Hotel Management System Software Requirements Specification (SRS)   
  
1. introduction  
  
1.1 Purpose  
  
The requirements needed to construct a hotel management system are outlined in this Software Requirements Specification (SRS) document. The goal of this system is to optimize hotel operations, including reservation management, guest information management, room assignment, invoicing, and other associated duties.   
  
1.2 Scope  
  
Both hotel employees and visitors will have access to capabilities through the Hotel Management System. It will have features including the ability to book a room, check-in and check-out procedures, manage room service, handle payments and bills, manage staff, and generate reports.   
  
1.3 Acronyms, Definitions, and Abbreviations   
  
\*\*API\*\*: Application Programming Interface

\*\*GUI\*\*: Graphical User Interface

\*\*SRS\*\*: Software Requirements Specification   
  
1.4 List of References   
  
[Proposal for Hotel Management System Project]   
- [Functional Requirements Document for Hotel Management System]

1.5 Overview  
The functional and non-functional requirements of the Hotel Management System, together with user roles, system interfaces, and limitations, will all be covered in this paper.   
  
2. Overall Description

2.1 Product Perspective  
The software application known as the Hotel Management System will operate independently. In order to handle transactions, it will communicate with external systems like payment gateways. It may also integrate with other hotel systems like accounting software.   
  
2.2 Product Functions  
The following essential features of the system will be present:   
  
Reservation Management: Permit visitors to book rooms at the front desk or online.   
Check-in/Check-out: Make it easy for visitors to arrive and depart.   
Room Allocation: Based on preferences and availability, automatically assign rooms to visitors.

Billing and Invoicing: Produce guest room bills, invoices for extra services, and tax bills for their stays.   
Management of Room Service: Let visitors make requests for room service and oversee orders and delivery.   
Staff Management: Oversee job descriptions, timetables, and assignments.   
Reporting: Provide data on revenue, occupancy rates, and other important indicators.

2.3 User Classes and Characteristics   
Visitors: People who lodge at the hotel. To make reservations, check in and out, and request services, they will communicate with the system.   
Employees at the hotel's front desk are in charge of handling reservations, check-in and check-out processes, and questions from visitors.   
Administrators: System administrators are in charge of managing user accounts, configuring system settings, and supervising the Hotel Management System's general operation.

2.4 Environment of Operation   
The system will be created as an online application that works with contemporary web browsers. t will be hosted on a secure server with appropriate backups and security measures in place.

2.5 Design and Implementation Constraints  
The system needs to abide with laws pertaining to data protection, such the GDPR.   
In order to handle an increasing number of users and transactions, the system must be scalable.   
Both visitors and employees should find it simple and intuitive to use the user interface.

3. Features of the System

3.1 Handling of Reservations   
Permit visitors to look for available rooms using filters like occupancy, room type, and dates.   
Give visitors the option to make, change, or cancel reservations online.   
Notify visitors when their reservations are confirmed.

3.2 Check-in/Check-out

Simplify the check-in procedure by collecting visitor data and allocating rooms effectively.   
To speed up arrival, let guests finish pre-check-in processes online.   
Provide guests with digital or printed check-out receipts.

3.3 Room Assignment   
Assign rooms to visitors automatically in accordance with their preferences, special requests, and availability.   
Align rooms optimally to increase revenue and occupancy.

3.4 Invoicing and Billing   
For guest stays, create itemized bills that include accommodation costs, extra services, and taxes.   
Accept a variety of payment options, including cash, credit/debit cards, and mobile payments.   
Give visitors the choice of receiving invoices via print or email.

3.5 Management of Room Service   
Permit visitors to peruse and place orders from the menu for room service.   
Alert employees to any new orders, and monitor their progress from preparation to delivery.   
Incorporate room service costs into visitor invoices by integrating with the billing system.

3.6 Personnel Administration   
Control the access levels, roles, and permissions of the personnel.   
Make jobs and provide them to employees, like cleaning

To check the job activity of workers

3.7 Documentation

Provide data on revenue, occupancy rates, and other important performance metrics on a daily, weekly, and monthly basis.  
Offer guidance on how to best manage inventory, staffing, and pricing.

4. Requirements for External Interfaces

4.1 Interfaces for Users  
Guest Interface: Easy-to-use and responsive mobile interface for guests to book, check in and out, and request services.  
Staff Interface: A feature-rich interface that allows front desk employees to handle reservations, check in and out, and retrieve visitor data.  
System administrators can manage users, adjust settings, and create reports using the administrator interface.

4.2 Interfaces for Hardware  
Standard computing devices including desktops, laptops, tablets, and cellphones will be used to access the system.

4.3 User Interfaces  
Payment Gateways: Secure financial transaction management through integration with payment processing services.

Integration with third-party systems, including property management or accounting software, is known as third-party APIs.

4.4 Interfaces for Communication   
Users will be able to message the system within the application and receive email notifications from it.   
  
5. Non-Functional Conditions

5.1 Needs for Performance   
The system must be quick to react and able to process multiple requests from users at once without experiencing any noticeable lag.   
Database queries should run quickly to reduce user loading times.

5.2 Security Conditions   
Sensitive data, including payment information and guest details, should be encrypted.   
Robust authentication procedures should be used to secure system access.   
To resolve vulnerabilities, regular security audits and updates should be carried out.

5.3 Needs for Reliability   
The system must to have less maintenance downtime and be accessible around-the-clock.   
Data backups should be done on a regular basis.

5.4: Scalability Needs   
Over time, the system should be built to support an increase in users and transactions.   
Testing for scalability is necessary to make sure the system can manage high traffic volumes.

5.5 Usability Standards   
Even users with different levels of technical expertise should be able to easily and intuitively use the user interface.   
To help users make the most of the system, help files and user manuals ought to be accessible.

6. Other Requirments

6.1 Legal Requirments  
The system ought to abide by all applicable laws and rules that control how hotels operate, such as those pertaining to consumer rights and data protection.

6.2 Requirements for Documentation   
For the installation, configuration, and use of the system, thorough documentation must be given.   
It is necessary to create training materials to teach employees how to use the system efficiently.

7. appendices

7.1 Glossary   
A reservation is a booking made by a guest for a specific duration of stay.   
Check-in is the procedure of a guest arriving at a hotel and registering for their stay.   
Check-out is the process by which a guest leaves the hotel following their stay.   
Room Service: Food and beverage items are provided to a guest's room upon request.

7.2 Revision History

