Software Requirements Specification

for

Hotel Management System

Version 1.0 approved

Prepared by Group04

Databases

12th October 2022

Table of Contents

Revision History

Name	Date	Reason For Changes	Version
Hotel Management Hotel	12th October 2022	Initial draft	1.0 draft 1

1. Introduction

1.1 Purpose

The Software Requirements Specification covers all features and functionality of version 1.0 of the Hotel Management System. The purpose of this SRS is to provide an exhaustive structure of the Hotel Management System that will assist the Project Developers in working on developing the system. The SRS mentions all aspects of the project and the complexity of the software that is expected to be constructed. The SRS can also be updated to incorporate any future requirements of the users or replace any existing features in the system.

1.2 Document Conventions

The SRS is written in the font 'Time New Romans' with a font size of 12pt and a line Spacing of 1.5. All headings and subheading are in bold. The headings have a font size of 18pt and the subheadings have a font size of 14pt.

1.3 Intended Audience and Reading Suggestions

The intended audience for the SRS is the project development team as well as the users of the system i.e. the employees and the owner of the Hotel.
The SRS will be used by the development team for updating and referring to the document for the understanding of the functionality and features of the hotel management system and including any additional requirements specified by the user. For the users, it will provide a detailed description of the system constructed by the developers.
The Sequence of document is:

1. Overview and Introduction of the Hotel Management System.
2. Use cases and features of the System
3. External Interface Requirements
4. Non Functional Requirements.

1.4 Project Scope

This hotel management system is designed to automate the major facilities at the hotel. This system will keep track off all the reservations made by the guests both online and through the receptionist. It will also keep track of the room types and their respective prices and allow the guests to check for room availability before making bookings. The inventory can also be viewed and updated. There are 4 end users - the owner, the manager, the receptionist, and the customers. Owner has unrestricted access to all the facilities and the entire database while the manager has restricted access and can only make certain changes to the database. The receptionist can only change the guest bookings (add, remove or update them).

2. Overall Description

2.1 Product Perspective

The Hotel Management System is a software product that the project developers are working on which aims to provide a tech-based alternative to the manual system in the form of an interactive user-friendly interface. This advanced system would be easy to use, reduce human error in calculations, efficiently update the customer details and overcome the problem of managing the substantial physical files. Moreover, the problems associated with the manual system such as inconsistency in data entry, lack of security and a large ongoing staff training cost can be resolved with our final systematic product. Hence, the end product will be a coherent well structured system which would increase the efficiency of all the tasks and would be practical to use.

2.2 Product Features

- Sign-up/Login/Sign out
- Update Password
- Updating account information
- Make reservation

- Check availability
- Cancel reservation
- Updating Booking Information
- Search for booking
- View Booking IDs
- Delete Inventory Item
- Add inventory
- Update Inventory
- Hire/Fire Staff
- Change/update staff schedule
- Online reservation
- View list of available rooms
- Make payments
- Setting room rates
- Adding/Deleting a facility

2.3 User Classes and Characteristics

There are four user levels in the Hotel Management System:

- Receptionist

  The primary purpose of a hotel receptionist is to manage the administrative tasks and essentially deal with customer service. Due to this reason, the educational background of the receptionist and proficiency in English, Math and IT is important for effective communication and maintaining a high standard of client service. The role of a receptionist consists of managing tasks such as check in/check out and registering guests, sending confirmation emails for online bookings.

- Owner

  The owner of the hotel has complete access to all the user functions and can monitor and authorize all the tasks performed by the system. Their primary role is to oversee issues related to property, business licenses, maintenance, standardized reputation and looking for

investment opportunities for the improvement of the hotel system. Moreover, some of the tasks will come entirely under his responsibility like deleting or adding staff members in the system and keeping a track of the reports.

- Manager

  Manager is needed to share the workload of the owner and supervise all the tasks that cannot be assigned to the receptionist. They have the privilege of accessing financial reports, adding new inventory, new room types and respectively modifying and updating all the details regarding them. The manager also has all the abilities that the receptionist user level has, however, the function of payment handling does not come under their appointment.

- Customer

  The customer is a person who is a bonafide occupant of a room of the hotel and their phone number, address and personal details are necessary for a successful booking. A customer is any user who carries a credit card or cash and uses it to make payments at the receptionist terminal. They can make use of the customer service and access all the facilities available at the hotel. Various customers who were regular in making bookings in the past can also make advanced reservations with prepaid accounts.

