

Hotel Management System

Software Requirement Specification

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Table of Contents

Table of Contents	ii
1. Introduction.....	1
1.1 Purpose	1
1.2 Document Conventions	1
1.3 Intended Audience and Reading Suggestions.....	1
1.4 Project Scope.....	2
1.5 References	2
2. Overall Description.....	2
2.1 Product Perspective	2
2.2 Product Features.....	3
2.3 User Classes and Characteristics	3
2.4 Operating Environment	4
2.5 Design and Implementation Constraints.....	4
2.6 User Documentation	5
2.7 Assumptions and Dependencies.....	5
3. System Features.....	5
4. External Interface Requirements.....	6
4.1 User Interfaces.....	6
4.2 Hardware Interfaces.....	6
4.3 Software Interfaces	6
4.4 Communications Interfaces	6
5. Other Nonfunctional Requirements.....	7
5.1 Performance Requirements.....	7
5.2 Safety Requirements	7
5.3 Security Requirements	8
5.4 Software Quality Attributes.....	8
6. Other Requirements	8

Appendix A: Glossary	9
Appendix B: Analysis Models.....	9
Appendix C: Issues List	9

1. Introduction

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 development team with clear understanding to build a system as per end user needs.

The clear understanding of the system and its' functionality will allow for the correct software to be developed for the end user and will be used for the development of the future stages of the project. This SRS will provide the foundation for the project. From this SRS, the Hotel Management System can be designed, constructed, and finally tested.

This SRS will be used by the system development team which is constructing the HMS and the hotel end users. The Project team will use the SRS to fully understand the expectations of this HMS to construct the appropriate software. The hotel end users will be able to use this SRS as a "test" to see if the constructing team will be constructing the system to their expectations. If it is not to their expectations the end users can specify how it is not to their liking and the team will change the SRS to fit the end users' needs.

1.2 Document Conventions

The document is prepared using Microsoft Word 2013 and has used the font type 'Times New Roman'. The fixed font size that has been used to type this document is 12pt with 1.5 line spacing. It has used the bold property to set the headings of the document.

1.3 Intended Audience and Reading Suggestions

The intended audience of this document would be owner and specific employees like Manager and Receptionist and project team with the objective to refer and analyze the information. The SRS

document can be used in any case regarding the requirements of the project and the solutions that have been taken. The document would final provide a clear idea about the system that is building.

1.4 Project Scope

The HMS project is intended for the reservations for room that can be made through online. This Hotel Management System will automate the major operations of the hotel. The Reservation System is to keep track in room and hall reservation and check availability. The Room Management System is for manage all room types room services. The Inventory Control System will keep track in all inventories of the hotel and guest details will handled by guest management. Administration department will monitor the all .There is three End Users for HMS. The End Users are Owner, Manager and Receptionist. Owner can access to all system functionalities without any restrictions. Manager can access to all system functionalities with limited restrictions. Receptionist can only access to the Reservation management section. To keep restrictions for each End User levels HMS can create different Login functions.

1.5 References

Hotel Management System: <https://www.scribd.com/doc/63824633/Hotel-Management-System>

Case Study: <https://www.scribd.com/doc/27927992/Hotel-Management-Case-Study>

Michael J. O'Fallon, Denney G. [*Rutherford, Hotel Management and Operations illustrated edition.*](#)
John Wiley & Sons, 2001

Hotel Management System: <http://www.scribd.com/doc/27927992/Hotel-Management-Case-Study>,

2. Overall Description

2.1 Product Perspective

The Hotel Management System is a new self-contained software product which will be produced by the project team in order to overcome the problems that have occurred due to the current manual system. The newly introduced system will provide an easy access to the system and it will contain user friendly functions with attractive interfaces. The system will give better options for the problem

of handling large scale of physical file system, for the errors occurring in calculations and all the other required tasks that has been specified by the client. The final outcome of this project will increase the efficiency of almost all the tasks done at the Hotel in a much convenient manner.

2.2 Product Features

- ❖ Customer Registration
- ❖ Check for Availability of Rooms
- ❖ Display the Rate
- ❖ Confirmation of Booking
- ❖ Email Notification
- ❖ Payment
- ❖ Set Room Details
- ❖ Manage Booking Details
- ❖ Generate Report
- ❖ Customer Service

2.3 User Classes and Characteristics

There are 3 user Levels in our Hotel Management System:

- ❖ Hotel Manager
- ❖ Receptionist
- ❖ Customers

Hotel Manager

Manager have 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.

