
Software Requirements Specification for Hotel Management System

Version

1.0

**Prepared by :Akhil N
Kashyap**

U

Ashwin Nayak

Arpith Potti

**National Institute of Technology Karnataka
10th January, 2019**

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	1
----------------	---

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	2
---------------------------	---

2.5 Design and Implementation Constraints	2
---	---

2.6 User Documentation	2
------------------------	---

2.7	Assumptions and Dependencies	3
3.	External Interface Requirements	3
3.1	User Interfaces	3
3.2	Hardware Interfaces	3
3.3	Software Interfaces	3
3.4	Communications Interfaces	3
4.	System Features	4
4.1	System Feature 1	4
4.2	System Feature 2 (and so on)	4
5.	Other Nonfunctional Requirements	4
5.1	Performance Requirements	4
5.2	Safety Requirements	5
5.3	Security Requirements	5
5.4	Software Quality Attributes	5
5.5	Business Rules	5
6.	Other Requirements	5
Appendix A: Glossary		5
Appendix B: Analysis Models		5
Appendix C: To Be Determined List		6

Revision History

Name	Date	Reason For Changes	Version
HM System	15/01/2019	Introduction, product scope and basic requirements	1.0
HM System	07/02/2019	Functional and nonfunctional requirements added, User classes and characteristics defined	1.1

1.Introduction

1.1 Purpose

A well developed, foolproof and comprehensive Hotel Management system.

1.2 Document Conventions

The document follows the standard typographic hierarchy. The various section headers and subheaders are of 16pt and 14pt, respectively and are bolded. The document text has a 12pt font size. The entire document follows the Arial font.

1.3 Intended Audience and Reading Suggestions

This document is intended at providing a comprehensive understanding of the project. Developers, project managers, marketing staff, users, testers, and documentation writers can use this documentation alike to get insights into various aspects that the project has to offer. The document starts off with the basic information regarding the end product of this project, its scope and some technical insights such as user classes, functions, etc. Later on, the documentation deals with the User interface, software, Hardware and Communication interfaces. Then the document focuses mainly on the system features of the project and the various non-functional requirements related to the project. The system requirements give a holistic view of the system and its features. Coming to the non-functional requirements, this section of the document deals with performance, safety, security and few other relevant requirements. Finally, the document concludes with the Appendix.

1.4 Product Scope

The software product to be produced is a Hotel Management System which will automate the major hotel operations. The first subsystem is a Reservation and Booking System to keep track of reservations and room availability. The second subsystem is the Tracking and Selling Food System that charges the current room. The third subsystem is a General Management Services and Automated Tasks System which generates reports to audit all hotel operations and allows modification of subsystem information. These three subsystem's functionality will be described in detail in section 2-Overall Description. There are two end users for the HMS. The end users are the hotel staff (customer service

representative) and hotel managers. Both user types can access the Reservation and Booking System and the Food Tracking and Selling System. The General Management System will be restricted to management users.

The Hotel Management System's objectives is to provide a system to manage a hotel that has increased in size to a total of 100 rooms. Without automation the management of the hotel has become an unwieldy task. The end users' day-to-day jobs of managing a hotel will be simplified by a considerable amount through the automated system. The system will be able to handle many services to take care of all customers in a quick manner. The system should be user appropriate, easy to use, provide easy recovery of errors and have an overall end user high subjective satisfaction.

1.5 References

<https://www.w3schools.com/> (User interface guidelines)

<https://www.djangoproject.com/> (Django guide)

<https://www.orbitmedia.com/blog/web-design-standards/> (Website design standards)

