
Software Requirements Specification

for

Hotel Management System

Version 1.0 approved

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Revision History

| Name | Date | Reason For Changes | Version |
|----------------------------------|----------------------|--------------------|---------|
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Problem Statement:

To book hotel rooms and handle bookings, the existing manual reservation system relies on paper and direct human involvement. This causes delays in the hotel while transmitting the information.

This project intends to make it easier for hotel businesses to manage their activities by addressing issues that customers and hotel management confront. This project intends to provide software that will benefit both customers and hotel management.

1. Introduction

1.1 Purpose

This document is meant to delineate the features of the Hotel Management System, so as to serve as a guide to the developers on one hand and a software validation document for the prospective client on the other.

1.2 Document Conventions

In producing the SRS document Hotel Management System, the following terminology was used: Headings are strong and emphasised and the Times New Roman font type with a font size of 12 pixels is used for the text to make the text more effective and readable.

1.3 Intended Audience and Reading Suggestions

The intended audience is:

- System Administrator
- Hotel Staff
- Customers
- Visitors

This proposed system can be used by any naive user and it does not require any educational level, experience or technical expertise in the computer field but it will be of good use if the user has a good knowledge of how to operate a computer.

The flow of reading the document:

- Read and understand the problem statement
- Read introduction
- Read the overall description of the project
- Get familiar with the interface

1.4 Product Scope

Clients may book hotel rooms, purchase food from hotel restaurants, reserve a pool, reserve an auditorium, and pay hotel bills. Room availability, room allocation, hotel employees, and different hotel departments such as cleaning, restaurants, and so on can all be managed by hotel management.

1.5 References

- [1] Software Engineering 9th Edition, Ian Sommerville
- [2] Fundamentals of Database System, 6th Edition, Ramez Elmasri, Shamkant B. Navathe
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- [4] Requirement Engineering: <http://morse.inf.unideb.hu/valseg/gybitt/07/ch02.html>
- [5] Hotel Management System: <https://www.scribd.com/doc/63824633/Hotel-ManagementSystem>
- [6] Features of hotel management software: <https://www.hotelogix.com/all-feature-list.php>
<https://medium.com/@datamateuaecrescent/features-of-hotel-management-software-41a9d19a0ae>
- [7] Hotel management company: <https://www.xotels.com/>
- [8] Departments In Hotel:
<https://setupmyhotel.com/train-my-hotel-staff/securityandloss/765-departments-that-make-a-hotel.html>

2. Overall Description

2.1 Product Perspective

The present manual reservation system relies on paper and direct human participation to reserve hotel rooms and handles bookings. This creates delays in the hotel's information transmission. Furthermore, consumers have little to no knowledge of the hotels in the region. A hotel guest checks into a room that is either overpriced or unsuitable for his or her personality. After researching many traditional hotel room booking systems, we identified the following flaws in their system. To make the hotel business more efficient for both clients and hoteliers. This product is a replacement for the existing methods of hotel bookings and management of the hotel.

2.2 Product Functions

- Dashboard (Login for customers and hotel management)
- Reservation Management
- Restaurant Service
- Hotel Department Management (e.g. Housekeeping, Laundry, etc)
- Hotel Staff Management
- Accounts and Credits Management

2.3 User Classes and Characteristics

- **Customer:** They can register or log in to the software through their username and password. They can book hotel rooms and other services provided by the hotel. They can order food while staying at the hotel. Also, they can pay bills online through their user account.
- **System Administrator:** Can give access to particular features of the software to the hotel staff as per their requirement. Adding or removing services provided by the hotel can be done by the system administrator.
- **Hotel Staff:** They will have limited access to the particular feature of the software as provided by the system administrator to them.

2.4 Operating Environment

Operating System: Windows 7+

Database: MongoDB

Browser: Any Browser

2.5 Design and Implementation Constraints

Memory: System will have only 10GB space of data server.

Internet: Internet service is required when booking hotels, paying bills online through software.

Language Requirement: Software must be only in English.

Reliability Requirements: The system should sync frequently to the backup server in order to avoid data loss during failure, so it can be recovered.

2.6 User Documentation

The system will provide an online user manual in HTML/PDF that will describe the functionality, options and roles to both the admins as well as the customers as to how to navigate through the software and use different features.

2.7 Assumptions

Assumptions:

AS-1: The user must be trained for basic computer functionalities.

AS-2: The user must have a basic knowledge of English.

AS-3: The system must be able to respond to database software within a reasonable time.

AS-4: Users should have access to the Internet while using the system.

AS-5: The Users should be Literate and friendly using applications in general.