2.4 Operating Environment

Hardware and software requirements

Hardware:

1. Supports all known operating systems
2. Billing machine will be required to print out bills
3. Supports mobile phones, laptops, PC’s and tablets

Software:

1. Designed to run on any platform above windows 7

2.5 User Documentation

A website navigation manual will be available on the site in the help section. The manual will be a pdf with details of how to access important features of the site.

2.6 Assumptions and Dependencies

Our implementation assumes that the user will have a stable internet connection to access the website. Users will be assumed to have only one account. The website will only allow interaction in the English language. It is assumed that the host system will be able to support our software requirements. The project depends on third party contact with banks through online banking services.

3. Use Cases and System Features

Functional Requirements

Owner functional requirements

- The system will allow the owner to login to the system and add new employees and assign them roles.
- The system will allow the owner to remove employees from the system.
- The system will allow the owner to set room rates for different types of rooms.
- The system will allow the owner to view revenue and trends for a specified time.
- The system will allow the owner to add new facilities to the hotel

Manager functional requirements

- The system will allow the manager to login and set schedules for employees.
- The system will allow the manager to hire/fire staff and an email notification will be sent to the owner.
- The system will allow the manager to view and update inventory.

Receptionist functional requirements

- The system will allow the receptionist to log in to the system and browse available rooms.
- The receptionist should be able to make/cancel reservations on a customer's behalf.
- The receptionist should be able to search for bookings from the database.
- The receptionist should be able to cancel reservations on a customer's behalf.
- The receptionist should be able to generate bills for a customer .

Customer functional requirements

- The system will allow a customer to make an account.
- The customer should be able to browse rooms and make reservations.
- The customer should be able to cancel reservations.
- The customer should be able to make online payments via a credit card.

Use Case List

Primary Actor	*Use Cases*
Customer	1. Sign-up 2. Login 3. Sign-out 4. Update Password 5. Update account information 6. Select room options and make reservations 7. Cancel bookings 8. Make payments 9. View list of available rooms
Receptionist	1. Sign-up 2. Login 3. Sign-out 4. Update Password 5. Update account information

	6. Searching rooms/check availability 7. Search for booking 8. Make reservation (trigger: restore point) 9. Updating booking information 10. Canceling reservations/deleting guests
Manager	1. Sign-up 2. Login 3. Sign-out 4. Update Password 5. Update account information 6. Changing staff schedule 7. Hire staff 8. Fire staff 9. View Hotel Inventory 10. Update Hotel Inventory
Owner	1. Sign-up 2. Login 3. Sign-out 4. Update Password 5. Update account information 6. Access staff panel 7. Adding a new facility 8. Deleting a facility 9. Setting room the rates 10. Delete room

Use Cases

Use Case ID:	1

Use Case Name:	Sign-up		
Created By:	Ayesha Masood	Last Updated By:	
Date Created:		Date Last Updated:	

Actors:	Customer, Receptionist, Manager, Own
Description:	Create the users account in the system
Trigger:	
Preconditions:	1. The user is able to open the website 2. The user can see the sign up button
Postconditions:	1. The user information is saved in database 2. The user can access the facilities of the website
Normal Flow:	**New customer wants to make an account** 1. The user opens the website 2. Clicks on the signup button 3. User adds their email in the email bar 4. User sets up a password 5. User confirms the email and password 6. User can now access the contents of the website
Alternative Flows:	**Email format is invalid** 1. System displays an error message 2. System asks user to enter correct email
Exceptions:	**User only wants to browse the site without accessing features** 1. User can continue as guest and skip the signup option to browse through the website without being able to access features
Includes:	
Priority:	High
Frequency of Use:	Once - at the time of making their account
Business Rules:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case ID:	2		
Use Case Name:	Login		
Created By:	Nida Tanveer	Last Updated By:	
Date Created:		Date Last Updated:	

