Movie Booking System

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ABSTRACT:

A Movie Booking System is an Android application developed using Java and MySQL that allows users to browse, select, and book movie tickets conveniently. The app provides features such as movie listings, showtimes, seat selection, and online payment integration. Users can register, log in, and manage their bookings, while an admin panel facilitates movie and theater management. The backend, powered by MySQL, stores user details, bookings, and movie data, ensuring secure and efficient transactions. The system enhances user experience by offering real-time updates on availability and booking confirmations, making movie ticket reservations seamless and hassle-free.

KeyWords: HTML, Java, MySQL.

I.INTRODUCTION:

A Movie Booking System is an Android application that allows users to browse, select, and book movie tickets conveniently using their smartphones. Developed using Java for the Android frontend and MySQL for backend database management, the system provides a seamless experience for users to check movie schedules, view available seats, and make secure bookings. The app integrates user authentication, ensuring a personalized experience where users can create accounts, save their booking history, and receive digital tickets. The Java-based Android UI ensures smooth navigation, while the MySQL database efficiently handles movie details, user data, and transaction records.

This system benefits both cinema administrators and moviegoers, as it automates the entire ticketing process, reducing manual workload and enhancing efficiency. Administrators can manage movie listings, set show timings, and track seat availability through a backend panel. Additionally, the app can include payment gateway integration for online ticket purchases, sending email or SMS confirmations upon successful booking. The combination of Java,

MySQL, and Android ensures a scalable, secure, and user-friendly movie booking solution, making it an essential tool for modern cinemas and entertainment hubs.

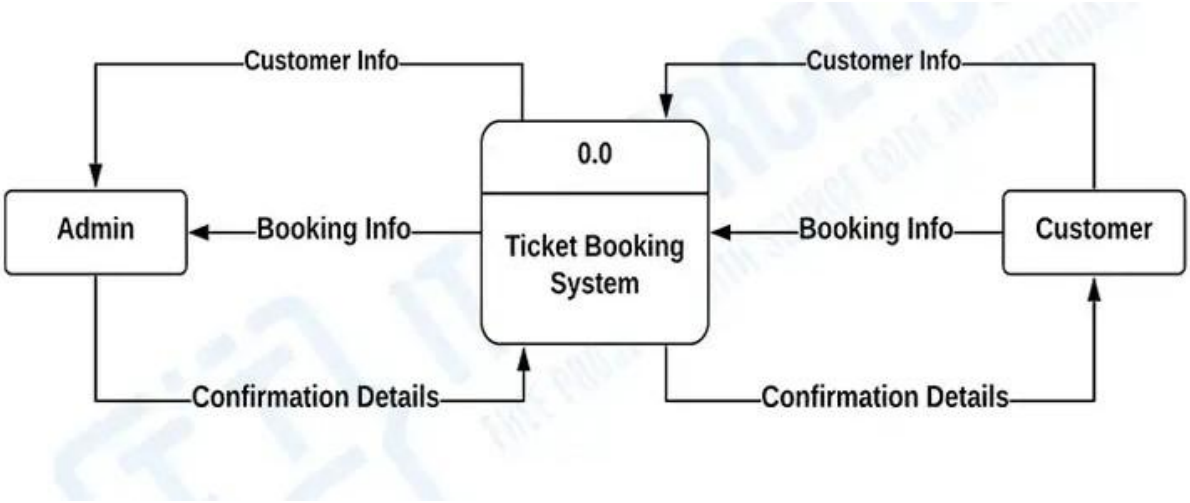

Fig.1 Work Flow

II.SCOPE OF STUDY:

The scope of this movie booking system focuses on providing users with a seamless and efficient way to browse, select, and book movie tickets through an Android application. The system integrates Java for the backend logic and MySQL as the database to store user details, movie schedules, seat availability, and transaction records. The application allows users to register, log in, view available movies, select showtimes, choose seats, and make payments online. Additionally, it includes a ticket confirmation system that generates a QR code or e-ticket for validation at the cinema entrance. This study will also cover the administrative features required to manage movie listings, update schedules, and monitor bookings. An admin panel will be developed to ensure that cinema managers can add new movies, adjust seat availability, and analyze sales reports. Security measures such as user authentication, encryption for payment processing, and database integrity will be implemented to prevent unauthorized access and data breaches. The system will ensure real-time updates, allowing users to see the latest movie schedules and available seats.

The research will examine the technical and user-experience aspects of developing a movie booking system, including performance optimization, UI/UX design principles, and database management. The study will also assess the feasibility of integrating third-party payment gateways and push notifications for booking confirmations and reminders. By analyzing similar existing systems, the project aims to develop an efficient, user-friendly, and secure movie booking solution tailored for Android users.

