Software Requirements Specification

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Hotel Reservation System Online

محمد الحسين

عطالله الدوخي

مصطفى القادري

عمر الشلبي

الفئة الثالثة

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# 1.0. Introduction

## 1.1. Purpose

The purpose of this document is to present a detailed description of the Hotel Reservation System Online, It will explain the different functional as well as non-functional requirements of the system, the interfaces of the system,what the system will do or how the system will interact with the external users, the constraints under which it will operate.

This document is intended for both the stakeholders and the developers of the system.

## 1.2. Scope of Project

The software to be produced is an Hotel Reservation System Online known as

‘e-Hotel’ which will help the customer to reserve rooms and other facilities of the hotel from anywhere in the world.

The core part of the project is the reservation and the booking system to keep track of the reservations and room availability.

The customer can make searches , reservations and cancel an existing reservation online . The customer needs to enter their personal details and have to pay 10 percentage of the total payment to confirm the booking. An email containing the confirmation details will be sent to the customer’s email address.

Administrator can add/update the room information .

.. The software will facilitate communication between administrator, and the customer via E-Mail.

The proposed software is multi-platform software such that it will work in all the operating systems and most of the browsers.

## 1.3. Glossary

|  |  |
| --- | --- |
| **Term** | **Definition** |
| End -users | The people who will be actually using the system |
| Database | Collection of all the information monitored by this system. |
| Administrator | Person who receives reservations, and accept it if there are room availability |
| customer | Anyone visiting the site to read articles. |
| Software Requirements Specification | 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. |
| Stakeholder | Any person with an interest in the project who is not a developer. |

## 1.4. References

IEEE. *IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications.* IEEE Computer Society, 1998.

## 1.5. Overview of Document

The next chapter, the Overall Description section, of this document gives an overview of the functionality of the product. It describes the informal requirements and is used to establish a context for the technical requirements specification in the next chapter.

The third chapter, Requirements Specification section, of this document is written primarily for the developers and describes in technical terms the details of the functionality of the product.

Both sections of the document describe the same software product in its entirety, but are intended for different audiences and thus use different language.

# 2.0. Overall Description

2.1. System Environment

**Hotel Reservation System Online**

**Online Hotel**

**Website**

**customer**

**Hotel Management**

**Hotel**

**Database**

**Receptionist**

Figure 1 - System Environment

The Hotel Reservation System Online has two active actors, the first ones are the customer who uses the system for the reservation purposes and can accesses the HMS through the Internet. The other active actor is the admin who can check customer details, add or change information of the system and he accesses the entire system directly.

## 2.2 Functional Requirements Specification

Functional requirements define the fundamental actions that system must perform. The functional requirements for the system are divided into two main categories.

### 2.2.1 customer Use Case

**Payment**

**Book**

**Customer**

**Make Reservations**

**Check Room Availability**

**View Details of Room**

**Cancel Booking**

**Figure 2 - customer Use Cases**

**Brief Description:**

The system should allow customer to Make Reservations, view information of rooms and allow customer to book the records in the database, accept the payment and provide confirmation

Before this use case can be initiated, the customer has already accessed the Online Hotel Website.

**1.1. Make Reservations**

The system shall enable customer to enter personal information.

**1.2.Check Room Availability:**

The system shall enable customer to check whether a room available or not.

**1.3. Details of Room:**

The system shall enable customer to check and review all the details of hotel.

**1.4. Book:**

The system enable the customer to reservation rooms online

**1.5. payment:**

The system enable customer to pay the bill online via credit card

**1.5. Cancel Booking:**

customer can cancel room reservation online

**2.2.2. Receptionist Use Case**

**Add Room**

**Receptionist**

**Update Customer Reservation Details**

**Check Customer Information**

**Managing Customer Information**

**Remove Room**

**Edit Room**

**Managing Rooms**

**Figure 2 - Receptionist Use Cases**

**Brief Description** The Receptionist can add a new room or updates information about a current room ,or delete room also he can check customer reservation information and modify it if customer cancel the reservation.

