

Documentation For MovieSpace Web Application

Modules:

User Management – Handles user registration, login, and profile management.

Movie Management – Stores and manages movie details.

Theater Management – Manages theaters and available screens.

Showtime Management – Handles scheduling of movies in different theaters.

Booking Management – Allows users to book seats and track reservations.

Payment Processing – Allows payment for ticket purchases.

Tables and relationships:

Users Table (users) – Stores user information.

Movies Table (movies) – Stores movie details.

Theatres Table (theatres) – Stores theaters and screens.

Showtimes Table (showtimes) – Stores movie schedules.

Seats Table (seats) – Stores available seats for each show.

Bookings Table (bookings) – Stores user bookings.

Payments Table (payments) – Stores payment transactions.

Entity Relationships:

A User can have multiple Bookings.

A Movie can have multiple Showtimes.

A Theater can host multiple Showtimes.

A Showtime has multiple Seats.

A Booking corresponds to a single Payment.

Flow:

User Registration/Login

Movie Browsing & Selection

Showtime & Seat Selection

Booking & Payment

Data Flow:**User Authentication Flow****Login:**

- User submits login form (phone, password).
- Data is sent to AuthService for authentication.
- If authenticated, the UserEntity is stored in the session.
- User is redirected to the homepage.

Or Signup:

- User submits signup form (name, phone, email, password).
- Data is sent to UserService.
- UserService creates a new UserEntity and saves it to the database.
- If successful, the user is redirected to the login page.

Homepage and Search Flow**Homepage:**

- MovieService fetches a list of MovieEntity objects.
- TheatreService fetches a list of TheatreEntity objects.
- Data is passed to the homepage view for display.

Search:

- User searches for movies or theatres.
- Search query is sent to MovieService or TheatreService.
- Results (MovieEntity or TheatreEntity) are displayed on the homepage.

Movie and Theatre Information Flow**Movie Info:**

- MovieService fetches MovieEntity by movieId.
- ShowtimeService fetches a list of TheatreEntity where the movie is shown.
- Data is passed to the movieInfo view.

Theatre Info:

- TheatreService fetches TheatreEntity by theatreId.
- MovieService fetches MovieEntity by movieId.
- ShowtimeService fetches a list of ShowtimeEntity for the movie and theatre.
- Data is passed to the theatreInfo or movieDateShowtimeSelection view.

Seat Selection and Booking Flow**Seat Selection:**

- ShowtimeService fetches ShowtimeEntity by selectedDate, selectedTime, and theatreId.
- SeatService fetches available seats (SeatEntity) for the showtime.
- Data is passed to the seatSelection or movieSeatSelection view.

Order Summary:

- Selected seats are marked as booked in the database using SeatRepo.
- ShowtimeService fetches ShowtimeEntity by showtimeId.
- Total price is calculated and passed to the orderSummary view.

Payment:

- PaymentService processes the payment and creates a PaymentEntity.
- BookingService creates a BookingEntity for the user, showtime, and payment.
- If successful, the user is redirected to the thank-you page.

Booking History and Profile Flow

Booking History:

- BookingService fetches a list of BookingEntity objects for the user.
- Data is passed to the bookingHistory view.

Profile:

- UserService fetches UserEntity from the session.
- User can update their profile (email, phone) using UserService.
- Updated UserEntity is saved to the database and session.

Thank You Flow

Thank You:

- A thank-you message is displayed after a successful booking.