

Movie Theater Reservation System

Software Design Specification

1.0.1

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Group 4

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System Description

1. **User Interface (UI):** This is the front-end of the system where users interact with the system. It could be a web application, mobile application, or even a kiosk at the theater. The UI allows users to browse movies, select a movie, choose a showtime, select seats, and make a payment.
2. **Reservation System:** This is the core of the application. It handles all the business logic such as checking seat availability, reserving seats, calculating prices, and confirming reservations. It communicates with the User Interface and the Database.
3. **Database:** This is where all the data is stored. It includes information about the movies, showtimes, theaters, seats, and reservations. The database ensures that the data is stored and retrieved in a secure and efficient manner.
4. **Payment Gateway:** This is an external service that handles payment transactions. Once the user confirms the reservation, the Reservation System sends a request to the Payment Gateway to process the payment. The Payment Gateway ensures that the payment is processed securely and notifies the Reservation System once the payment is successful.
5. **Notification System:** Once a reservation is confirmed and payment is successful, the system sends a confirmation notification to the user. This could be an email or a text message.
6. **Admin Interface:** This is a separate interface for administrators to manage the system. It allows administrators to add or remove movies, change showtimes, update seat layouts, etc.