

HOTEL MANAGEMENT SYSTEM

By

Mohan Krishna
Sangireddy Nivedhitha
Velagapudi Lakshmi Sathvika

Project Abstract: This case study details the development of a comprehensive hotel management web application designed to streamline hotel operations, enhance guest experiences, and optimize the booking and room management processes. The platform is intended for use by hotel staff to manage bookings, room availability, customer interactions, and services efficiently.

Objective: To create a robust, secure, and user-friendly hotel management system that facilitates efficient hotel operations, improved customer service, and streamlined communication between the hotel staff and guests.

Modules and Implementation:

Front Desk Staff Module: Check-in/Check-out Management: Manage guest check-ins and check-outs efficiently, including handling room assignments and processing payments.

Reservation System: Allows staff to book rooms, modify reservations, and manage cancellation policies.

Guest Management: Maintain guest profiles, preferences, and history to provide personalized services.

Housekeeping Module: Room Status Update: Track and update the status of rooms (cleaned, needs cleaning, under maintenance).

Task Assignment: Assign tasks to housekeeping staff and manage schedules.

Management Module: Reporting: Generate reports on occupancy rates, revenue, and other key performance indicators.

Staff Management: Manage staff roles, schedules, and access to the system.

Inventory Control: Manage inventory for hotel supplies and amenities.

Maintenance Module: Issue Reporting: Log and track maintenance issues reported by guests or staff.

Maintenance Scheduling: Schedule and manage routine maintenance tasks to ensure facility upkeep.

Project Flow:

1. Front Desk Registration and Login:

Account Setup: Front desk staff create their accounts, entering necessary information. Data is validated and securely stored in MySQL.

Secure Login: Staff log in to the platform, with authentication managed via Spring Security.

2. Reservation and Guest Management:

Booking and Reservations: Staff use a dedicated interface to book rooms for guests, modify existing reservations, or handle cancellations.

Guest Check-In/Check-Out: Manage guest arrivals and departures, including payment processing and issuing room keys.

3. Housekeeping Operations:

Room Status Management: Update the cleaning status of rooms through the application, ensuring real-time tracking for availability.

Task Management: Assign cleaning tasks to housekeeping staff, monitor progress, and update task completion status.

4. Maintenance Management:

Maintenance Requests: Log maintenance issues identified by staff or reported by guests.

Schedule and Track Maintenance: Organize and monitor ongoing maintenance activities, ensuring all facilities are in optimal condition.

5. Administrative Controls:

Staff Management: Admins manage roles and permissions for new and existing staff, ensuring secure access to the system.

Inventory Management: Oversee the stock of hotel supplies and amenities, place orders, and track deliveries.

Reporting and Analytics: Generate detailed reports on hotel operations, including occupancy rates, financial performance, and guest satisfaction metrics.

Technology Stack:

Frontend Technologies: HTML, CSS, JavaScript, Bootstrap for creating a responsive and engaging user interface.

Frontend Framework: Angular, enhancing the dynamic interaction of the application.

Server Side Programming: Spring Boot, handling all backend logic and server-side operations efficiently.

Backend Frameworks: Hibernate for ORM functionalities, Spring MVC for managing application workflows, and Spring Boot Rest for robust API services.

Language: Java, known for its robust performance and scalability in enterprise applications.