Actors:	Customer, Receptionist, Manager, Owner
Description:	User can access their previously made account
Trigger:	
Preconditions:	1. User should have already signed up previously 2. User should have signed out of their account 3. User can see the login button
Postconditions:	1. User can open their account and access facilities of website
Normal Flow:	**User information is found in the database** 1. User opens the website and clicks the login button 2. System asks for users email 3. System asks for users password 4. System opens the users account
Alternative Flows:	**User enters incorrect email or password** 1. Systems displays error message 2. System asks user to enter correct email or password **User account has not been created previously** 1. System asks user to create an account first
Exceptions:	
Includes:	
Priority:	High
Frequency of Use:	Whenever the user wants to make bookings
Business Rules:	
Special Requirements:	
Assumptions:	User already has an account
Notes and Issues:	

Use Case ID:	3		
Use Case Name:	Sign-out		
Created By:	Aima Shahid	Last Updated By:	
Date Created:		Date Last Updated:	

Actors:	Customer, Receptionist, Manager, Owner
Description:	The user logs out of their account
Trigger:	
Preconditions:	1. User should have already signed up previously 1. User should be currently logged into their account 2. User can see the sign out button
Postconditions:	1. User logs out of their account

	2. User can no longer access facilities of the website
Normal Flow:	**User has an already made account** 1. User has logged into his account 2. User clicks on the sign out button 3. Systems asks user for confirmation if they actually want to sign out
Alternative Flows:	
Exceptions:	
Includes:	
Priority:	Medium
Frequency of Use:	Everytime a user logs in, they will have to sign out
Business Rules:	
Special Requirements:	
Assumptions:	User has an already made account
Notes and Issues:	

Use Case ID:	4		
Use Case Name:	Update Password		
Created By:	Ayesha Masood	Last Updated By:	
Date Created:		Date Last Updated:	

Actors:	Customer, Receptionist, Manager, Owner
Description:	The user will be able to change their password
Trigger:	
Preconditions:	1. The user has a previously made account 2. The user has either forgotten their password or wants to update it
Postconditions:	1. The user account information will be updated with the new password 2. The new password will be used for future logins
Normal Flow:	**The user wants to change password** 1. The user opens the website 2. The user can view the forgotten password button 3. The user clicks on the forgotten password button 4. The user types in the email used to sign in to the account 5. The system sends an email to the email id with a password changing confirmation link 6. User clicks on it to confirm 7. The user can now enter a new password in the dialog box of the website

	8. The user clicks the confirm password change button
Alternative Flows:	**The user wants to cancel password** 1. The user opens the website 2. The user clicks the forgotten password button 3. The user can click 'back' if they accidentally clicked the button
Exceptions:	
Includes:	
Priority:	Low
Frequency of Use:	Will only be used when the user wants to change password. Once a month.
Business Rules:	
Special Requirements:	
Assumptions:	The user has an already made account
Notes and Issues:	

Use Case ID:	5		
Use Case Name:	Updating account information		
Created By:	Nida Tanveer	Last Updated By:	
Date Created:		Date Last Updated:	

Actors:	Owner, Manager, Receptionist, Customer
Description:	User should be able to update basic information such as name, contact info, profile picture
Trigger:	
Preconditions:	1. User should already have an account.
Postconditions:	1. New information is updated in user's account
Normal Flow:	1. User logins into their account. 2. User clicks on "Edit Profile" 3. Enter new information. 4. System asks the user to confirm new information. 5. System updates new information in the database. 6. System displays profile page with updated information.
Alternative Flows:	
Exceptions:	
Includes:	
Priority:	Low
Frequency of Use:	Not very often; twice a year
Business Rules:	
Special Requirements:	
Assumptions:	

Notes and Issues:	

RECEPTIONIST

Use Case ID:	6		
Use Case Name:	Make Reservation		
Created By:	Seemal Tausif	Last Updated By:	
Date Created:		Date Last Updated:	

Actors:	Receptionist
Description:	Add a new reservation
Trigger:	
Preconditions:	1. Customer information should be valid 2. Customer has valid mode of payment
Postconditions:	1. Hotel guest details should be updated to include current guest
Normal Flow:	**Make new reservation by receptionist** 1. Receptionist initiates new reservation 2. Receptionist enters guest details/room preferences 3. System searches for suitable matches/free rooms 4. Customer chooses preferred room, confirms booking and payment 5. Receptionist confirms booking and system updates customer information/room status 6. System generates confirmation receipt
Alternative Flows:	**No rooms found by system** 1. If there are results found, system returns a message to the receptionist and shows alternate rooms if available 2. Customer chooses preferred room, confirms or cancels booking and payment 3. Receptionist confirms/cancels booking and system updates customer information/room status 4. System generates confirmation receipt
Exceptions:	**System crashes** 1. If system fails at any point, roll back all changes
Includes:	None
Priority:	High