2.Overall Description

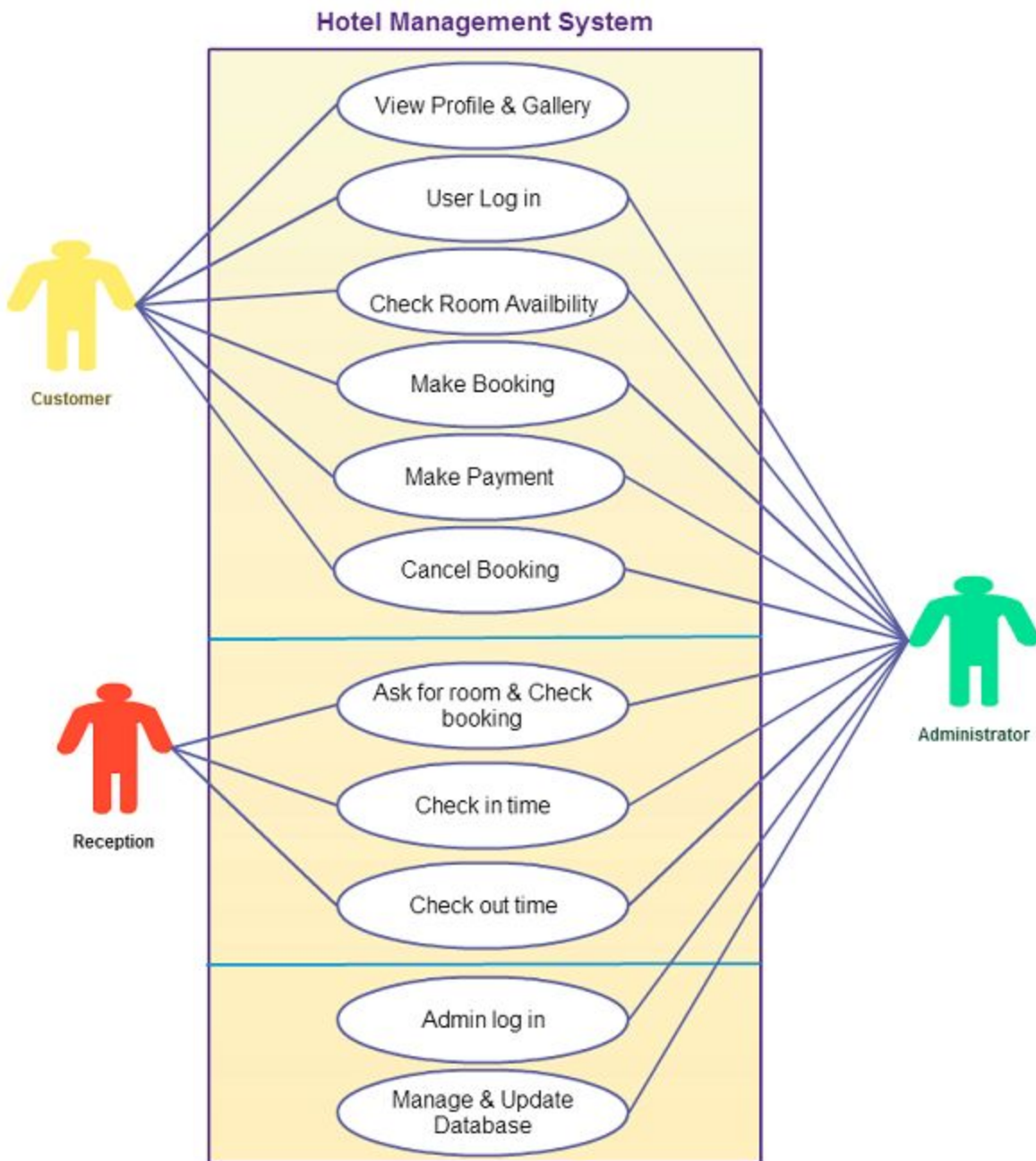
2.1 Product Perspective

The Hotel management system is a stand alone project, concentrating on a complete solution to the problem statement. The need for a comprehensive, easy-to-use and robust product is the main motivation behind this project. The project aims at helping out the Hotel managers with bookings, cancellations, room allotments and many more related services.

2.2 Product Functions

- Reservation and Booking System
- General Management Services and Amenities

2.3 User Classes and Characteristics



2.4 Operating Environment

The software runs on Django backend, in which sqlite database is used. Basic necessary is an updated web browser.

2.5 Design and Implementation Constraints

1. The global schema, fragmentation schema, and allocation schema.
2. SQL commands for above queries/applications.
3. How the response for application 1 and 2 will be generated. Assuming these are global queries. Explain how various fragments will be combined to do so.
4. Implement the database at least using a centralized database management system.

2.6 User Documentation

The following sections will be available on the software platform for user support:

User guide

Customer support

2.7 Assumptions and Dependencies

The system is not required to save generated reports.

