

# **HOTEL MANAGEMENT**

## **PROBLEM STATEMENT :**

Managing a hotel can be a complex and challenging task. Hotel managers need to keep track of room availability, reservations, check-ins and check-outs, housekeeping, inventory, and customer service. They also need to ensure that their hotel complies with all relevant regulations and provides a high-quality experience for their guests. In addition, managers need to be able to monitor their hotel's financial performance and make data-driven decisions to improve profitability. It is required to design and build a hotel management system that meets these requirements and provides a seamless experience for both hotel staff and guests.

Furthermore, hotel managers need to comply with various regulations, such as fire safety codes, food safety regulations, and labor laws. They need to ensure that their staff is trained to provide high-quality customer service and that their hotel provides a safe and comfortable environment for guests.

To handle all these tasks effectively, hotel managers often use a hotel management system, which is a software application designed to streamline hotel operations and provide real-time data to managers. The system can help managers keep track of room availability, reservations, and guest requests, as well as manage housekeeping schedules and inventory.

A hotel management system can also provide financial reporting and analytics, allowing managers to monitor their hotel's revenue, expenses, and profitability. This information can be used to make data-driven decisions about pricing, promotions, and marketing strategies to improve their hotel's financial performance.

Overall, a hotel management system can help hotel managers run their hotel more efficiently, provide better customer service, and improve their bottom line.

# Software Requirement Specification(SRS)

## 1 Introduction :

- 1.1 **Purpose of this Document :** The purpose of this Software Requirements Specification (SRS) document is to define the functional and nonfunctional requirements for the Hotel Management System. This document outlines the features, functions, and constraints of the system.
- 1.2 **Scope of this document :** The Hotel Management System is intended to automate the management process for hotels. The system will allow hotels to track the room availability, reservations, check-in and check-out, housekeeping, inventory, and customer services. The system will also generate reports and provide analytics to help hotels make informed decisions.
- 1.3 **Overview :** A software requirements specification (SRS) is a document that describes what the software will do and how it will be expected to perform. It also provides a comprehensive outline of the requirements for a Hotel Management System, and it serves as a guide for developers and stakeholders to ensure that the system meets the needs of its users.

## 2 General description :

A Hotel Management System is a software application that helps hotels manage their daily operations more efficiently. It is designed to provide a seamless experience for guests from the moment they make a reservation to the moment they check out. The system typically includes a range of features, such as room availability management, reservation management, check-in and check-out management, housekeeping management, inventory management, customer service management, and financial reporting and analytics.

By using a Hotel Management System, hotel staff can easily manage reservations, room assignments, and customer information, which reduces the chances of overbooking or double booking. It also helps to streamline the check-in and check-out process, which saves time for both guests and staff. The system provides real-time updates on room availability, which helps staff to make informed decisions and provide accurate information to guests.

## 3 Functional Requirements :

- **User Management:** The system should allow the hotel staff to create and manage user accounts with different access levels, such as admin, manager, receptionist, and housekeeping staff.
- **Reservation Management:** The system should allow guests to make online reservations, and hotel staff to manage and track the reservation status, room availability, and room assignment.

- **Room Management:** The system should allow hotel staff to manage room inventory, assign rooms to guests, track room status, and handle room service requests.
- **Billing and Payment:** The system should generate bills for guests, handle multiple payment methods, and integrate with payment gateways.
- **Guest Management:** The system should store guest information, track guest history, and manage guest requests and complaints.
- **Housekeeping Management:** The system should allow the housekeeping staff to view the room cleaning schedule, update room status, and track housekeeping supplies.
- **Inventory Management:** The system should allow hotel staff to manage and track inventory of supplies, food, and beverages, and generate reports on inventory usage and stock levels.
- **Reports:** The system should generate various reports, including occupancy reports, revenue reports, and guest history reports.
- **Security:** The system should ensure the security of guest information and transactions, and comply with data privacy regulations.

#### 4 Interface Requirements :

- **User Interface:** The user interface should be intuitive and user-friendly, allowing users to navigate through the system easily. The interface should have a clean and modern design, with easy-to-read fonts and color schemes that are pleasing to the eye.
- **Dashboard Interface:** The dashboard interface should provide an overview of critical information such as the occupancy rate, reservation status, and room availability. The interface should have customizable widgets that display relevant information based on the user's role and access level.
- **Reservation Interface:** The reservation interface should allow users to make and manage reservations easily. The interface should display available room types, rates, and amenities, with options to filter and sort results. Users should be able to select a room, set check-in and check-out dates, and view the total cost of the reservation.
- **Room Management Interface:** The room management interface should allow hotel staff to view and manage room inventory, assign rooms to guests, and handle room service requests. The interface should display room status, including occupied, vacant, and under maintenance. Users should be able to update room status, view room details, and assign housekeeping tasks.
- **Billing and Payment Interface:** The billing and payment interface should allow hotel staff to generate bills for guests, handle multiple payment methods, and integrate with payment gateways. The interface should display the total cost of the stay, additional charges such as room service and taxes, and provide options for splitting the bill. Users should be able to process payments, print receipts, and view payment history.
- **Guest Management Interface:** The guest management interface should allow hotel staff to view guest information, track guest history, and manage guest requests and complaints. The interface should display guest details such as name, contact information, and

reservation history. Users should be able to update guest information, manage requests, and handle complaints.

