

# AcmePlex Movie Theater Reservation System

## System Description

The AcmePlex Movie Theater Reservation System is an elegant and user-centric web application crafted to redefine the movie-going experience. Designed with cutting-edge technologies like Spring Boot and Thymeleaf, this system seamlessly integrates theater management, ticket booking, and advanced payment features into a cohesive and intuitive platform.

## Key Features

### 1. Dynamic User Management

Effortless Access:

- Registered users can create an account, log in, and enjoy a personalized experience, including saved details and faster bookings.
- Guests (ordinary users) can bypass registration and directly access the booking page for convenience.

Tailored Experience:

- Registered users enjoy exclusive benefits such as no cancellation fees and priority access to early bookings.

### 2. Smart Search and Filter

- Discover movies effortlessly with the powerful search functionality:
  - Filter by movie title or release date.
  - Select theaters by location or name.
- Results are dynamically updated to ensure users find what they're looking for.

### 3. Interactive Seat Selection

- Experience the thrill of choosing seats through an intuitive graphical interface:
  - Real-time updates highlight available (green) and unavailable (red) seats.
  - Prevents double booking by instantly marking selected seats as unavailable.
- Every booking seamlessly updates the database, ensuring accuracy.

## **4. Seamless Ticket Purchase**

Proceed to a detailed summary page displaying:

- Movie name, theater name, showtime, and selected seat numbers.

Secured Payments:

- Accepts 16-digit credit card numbers.
- CVV is encrypted using robust hashing techniques for maximum security.

Instant Confirmation:

- Upon successful payment, a confirmation email is sent to the user.
- Includes complete booking details: theater, movie, showtime, seat numbers, and ticket price.

## **5. Dedicated Support**

- A user-friendly contact form allows customers to:
  - Report issues with payments or bookings.
  - Automatically forward inquiries to the theater's dedicated support team for rapid resolution.

## **Built-in Security**

**Data Encryption:**

- Sensitive information, such as CVV, is encrypted and securely stored in the database.

**Transparent Communication:**

- Email notifications provide users with a detailed record of their transactions.

**Database Integrity:**

- Real-time database updates ensure accurate seat availability.

## **Technologies Used**

- **\*\*Frontend\*\***: Thymeleaf, HTML, CSS, Bootstrap (optional)
- **\*\*Backend\*\***: Spring Boot, Java 17
- **\*\*Database\*\***: MySQL with Hibernate/JPA
- **\*\*Security\*\***: Encryption for CVV and secure email communication
- **\*\*Build Tool\*\***: Maven