# Software Requirement Document [SRS] By IEEE

## Application: Hotel Management System

# 1. Introduction

## 1.1 Purpose:

This document specifies the software requirments for the HMS. The System will automate hotel operations such as room booking, check in, check out, billing and reporting to improve operational efficiency & guest experience

## 1.2 Document conventions

- **Bold** for heading and important terms
- Bullet points for lists
- Use of clear, simple language

## 1.3 Intended Audience and Suggestion Reading

- Developers & testers for implemantation & 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 reservation & guest checkin / checkouts, payments user roles and reporting

## 1.5 References

- IEEE std 830-1998
- PCIDSS guidelines for payment security
- GDPR for data protection Complience

# 2. Overall Description

## 2.1 Product Perspective

The HMS is a standalone web application integrated with payment gateways & notification services

## 2.2 product function

- User authentication and registration
- 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 System and reports
- Receptionist : Manage Booking and guest operation
- Guest : Searches and books room, manages profile

## 2.4 Operating Environment

- Modern web browser 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 transistion and at rest
- Role-based access control

## 2.6 User Documention

- User manuals + online help
- Admin and staff training guides

## 2.7 Assumptions and Dependencies

- Internet Connection for payment + notification
- Third-party API's availability

# 3 Specific Requirements

## 3.1 function Requirements

- Secure User Registration + login
- Role based access Control
- Room availibity search by date, type + price
- Book, modify + cancel Reservation
- check-in / checkout processing

- Process payment and generate receipts
- Manage User profiles
- Admin reports on booking 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 : role and access controls
- payment processing and Billing
- Reporting Dashboard

## 3.4 Non-Functional Requirements
- Supports 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 rooms
- checkin : Guest Arrival process
- check-out : Guest departure + payment finilization

## 4.2 future Enhancement
- Mobile Apps
- Loyalty Programs
- Multi-languge support
- Door lock System integration
- Multi-language Support