Frequency of Use:	Multiple reservations can be made e.g 20-30 new reservations per day
Business Rules:	
Special Requirements:	Receptionists can cancel any time before 24 hours of booking date.
Assumptions:	
Notes and Issues:	

Use Case ID:	7		
Use Case Name:	Check availability		
Created By:	Aima Shahid	Last Updated By:	
Date Created:		Date Last Updated:	

Actors:	Receptionist
Description:	Check whether a room is available or not
Trigger:	
Preconditions:	1. Authorised log in to the system
Postconditions:	1.
Normal Flow:	**Check room availability** 2. Display interface 3. Press check availability button 4. Enter room information 5. System verifies availability according the information entered 6. Display room availability status
Alternative Flows:	**No room availability according to conditions entered** 1. Display “no room available message”
Exceptions:	
Includes:	
Priority:	High
Frequency of Use:	Multiple times per day e.g 20-30 times per day
Business Rules:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case ID:	8		
Use Case Name:	Cancel Reservation		
Created By:	Bakhtawar Ahtisham	Last Updated By:	
Date Created:		Date Last Updated:	

Actors:	Receptionist
Description:	Cancel and booking that has already been made
Trigger:	
Preconditions:	1. Receptionist is logged in 2. Customer is cancelling at least 24 hours before the reservation date
Postconditions:	1. Hotel guest details should be updated to exclude current guest
Normal Flow:	**Cancel reservation** 1. Receptionist enters reservation details 2. System searches for the reservation 3. If reservation exists, receptionist will delete reservation 4. System updates information and deletes reservation
Alternative Flows:	**Reservation not found** 1. System displays the message “reservation does not exist”
Exceptions:	
Includes:	Search for booking
Priority:	High
Frequency of Use:	Can be used more than once a day
Business Rules:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case ID:	9		
Use Case Name:	Updating Booking Information		
Created By:	Nida Tanveer	Last Updated By:	
Date Created:		Date Last Updated:	

Actors:	Customer
Description:	Change booking information e.g room type, duration of stay
Trigger:	
Preconditions:	1. Login information 2. There should be a prior booking
Postconditions:	Booking should be updated with new customer preferences
Normal Flow:	1. System displays the prior details of the booking 2. Check if the new room is available for the duration requested 3. Select the new room/ update duration. 4. Update database. 5. System displays a "success" message and booking summary.
Alternative Flows:	1. If the new room is not available or duration is not feasible then display "Cannot update booking"
Exceptions:	1. System failure during updating information 2. Roll back to system restoration point
Includes:	1.Check room availability 2. Search for booking
Priority:	Medium
Frequency of Use:	
Business Rules:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case ID:	10		
Use Case Name:	Search for booking		
Created By:	Seemal Tausif	Last Updated By:	
Date Created:		Date Last Updated:	

Actors:	Receptionist
Description:	The receptionist can view the list of bookings made by the customer
Trigger:	
Preconditions:	1. The receptionist is logged into their account
Postconditions:	1. The receptionist can view the bookings

Normal Flow:	1. The receptionist clicks on the search for booking search bar 2. The system will show the respective bookings
Alternative Flows:	
Exceptions:	
Includes:	
Priority:	Medium
Frequency of Use:	Once a day
Business Rules:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

MANAGER

Use Case ID:	11		
Use Case Name:	Hire staff		
Created By:	Aima Shahid	Last Updated By:	
Date Created:		Date Last Updated:	

Actors:	Manager, Owner
Description:	Hire new staff members (e.g receptionist, housekeeping etc)
Trigger:	
Preconditions:	1. Valid candidate information
Postconditions:	1. System updates new employee information (make schedule, assign duties etc) 2. System should make an account for new employee
Normal Flow:	**Enter information of new employee into system** 1. Manager selects option to make new entry for employee 2. Employee gives personal details 3. Systems makes new entry for employee and updates information 4. Display a successful message and send notification to the owner 5. Call Change/update staff schedule and assign duties and shifts to the new employee 6. Send automated email to new employee with login details
Alternative Flows:	

