Software Requirements Specification

for

Hotel Management System

Version 1.0 approved

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Table of Contents

Table of Contents ii
Revision History ii
1. Introduction 1
1.1 Purpose 1
1.2 Document Conventions 1
1.3 Intended Audience and Reading Suggestions 1
1.4 Product Scope 1
1.5 References 2
2. Overall Description 2
2.1 Product Perspective 2
2.2 Product Functions 2
2.3 User Classes and Characteristics 2
2.4 Operating Environment 3
2.5 Design and Implementation Constraints 3
2.6 User Documentation 3
2.7 Assumptions and Dependencies 4
3. External Interface Requirements 4
3.1 User Interfaces 4
3.2 Hardware Interfaces 4
3.3 Software Interfaces 4
3.4 Communications Interfaces 4
4. System Features 5
4.1 Functional Requirements 5
5. Other Nonfunctional Requirements 5
5.1 Performance Requirements 5
5.2 Safety Requirements 5
5.3 Security Requirements 6
5.4 Capacity Requirements 6
5.5 Availabilty Requirements 6
5.6 Software Quality Attributes 6
Appendix A: Glossary 6

Revision History

Name	Date	Reason For Changes	Version

1. Introduction

The Hotel Management System is a tool for booking the rooms of Hotel through online by the Customer. It provides the proper management tools and easy access to the customer information.

1.1 Purpose

This Hotel Management System Software Requirement Specification (SRS) main objective is to provide a base for the foundation of the project. It gives a comprehensive view of how the system is supposed to work and what is to be expected by the end users. Client's expectation and requirements are analyzed to produce specific unambiguous functional and non-functional requirements, so they can be used by developer with clear understanding to build a system as per end user needs. This SRS for HMS can also be used for future as basis for detailed understanding on how project was started. It provides a blueprint in maintaining and modifying this project as per required changeability.

1.2 Document Conventions

1. SRS – Software Requirements Specification
2. HMS – Hotel Management System
3. End users – The people who will be actually using the system.

1.3 Intended Audience and Reading Suggestions

This SRS document is intended to help developers, users, testers, and documentation writers to understand the project.The rest of the SRS contains functional and non-functional requirements, software and hardware specifications and all the important information to understand this project better.I would like to suggest to start reading the document from overview and follow each sub-parts and headings closely to know about the HMS.

1.4 Product Scope

The HMS project is intended for the reservations for room that can be made through online. It will be able to automate the various operations of the Hotel. Our Hotel Management System will have three end users: Customer, Receptionist, and Hotel Manager. Hotel Management System will consists of Booking Management System, DBMS Server, and Report Generator. Customers will be able to check for room's availability, select the rooms, and pay for the room. Receptionist will have access to update or modify booking details. Manager will able to view the financial report and able to update room information such as cost and category. The main goal of this introduced automated HMS software is to simplify every day process of hotel. Day to day Hotels are increasing and they need to automate to provide customer ease of access. It will be able to take care of services to customer in a quick manner. This automation will be able to replace the drawbacks of large customer information physical files which were difficult to handle. Secure Transaction, quick retrieval of information, ease of use, quick recovery of errors, fault tolerance are some of the benefits that development team will be working on to achieve end user satisfaction.

1.5 References

1. IEEE SRS guidelines template
2. Wikipedia
3. Fundamentals of Database System, 6th Edition, Ramez Elmasri, Shamkant B. Navathe

2. Overall Description

The remaining sections of this documentations describes the overall descriptions which includes product perspective and functions, characteristics of users. It also consists of Assumptions, and Constraints. Overall description is listed in section 2. Section 3 includes Specific Requirements which consists of Functional and Non-functional requirements, External Interface Requirements, Software System Attributes, Performance Requirements, Capacity Requirements, Availability Requirements, Safety Requirements.

2.1 Product Perspective

Hotel Management System is an independent system that manages online booking of hotel rooms.

2.2 Product Functions

General functions are:
1. Customer Registration
2. Check for Availability Of Rooms
3. Display the Rate
4. Confirmation Of Booking
5. Email Notification
6. Payment
7. Set Room Details
8. Manage Booking Details
9. Generate Report

2.3 User Classes and Characteristics

1.Hotel Manager:
Manager has every access to the hotel system. Manager is solely responsible for managing hotel resources and staffs. Manager can view any report such as financial report, customer information, booking information, and room information, analyze them and take the decision accordingly. Manger is required to have experience on managing hotel previously, and have base knowledge of database and application server.

2.Receptionist:
Hotel Receptionist sole purpose is to provide the quality customer service. She have least access than manager. She can manage the booking details. She can search for availability of rooms, add the customer, confirm the booking, and update the booking details. Manager of hotel would probably want the receptionist who have good communication skills and command over English language. She should have basic IT Knowledge.

3.Customer
Customer are vital part of the system. Customer have access to view the vacant room information and price range. They should be able to confirm the booking and cancel it if necessary. Customers have access to customer service desk portal to forward their inquiry. Customer should at least be capable to use the web UI interface.

2.4 Operating Environment

2.4.1 Hardware Requirement:

1. **Processor**:2GHZ
2. **RAM:** 4GB
3. **Disk Space**: 2GB

2.4.2 Software Requirement:

1. Web Server: xampp Apache Server , OS (Windows)
2. Database Server: MariaDB, OS (Windows)
3. Development End: HTML, XML, JavaScript, PHP ,OS(Windows).