**Initial Step-By-Step Description**

Before this use case can be initiated, the Receptionist has already accessed the main page of the Hotel Manager.

1- The system should allow Receptionist to check customer and booking details.

2- The system should allow Receptionist to add information about Customers & Rooms.

3- The system should allow Receptionist to change the Customers & Rooms information.

4- The system should provide all the details to Receptionist

5- Receptionists can create, edit, and delete the rooms that are available for reservation.

6- Receptionist can update the availability of hotel's rooms.

**2.3 User Characteristics**

The Customer is expected to be Internet literate and be able to use a search engine, and to be able to use email with attachments. The Receptionist is expected to be Windows literate and to be able to use button, pull-down menus, and similar tools.

## 2.4 Non-Functional Requirements

The OHMS will be on a server with high speed Internet capability. The physical machine to be used will be determined by the Historical Society. The software developed here assumes the use of a tool such as Tomcat for connection between the Web pages and the database. The speed of the Customer’s connection will depend on the hardware used rather than characteristics of this system.

The HMS will be placed on PC’s throughout the hotel, and will contain an Access database. Access is already installed on this computer and is a Windows operating system. The database plays vital role in the organization and it should be stored in proper way that required information can be retrieve easily from stored warehouse such as room details is stored in room database. The users should be allowed to access the information about rooms which as available and what are the cost of the room where as security system should be used by system so confidential information does not access to unauthorized person. The database system should be organized so that management can retrieve the information in simple and summarized form The system will be secured from the outside attacks and unauthorized access, since it will contain the personal information of users, the security options must be implemented in order to prevent theft or misuse of the information.

# 3.0. Requirements Specification

## 3.1 External Interface Requirements

Website should be accessible to every user using web browsers that is version 4.0 or

higher. The website should be available in different language and used suitable visual

interface. The site should maintain the inventory of website visited by the users from

different areas in its database.

**Home Page:**

Home page is the first page of the website which is the index page for web designer. It will provide all the information about the hotel and its activities. It should give detail information and attract users to be customers. The page will have a banner covering 25 percentage of the page with graphic appearance. The page will have logo and site map above the banner with the entire menu bar under the banner. The page should contain some information and images at the middle following the entire social networking link at the bottom right of the page while ending with privacy link at the bottom left end.

**Booking page:**

Booking page follows the same interface as home page. It will contain logo,

sitemap at the top following banner and entire menu bat. The page show

booking calendar, amount and booking form which contain information

about customer and payment method instead of image and other text shown

in the home page. The page then will be entire menu social networking at

the bottom right ending with privacy link at the bottom left end.

**Website administration (Receptionists):**

The site should have different page for administration users with separate

accessibilities to understand users’ behaviors. System administrators could

uses the records for users' activities to find the lack of functional

requirement and for better improvement.

The system will store all data dividing into 4 parts as per the character of database which are room, booking, and payment and customer details. The system shall permit only administrator to edit the database and the system will allows customer to cancel the booking. System will have room detail database which store all the information of room. Booking data base store the booking information and payment database shows all the payment whichever is due from the customer and customer database provide all the information of customers.

## 

## 3.2 Functional Requirements

**3.2.1 Make Reservation**

|  |  |
| --- | --- |
| **Use Case Name** | Make reservation |
| **XRef** | Section 2.2.1, Make reservation |
| **Trigger** | The user assesses the Online Hotel Website |
| **Precondition** | The Web is displayed with grids for searching |
| **Basic Path** | customer may view multiple room / rate combinations and  decides which room / rate combination meets their requirements  then he enter his personal information |
| **Postcondition** | The make reservation is open the booking page |
| **Exception Paths** | The customer may abandon the reservation at any time. |

**3.2.2 View Details of Room**

|  |  |
| --- | --- |
| **Use Case Name** | View Details of Room |
| **XRef** | Section 2.2.1, View Details of Room |
| **Trigger** | The user assesses the Online Hotel Website |
| **Precondition** | The customer found the appropriateness room |
| **Basic Path** | The system shall enable customer to check and review all the details of hotel , show all the details of specific room and display whether or not the room is reserved, and provide price range of all the rooms. |
| **Postcondition** | The information about search is sent. |
| **Exception Paths** | The attempt may be abandoned at any time. |
| **Other** | None |