Exceptions:	
Includes:	Change/update staff schedule
Priority:	Medium
Frequency of Use:	Rare occasions, only when we are hiring new employees.
Business Rules:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case ID:	12		
Use Case Name:	Fire staff		
Created By:	NIda Tanveer	Last Updated By:	
Date Created:		Date Last Updated:	

Actors:	Manager, Owner
Description:	Fire an employee (e.g receptionist, housekeeping)
Trigger:	
Preconditions:	1. An employee should already been employed in the system
Postconditions:	1. The system should delete entry for the employee 2. The system should unauthorise login into the system
Normal Flow:	**Fire employee** 1. Manager enter the information of employee that is to be fired 2. System searches for the employee 3. Manager selects option to remove employee from system 4. Systems asks for confirmation 5. Manager confirms the deletion 6. System updates employee status and unauthorised access of system to employee 7. System sends automated email to fired employee
Alternative Flows:	1. If the employee is not found in the system, a message is displayed “employee not found” 2. The system gives manager the option to enter information of employee again or to exit 3. Steps after step 2 are done again if manager enters information again 4. Otherwise the program exits
Exceptions:	
Includes:	None

Priority:	Medium
Frequency of Use:	Rare occasions when an employee needs to be fired
Business Rules:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case ID:	13		
Use Case Name:	View Hotel Inventory		
Created By:	Seemal Tausif	Last Updated By:	
Date Created:		Date Last Updated:	

Actors:	Manager, Owner
Description:	The Manager can keep track of the hotel resources available (resources conform to the inventory)
Trigger:	
Preconditions:	1. The manager is logged into the account
Postconditions:	1. The manager can view the list of available inventory and their respective quantity
Normal Flow:	1. The manager clicks on the view inventory button 2. The list of inventory items is viewed with their respective quantity
Alternative Flows:	
Exceptions:	
Includes:	
Priority:	Low
Frequency of Use:	Once a month
Business Rules:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case ID:	14		
Use Case Name:	Add Hotel Inventory		
Created By:	Bakhtawar Ahtisham	Last Updated By:	

Date Created:		Date Last Updated:	

Actors:	Manager
Description:	The Manager can add hotel resources (resources conform to the inventory)
Trigger:	
Preconditions:	1. The manage is logged into the account 2. The manager is viewing the list of hotel inventory
Postconditions:	2. The respective changes are made in the system
Normal Flow:	**Add inventory** 1. The managed clicks on the add inventory button in the inventory viewing area 2. Manager adds a new inventory item to the system
Alternative Flows:	
Exceptions:	
Includes:	
Priority:	Low
Frequency of Use:	Once a week
Business Rules:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case ID:	15		
Use Case Name:	Remove Hotel Inventory		
Created By:	Zoha Hayat	Last Updated By:	
Date Created:		Date Last Updated:	

Actors:	Manager, Owner
Description:	The Manager can add or remove type and quantity of hotel resources available (resources conform to the inventory)
Trigger:	
Preconditions:	3. The manage is logged into the account 4. The manager is viewing the list of hotel inventory
Postconditions:	3. The respective changes are made in the system
Normal Flow:	**Remove inventory**

	1. The managed clicks on the remove inventory button in front of item in the inventory viewing area 2. The inventory item is removed
Alternative Flows:	
Exceptions:	
Includes:	
Priority:	Low
Frequency of Use:	Once a week
Business Rules:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case ID:	16		
Use Case Name:	Update Hotel Inventory		
Created By:	Zoha Hayat	Last Updated By:	
Date Created:		Date Last Updated:	

Actors:	Manager, Owner
Description:	The Manager can add or remove type and quantity of hotel resources available (resources conform to the inventory)
Trigger:	
Preconditions:	5. The manage is logged into the account 6. The manager is viewing the list of hotel inventory
Postconditions:	4. The respective changes are made in the system
Normal Flow:	**Change quantity** 1. The manager can increase or decrease the quantity of the already added items in the inventory viewing area
Alternative Flows:	
Exceptions:	
Includes:	
Priority:	Low
Frequency of Use:	Once a week
Business Rules:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case ID:	17		
Use Case Name:	Change/update staff schedule		
Created By:	Aima Shahid	Last Updated By:	
Date Created:		Date Last Updated:	

