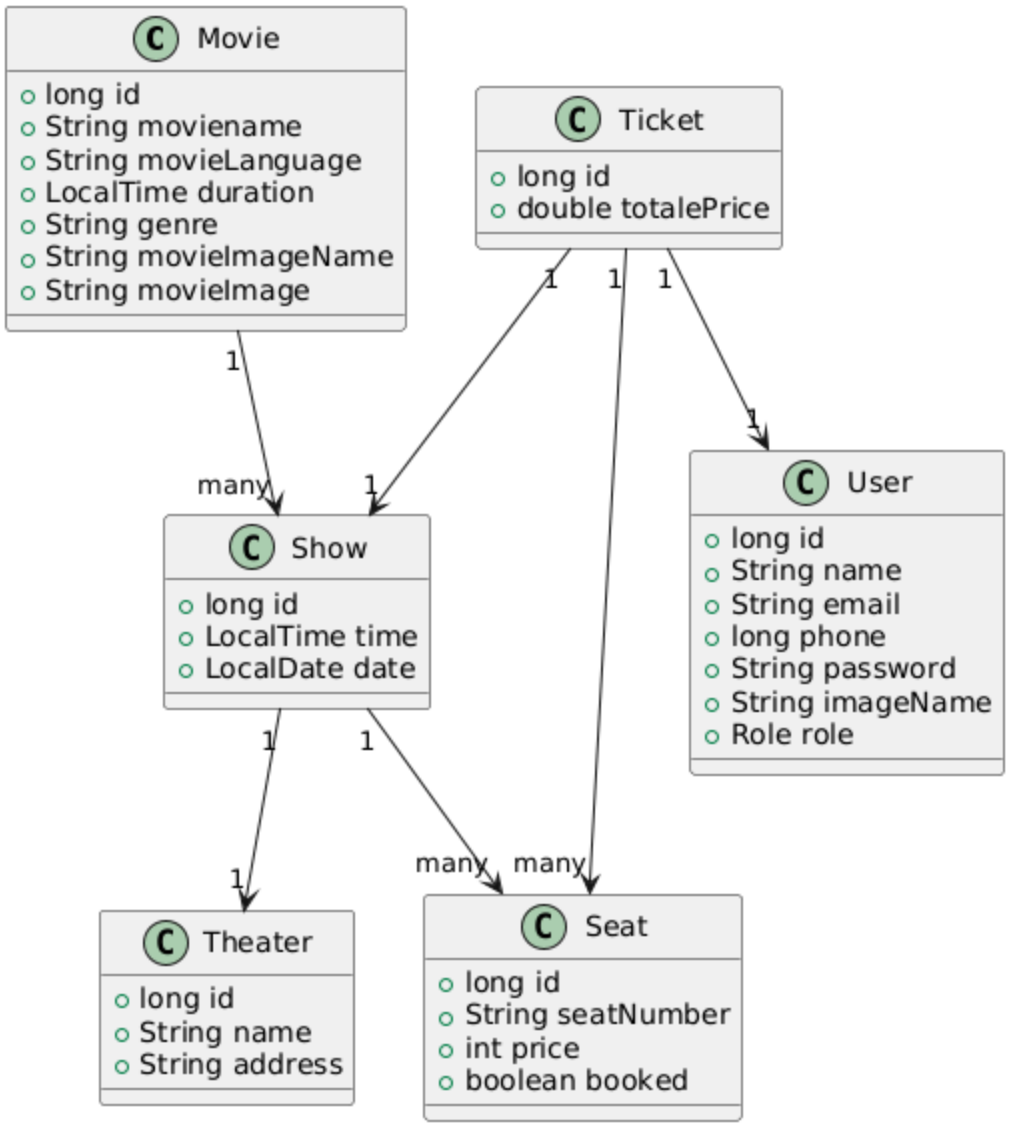
1. **User Registration/Login:**
    - The user creates an account or logs in with their credentials. They provide details like their name, email, phone, and password, which will be stored in the `User` entity.
2. **Browse Movies:**
    - The logged-in user can browse a list of available movies (`Movie` entity). Each movie displays relevant information such as its name, genre, language, duration, and movie poster.
3. **Select a Show:**
    - After selecting a movie, the user is shown the available show timings from the `Show` entity, which are tied to a particular `Theater` entity. Each show has a scheduled time (`time`), date (`date`), and is associated with a specific theater.
4. **Choose a Seat:**
    - The user selects a show and is presented with the available seats (`Seat` entity). Each seat has a seat number (`seatNumber`), price (`price`), and booking status (`booked`).
5. **Booking Confirmation:**
    - Once the user selects their seats, a `Ticket` entity is created that holds details like the total price (`totalePrice`), selected show, and associated user.
    - The selected seats are marked as booked, and a confirmation is generated.
6. **Payment and Final Confirmation:**
    - The user completes the payment for the ticket.
    - Upon successful payment, the ticket is confirmed, and details are stored in the `Ticket` entity. The system marks the selected seats as booked in the `Seat` entity.

