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# Software Requirements Specification

for

## Hotel Management System

Version 1.0 approved

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## Revision History

Name	Date	Reason For Changes	Version

# 1. Introduction

## 1.1 Purpose

This Hotel Management System Software Requirement Specification's (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 the development team with clear understanding to build a system as per end user needs.

This SRS for HMS can also be used in the future as a basis for detailed understanding on how the project was started. It provides a blueprint for upcoming new developers and maintenance teams to assist in maintaining and modifying this project as per required changeability.

## 1.2 Document Conventions

This document uses the following conventions:

TERM	DEFINITION
Database	Collection of all the information monitored by this system
User	Any person or company logged on the system.
Android	A mobile device operating system developed by Google Inc
DFD	Data Flow Diagram.
MacOS	Macintosh Operating system that is now known as the classic MacOS.
Software Requirements Specifications (SRS)	A document that completely describes all of the functions of a proposed system and the constraints under which it must operate. For example, this document.
MS-OS	Microsoft Operating System is an operating system by Microsoft.
GUI	GUI is the Graphical User Interface.
iOS	iOS is a mobile operating system created and developed by apple.
SQL	It is a structured query Language.
SRS	Software Requirement Specifications
HMS	Hotel Management System
DBMS	Database Management System

Blueprint	A design technical plan
JDBC	Java Database Connectivity
HTTP/HTTPS	HyperText Transfer Protocol/Secure
EJB	Enterprise Java Beans
API	Application Interface
OS	Operating System
JSP	Java Server Pages
FR	Functional Requirement
NFR	Non Functional Requirement

### 1.3 Intended Audience and Reading Suggestions

The HMS project is intended for the reservations for rooms that can be made online. It will be able to automate the various operations of the Hotel. This Hotel Management System will have three end users: Customer, Receptionist, and Hotel Manager.

### 1.4 Product Scope

Hotel Management System will consist 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 be able to view the financial report and be able to update room information such as cost and category.

### 1.5 References

1. [draw.io](https://draw.io)
2. [Concept Draw](https://conceptdraw.com)
3. [Tutorials Point](https://tutorials-point.com)
4. [Slide Share](https://slideshare.net)
5. [Quora](https://quora.com)
6. Object-Oriented Modeling and Design With UML - Pearson Education

## **2. Overall Description**

### **2.1 Product Perspective**

### **2.2 Product Functions**

Some of the general functions of the HMS include the following:

1. Customer Registration and Allotment of preferred Room
2. Price Display and Confirm Booking on Customer Agreement
3. Email Notification on Payment
4. Manage Booking Details and Room Status
5. Report on Checkout
6. Customer Feedback

### **2.3 User Classes and Characteristics**

#### **1. Hotel Manager**

Manager has super access to everything in the hotel management system. Manager is solely responsible for managing hotel resources and staff. Manager can view any report such as financial report, customer information, booking information, and room information, analyse them and take the decision accordingly. Managers are required to have experience on managing hotels previously, and have basic knowledge of databases and application servers.

#### **2. Receptionist**

Hotel Receptionist's sole purpose is to provide quality customer service. She has less access to the system than the 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 the hotel would probably want the receptionist who has good communication skills and command over the English language. She should have basic IT Knowledge.

#### **3. Customer/Visitor**

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

## 2.4 Operating Environment

The Hotel Management System shall be a stand-alone system running in a Windows Environment. The system shall be developed using Java and Mysql databases.

## 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 be very simple and just to perform basic functionalities. UI is going to be very simple.
4. Implementation Constraint: Application should be based on PHP, JavaScript, Java and CSS.
5. Reliability Requirements: System should sync frequently to the backup server in order to avoid the data loss during failure, so it can be recovered.

## 2.6 Assumptions and Dependencies

It's assumed that the system developed will work perfectly if listed requirements are met.

# 3. External Interface Requirements

## 3.1 User Interfaces

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

## 3.2 Hardware Interfaces

Server Side			
Monitor	Processor	RAM	Disk Space
1024x768	Intel or AMD 2GHZ	4GB	10GB

Client Side			
Monitor	Processor	RAM	Disk Space
1024x768	Intel or AMD 1GHZ	512MB	2GB

### 3.3 Software Interfaces

Web Server: Apache Tomcat Server

Database Server: MongoDB

Development End: Java, JSP Servlet, HTML, XML, CSS, JavaScript

Implementation Constraint: Application should be based on PHP, JavaScript, Java and CSS.

### 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

### 4.1.3 Functional Requirements

#### 1. Registration

**FR1.** The Customer should be able to register with their details

**FR2.** The system should record the basic details like Name, Email, Password, DOB etc. of the customer into the database.

**FR3.** The system shall send verification messages to email.

#### 2. Login

**FR4.** The system should verify the customer's email and password against the values stored in the database.

**FR5.** After login, customers should be redirected to the Home Page.

#### 3. Reservation

**FR6.** The system should enable customers to check for availability of rooms.

**FR7.** The system should display the rate for all the rooms.

**FR8.** The system should allow the customer to confirm or cancel the booking.

**FR9.** The system should record booking details into a database.

#### 4. Receptionist Access

**FR10.** The system should allow Receptionists to update, add or delete booking

information.

**FR11.** The system should provide the customer desk portal to the receptionist for providing responses to customer queries.

## **5. Admin Access**

**FR12.** The system should generate financial and customer report for manager

**FR13.** The system should enable full access to the manager.

## **6. Payment Management System**

**FR14.** The system should allow customers to pay bills via online using credit or debit cards.

# **5. Other Nonfunctional Requirements**

## **5.1 Performance Requirements**

**NF1.** Data in the database should be updated within 2 seconds.

**NF2.** Query results must return results within 5 seconds.

**NF3.** Load time of the 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**

**NF6.** Database should be backed up every hour.

**NF7.** Under failure, the system should be able to come back to normal operation within an hour.

## **5.3 Security Requirements**

**NF7.** All external communications between the data's server and client must be encrypted.

**NF8.** All data must be stored, protected or protectively marked.

**NF9.** 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 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:** 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 on any Windows environment.

**Usability:** The system should provide a user manual at every level.

**Testability:** The system should be able to be tested to confirm the performance and clients specifications.

**Maintainability:** The system should be maintainable.

## **5.5 Business Rules**

Room Type: Single Room; Double Room.

1 single room can accommodate either 1 adult or 1 child. 1 double room can accommodate 2 adults, 2 children or 1 adult and 1 child.

GDPR implies deleting Customer's Credit card information within 24 hrs. after checkout

Official documents to verify the identity of a person is required