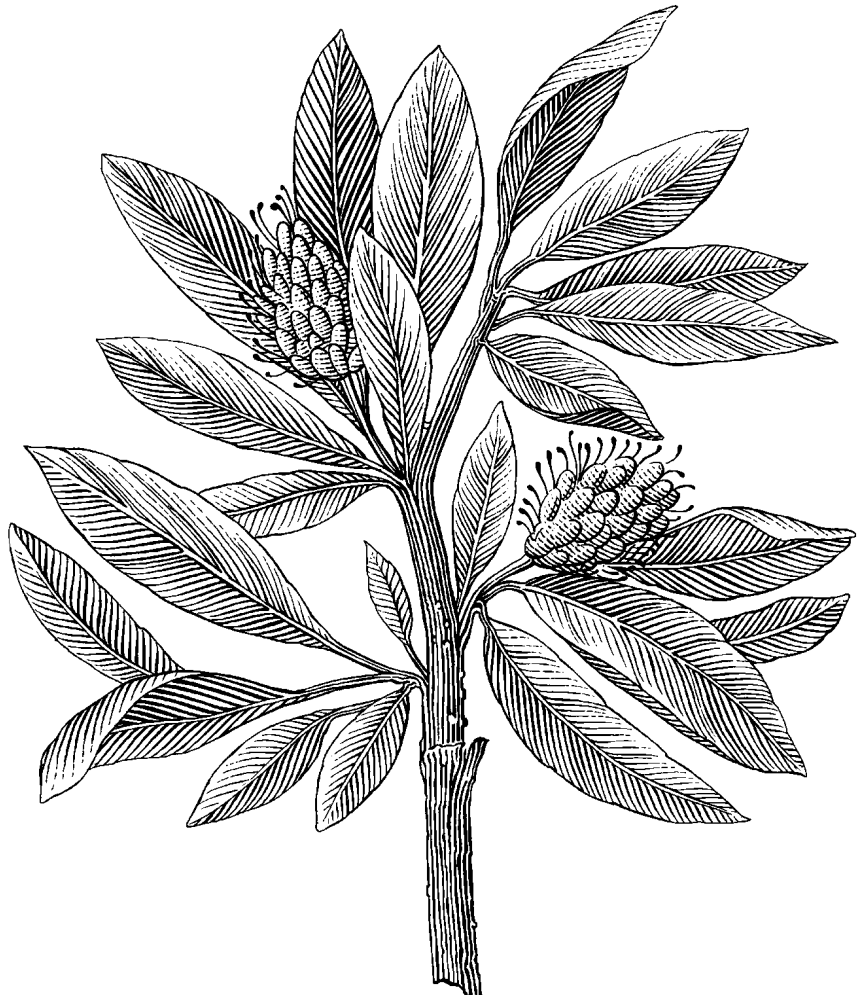
Linnéuniversitetet
Kalmar Växjö

2DV603 – Assignment 1
Requirements Engineering

Hotel Reservation Management System

Requirements Document



Author: Mohammed Basel Nasrini
Semester: VT2018
Course code: 2DV603

1. Purpose

The purpose of the system requirements document is to specify the overall system requirements that will govern the development and implementation of “Hotel Reservation Management System”.

2. Problem

The product will be used by “Linnaeus Hotel” to replace the existing paper-based system that manage the front-desk activities. It will be used by hotel front-desk clerks to enter reservations as well as to check guests in and out of the hotel. Each hotel room is assigned a quality level (large room, small room, room with/without a view, smoking/non-smoking room, room with single bed, room with double bed, room with two single beds, etc.).

3. Environment and System Models

In this version of the software, it will be run by the front-desk computers where the clerks can perform the activities that will be saved to the database. Second version will be developed in the future where guests will be able to make reservation from the hotel website.

4. Scenarios

This section lists the scenarios based on the client description of the system

4.1. Scenario 1 – Room reservation

A guest wants to book a room. The hotel clerk asks the guest about the arrival date, stay duration, type of room he or she wishes, and number of guests and their age group. The system checks if the wanted room(s) is available in those night. The system view rooms that meet the guest’s desire and their price. The guest confirms the price. Clerk asks for the guest information (his or her name, address, telephone number). A confirmation message will be displayed that the reservation has been made.