- **Housekeeping Management Interface:** The housekeeping management interface should allow housekeeping staff to view the room cleaning schedule, update room status, and track housekeeping supplies. The interface should display the room status, cleaning schedule, and room details. Users should be able to update room status, view cleaning instructions, and manage inventory.
- **Inventory Management Interface:** The inventory management interface should allow hotel staff to manage and track inventory of supplies, food, and beverages, and generate reports on inventory usage and stock levels. The interface should display inventory items, stock levels, and usage history. Users should be able to update inventory levels, view usage reports, and manage supply orders.

## 5 Performance Requirements :

- **Response Time:** The hotel management system should have a fast response time to ensure users can perform tasks quickly. The system should respond to user requests within a reasonable time frame, typically less than 3 seconds.
- **System Availability:** The hotel management system should be available to users at all times. The system should have a high uptime percentage, typically greater than 99%, to ensure users can access the system when needed.
- **Scalability:** The hotel management system should be scalable, allowing it to handle an increasing number of users and data without performance degradation. The system should be able to handle peak loads during high demand periods such as holidays and events.
- **Concurrent User Capacity:** The hotel management system should be able to handle a high number of concurrent users without performance degradation. The system should be able to handle at least 100 users simultaneously without affecting response time.
- **Data Processing Speed:** The hotel management system should have fast data processing speed to ensure users can perform tasks quickly. The system should be able to handle large data volumes without affecting response time.
- **Security:** The hotel management system should be secure to ensure data confidentiality, integrity, and availability. The system should use encryption to protect sensitive data, have access control mechanisms to restrict unauthorized access, and have a backup and recovery plan in case of data loss.
- **Integration:** The hotel management system should be able to integrate with other systems, such as payment gateways, property management systems, and customer relationship management systems. Integration ensures seamless data exchange and reduces manual data entry, leading to better system performance.

## 6 Design Constraints :

- **Security:** The system must have robust security features to protect guest information and maintain privacy. This includes authentication, authorization, and access control mechanisms.
- **Scalability:** The system must be scalable to support a large number of users and guests. It should be able to handle peak loads during high season periods without performance degradation.
- **Reliability:** The system should be highly reliable and available 24/7. It must have mechanisms to handle system failures and recover quickly from them.
- **Usability:** The system should be easy to use for both staff and guests. The interface should be intuitive, and the system should be designed with a user-centered approach.
- **Integration:** The system should be able to integrate with other hotel systems such as billing, accounting, inventory, and guest services. It should be able to exchange data seamlessly with these systems.
- **Accessibility:** The system should be accessible to users with disabilities. It should comply with accessibility standards such as WCAG 2.1 to ensure that everyone can use the system.
- **Compliance:** The system must comply with local and international regulations such as GDPR, PCI-DSS, and HIPAA. It should also comply with industry standards such as ISO 27001.
- **Performance:** The system must have high performance to support real-time operations such as room reservations, check-ins, check-outs, and housekeeping. It should be able to process requests quickly and efficiently.
- **Customization:** The system should be customizable to meet the unique needs of each hotel. It should allow hotels to configure settings, policies, and workflows according to their requirements.
- **Cost-effectiveness:** The system should be cost-effective and provide a good return on investment for the hotel. It should have a low total cost of ownership and be able to generate revenue for the hotel through upselling and cross-selling.

## 7 Non-Functional Attributes :

**Usability:** The system should be user-friendly and easy to learn, with a simple and intuitive interface.

**Performance:** The system should be able to handle a large number of users and transactions, and respond quickly to user requests.

**Reliability:** The system should be reliable and available 24/7, with minimal downtime for maintenance and updates.

**Scalability:** The system should be scalable to meet the needs of hotels of different sizes and types, and able to handle future growth and expansion.

**Security:** The system should be secure and protect sensitive information from unauthorized access or data breaches.

**Compatibility:** The system should be compatible with different hardware and software platforms, and support integration with third-party applications and services

## 8 Preliminary Schedule and Budget :

BUDGET : 50,000

SCHEDULE :

- Requirements gathering: 2 weeks
- System design: 3 weeks
- Software development: 12 weeks
- Hardware procurement and setup: 2 weeks
- Testing and quality assurance: 4 weeks
- Training and documentation: 2 weeks
- Deployment and go-live: 2 weeks