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.

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

Hardware and software requirements:

Hardware:-

- ❖ **Operating System** Supports all known operating systems, such as Windows, Linux.
- ❖ **Computer** 512MB+ RAM, monitor with minimum resolution of 1024x768, keyboard, and mouse.
- ❖ **Hard Drive** should be in NTFS file-system formatted with minimum 10 GB of free space.
- ❖ **A Laser printer** will need to be used to print these reports and notes.

Software:-

- ❖ Software is designed to run on any platform above Microsoft Windows 7 (32bit).
- ❖ Microsoft .NET Frameworks 4.0 or above.
- ❖ Microsoft SQL Server Management Studio Express 2010.

2.5 Design and Implementation Constraints

Software development crew provides their best effort in developing the system. In order to maintain the reliability and durability of system, some design and implementation constraints are applied.

Availability of an android app for hotel management system could make the system portable but due to time constraint it is not possible.

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

2.6 User Documentation

User manual provide to the client will give a clear idea in interacting with the system. It will be written in a simple understandable language concealing the inner complexity of the system. A hard copy of the user manual will be delivered to the client with the delivery of system.

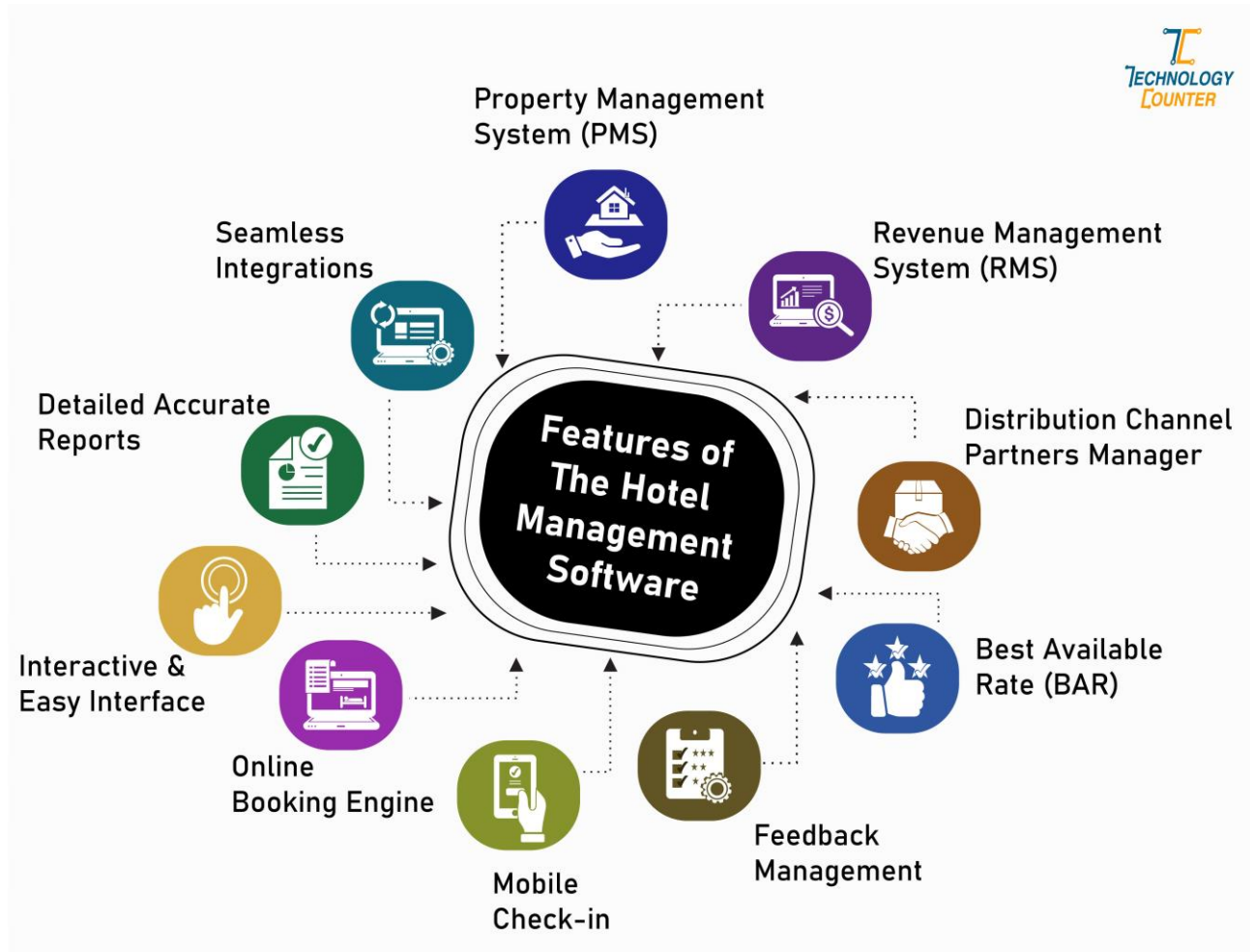
2.7 Assumptions and Dependencies

Some software used in implementing the system is with high cost and the client has agreed to afford the amount of money needed to purchase them. It's assumed that client won't change that decision on the next phases of the software development. It is assumed that system developed will work perfectly that's going to be developed under the Windows OS, and Apache Server with Mongo DB database. If incase of any difficulties, SRS should be flexible enough to change accordingly.

3. System Features

- ❖ Sometimes it happens that the rooms get booked soon when one visits the place therefore user can make advance booking using this system.
- ❖ It saves user time in search of rooms.
- ❖ The system is useful as it calculates an exact cost for requested number of days.
- ❖ It saves organization resources and expenses.
- ❖ This system is effective and saves time and cost of users.

- ❖ The system is portable i.e. can be used from anywhere.
- ❖ Easy registration.



4. External Interface Requirements

4.1 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.

4.2 Hardware Interfaces

A specific computer must match with the above mentioned requirements in order to gain the maximum benefits from the system in an efficient manner.

Reservation alerts will be sent to the one of the member of hotel staff as an e-mail notification. So there is a need of broadband internet connection. Client should be able to keep a stable internet connection.

A laser printer will be needed when printing bills and several reports.

4.3 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)

4.4 Communications Interfaces