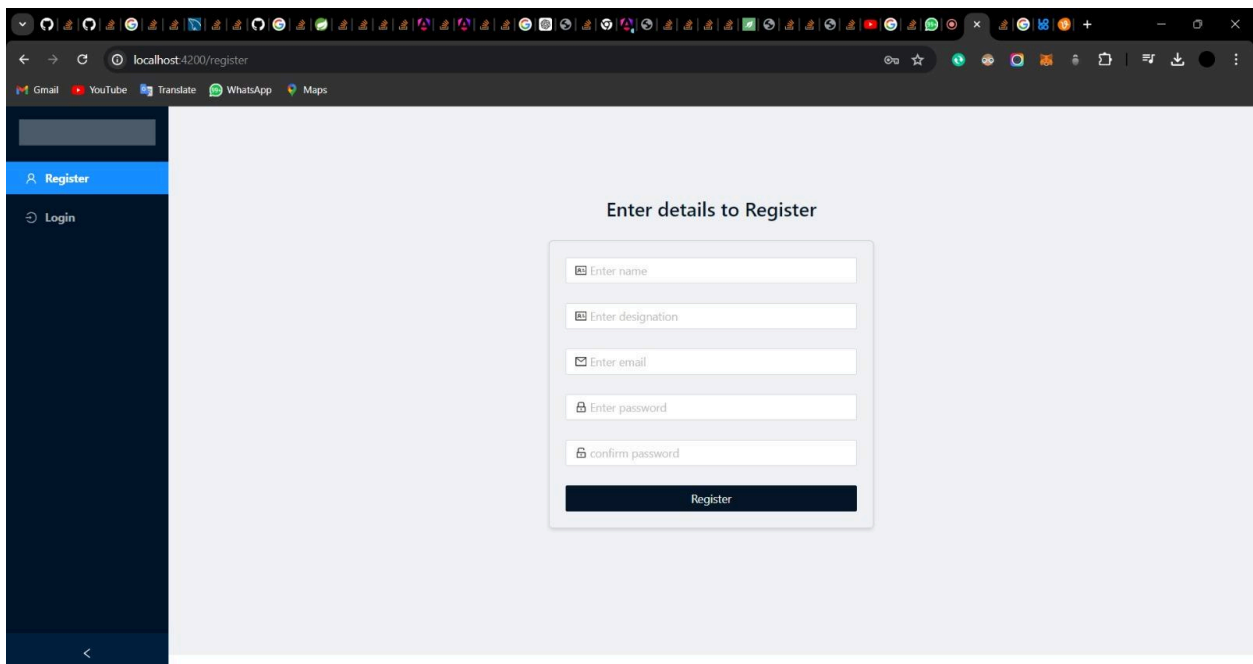
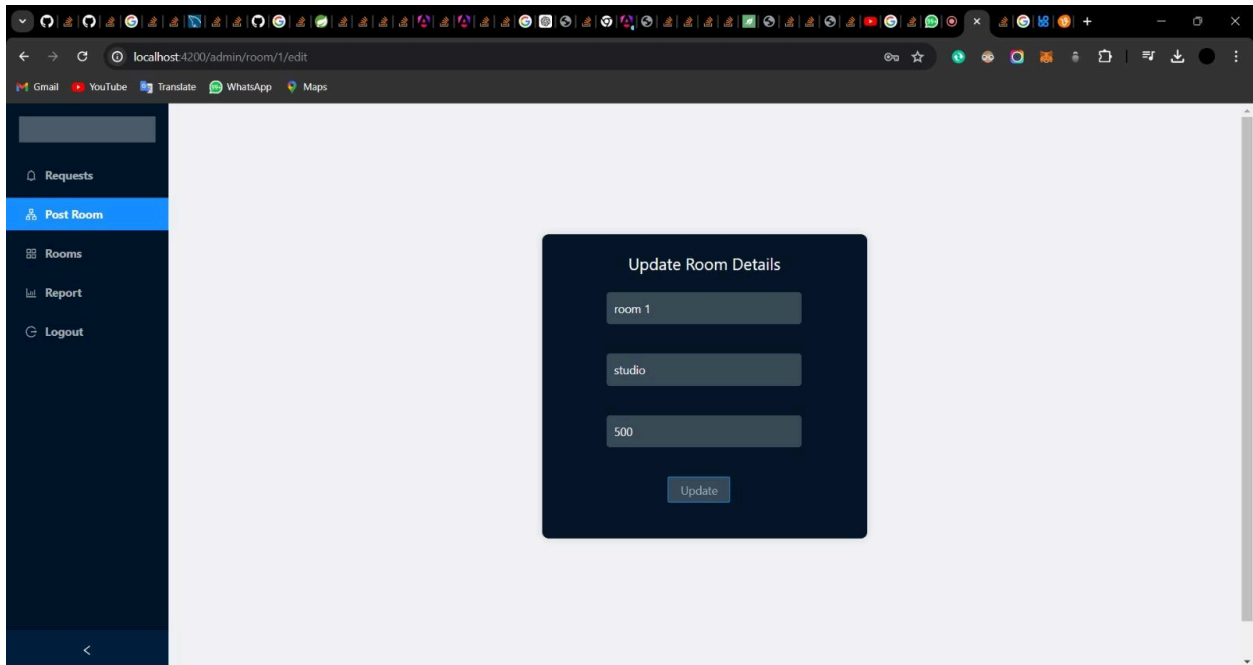
Database: MySQL, chosen for its strong performance in managing relational data efficiently.

