* SRS for Hotel management system.

1. Introduction

1.1 Purpose: purpose is to define the requirements for the HMS, which automates various hotel operations like guest reservations, billing and room management

1.2 Scope: The HMS will handle essential hotel operation improving service efficiency and guest satisfication. It includes room booking, check-in/check-out proccess, and payment handling. It also covers system require-ments, design constraints, and a preliminary development timeline and budget.

1.3 Overview: HMS is a web-based application that helps manage hotel operations, including room bookings, guest services, and billing. The system will automate daily tasks, reducing manual work and enhancing the overall efficiency of the hotel's workflow.

2. General description:

2.1 User characteristics:

- Guests: can book rooms & view invoices.
- Hotel staff: manages bookings, guest check-in or check-outs, & invoicing.
- Managers: oversees operations, generates reports, and manages staff.

2.2 Features:

- Room Building: search & book rooms based on availibility.
- Billing: Generate invoices & proces payments
- Reporting: provide occupancy & financial reports for managemeat.

2.3 Benefits:

- Reduces manual processes & human error.
- Provides real-time updates on room availability.
- Streamlines billing & invoicing.

3. Functional Requirements.

- Guests Registration: Users must be able to register & manage their accounts.
- Room Booking: The system must allow users to book rooms based on availibility.
- Billing: The system must generate accurate invoices for room chaises & services.
- check-in/check-out: Hotel staff must manage guest check-ins & check-outs.

4. Interface Requirements:
- User Interface: The system should be accessible on both desktop and mobile platforms
- System Interface: The mus system must integrate with payment gateways & third-party booking platforms

5. Performance Requirements:
- Response Time: The system must respond within 3 seconds for room searches & bookings
- Scalability: The system should handle up to 500 concurrent users.
- Error Rate: The error rate in bookins or room allocation should be less than 0.5%.

6. Design constraints:
- Hardware: The system will be cloud-hosted with a minimum of 4GB RAM & 100GB storage.
- Software: For backend we may use Node.js, with React for the frontend and MySQL for the database.

7. Non-finctional attributes:
- Security: Data must be encrypted and comply for privacy laws.
- Portability: The system should work across major browsers & mobile services.
- Reliability: The system must maintain a 99.9% uptime

8. Preliminary Budget & Schedule:
8.1 Schedule:
- Development: It may take about 6weeks to develop the application.
- Testing & Deployment: It may take 3weeks for testing & making it ready to use application

8.2 Budget
- Development cost: $20,000
- Infrastructure: $3000./year