Detailed Workflow Steps

1. **User Registration & Login**
    - Input: `User` entity
    - Workflow:
        - User registers or logs in.
        - If registration, `User` entity is populated with user details (e.g., name, email, password).
        - On login, the system validates the user credentials and grants access.
2. **Movie Browsing**
    - Input: `Movie` entity
    - Workflow:
        - System fetches the list of available movies.
        - Displays movie details from the `Movie` entity (moviename, genre, movieImage).

3. **Show Selection**
    - Input: `Show` entity
    - Workflow:
        - After the user selects a movie, the system displays all available shows linked to that movie.
        - Each show is connected to a `Theater` and has attributes like time, date, and associated movie.
4. **Seat Selection**
    - Input: `Seat` entity
    - Workflow:
        - For the selected show, the system fetches available seats (`Seat` entity).
        - User chooses a seat, and the seat status is updated to `booked = true`.
5. **Ticket Creation and Booking**
    - Input: `Ticket`, `Seat`, and `User` entities
    - Workflow:
        - Once the user selects seats, the total price is calculated, and a `Ticket` is generated.
        - The selected seats are linked to this ticket, and the user is linked as the ticket owner.
6. **Final Payment**
    - Input: `Ticket` and `User` entities
    - Workflow:
        - The user proceeds to payment.
        - Upon successful payment, the system confirms the booking, and the `Ticket` entity is finalized with details of the show, seats, and the user.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String movieLanguage
LocalTime duration
String genre
String movieImageName
String movieImage
Ticket
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User
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String email
long phone
String password
String imageName
Role role
Show
long id
LocalTime time
LocalDate date
Theater
long id
String name
String address
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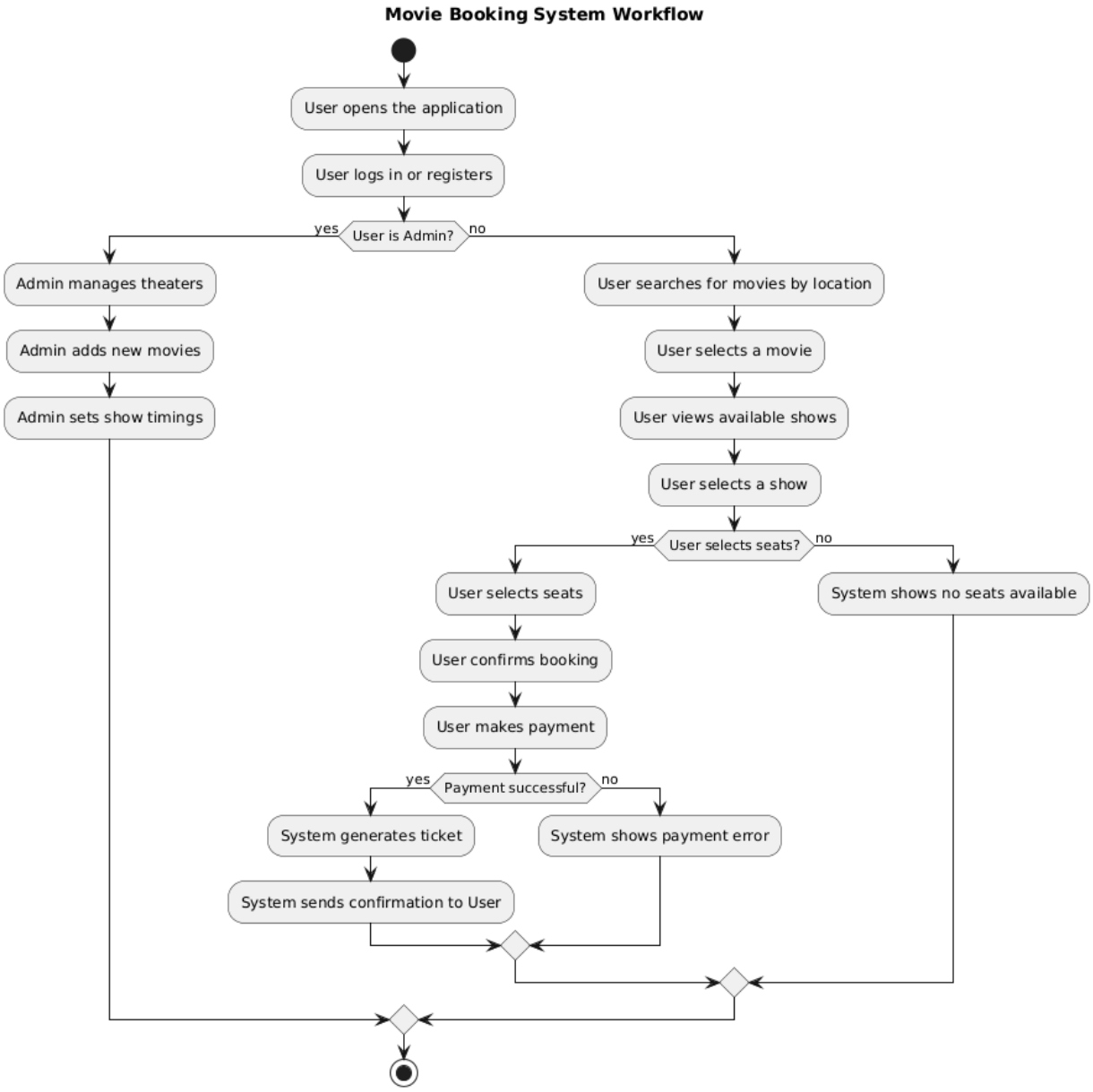