The System shall be using HTTP/HTTPS for communication over Internet and for intranet communications, it shall use TCP/IP protocol. When a specific reservation is reserved at the same time an e-mail notification will be sent to both relevant staff member's e-mail account and guest's account. Guest will be notified in the check-out date. To achieve that functionality, it requires having a stable internet connection. Mostly a broadband connection with the client's computer will provide the efficient service.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

Performance requirements define acceptable response times for system functionality. Although the system is developed suiting for the least system performances, the performance of the system will highly depend on the performance of the hardware and software components of the installing computer.

- ❖ NF1. Data in database should be updated within 2 seconds.
- ❖ NF2. Query results must return results within 5 seconds.
- ❖ NF3. Load time of UI should not take more than 2 seconds.
- ❖ NF4. Login Validation should be done within 3 seconds.
- ❖ NF5. Response to customer inquiry must be done within 5 minutes.

5.2 Safety Requirements

There are several user levels in hotel management system, Access to the various subsystems will be protected by a user log in screen that requires a user name and password. This gives different views and accessible functions of user levels through the system.

- ❖ NF6. Database should be backed up every hour.
- ❖ NF7. Under failure, system should be able to come back at normal operation under an hour.
- ❖ NF8. Not more than 10,000 members to be registered.
- ❖ NF9. System need to handle at least 20 transactions during peak hours.

5.3 Security Requirements

Receptionists and Managers and owner will be able to log in to the Hotel Management System. Receptionists will have access to the Reservation/Booking and subsystems. Managers will have access to the Management subsystem as well as the Reservation/Booking subsystems. Owner has the maximum privilege to all subsystems. Access to the various subsystems will be protected by a user log in screen that requires a user name and password.

- ❖ NF10. All external communications between the data's server and client must be encrypted.
- ❖ NF11. All data must be stored, protected or protectively marked.
- ❖ NF12. Payment Process should use HTTP over Secure protocol to secure the payment transaction.

5.4 Software Quality Attributes

- ❖ **Correctness:** This system should satisfy the normal regular Hotel Management operations precisely to fulfill the end user objectives.
- ❖ **Efficiency:** Enough resources to be implemented to achieve the particular task efficiently without any hassle.
- ❖ **Flexibility:** System should be flexible enough to provide space to add new features and to handle them conveniently.
- ❖ **Integrity:** System should focus on securing the 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 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.

6. Other Requirements

When the system is completely developed and submitted to the client, few sessions will be required to make the users of the system understand about the functionality of it and some time to adapt to the system. After those sessions, it's required that a member from the development team should spend sometime in the system background for an agreed time period. That time period will be used in identifying new bugs that could not be reached in the earlier phases of the development process. Client should have a valid e-mail account in order to receive reservation e-mail notifications.