4.2. Scenario 2 – Check-in

A guest wants to check in. The hotel clerk asks the guest about his/her nick name and insert it to the system. The system views reserved room. Clerk asks for the guest passport or ID and insert the passport or the ID number to the system. A confirmation message will be displayed that the check-in process has been made.

4.3. Scenario 3 – Check-out

A guest wants to check out. Clerk lists room charges and the other service (food, drinks, telephone calls, etc.). The guest pays the total amount. A confirmation message will be displayed that the check-out process has been made and a receipt will be printed.

5. Requirements

This section of the document lists specific requirements for “Hotel Reservation Management System”. Requirements are divided into the following sections:

1. Functional Requirements
2. Non-functional Requirements

5.1. Functional Requirements

1. Room Management

1.1. Each room has a number.
1.2. Each room has a quality level.
1.3. A room is smoking or non-smoking.
1.4. A room is with or without a view.
1.5. A room has a number of beds with different sizes.
1.6. Some rooms can adjoin others.
1.7. Rooms that have the same quality level have the same daily rate.
1.8. The daily rate may differ depending on the day and the season and the number of guests.
1.9. A room is available for reservation or check-in if it is not reserved or allocated to any guest.

2. Reservation Management

2.1. Making a reservation need the guest to specify the arrival day and the stay duration, number of guests, and their age group.
2.2. A reservation can be made for a minimum of one guest.
2.3. A reservation is made if the room(s) that meet the guest’s desire are available.
2.4. A reservation is made after a confirmation for the guest about the daily rate.
2.5. A reservation can be modified if the room(s) are available in the new days.
2.6. Reservation can be cancelled
2.7. If the reservation is too late and the guest want to cancel the reservation, he/she will be charged some fees (a percentage of the room price)

3. Check-in Management

3.1. A check-in made after a previous reservation.
3.2. A check-in is made after giving the guest his/her passport number or ID number.

4. Check-out Management

4.1. A check-out needs a previous check-in
4.2. A receipt will be printed when the check-out is made.

5.2. Non-functional Requirements

5.1. The room availability procedure must take less than 2 seconds to complete.
5.2. Check-out procedure must take 60 seconds to complete in average.

6. **Use Case Diagram**

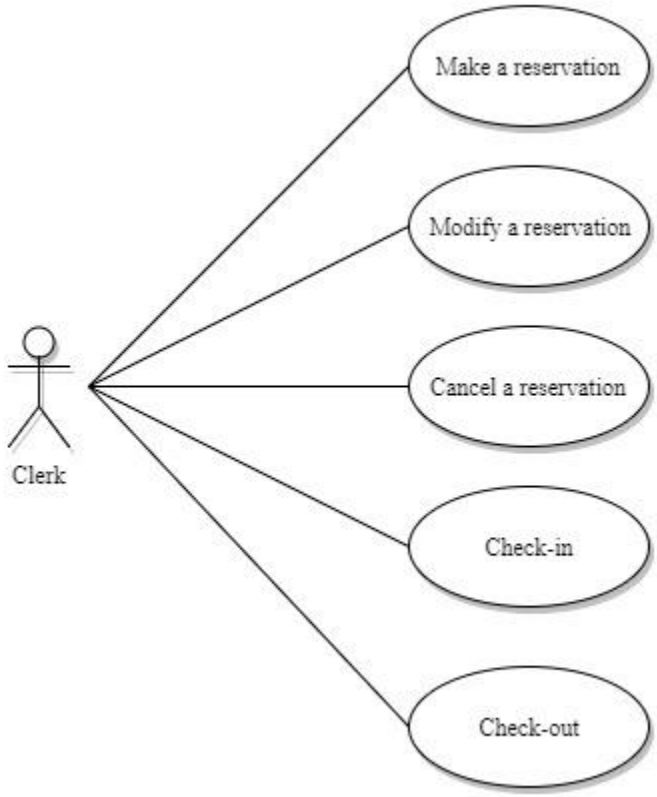


Figure 1 - Use Case Diagram

The above use case diagram shows the functionality of the hotel reservation management system. The clerk can make all the procedure in the system.