Actors:	Manager, Owner
Description:	Change/update the shifts/duties of the staff members
Trigger:	
Preconditions:	1. The employee should exist in the system
Postconditions:	1. The new schedule should be updated in the system/employee profile 2. A notification should be sent to the employee
Normal Flow:	1. The manager enters employee information 2. The system checks if the employee entry exists 3. Manager selects option to change schedule/duties 4. Manager enters new shift/duties for employee 5. Updates are made in the system 6. A notification is sent to the employee with the updated information
Alternative Flows:	1. If the employee is not found, the system displays a message for the manager to enter information again or to exit 2. If manager selects enter information again, the system takes information and step 2 is started again 3. Otherwise the process exits
Exceptions:	
Includes:	
Priority:	Medium
Frequency of Use:	Can be used around once a month
Business Rules:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

CUSTOMER

Use Case ID:	18
Use Case Name:	View list of available rooms

Created By:	Nida Tanveer	Last Updated By:	
Date Created:		Date Last Updated:	

Actors:	Customer
Description:	System displays a list of rooms that are unoccupied
Trigger:	
Preconditions:	1.
Postconditions:	1. List of available rooms should be displayed by the system
Normal Flow:	1. Customer selects option to view rooms 2. Customer enters date information and type of room 3. System searches for available rooms on specified date 4. If available rooms are found, the system displays a list of available rooms, their price, and their corresponding price.
Alternative Flows:	1. If no available rooms are found, the system will display a message informing the customer that no rooms are available.
Exceptions:	
Includes:	
Priority:	High
Frequency of Use:	Can be used 20-30 times a day
Business Rules:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case ID:	19		
Use Case Name:	Make online reservation		
Created By:	Bakhtawar Ahtisham	Last Updated By:	
Date Created:		Date Last Updated:	

Actors:	Customer
Description:	Customer selects a room type and makes reservation
Trigger:	
Preconditions:	1. Customer should be logged into their account
Postconditions:	1. System should update information and reserve a room for the customer
Normal Flow:	1. Customer selects option for making an online reservation 2. Customer enters reservation details (such as type of room and date)

	3. System searches through list of available rooms to check if the specified room is available or not 4. If room is available, the system confirms the reservation 5. Customer gets email notification of reservation confirmation
Alternative Flows:	1. If room is not available according to the specified details, the system returns a message informing customer that no rooms are available 2. System provides option to the customer to enter a different set of details or to exit 3. If the customer selects option to enter details again, step 3 from normal flow is started again 4. Otherwise, the process exits and no changes are made
Exceptions:	
Includes:	View list of available rooms
Priority:	High
Frequency of Use:	Can be used around 5 times a day
Business Rules:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case ID:	20		
Use Case Name:	Make payments		
Created By:	Zoha Hayat	Last Updated By:	
Date Created:		Date Last Updated:	

Actors:	Customer
Description:	The customer will be able to pay (online) for the facility they want to book
Trigger:	
Preconditions:	1. The customer has a valid credit/debit card 2. The customer is logged into their account 3. The customer has selected facility to pay for (made room reservation) 4. The credit card limit has not been reached
Postconditions:	1. The system sends an email notification to the user with the confirmation of payment 2. The customer's information is updated in the database to reflect their payment history

Normal Flow:	**Make payment** 1. The customer selects the facility to pay for 2. The customer clicks the 'make payment' button 3. The customer is asked to add their credit card information 4. The customer adds the information and clicks the 'confirm payment' button.
Alternative Flows:	**Card details are incorrect** 1. If a customer enters incorrect credit card information, the system displays a message to enter correct information. **Card limit has been reached** 2. If the credit card limit has been reached, the system displays an error message to the user.
Exceptions:	
Includes:	
Priority:	High
Frequency of Use:	Everytime the customer reserves a facility: 10-20 times a day.
Business Rules:	
Special Requirements:	
Assumptions:	
Notes and Issues:	Access to third party (bank) will be required

Use Case ID:	21		
Use Case Name:	Cancel Online Reservation		
Created By:	Ayesha Masood	Last Updated By:	
Date Created:		Date Last Updated:	

Actors:	Receptionist
Description:	Cancel and booking that has already been made online by customer
Trigger:	
Preconditions:	3. Customer is logged in 4. Customer is cancelling at least 24 hours before the reservation date
Postconditions:	2. Hotel guest details should be updated to exclude current guest
Normal Flow:	**Cancel reservation** 5. Customer searches for reservation in their account 6. Customer selects option to delete reservation