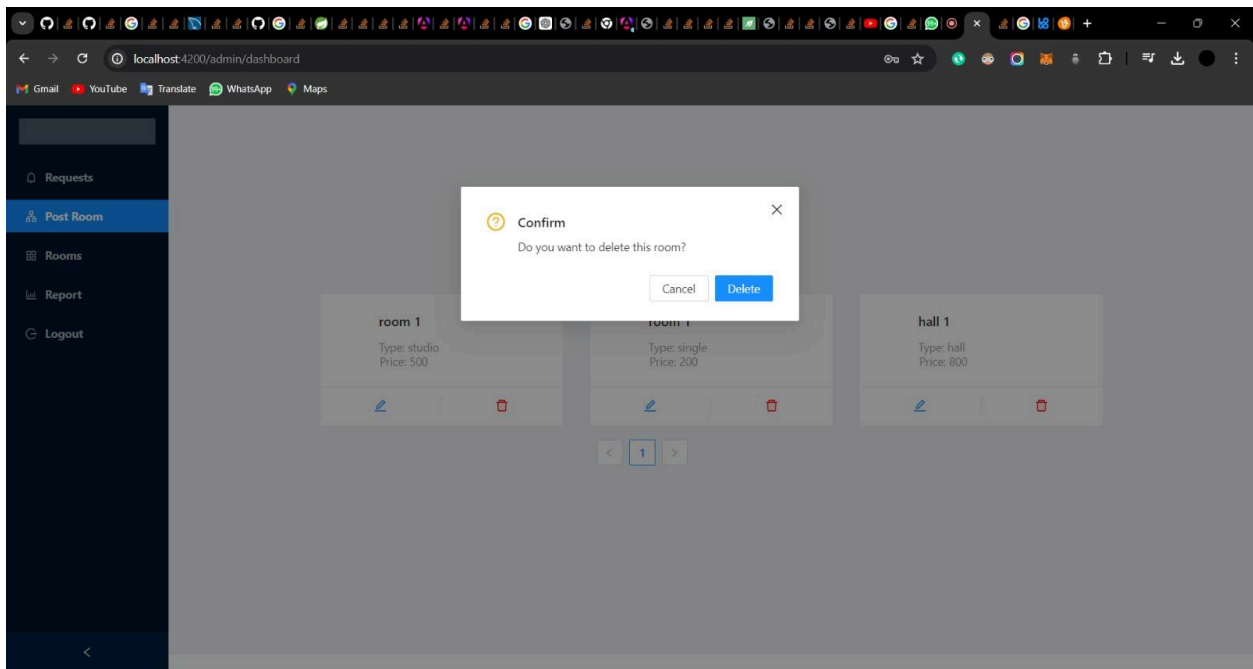
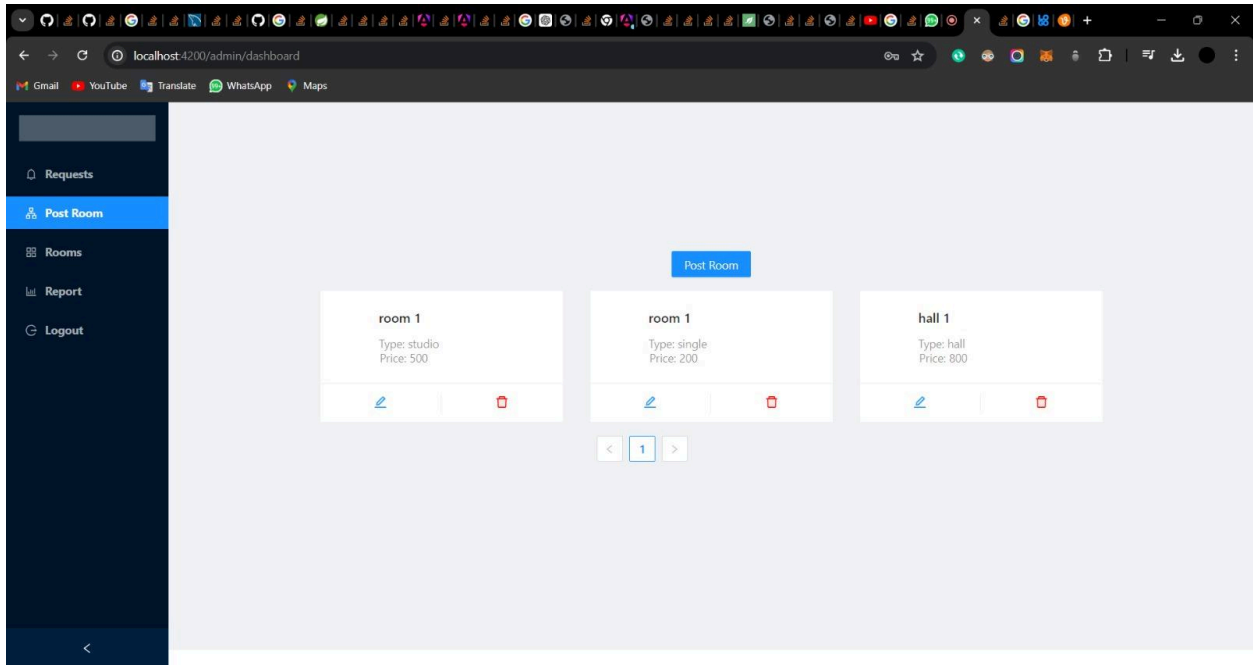
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