Online Movie Ticket Booking System ER Diagram

An online movie ticket booking system is a complex database structure that manages various aspects of cinema operations and customer interactions. This system encompasses multiple entities, each with specific attributes and relationships, to efficiently handle movie screenings, ticket reservations, and payments.

The core entities in this system include User, Movie, Cinema, Auditorium, Seat, Show, Booking, Payment, and Ticket. These entities work together to create a comprehensive platform for managing cinema operations and providing a seamless ticket booking experience for customers.

Entities and Attributes

User

Stores customer information including user_id (PK), username, email, password, name, phone number, role, and creation timestamp.

Movie

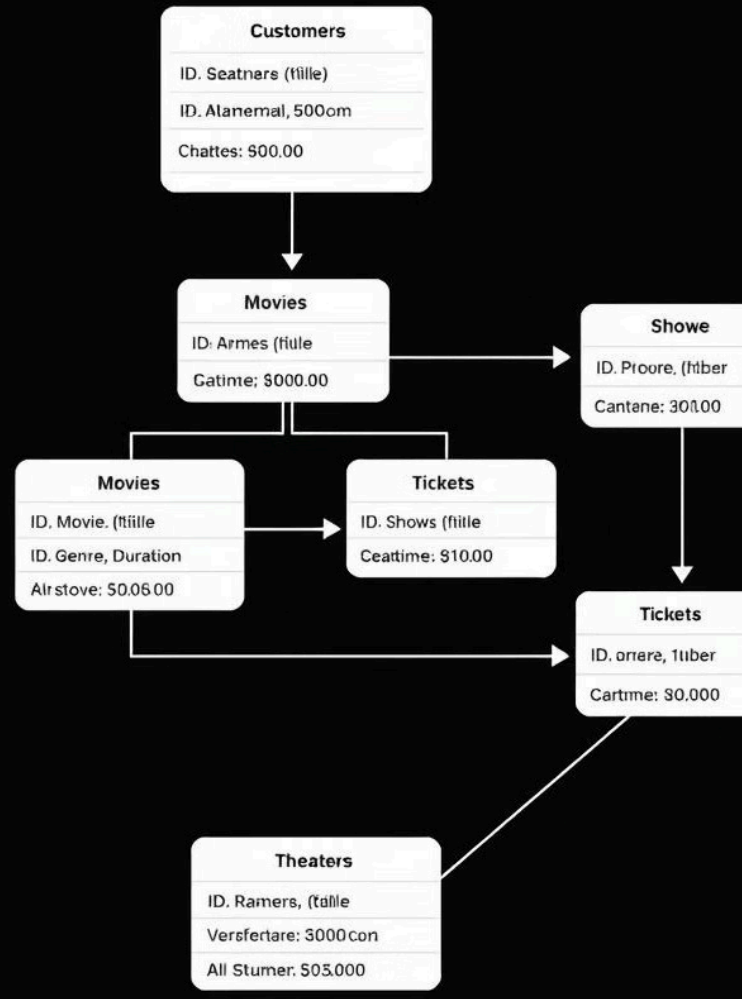
Contains movie details such as movie_id (PK), title, description, release date, duration, rating, genre, language, and cast.

Cinema and Auditorium

Cinema entity includes cinema_id (PK), name, location, phone number, and capacity. Auditorium represents rooms within a cinema with auditorium_id (PK), cinema_id (FK), name, and total seats.

Seat, Show, Booking, Payment, and Ticket

These entities manage seating arrangements, show schedules, bookings, payments, and individual tickets, each with their respective primary keys and relevant attributes.



Enhanced Relationships and Cardinality

1

User to Booking

A User can have multiple Bookings, but each Booking belongs to one User.

2

Cinema to Auditorium to Seat

A Cinema has multiple Auditoriums, each Auditorium has multiple Seats. Each Seat belongs to one Auditorium.

3

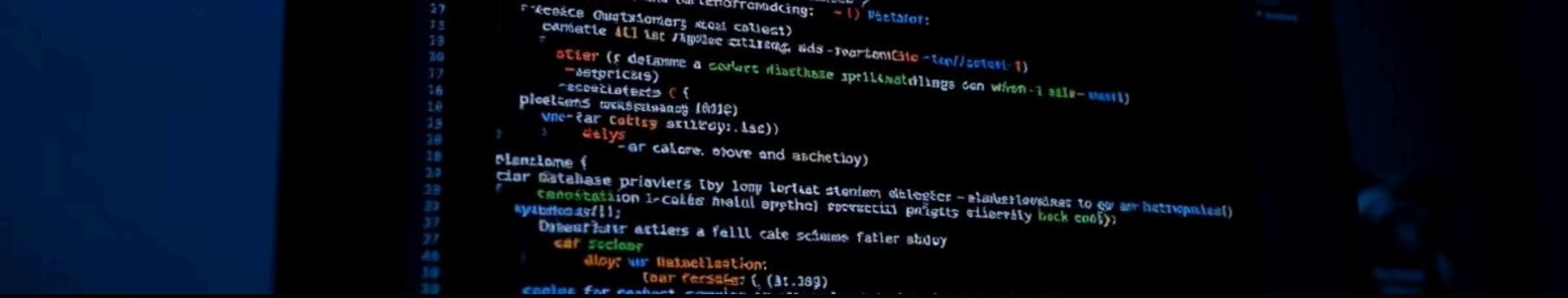
Movie to Show to Booking

A Movie can be scheduled for multiple Shows. Each Show can have multiple Bookings, and each Booking is linked to one Show.

4

Booking to Payment and Ticket

Each Booking can have multiple Payments and generate multiple Tickets. Each Ticket is tied to a specific Seat.



SQL Schema Sample

User Table	Movie Table	Cinema Table
Auditorium Table	Seat Table	Show Table
Booking Table	Payment Table	Ticket Table

The SQL schema includes CREATE TABLE statements for all entities in the system. Each table is defined with appropriate columns, data types, and constraints. Primary keys are set using AUTO_INCREMENT, and foreign keys are established to maintain referential integrity between related tables.

Notable features include ENUM types for specific columns like user roles, movie ratings, and booking statuses. TIMESTAMP columns are used for tracking creation dates, and DECIMAL types are employed for monetary values to ensure precision in financial transactions.