Credit card payments are not included

Food and delivery management not included

3.External Interface Requirements

3.1 User Interfaces

Screen Name	Description
Login	Log into the system as a CSR or Manager
Reservation	Retrieve button, update/save reservation, cancel reservation, modify reservation, change reservation, adjust room rate, accept payment type/credit card
Check-in	Modify room stay (e.g., new credit card), check-in customer (with or without a reservation), adjust room rate, special requests, accept payment type/credit card
Checkout	Checkout customer, generate bill
Hotel Payment	Accept payment for room and food
Room Service/Restaurant	Create order, modify order, view order, cancel order, generate meal bill
Customer Record	Add or update customer records
Administer Rooms	Availability and rates
Administer User	Create, modify, and delete users; change password
Administer Meals	Create, modify, and delete meal items and prices
Reports	Select, view, save, and delete reports

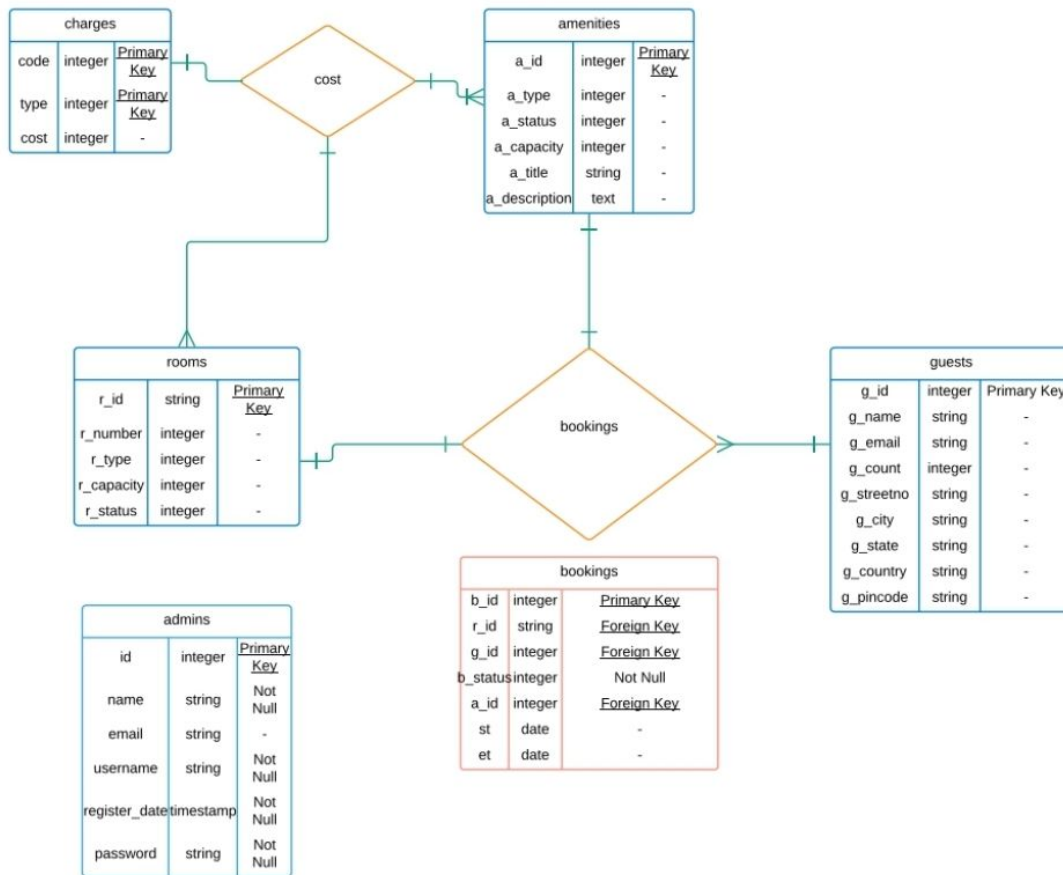
3.2 Hardware Interfaces

- Windows.
- A browser which supports CGI, HTML & Javascript.
- Stable internet connectivity
- Printer to print bills and receipts

3.3 Software Interfaces

Software used	Description
Operating system	We have chosen Windows operating system for its best support and user-friendliness.
Database	To save the Flight records, passengers records we have chosen SQL+ database.