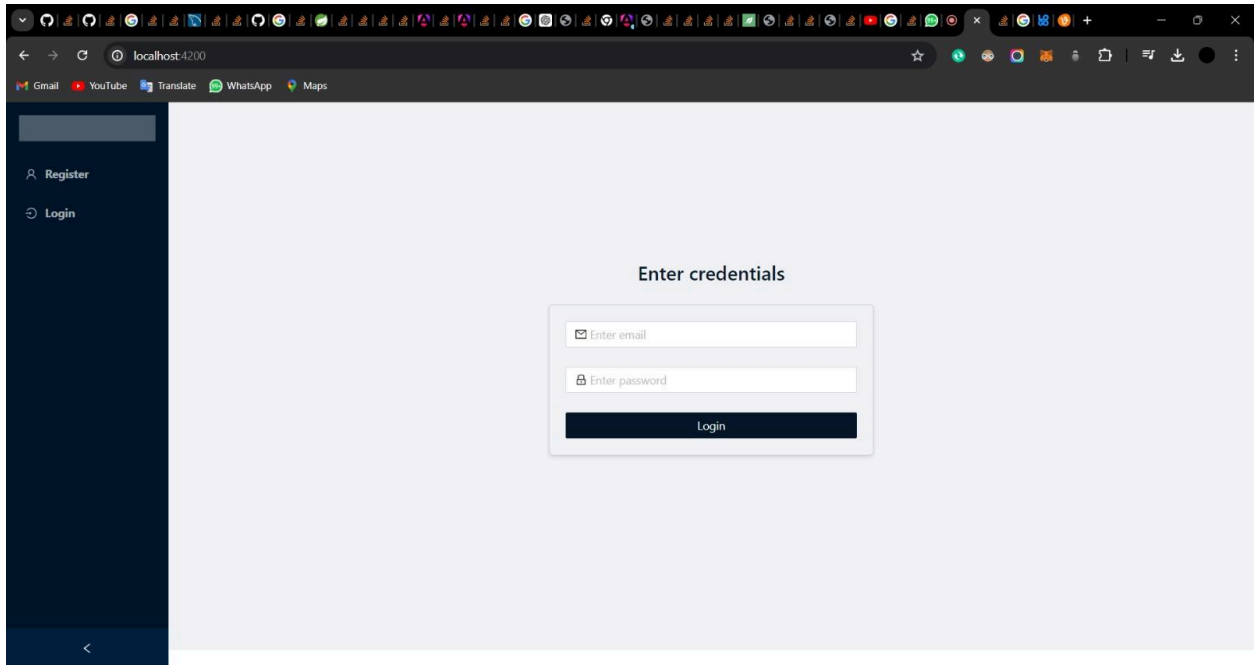
Data Integrity: Strict validation of all user inputs to ensure accuracy and prevent errors.