III.METHODOLOGY:

DESIGN:

Designing a Movie Booking System using Java and MySQL for an Android app requires careful planning. Below is a structured approach, including system architecture, app design, and database schema.

1. SYSTEM ARCHITECTURE:

The system follows a Model-View-Controller (MVC) architecture, ensuring clear separation of concerns between data handling, business logic, and user interface.

- Frontend: Android App (Java/Kotlin).
- Backend**:** Java (Spring Boot, Node.js, or Java EE.
- Database: MySQL.

2. SYSTEM COMPONENTS:

1. Android App (Client)
    - User Authentication (Login/Register)
    - Browse Movies
    - Seat Selection
    - Payment Integration (Razorpay, Stripe, PayPal)
    - Booking Confirmation & History
2. Backend Server (Java Spring Boot)
    - Handles API Requests
    - Business Logic for Booking, Payments
    - Stores & Retrieves Data from MySQL
    - Manages User Authentication (JWT)
3. Database (MySQL)
    - Stores Users, Movies, Showtimes, Bookings, Payments

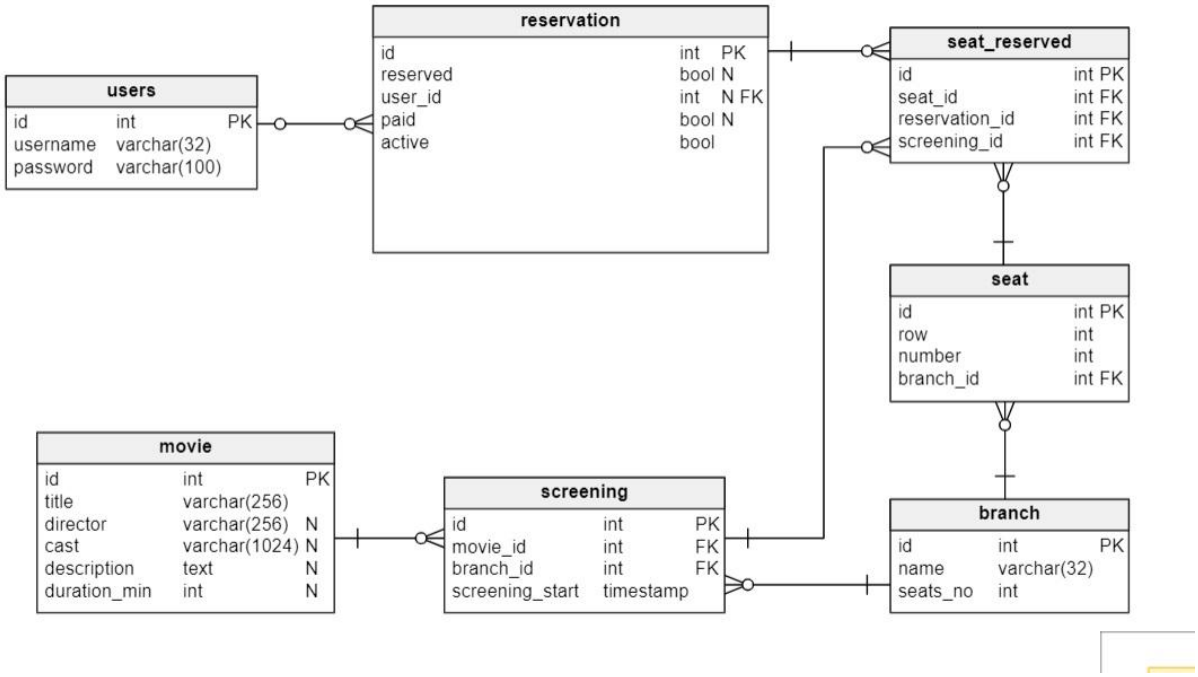

Fig 2. Data Base Design

IV.FEATURE AND FUNCTIONS :

USER AUTHENTICATION:

A movie booking system for an Android app using Java and MySQL includes user authentication to ensure secure access. The app features a login and registration system where users sign up with an email and password, which are securely stored in a MySQL database with hashing. Java handles the backend logic using JDBC to connect to the MySQL server, validating credentials and managing user sessions. Once authenticated, users can browse movies, select showtimes, and book tickets. The system can also include session management with tokens for security, ensuring only logged-in users can access booking features.

MOVIE LISTS:

A movie booking system Android app using Java and MySQL allows users to browse, search, and book movie tickets seamlessly. The app fetches movie listings from a MySQL database, displaying details such as movie title, genre, duration, show timings, and available seats. Users can select their preferred movie, choose a theater and showtime, and proceed with ticket booking using an integrated payment gateway. Admins can manage movie listings, update schedules, and monitor bookings through a backend panel. The app ensures a smooth user

experience with secure authentication, real-time seat availability updates, and booking confirmation via email or SMS.