The database of the application is as follows:



3.4 Communications Interfaces

The system shall be a standalone product that does not require any communication *interfaces*.

4. System Features

4.1 Reservation and Booking System

4.1.1 - Description and priority:-

- Allows for typing in customer information
- Has a default room rate that is adjustable
- Includes a description field for the changed rate
- When a customer checks in, the room number will be changed to occupied in the database
- Ability to modify a reservation
- When no rooms are available and a customer would like to extend their reservation their information will be placed in a database and when there are rooms available
- When a customer checks out the amount owed is displayed
- If the internal clock states that is a customer's time to have checked out and customer has not checked out, adds an extra night to amount owed and provides a report
- Records that room is vacant
- Records payment
- Allows for space to write customer's feedback

-> Priority is High(9) as it is the main feature of this software.

4.1.3 Functional Requirements

1. The system shall record reservations.
2. The system shall record the customer's first name.
3. The system shall record the customer's last name.
4. The system shall record the number of occupants.
5. The system shall record the room number.
6. The system shall display the default room rate.
7. The system shall record the customer's phone number.
8. The system shall display whether or not the room is guaranteed.
9. The system shall generate a unique confirmation number for each reservation.
10. The system shall automatically cancel non-guaranteed reservations if the customer has not provided their credit card number by 6:00 pm on the check-in date.
11. The system shall record the expected check-in date and time.
12. The system shall record the expected checkout date and time.

13. The system shall check-in customers.
14. The system shall allow reservations to be modified without having to reenter all the customer information.
15. The system shall checkout customers.
- 15.1. The system shall display the amount owed by the customer.
- 15.2. To retrieve customer information the last name or room number shall be used
- 15.3. The system shall record that the room is empty.
- 15.4. The system shall record the payment.
- 15.5. The system shall record the payment type.
16. The system shall charge the customer for an extra night if they checkout after 11:00 a.m.
17. The system shall mark guaranteed rooms as “must pay” after 6:00 pm on the check-in date.
18. The system shall record customer

4.2 General Management system and amenities

4.2.1 -

- Reports generated to audit hotel occupancy, future occupancy, room revenue, and food revenue
 - Exception reports listing exceptions to the normal cost
 - Allows addition, deletion and modification of information on rooms and rates, menu items and prices, user profiles
- Creation of users and assigning passwords

4.2.2-

- 1.The system shall display the hotel occupancy for a specified period of time (days;including past, present, and future dates).
- 2.The system shall display projected occupancy for a period of time (days).
- 3.The system shall display room revenue for a specified period of time (days).
- 4.The system shall display food revenue for a specified period of time (days).
- 5.The system shall display an exception report, showing where default room and food prices have been overridden.
- 6.The system shall allow for the addition of information, regarding rooms, rates, menu items, prices, and user profiles.
- 7.The system shall allow for the deletion of information, regarding rooms, rates, menu items, prices, and user profiles.
- 8.The system shall allow for the modification of information, regarding rooms, rates, menu items, prices, and user profiles.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

Performance requirements define acceptable response times for system functionality.

- *The load time for user interface screens shall take no longer than two seconds.*
- *The log in information shall be verified within five seconds.*
- *Queries shall return results within five seconds*

5.2 Safety Requirements

There are several users in hotel management system. Access to various subsystem will be protected by a user login screen which requires a username and password. This gives different views and accessible functions to each user type. Backups are maintained to ensure database security. System can be restored in case of emergency.

5.3 Security Requirements

Customer Service Representatives and Managers will be able to log in to the Hotel Management System. Customer Service Representatives will have access to the Reservation/Booking and Food subsystems. Managers will have access to the Management subsystem as well as the Reservation/Booking and Food subsystems. Access to the various subsystems will be protected by a user login screen that requires a username and password.

5.4 Software Quality Attributes

- **AVAILABILITY:** The room should be available on the specified date and specified time as many customers are doing advance reservations.
- **CORRECTNESS:** The room should be booked for the exact date and time entered by the user.
- **MAINTAINABILITY:** The administrators should maintain correct records of the rooms.
- **USABILITY:** The room features should satisfy a maximum number of customers needs.