

HOTEL MANAGEMENT SYSTEM

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- Problem Statement :- In many hotels, the management of reservations, check-ins, check-outs, billing, and staff assignments is still done manually or using outdated system. These issues reduce operational efficiency, increase the chance of human error, and negatively impact the guest experience.

① Purpose - The purpose of this document is to describe the functional & non-functional requirements for the Hotel Management System (HMS). This system will automate the daily operations of a hotel, including room reservations, check-in/check-out billing, staff management, & report generation. It is intended for hotel administrators, receptionists & customers who interact with the hotel-services.

- ② Scope -
- online room booking & cancellation.
 - guest check-in & check-out management.
 - staff-management. (assign, duties, track)
 - Inventory management for hotel resource.
 - automated billing & payment processing.

③ Overview - The hotel management system is an integrated software solⁿ that automates and manages the operations of a hotel. It streamlines the process of room booking, check-in/check-out, billing, and staff coordination, while also providing accurate reports for administrators.

The System is designed to improve customer experience through online booking, reduce manual errors, provide real-time updates on room availability, support secure payments & maintain transaction records.

④ General Description :- • System - The HMS

provides a centralized platform for managing hotel operations efficiently. It automates key processes such as

- reservation & cancellation of rooms.
- guest check-in & check out.
- billing & payment processing.
- staff duty assignment & housekeeping management.
- report generation for revenue, occupancy & performance.

- The System also ensures role-based access control so that each user interact only with the features relevant to their role.

- User :- • administrator
- Receptionist
- Customer (Guest)
- Housekeeping staff

⑤ Functional Requirement :- (I) User authentication - Secure login/logout for admin, receptionist, staff and customers.

(II) Room Reservation - customers can book/cancel rooms online.

- real-time room availability check.

III Check in/out :- Receptionist assigns rooms during check-in

- System updates availability on check-out.

IV Billing & Payment - automated bill generation.

- Support for online/offline payments.

V Staff Management - assign duties

- Track attendance & availability.

VI Notification - Email / SMS alerts for booking confirmations, reminders & cancellations

⑥ Non-Functional Req :-

- Performance : Handle at least 500 concurrent users.

- Security : Role-based access, encrypted data storage, SSL for online transactions.

- Scalability : Support future extension.

- Usability : Simple and intuitive user interface.

- Availability : 99.9% uptime for online services.

⑦ Interface Requirement :-

- User-interface - merchant dashboard for transaction tracking

- Servers for processing & database storage.

- Hardware interface - POS terminals for physical transaction

- Servers for processing & database storage.

- Software interface - Banking APIs

- Secure communication protocols.

⑧ Performance Requirement :-

- Response Time -

- Availability

- Concurrent - Users

- Data Handling

- Scalability

- Backup & Recovery

⑨ Design - Constraint :- Technology constraints

- Security constraints
- databases should be MySQL
- web-interface must be developed using HTML, CSS, JavaScript.
- Regulatory constraints - payment handling must follow PCI-DSS standards,
- Should run on windows/linux servers
- System should be accessible on PCs, laptops & smartphones.

⑩ Schedule & Budget → Schedule → total initial development time ~ 16 weeks (4 months)
→ Budget → estimated budget ~ (5 lakhs)