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2.5 Design and Implementation Constraints

1. **Memory:** System will have only 10GB space of data server.
2. **Language Requirement:** Software must be only in English.
3. **Budget Constraint:** Due to limited budget, HMS is intended to very simple and just for basic functionalities. UI is going to be very simple.
4. **Implementation Constraint:** Application should be based on Java only.
5. **Reliability Requirements**: System should sync frequently to backup server in order to
6. avoid the data loss during failure, so it can be recovered.

2.6 User Documentation

The User Manual describes the use of the system to manager and customers.The user manual should be available as a hard copy and also as online help. An installation document will be provided that includes the installation instructions and configuration guidelines, which is important to a full solution offering. Also, a Read Me file is typically included as a standard component.

2.7 Assumptions and Dependencies

It is assumed that system developed will work perfectly that's going to be developed under the Windows OS, and Xampp Apache Server with Maria DB database. If incase of any difficulties SRS should be flexible enough to change accordingly.

3. External Interface Requirements

3.1 User Interfaces

The user interface for system shall be compatible to any type of web browser such as Mozilla *Firefox, Google Chrome, and Internet Explorer.*

1. Login: Log into the system as a Manager
2. Reservation: Retrieve button, update/save reservation, cancel reservation,
3. modify reservation, change reservation, adjust room rate, accept
4. payment type/credit card
5. Check-in: Modify room stay (e.g., new credit card), check-in customer (with
6. or without a reservation), adjust room rate, special requests,
7. accept payment type/credit card
8. Checkout: Checkout customer, generate bill
9. Hotel Payment: Accept payment for room and food
10. Customer Record: Add or update customer records
11. Rooms :Availability and rates
12. Admin:Create, modify, and delete users; change password
13. Reports: Select, view, save, and delete reports

3.2 Hardware Interfaces

The system shall run on a Microsoft Windows based system.

3.3 Software Interfaces

All databases for the HMS will be configured. These databases include hotel rooms and customers information. These can be modified by the end users. The room database will include the room numbers and if they are vacant or occupied. The customers information database will contain all the information of the customer such as first name, last name, number of occupants, assigned room, default room rate(may be changed), phone number, whether or not the room is guaranteed, credit card number, confirmation number, automatic cancellation date, expected check in date and time, actual check in date and time, expected check out date and time, amount owed by customer, and *customer feedback.*

3.4 Communications Interfaces

The System shall be using HTTP/HTTPS for communication over Internet and for intranet communications, it shall use TCP/IP protocol.

4. System Features

4.1 Functional Requirements

4.1.1 Registration

1. The Customer should be able to register with their details
2. The system should record following customer details into member database.
3. Name,Email, Password, Address, DOB etc.
4. The system shall send verification message to email.

4.1.2 Logging In

1. The system should verify the customer email & password against the member database when logging in.
2. After login, member should be directed to Home screen.

4.1.3 Reservation

1. The system should enable customer to check for availability of rooms
2. The system should display rate for all rooms
3. The system should allow customer to confirm or cancel the booking
4. The system should record booking details into database

4.1.4 Receptionist Access

1. The system should allow Receptionist to update, add or delete booking information.
2. The system should provide customer desk portal access to receptionist for providing response to customer inquiry.

4.1.5 Manager Access

1. The system should generate financial and customer report for manager
2. The system should enable manager full modification access to customer ,booking and room information.

4.1.6 Payment Management System

1. The system should allow customer to pay bill via online using credit or debit card

5. Other Nonfunctional Requirements

5.1 Performance Requirements

1. Data in database should be updated within 3 seconds.
2. Query results must return results within 5 seconds
3. Load time of UI Should not take more than 5 seconds
4. Login Validation should be done within 5 seconds
5. Response to customer inquiry must be done within 5 minutes.

5.2 Safety Requirements

1. Database should be backed up every hour.
2. Under failure, system should be able to come back at normal operation under an hour.

5.3 Security Requirements

1. All external communications between the data's server and client must be encrypted
2. All data must be stored, protected or protectively marked.
3. Payment Process should use HTTP over Secure protocol to secure the payment transactions.

5.4 Capacity Requirements

1. Not more than 10,000 members to be registered
2. System need to handle at least 20 transactions during peak hours.

5.5 Availability Requirements

Report should be generated automatically every day for manager and anytime upon request

5.6 Software Quality Attributes

1. Correctness: This system should satisfy the normal regular Hotel Management operations
2. precisely to fulfill the end user objectives
3. Efficiency: Enough resources to be implemented to achieve the particular task efficiently
4. without any hassle.
5. Flexibility: System should be flexible enough to provide space to add new features and to
6. handle them conveniently
7. Integrity: System should focus on securing the customer information and avoid data
8. losses as much as possible
9. Portability: The system should run in any Microsoft windows environment.
10. Usability: The system should provide user manual to every level of users.
11. Testability: The system should be able to be tested to confirm the performance and clients
12. specifications.
13. Maintainability: The system should be maintainable.

Appendix A: Glossary

1. Database: A large collection of information stored in a computer.
2. The Apache HTTP Server, colloquially called Apache, is free and open-source cross-platform web server software, released under the terms of Apache License 2.0.
3. In computing, a **server** is a computer program or a device that provides functionality for other programs or devices, called clients.
4. A **client** is a piece of computer hardware or software that accesses a service made available by a server. The server is often (but not always) on another computer system, in which case the **client** accesses the service by way of a network.