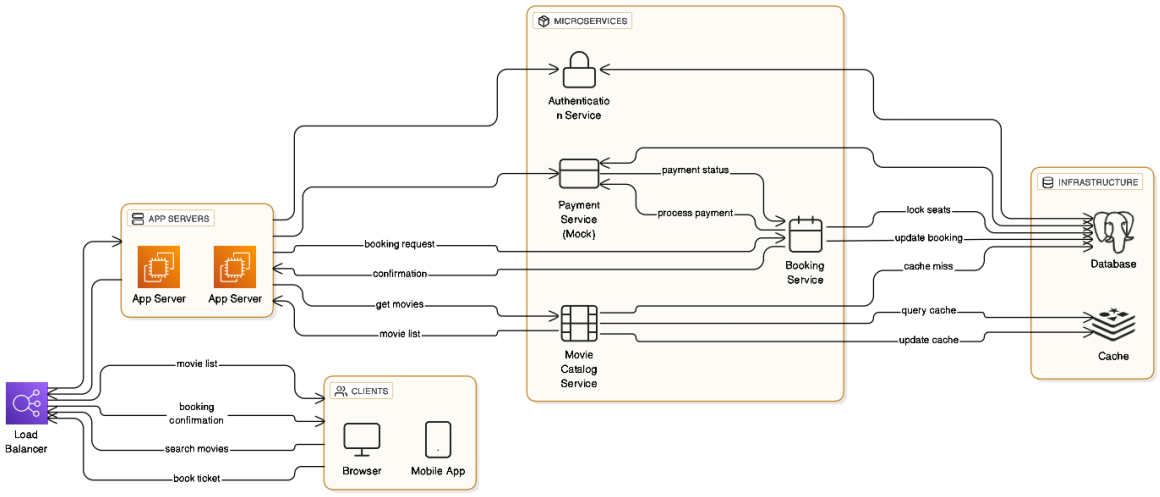
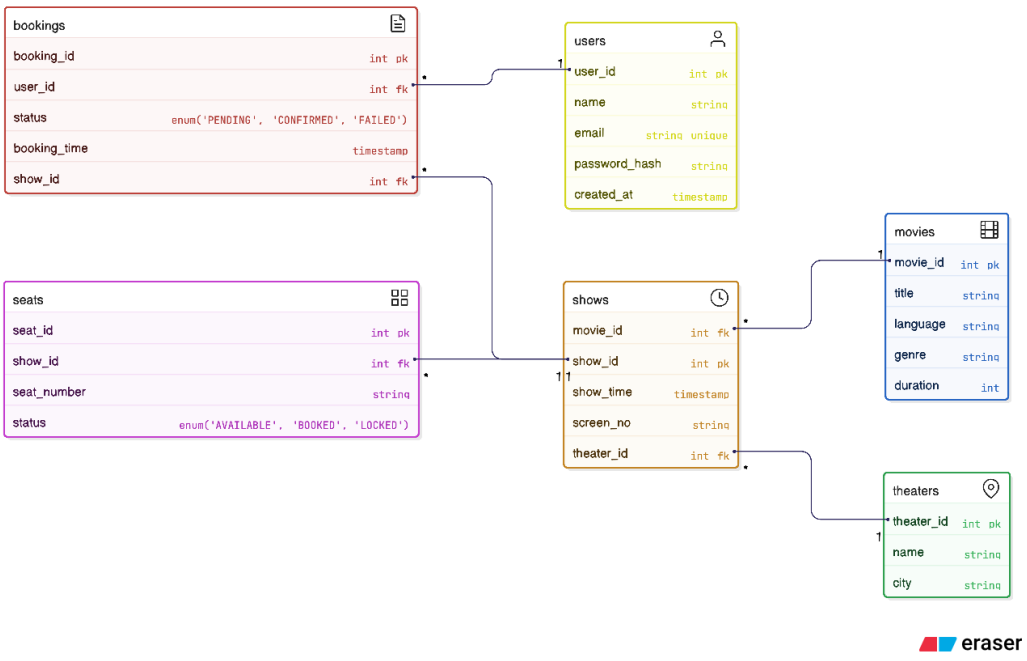
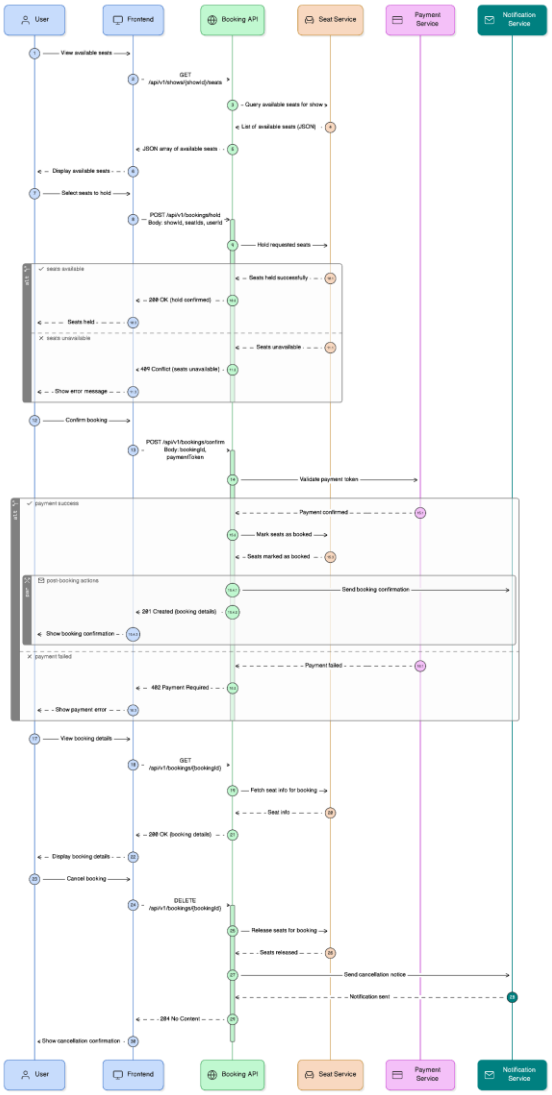
1. High-Level Design (HLD)



2. Low-Level Design (LLD)




User
Frontend
Booking API
Seat Service
Payment Service
Notification Service
View available seats
GET /api/v1/shows/{showId}/seats
Query available seats for show
List of available seats (JSON)
JSON array of available seats
Display available seats
Select seats to hold
POST /api/v1/bookings/hold
Body: showId, seatIds, userId
Hold requested seats
alt
seats available
Seats held successfully
200 OK (hold confirmed)
Seats held
seats unavailable
Seats unavailable
409 Conflict (seats unavailable)
Show error message
Confirm booking
POST /api/v1/bookings/confirm
Body: bookingId, paymentToken
Validate payment token
payment success
Payment confirmed
Mark seats as booked
Seats marked as booked
par
post-booking actions
Send booking confirmation
201 Created (booking details)
Show booking confirmation
payment failed
Payment failed
402 Payment Required
Show payment error
View booking details
GET /api/v1/bookings/{bookingId}
Fetch seat info for booking
Seat info
200 OK (booking details)
Display booking details
Cancel booking
DELETE /api/v1/bookings/{bookingId}
Release seats for booking
Seats released
Send cancellation notice
Notification sent
204 No Content
Show cancellation confirmation

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