Software Requirement Specification(SRS)

1 Introduction:

1.1 **Purpose of this Document:** The purpose of the above document is to provide a detailed software requirement specification (SRS) for the development of a Hotel Management System (HMS). The SRS outlines the functional and non-functional requirements of the system, as well as its scope, usability, reliability, security, performance, and compatibility.

1.2 **Scope of this document** – The scope of the document is to define the functional and non-functional requirements of the system to be developed. It includes the specific features and functions that the system should have, as well as the constraints and limitations of the system. The document also describes the intended user groups and their needs, as well as the expected benefits and outcomes of the system.

1.3 **Overview** – Overall, the document serves as a guide for the development team to design, develop, and test the HMS software solution that meets the expectations of the hotel management and guests. The SRS document will also serve as a basis for verifying and validating the final software product and for ensuring that it meets the specified requirements.

2 General description:
The Hotel Management System (HMS) is a software solution that will be developed to manage the operations of a hotel, including managing reservations, room assignments, guest check-ins and check-outs, billing and invoicing, and other related functions. The software will be developed with the aim of automating the entire process of managing a hotel, from booking to check-out, and will be user-friendly and intuitive to use.

3 Functional Requirements:

- Room Reservation Management: The system should allow guests to reserve rooms based on availability, and staff should be able to view all reservations, update them, or cancel them if required. The system should also be able to provide information about the availability of rooms based on the dates requested by the guest.
- Room Management: The system should allow hotel staff to manage the allocation of rooms to guests, based on availability and guest preferences. The system should also allow for room maintenance, cleaning and inspection.
- Check-In and Check-Out Management: The system should allow hotel staff to manage the check-in and check-out of guests, including recording guest details, verifying payment information, and providing room keys.
- Guest Management:The system should allow for the creation and maintenance of guest profiles, including contact information, payment details, and room preferences. The system should also be able to track guest history and preferences, such as food allergies or special requests.

- Billing and Invoicing Management: The system should generate invoices for guests based on the services and products used during their stay. The system should also manage payments and provide reports on unpaid invoices.
- Reporting: The system should provide management reports on occupancy rates, revenue, guest preferences, and other key performance indicators.

4 Interface Requirements:

- User Interface:The system should have an easy-to-use and intuitive user interface for both the hotel staff and guests. The user interface should be designed to minimize the number of steps required to complete a task, with clear and concise instructions. The system should also have a consistent look and feel across all modules.
- External Interfaces:The system should be able to interface with third-party applications such as online booking systems, payment gateways, and accounting software. The interface should be compatible with a wide range of platforms and protocols.
- Device Interfaces:The system should be accessible from a variety of devices, including desktops, laptops, tablets, and smartphones. The system should be designed to be responsive and adaptable to different screen sizes and resolutions.

5 Performance Requirements:

- Response Time:The system should be able to respond to user input quickly and efficiently, with a response time of less than 2 seconds.
- Scalability:The system should be able to handle a large volume of transactions and data, and should be scalable to accommodate future growth and expansion.
- Availability:The system should be available 24/7, with a minimum uptime of 99.9%. The system should also have a backup and recovery mechanism in case of system failures.
- Security:The system should have appropriate security measures in place to protect against unauthorized access, data breaches, and other security threats. The system should also be compliant with relevant security standards and regulations.
- Data Management:The system should be able to manage and store large amounts of data efficiently, with a high level of accuracy and integrity. The system should also have backup and recovery mechanisms to ensure data availability and integrity.
- System Compatibility:The system should be compatible with a wide range of hardware and software platforms, including different operating systems and browsers. The system should also be compatible with different versions of the same platform and software.

6 Design Constraints:

- Technology Constraints:The system must be designed to work with existing hardware and software systems used by the hotel. The technology used to develop the system must also be compatible with the hotel's IT infrastructure and policies.
- Time Constraints:The system must be developed within a specified time frame, and the design should be completed to ensure that development is not delayed.
- Budget Constraints:The system must be designed within the budget allocated for the project. The cost of hardware, software, and development resources should be taken into account during the design process.
- Regulatory Constraints:The system must comply with relevant regulations, laws, and standards, including data protection regulations and privacy laws.
- Accessibility Constraints:The system should be designed to accommodate users with disabilities, such as those who are visually impaired or have hearing difficulties. The system should also be designed to work with different languages and alphabets

7 Non-Functional Attributes:

- Reliability - The system should be reliable and available 24/7 with minimum downtime and data loss.
- Scalability - The system should be able to handle a high volume of users, transactions, and data as the hotel business grows.
- Performance - The system should be fast, responsive, and provide a seamless user experience for both staff and guests.
- Security - The system should be secure and protect sensitive data such as guest information, financial transactions, and employee data.
- Maintainability - The system should be easy to maintain and upgrade, with minimal disruption to the hotel's operations.
- Usability - The system should be user-friendly and easy to use, with an intuitive interface and clear instructions for staff and guests.
- Compatibility - The system should be compatible with existing hardware and software systems used by the hotel.
- Accessibility - The system should be accessible to users with disabilities and support different languages and alphabets.
- Availability - The system should be available to authorized users at all times with minimum downtime.
- Interoperability - The system should be able to communicate and exchange data with other systems used by the hotel and its partners.

8 Preliminary Schedule and Budget:

Preliminary Schedule:

- Requirements gathering and analysis: 2-4 weeks
- System design and architecture: 4-6 weeks
- System development and testing: 12-16 weeks
- User acceptance testing and deployment: 4-6 weeks
- Maintenance and support: Ongoing

Total estimated time for development: 22-32 weeks (approximately 5-8 months)

Preliminary Budget:

- Personnel costs (including salaries, benefits, and taxes): $400,000-$600,000
- Hardware and software costs (including servers, storage, software licenses, and peripherals): $100,000-$150,000
- Development tools and resources (including development software, testing tools, and training): $50,000-$100,000
- Consulting fees (for external expertise, if needed): $50,000-$100,000
- Miscellaneous costs (including travel, office expenses, and contingencies): $25,000-$50,000

Total estimated budget for development: $625,000-$1,000,000