High-Level Design (HLD)

1. **Project Overview**
    - Purpose and Scope of the Movie Booking System
2. **System Architecture**
    - Overview of System Components and Interactions
3. **Technology Stack**
    - Frontend: React (or any other chosen framework)
    - Backend: Spring Boot, Java

    - Database: MySQL/PostgreSQL
4. **Core Functional Modules**
    - User Management (Registration, Login)
    - Movie and Show Management
    - Theater and Seat Management
    - Booking and Ticketing System
    - Payment Gateway Integration
5. **Database Design**
    - Key Entities and Relationships
    - ER Diagram
6. **Security Considerations**
    - User Authentication and Authorization
    - Data Encryption for sensitive information
7. **Scalability and Performance**
    - System Scaling Strategy
    - Caching and Load Balancing Mechanisms
8. **External Integrations**
    - Payment Gateway Integration
    - Notification Services (Email/SMS for booking confirmation)
9. **API Overview**
    - API Endpoints for Frontend-Backend Communication

Low-Level Design (LLD)

1. **Class Diagrams**
    - Entity Relationships (Movie, Show, Seat, Theater, Ticket, User)
2. **Detailed Component Design**
    - Detailed Description of Core Components (Controllers, Services, Repositories)
3. **Database Schema**
    - Detailed SQL Table Structure and Queries
4. **Sequence Diagrams**
    - Workflow for User Registration, Movie Selection, Show Booking, and Ticketing
5. **Flowcharts**
    - Flowcharts for Core Processes (Seat Selection, Ticket Generation)
6. **API Design**
    - Request and Response Formats for all API Endpoints
7. **Service Layer Design**
    - Details of Service Classes for Business Logic
8. **Error Handling Mechanism**
    - Strategy for Exception Handling and Logging
9. **UI/UX Design Considerations**
    - Mockups or Wireframes (if available)
    - User Flow for Movie Booking