**3.2.1 Check Room Availability**

|  |  |
| --- | --- |
| **Use Case Name** | Check Room Availability |
| **XRef** | Section 2.2.1, rate |
| **Trigger** | The customer accept the room |
| **Precondition** | The customer can check the availability of particular room with particular details |
| **Basic Path** | When the customer select the availability tab ,can enter room type, duration, number of adults & children and price ,then the system will check room availability relevant to entered details and display available room details |
| **Postcondition** | If it appropriateness the customer will see the book page |
| **Exception Paths** | The attempt may be abandoned at any time. |
| **Other** | None |

**3.3.3 Book**

|  |  |
| --- | --- |
| **Use Case Name** | book |
| **XRef** | Section 2.2.1, book |
| **Trigger** | The customer search about room |
| **Basic Path** | 1- The system shall have next button or cancel button for booking procedure.  2- The system shall enable customer to visit booking page, allow booking the room and confirming the room.  3- The system shall send an email notification of booking confirmation to customer.  4- The system shall redirect customer to payment page if they click the confirmation. |
| **Postcondition** | Move to payment part |
| **Exception Paths** | The attempt may be abandoned at any time. |
| **Other** | None |

**3.3.4 Cancel Booking**

|  |  |
| --- | --- |
| **Use Case Name** | Cancel Booking |
| **XRef** | Section 2.2.1, Cancel Booking |
| **Trigger** | The customer booked room |
| **Basic Path** | The customer provide room's identifier and some personal information , then System validates customer inputs and confirms deletion of selected customer and send an email notification of cancel booking confirmation to customer. |
| **Postcondition** | The system sent email to customer include the information about reservation |
| **Exception Paths** | The attempt may be abandoned at any time. |
| **Other** | None |

**3.3.4 payment**

|  |  |
| --- | --- |
| **Use Case Name** | payment |
| **XRef** | Section 2.2.1, payment |
| **Trigger** | The customer booked room |
| **Basic Path** | 1- The system shall calculate the total bill amount.  2- The system shall enable customer to pay the bill online via credit card or PayPal.  3- The system shall should verify and accept the credit card. |
| **Postcondition** | The system sent email to customer include the information about reservation |
| **Exception Paths** | The attempt may be abandoned at any time. |
| **Other** | None |

**3.3.5 Add Room**

|  |  |
| --- | --- |
| **Use Case Name** | Add Room |
| **XRef** | Section 2.2.2, Receptionist use case |
| **Trigger** | The new customer made reservation |
| **Basic Path** | 1-The system accesses the Hotel database and presents an alphabetical list of the rooms available  2- Receptionis clicks “add room” button  3- System prompts the admin to fill out room details  4- System validates new room information  5- System creates a new room  6- Update database |
| **Postcondition** | if Room details are correct, Display “successful ” message  else Display the message "Unsuccessful" and display room management option. |
| **Exception Paths** | The attempt may be abandoned at any time. |
| **Other** | None |

**3.3.6 Update Room**

|  |  |
| --- | --- |
| **Use Case Name** | update Room |
| **XRef** | Section 2.2.2, Receptionist use case |
| **Trigger** | The new customer made reservation |
| **Basic Path** | 1-The system accesses the Hotel database and presents an alphabetical list of the rooms available  2- Receptionist selects “change room properties”  3- System prompts Receptionist to select room  4- Receptionist select the room  5- System display room properties  6- Receptionist edit room properties  7- System alters room properties  8- Update database |
| **Postcondition** | Display “successful” message |
| **Exception Paths** | The attempt may be abandoned at any time. |
| **Other** | None |