3. External Interface Requirements

3.1 User Interfaces

UI-1: The user interface for the system shall be compatible with any type of web browsers such as Mozilla Firefox, Google Chrome, and Internet Explorer.

UI-2: The system shall provide a help link from each displayed Tab to explain how to use that tab.

3.2 Hardware Interfaces

| Server-Side | | | |
|----------------------|-------------------|--------|------------|
| Monitor | Processor | RAM | Disc Space |
| Resolution: 1024x768 | Intel or AMD 2GHZ | 4 GB | 10 GB |
| Client-Side | | | |
| Monitor | Processor | RAM | Disc Space |
| Resolution: 1024x768 | Intel or AMD 2GHZ | 512 MB | 2 GB |

3.3 Software Interfaces

Web Server: Apache Tomcat Server, OS (Windows)

Database Server: Mongo DB, OS (Windows)

Development End: J2EE,Java,JSP,Servlet,HTML,XML,JavaScript, OS(Windows)

3.4 Communications Interfaces

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

4. System Features

4.1 Registration

4.1.1 Description and Priority

The customer should be able to register with their details. The system should record the customer details like name, email, password, address, DOB and ID proof into the database. Hotel staff such as receptionist, restaurant manager, the hotel manager will also register to access particular features of their requirements.

Priority= High

4.1.2 Stimulus/Response Sequences

Stimulus: Customer request for registering on the software.

Response: The system will ask the user for his/her details.

Stimulus: Customer provides the required data.

Response: The system stores the data and takes the user to the login page.

4.1.3 Functional Requirements

TBD

4.2 Logging In

4.2.1 Description and Priority

The system should verify the customer's email & password against the member database when logging in. After login, members should be directed to the Dashboard.

Priority: High

4.2.2 Stimulus/Response Sequences

Stimulus: Customer requests for logging in on the software.

Response: The system will ask the user for his/her email and password.

Stimulus: Customer provides the required data.

Response: The system checks the data and if correct directs the user to the home page else displays a message saying the details are incorrect

4.3 Reservation

4.3.1 Description and Priority

The customer should be able to see the hotels and other facilities with the charges associated with them that are available at the location provided by the user.

The receptionist can also view and book hotel rooms for customers, visiting physically.

Priority= High

4.3.2 Stimulus/Response Sequences

Stimulus: Customer requests for available hotels and other services information.

Response: The system will provide the list of hotels available at the asked location.

Stimulus: Customer requests for reservation of the room.

Response: The system makes a reservation for the customer and displays the latest available information on the system.

Stimulus: Receptionist checks for room availability within the hotel and makes a reservation if available.

Response: The system will provide the necessary information and update the latest information.

4.4 Payment Management

4.4.1 Description and Priority

The page shall display the total price of the selected rooms for a selected number of periods. The system should allow customers to pay bills online using credit or debit cards.

Priority: High

4.4.2 Stimulus/Response Sequences

Stimulus: Customer shall select the method of payment.

Response: The system will ask the customer to fill in the card details

Stimulus: The customer shall fill in its card details.

Response: Page shall display mandatory checkbox field for agreement of terms and conditions

Stimulus: The customer shall check the checkbox for agreeing to terms and conditions and proceed to pay.

Response: The system waits for the transaction to happen and then shows the room booked by the customer.

4.5 Restaurant Service

4.5.1 Description and Priority

The customer can see the menu and the pictures of the hotel restaurant. They can select items and prepare their order.

Priority: Medium

4.5.2 Stimulus/Response Sequences

Stimulus: Customer selects the restaurant of the hotel he stays in.

Response: The system will show the menu.

Stimulus: Customer selects the items they wish to have.

Response: The system asks the customer to confirm the order.

Stimulus: Confirms the order.

Response: Shows the approximate time in which the order will be delivered to their room.

4.6 Management of Different Sections Within Hotel

4.6.1 Description and Priority

The management details of different sections such as housekeeping, laundry can be monitored through the system. That includes distribution of working shifts between the workers, things that need to be managed for housekeeping, and other resources, etc.

Priority: High

4.6.2 Stimulus/Response Sequences

Stimulus: The manager will add, modify or remove working shifts for the hotel staff.

Response: The system will keep a record of work assigned to the staff and the time for which the particular staff has worked.

Stimulus: The manager will request details of the staff like working hours, shifts, etc.

Response: The system will generate a report that includes the number of hours of work, leaves taken by the staff, and the amount to be paid as a salary.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

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

5.2 Safety Requirements

- The database should be backed up every hour.
- Under failure, the system should be able to come back to normal operation within an hour.