	7. System will remove the reservation from customers account 8. System updates information and deletes reservation
Alternative Flows:	**Reservation not found** 2. System displays the message “reservation does not exist”
Exceptions:	
Includes:	
Priority:	High
Frequency of Use:	Can be used more than once a day
Business Rules:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case ID:	22		
Use Case Name:	Avail Facility		
Created By:	Bakhtawar Ahtisham	Last Updated By:	
Date Created:		Date Last Updated:	

Actors:	Customer
Description:	The user can avail a facility.
Trigger:	
Preconditions:	1. The user opens the website 2. The user wants to avail a facility
Postconditions:	1. The user can type in the name of facility they want
Normal Flow:	1. The user opens the website 2. The user logs into their account using their email and password 3. The user can type in the information 4. The availed facility will be added in the database.
Alternative Flows:	
Exceptions:	
Includes:	
Priority:	High
Frequency of Use:	Might have to use every time they need a facility
Business Rules:	
Special Requirements:	
Assumptions:	

Notes and Issues:	

Use Case ID:	23		
Use Case Name:	View Facility		
Created By:	Aima Shahid	Last Updated By:	
Date Created:		Date Last Updated:	

Actors:	Customer
Description:	The user can view list of facilities.
Trigger:	
Preconditions:	3. The user opens the website 4. The user wants to see the facilities
Postconditions:	2. The user can see the facilities.
Normal Flow:	5. The user opens the website 6. The user logs into their account using their email and password 7. The user can click on the view facility button 8. The user sees the list.
Alternative Flows:	
Exceptions:	
Includes:	
Priority:	High
Frequency of Use:	Might have to use every time they need a facility
Business Rules:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case ID:	24		
Use Case Name:	View Booking ID		
Created By:	Seemal Tausif	Last Updated By:	
Date Created:		Date Last Updated:	

Actors:	Customer
Description:	The user can view list of bookings made by them
Trigger:	

Preconditions:	5. The user opens the website 6. The user wants to see the bookings
Postconditions:	3. The user can see the bookings.
Normal Flow:	9. The user opens the website 10. The user logs into their account using their email and password 11. The user can click on the view bookings button 12. The user sees the list of bookings.
Alternative Flows:	
Exceptions:	
Includes:	
Priority:	High
Frequency of Use:	Might have to use it once a day.
Business Rules:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case ID:	25		
Use Case Name:	Update Online Reservation		
Created By:	Ayesha Masood	Last Updated By:	
Date Created:		Date Last Updated:	

Actors:	Receptionist
Description:	Update booking that has already been made online by customer
Trigger:	
Preconditions:	5. Customer is logged in 6. Customer is updating at least 24 hours before the reservation date
Postconditions:	3. Hotel guest details should be updated to exclude current guest
Normal Flow:	9. Customer searches for reservation in their account 10. Customer selects option to update reservation 11. Customer enters new check in date and check out date 12. System updates information
Alternative Flows:	**Reservation not found**

	3. System displays the message “reservation does not exist”
Exceptions:	
Includes:	
Priority:	High
Frequency of Use:	Can be used more than once a day
Business Rules:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

OWNER

Use Case ID:	26		
Use Case Name:	Add a new facility		
Created By:	Bakhtawar Ahtisham	Last Updated By:	
Date Created:		Date Last Updated:	

Actors:	Owner
Description:	Owner can add a new facility to hotel like spa, gym, basketball court
Trigger:	
Preconditions:	1. Owner needs to be logged in
Postconditions:	2. The facility is added to hotel database and is now available to the customers
Normal Flow:	**Add a new facility to hotel** 1. User selects the hotel facilities window 2. The hotel facilities are displayed 3. The user selects to add a new facility to the hotel 4. The user enters the facility details 5. The database is updated 6. Display a “successful” message
Alternative Flows:	
Exceptions:	
Includes:	
Priority:	Low
Frequency of Use:	Very rarely used
Business Rules:	
Special Requirements:	
Assumptions:	The facility is up and running in the hotel

Notes and Issues:	

Use Case ID:	27		
Use Case Name:	Setting room rates		
Created By:	Seemal Tausif	Last Updated By:	
Date Created:		Date Last Updated:	

