## Software Requirements Specification (SRS)

## Hotel Management System.

1. **Introduction.**

1.1    **Purpose**

This document specifies the software requirements for the Hotel Management System. The system will automate hotel operations such as room booking, check-in/check-out, billing, and reporting to improve operational efficiency and guest experience.

1.2    **Document Conventions.**

- Bold for headings and important terms
- Bullet points for lists
- Use of clear, simple language.

1.3    **Intended Audience and Reading Suggestions**

- Developers and testers for implementation and validation
- Project managers for planning & tracking
- Hotel staff and stakeholders for understanding capabilities

1.4    **Product scope**

HMS is a web-based application designed to manage hotel reservations, guest check-ins/checkouts, payments, user roles, and reporting.

1.7 References
- IEE Std 830-1998
- PCI Dss guidelines for payment security
- GDPR for data protection compliance

2. Overall Description.

2.1 Product perspective.

The HMS is a standalone web application integrated with payment gateway and notification services.

2.2 Product Functions
- User registration and authentication
- Room search and booking
- Booking modification and cancellation
- Guest check-in and check-out
- Payment processing and invoicing
- Report generation.

2.3 User Classes and Characteristics.
- Admin : Full access, manages system & reports
- Receptionist : Manages bookings and guest operations
- Guest : Searches and books rooms, manages profile.

2.4 Operating Environment
- Modern web browsers on desktop and mobile.
- Cloud or on-premise server deployment.

2.5 Design and Implementation Constraints
- Secure payment processing (PCI DSS compliance)
- Data encryption in transit and at rest
- Role - based access control.

2.6 User Documentation
- User manuals and online help
- Admin and staff training guides.

2.7 Assumptions and Dependencies.
- Internet connection for payment and notifications
- Third - party APIs availability.

3. Specific Requirements
3.1 Functional Requirements
- Secure User registration and login
- Role - based access control.
- Room availability search by date, type and price.
- Book- modify and cancel reservations.
- Check-in and Check-out processing
- Process payments and generate receipt.
- Manage user profiles.
- Admin reports on bookings, revenue, and occupancy.
- Notifications via email/SMS

3.2 External Interface Requirements
- User-friendly web UI
- Payment gateway integration (Stripe, PayPal)
- Email and SMS notification APIs

- Secure HTTPS Communication

### 3.3 System Features
- Room Management: add/update/delete rooms and availability
- Booking Management: full booking lifecycle handling
- User Management: roles and access controls
- Payment Processing and Billing
- Reporting Dashboard.

### 3.4 Non-Functional Requirements
- Support 100+ concurrent users
- Response time under 2 seconds
- Data security and encryption
- 99.9% System uptime
- Scalable architecture for future expansion.
- Intuitive and responsive UI

## 4. Appendices

### 4.1 Glossary
- Booking: Reservation of room(s)
- Check-in: Guest arrival process
- Check-out: Guest departure and payment finalization

### 4.2 Future Enhancements
- Mobile apps
- Door lock System integration
- loyalty programs
- Multi-language Support