

Project Overview: Movie Theater Management System

Project Description

The Movie Theater Management System (MTMS) is a comprehensive database-driven application designed to streamline and automate the operations of a cinema chain. This system caters to both customers and staff members, providing functionalities for ticket sales, movie scheduling, customer management, promotions, and more. Below is a detailed description of the system components:

System Components

1. **Database Schema:** The database schema consists of multiple tables interconnected through relationships to store and manage data effectively. Key tables include:
 - **Movies:** Stores information about movies such as title, release date, duration, genre, director, language, and format.
 - **Customers:** Manages customer details including name, contact information, address, and membership status.
 - **Tickets:** Tracks ticket sales, including details like seat number, price, purchase date, associated showtime, and customer.
 - **Showtimes:** Records scheduled showtimes for movies, linked to theaters and screens.
 - **Theaters and Screens:** Stores details about theater locations, screens within each theater, and their capacities.
 - **Payments and Promotions:** Manages payment transactions made by customers and promotional offers applicable to movies or theaters.
 - **Reviews and Ratings:** Stores customer reviews, ratings, and feedback on movies.
 - **Staff:** Manages staff details and roles within the cinema.
2. **Functionality Overview:**
 - **Ticket Sales:** Enables customers to purchase tickets online or at the theater, selecting seats based on availability.
 - **Showtime Management:** Allows staff to schedule and manage movie showtimes across different screens and theaters.
 - **Customer Management:** Tracks customer interactions, preferences, and membership statuses, facilitating targeted promotions and customer service.
 - **Promotions and Discounts:** Implements promotional offers, discounts, and loyalty programs to enhance customer engagement and retention.
 - **Feedback and Reviews:** Gathers customer feedback and reviews to improve movie selections and overall service quality.

- **Staff Management:** Manages roles, responsibilities, and scheduling for cinema staff members, ensuring efficient operations.

3. Triggers and Procedures:

- **UpdateScreenAndShowtimeAfterTicketSale:** Automatically updates screen and showtime availability after each ticket sale to reflect changes in seating.
- **UpdateCustomerTotalSpentAfterPayment:** Calculates and updates the total amount spent by customers after each payment transaction.
- **UpdateTotalTicketsSoldAfterTicketSale:** Tracks and updates the total number of tickets sold for each movie after every ticket sale.

4. Complex Queries:

- **Revenue Reports:** Generate reports on revenue generated from ticket sales, concessions, and promotions over specified periods.
- **Customer Insights:** Analyze customer spending patterns, preferences, and attendance frequency to tailor marketing strategies.
- **Operational Efficiency:** Monitor theater occupancy rates, screen utilization, and staff productivity to optimize resource allocation.

Project Goals

The primary goal of the Movie Theater Management System is to enhance operational efficiency, improve customer experience, and maximize revenue for the cinema chain. By leveraging data-driven insights and automation, the system aims to:

- Simplify ticket purchasing processes for customers.
- Optimize scheduling and resource allocation for movie showtimes.
- Enhance customer satisfaction through personalized promotions and services.
- Streamline staff management and operational workflows.
- Provide comprehensive analytics for informed decision-making and business growth.

Conclusion

The Movie Theater Management System integrates database management, business logic, and user interfaces to deliver a robust solution for cinema operations. It supports the cinema chain in delivering exceptional movie experiences while driving profitability and operational excellence.