Actors:	Owner
Description:	The rates for all the room types will be entered by the owner
Trigger:	
Preconditions:	1. Owner should be logged in the system. 2. Room type should already exist or already have an existing rate set.
Postconditions:	1. The price for the specific room type should be updated
Normal Flow:	**The price for a room type needs to be updated** 1. Owner chooses the room type to update 2. Selects room properties 3. Room management information displayed 4. Display the room rate 5. Owner enters the new price for the room 6. The system updates the price of the room 7. Display “successful” message
Alternative Flows:	
Exceptions:	
Includes:	None
Priority:	Low
Frequency of Use:	Once a month
Business Rules:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case ID:	28
Use Case Name:	Deleting a facility

Created By:	Zoha Hayat	Last Updated By:	
Date Created:		Date Last Updated:	

Actors:	Owner
Description:	An already existing facility needs to be deleted from the system
Trigger:	
Preconditions:	1. The owner needs to be logged in 2. The facility needs to be already existing
Postconditions:	1 The facility is removed from hotel database and should no longer be visible to the customers
Normal Flow:	**Deleting Facility** 1. The user selects the available hotel facilities window 2. The user selects the facility that needs to be deleted 3. The user removes that facility 4. The database is updated 5. A "successful" message displayed
Alternative Flows:	
Exceptions:	
Includes:	
Priority:	Low
Frequency of Use:	Very rarely used
Business Rules:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case ID:	29		
Use Case Name:	Access staff panel		
Created By:	Ayesha Masood	Last Updated By:	
Date Created:		Date Last Updated:	

Actors:	Owner
Description:	The owner can view information about all the employees
Trigger:	
Preconditions:	1. The owner should be logged into the account
Postconditions:	1. The owner can view employee list and information
Normal Flow:	1. The owner clicks on the 'view employees' button

	2. The employee list along with their information is available
Alternative Flows:	
Exceptions:	
Includes:	
Priority:	Low
Frequency of Use:	Once a month
Business Rules:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case ID:	30		
Use Case Name:	Delete room		
Created By:	Zoha Hayat	Last Updated By:	
Date Created:		Date Last Updated:	

Actors:	Owner
Description:	The room needs to be deleted from the hotel database
Trigger:	
Preconditions:	1. The room is under renovation 2. The owner needs to be logged in
Postconditions:	1. The room no longer available in the database for customers to view
Normal Flow:	**Delete the room from the database** 1. User selects the available rooms window 2. The user navigates to the room to be deleted 3. The room is removed from system 4. The database is updated 5. A “successful” message is displayed
Alternative Flows:	**The room is currently booked** 1. The hotel room is currently booked and can not be deleted 2. Schedule to delete the room after checkout
Exceptions:	
Includes:	
Priority:	Low
Frequency of Use:	Very rarely used
Business Rules:	

Special Requirements:	
Assumptions:	
Notes and Issues:	

4. External Interface Requirements

4.1 User Interfaces

The system should provide an easy to use interface with a web portal that should allow the user to login and then use different services based on their authorization. Different actors will have different functionalities and will be using a different version of the interface.

4.2 Hardware Interfaces

For database management, there needs to be a server and for the website to communicate with the server, an appropriate connection needs to be there to send e-mail notifications and alerts. The hardware should be compatible with the requirements of the software. The system should also have a stable internet connection to connect with the server and for the software to be able to run smoothly.

4.3 Software Interfaces

The software should be able to accept credit card payments interfacing with third party API'S which make credit card payments (banks etc). The system should support and work on both Windows 7 or above Operating Systems and macOS.

Other Nonfunctional Requirements

4.4 Performance Requirements

- No concurrent usage
- Notification emails generated immediately after events take place
- The system is expected to keep history of the last year

4.5 Security Requirements

- All the transactions should be made secure using encryption
- No credit card history to be kept to prevent theft
- Every private module pertaining to a specific actor will be made available to only that particular actor except public module

5. Other Requirements

Appendix A: Glossary

Inventory: It is the list of all the products that a hotel uses for maintenance and any product that may be used for providing facilities to the customer (e.g kitchen grocery, cleaning supplies etc).

Appendix B: Issues List

Implementation details (environment, mode of formation) still need to be decided.