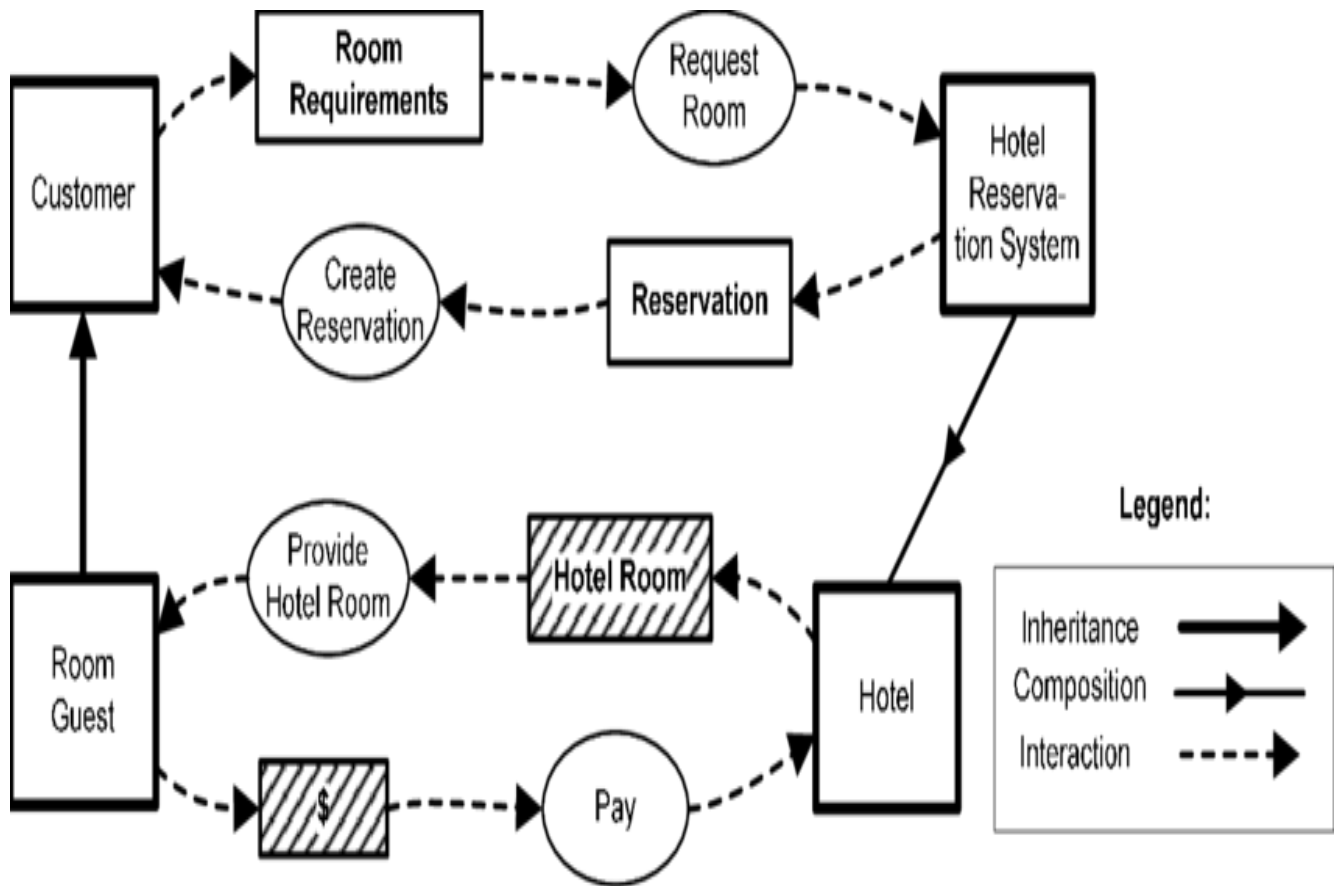
Appendix A: Glossary

- ❖ Check-out – settle one's hotel bill before leaving.
- ❖ Check-in – the process whereby a guest announces their arrival at the hotel.

Appendix B: Analysis Models

Analysis Model of the HMS is given below:





Appendix C: Issues List

This is a dynamic list of the open requirements issues that remain to be resolved:

- ❖ Have an interface for customers to make their own bookings
- ❖ Login for staff members

We won't be covering a complete hotel management system in this project.