**3.3.7 delete Room**

|  |  |
| --- | --- |
| **Use Case Name** | delete Room |
| **XRef** | Section 2.2.2, Receptionist use case |
| **Trigger** | The new customer made reservation |
| **Basic Path** | 1-The system accesses the Hotel database and presents an alphabetical list of the rooms available  2- Receptionist select “delete room” option  3- Display delete room option  4- Receptionist select the room  5- System display confirm message  7- Update database |
| **Postcondition** | Display “successful” message |
| **Exception Paths** | If user select “Yes” details are remove from the database. Else cancel the process |
| **Other** | None |

**3.3.5 Check customer information**

|  |  |
| --- | --- |
| **Use Case Name** | Check customer information |
| **XRef** | Section 2.2.2, Receptionist use case |
| **Trigger** | The new customer made reservation |
| **Basic Path** | 1-The system accesses the Hotel database and presents an alphabetical list of the customers  2- Receptionist clicks “Search” button  3- System prompts the admin to fill out customer details  4- System validates Receptionist inputs  5- Display search results |
| **Postcondition** | if customer details are correct, Display “successful ” message  else Display the message "Unsuccessful" and display customer management option. |
| **Exception Paths** | The attempt may be abandoned at any time. |
| **Other** | None |

**3.3.5 update customer reservation details**

|  |  |
| --- | --- |
| **Use Case Name** | update customer reservation details |
| **XRef** | Section 2.2.2, Receptionist use case |
| **Trigger** | The new customer made reservation |
| **Basic Path** | 1-The system accesses the Hotel database and presents an alphabetical list of the customers  2- Receptionist clicks “Edit customer info” button  3- System prompts the Receptionist to fill out customer details  4- System validates Receptionist inputs  5- Display customer details  6- Receptionist alters the reservation details of customer  7- Update database |
| **Postcondition** | if customer details are correct, Display “successful ” message  else Display the message "Unsuccessful" and display customer management option. |
| **Exception Paths** | The attempt may be abandoned at any time. |
| **Other** | None |

## 3.3 Detailed Non-Functional Requirements

### 3.3.1 Logical Structure of the Data

The Logical Structure of the data to be stored in the OHMS database on the server is as follows:

**ROOM:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data Item** | **Type** | **Description** | **Comment** |
| Room Number | number | Give rooms identifier number |  |
| Room Price | number | price range of the room |  |
| Room Type | Text | 1-single room(a room which has single bed facility).2-double room(a room which has double bed facility).3-twin room(a room which has two single bed separated by a center table).4-interconnecting rooms(two rooms which shares a common door).5-duplex(a room which is been spread on two floors connected by an internal staircase).6-suite room(a room comprises of two or more bedroom,a living room and a dining area). |  |
| Room Capacity | Text | The maximum capacity of people in one hotel room 5 people |  |
| Room Special Features | Text | * Room view * TV * Wifi * Air conditioning * Coffee maker/tea service * Rollaway bed | May be several |
| Room Status |  | Reserved OR not\_Reserved |  |

**BOOK:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data Item** | **Type** | **Description** | **Comment** |
| Customer Name | number |  |  |
| Customer Phone Number | number |  |  |
| Room Type | Text | 1-single room(a room which has single bed facility).2-double room(a room which has double bed facility).3-twin room(a room which has two single bed separated by a center table).4-interconnecting rooms(two rooms which shares a common door).5-duplex(a room which is been spread on two floors connected by an internal staircase).6-suite room(a room comprises of two or more bedroom,a living room and a dining area). |  |
| E-mail | Text |  |  |
| Payment Method | Text | Credit card OR cash |  |
| Country |  |  |  |
| Check In Date |  |  |  |
| Check Out Date |  |  |  |
| Number of Guests |  |  |  |

**customer details:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data Item** | **Type** | **Description** | **Comment** |
| Customer Name | number |  |  |
| Customer Phone Number | number |  |  |
| Room Number | Text |  |  |
| E-mail | Text |  |  |
| Last Visit Date ( for those who had been visit the hotel before) | Text |  |  |
| Country |  |  |  |

**Payment:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data Item** | **Type** | **Description** | **Comment** |
| Paid Amount | number |  |  |
| Required Amount | number | The invoice includes the room fee and services |  |
| Room Rate |  | Price of room |  |
| Paid method | Text | Credit card OR cash |  |