7. Use Cases

The following use cases are derived from the scenarios

Use Case ID:	1
Use Case Name:	Room reservation
Req ID:	1.9, 2.1, 2.2, 2.3, 2.4, 5.1
Participating actors:	Guest, clerk
Goal:	Reserve a room for a guest

Preconditions
• One room available at least

Step	User Actions
1	The guest requests a reservation
2	The guest provides the arrival date, stay duration, type of the room, and number of guests and their age group.
3	The clerk inserts the given information to the system.
4	The system shows the availability and the daily rate.
5	The guest agrees the offered room and the rate and provide the contact details.
6	The clerk inserts the given details.
7	A confirmation message will be displayed that the reservation has been made.

Alternate Flow – 4a – No available room meets the guest desire	
Step	**User Actions**
4.a.1	The system shows a message that no available room suits the guest desire
4.a.2	Use case end

Alternate Flow – 5a – The guest does not agree the rate or the offered room	
Step	**User Actions**
5.a.1	The clerk cancels the process
5.a.2	Use case end

Post conditions
A room of the desired type will be reserved for the guest and will not be available under that period.

Use Case ID:	2
Use Case Name:	Modify reserved room
Req ID:	1.9, 2.3, 5.1
Participating actors:	Guest, clerk
Goal:	Modify a reserved room for a guest

Preconditions
• A guest has a reserved room

Step	User Actions
1	The guest requests to modify a reservation
2	The guest provides a nick name and the information he wants to edit
3	The clerk inserts the nick name and the given information to the system.
4	The system shows the availability and the daily rate.
5	The guest agrees the new offed room and the new rate.
6	The clerk confirms the new information.
7	A confirmation message will be displayed that the reservation has been modified.

Alternate Flow – 4a – No available room meets the new guest desire	
Step	**User Actions**
4.a.1	The system shows a message that no available room suits the new guest desire
4.a.2	Use case end

Alternate Flow – 5a – The guest does not agree the rate or the offered room	
Step	**User Actions**
5.a.1	The clerk cancels the process
5.a.2	Use case end

Post conditions
A reservation will be modified.

Use Case ID:	3
Use Case Name:	Reservation cancel
Req ID:	2.6, 2.7
Participating actors:	Guest, clerk
Goal:	Cancel a reserved room for a guest

Preconditions
• A guest has a reserved room

Step	User Actions
1	The guest requests to cancel a reservation.
2	The guest provides a nick name.
3	The clerk inserts the nick name.
4	A confirmation message will be displayed that the reservation has been canceled.

Alternate Flow – 4a – The reservation is too late, so the guest will be charged	
Step	**User Actions**
4.a.1	The system calculates the fee (a percentage of the room price)
4.a.2	Use case end

Post conditions
A reservation will be canceled.

Use Case ID:	4
Use Case Name:	Check-in
Req ID:	3.1, 3.2
Participating actors:	Guest, clerk
Goal:	Check in a guest at the hotel

Preconditions
• A guest has a passport or an ID • A guest has a reserved room

Step	User Actions
1	The guest requests to check-in and provide the nick name.
2	The clerk inserts the nick name.
3	The guest provides a passport or an ID.
4	The clerk inserts the passport or the ID number.
5	A confirmation message will be displayed that the check in has been made.

Post conditions
The check-in process will be made

Use Case ID:	5
Use Case Name:	Check-out
Req ID:	4.1, 4.2, 5.2
Participating actors:	Guest, clerk
Goal:	Check out a guest from the hotel

Preconditions
• A guest checked in in the hotel

Step	User Actions
1	The guest requests to check-out and provide the nick name.
2	The clerk inserts the nick name.
3	The system calculates the room charges and the other service (food, drinks, telephone calls, etc.).
4	The guest pays the total amount.
5	A confirmation message will be displayed that the check-out process has been made and a receipt will be printed.

Post conditions
The check-out process will be made