Security Measures: Implementation of HTTPS, SSL certificates, and routine security audits.

SCREENSHOTS:

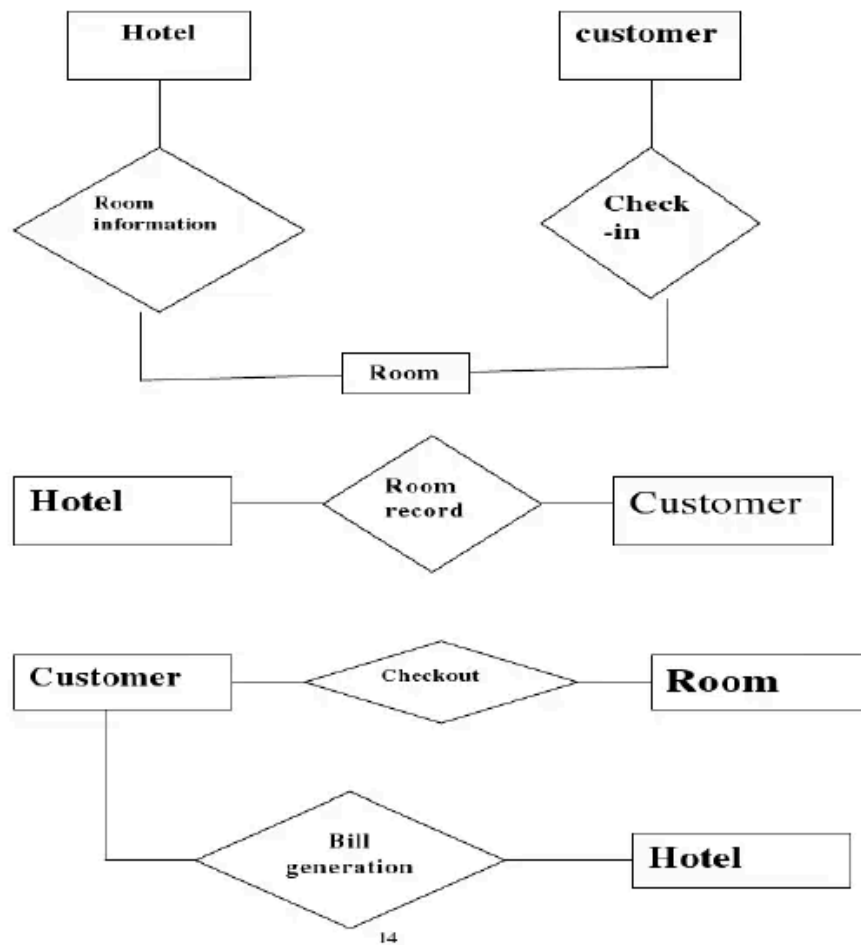






ER DIAGRAM:

E-R DIAGRAM



FLOW DIAGRAM:

CONTEXT LEVEL DFD HOTEL MANAGEMENT SYSTEM

