

Software requirement specification on Hotel Management System

1. Introduction

1.1 purpose

This document specifies the Software required 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 heading and key terms
- Bullet Point for list
- use clear, simple language

1.3 Intended Audience and Reading suggestion.

- 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 reservation, guest checkin/checkout, payment, user roles and reporting.

1.5 References

- IEEE Std.
- 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 registration and authentication
- Room search and booking
- Booking notification and cancellation
- Guest check-in and check-out
- payment processing and invoicing
- Report generation

2.3 user classes and characteristics

Admin: full access, manages lists and reports

Receptionist: Manages bookings and guest operations

Guest: searches and books rooms, manages profile

2.4 Operation Environment

- modern web browsers on desktop and mobile
- cloud or on-premise server desktop and web

2.5 Design and Implementation Constraints

- Secure payment processing
- 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 reservation
- Check-in and check-out processing
- Process payments and generate receipts
- Manage user profiles

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Cancellation
Check-Out
Invoicing

Characteristics
Logs and reports
Guests and guest operations
Reserves rooms, manages

1. Desktop and mobile
2. desktop and mobile.

Constraints

at rest

power to sleep a
are just staff a
with drops

guides.

ies
ent and notification
ility.

and login

date, type and
reservation
occurring o
rate Receipts.

Admin reports on bookings, revenue and occupancy
via email/SMS

Internal interface Requirements

3.2 External interface Requirements

→ user-friendly web UI
→ payment gateway integration (Stripe, PayPal)
→ Email and SMS notification API's

→ Secure HTTPS communication

→ System features

3.3 System management: add/update/delete rooms

→ Room management and availability

→ Booking management: full booking lifecycle handling

→ User Management: roles and access controls

→ Payment processing and Billing

→ Reporting Dashboard

Non-functional Requirements

3.4 Support 100+ concurrent user

→ Response time under 2 seconds

→ Data security and encryption

→ 99.9% system uptime

→ Scalable architecture for future expansion.

Appendices

4.1 Glossary

→ Booking: Reservations of rooms

→ Check-in: Guest arrival process

→ Check-out: Guest departure and payment finalization.

4.2 Future Enhancements

→ Mobile apps

→ Door lock system

→ Loyalty programs

→ Multi-language support