SEAT MANAGE:

A movie booking system Android app using Java and MySQL allows users to browse movies, select showtimes, and book seats in real time. The app connects to a MySQL database via a backend (using PHP, Node.js, or Firebase) to manage user reservations and seat availability. The seat management feature displays a real-time seat map, marking booked and available seats dynamically. Users can select seats, proceed to payment, and receive confirmation with booking details. Admins can update movie schedules, manage bookings, and track seat occupancy efficiently. The app ensures a smooth user experience with secure authentication and transaction handling.

PAYMENT INTEGRATION:

A Movie Booking System for Android using Java and MySQL allows users to browse movies, select seats, and make payments seamlessly. The app, built with Java and Android Studio, connects to a MySQL database via a PHP or Node.js backend for real-time movie listings, seat availability, and user authentication. Users can search movies, view showtimes, and book tickets with an interactive UI. Payment integration is handled using Razorpay, Stripe, or PayPal SDKs, ensuring secure transactions. The backend updates booking statuses instantly, and users receive confirmation via email or SMS. Admins can manage movies, theaters, and bookings through a web dashboard.

V.RESULT:

The app features user authentication, movie listings fetched from a MySQL database, seat selection, and secure payment integration. The backend, developed using Java with JDBC, handles user requests, ticket bookings, and database transactions.

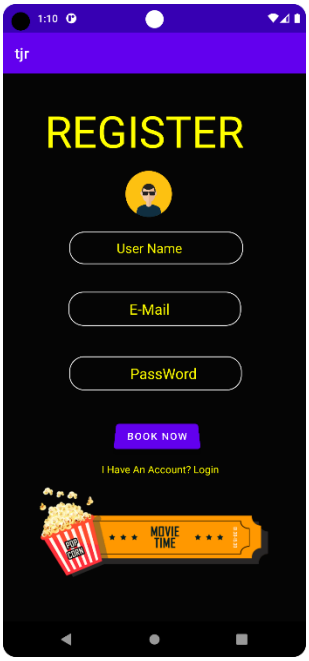

Fig.3 Sample Photo

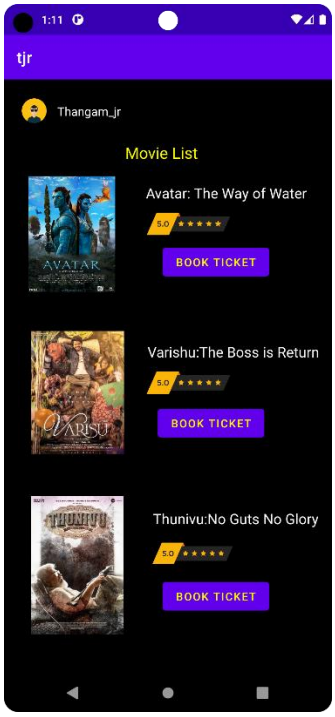

Fig.4 Admin Panel

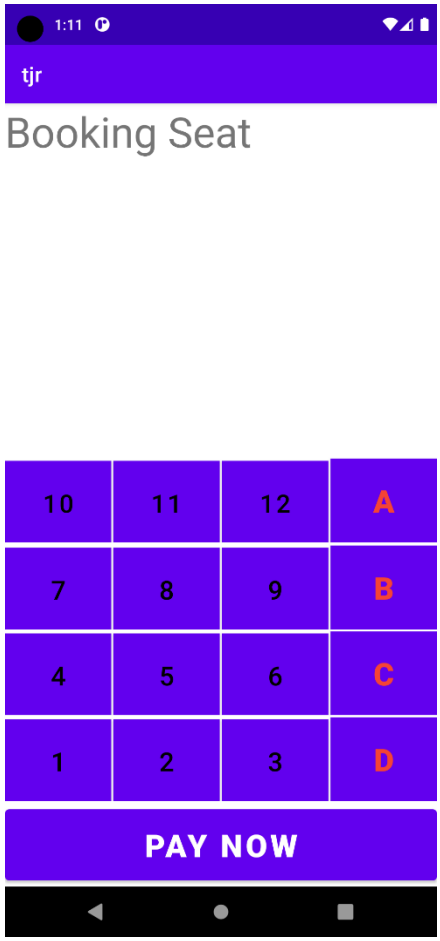

Fig.5 Login Panel

VI.CONCLUSION:

In conclusion, a movie booking system built with Java and MySQL for Android offers a practical and scalable solution for both users and theater administrators. The integration of a well-structured database and an interactive UI ensures a hassle-free booking experience. Future enhancements could include AI-driven movie recommendations, push notifications for upcoming shows, and additional payment gateways to further improve user satisfaction and system efficiency.

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