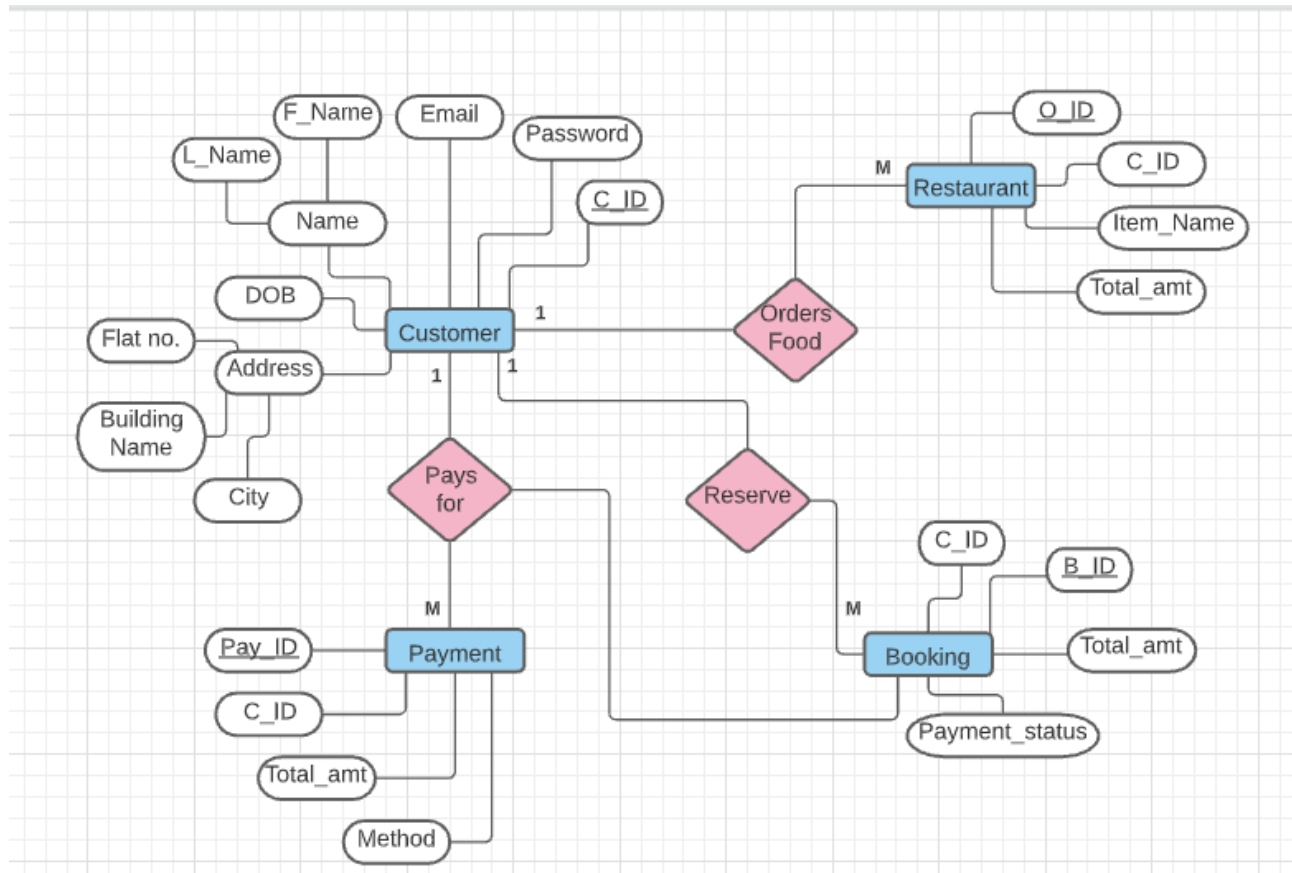
5.3 Security Requirements

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

5.4 Software Quality Attributes

- **Correctness:** This system should satisfy the normal regular Hotel Management operations precisely to fulfil the end-user objectives.
- **Efficiency:** Enough resources to be implemented to achieve the particular task efficiently without any hassle.
- **Flexibility:** The system should be flexible enough to provide space to add new features and to handle them conveniently.
- **Integrity:** The system should focus on securing customer information and avoid data losses as much as possible.
- **Portability:** The system should run in any Microsoft Windows environment.
- **Usability:** The system should provide a user manual to every level of users.
- **Testability:** The system should be able to be tested to confirm the performance and clients specifications.
- **Maintainability:** The system should be maintainable.

Appendix A: ER Diagram



Appendix B: To Be Determined List

Functional Requirements in the System Features