

19.08'25

Software Requirements Specification (SRS)

Hotel Management System.

1 Introduction

1.1 Purpose

This document specifies the software requirements for the Hotel Management System (HMS).

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 and 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/check-outs, payments, user roles, and reporting.

1.5 References:

- * IEEE Std 830-1996.
- * 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 gateways and notification services.

2.2 Product Functions:

- * User registrations 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, manages system and 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 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 notification.
- * Third-party APIs availability.

3 Specification 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 receipts.
- * Manage user profiles.
- * Admin reports on bookings, revenue, and occupancy.
- * Notification 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 UI

4 Appendices

4.1 Glossary

- * Booking: Reservations of room(s)
- * Check-in: Guest arrival process
- * Check-out: Guest departure and payment finalization.

4.2 Future Enhancements

- * Mobile app.
- * Multi-language support
- * Door lock system integration
- * Loyalty programs.