Cairo University  
Faculty of Computers and Artificial Intelligent

**CS251 - Software Engineering I**

Project Name

Software Requirements Specifications (SRS)

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# Document Purpose and Audience

* Document Purpose: And the purpose of this document is to present a clear idea about what the Hotel Management System should be able to do, scope of the system, who will use it, where it will operate and what are the constraints it will operate under. It will also explain the functional and nonfunctional requirements of the system, and how the system behaves in a simplified manner.
* Audience: Project Manager, Customers, developers, testers

# Introduction

## Software Purpose

* The main purpose of this software is to help with management of hotels and make it easier for hotel employees to do their day-to-day tasks in the hotel and record information related to the hotel such as information about the prices of different hotel rooms, prices of different reservation packages, the hotel rooms, the reservations for each room, and the guests who visit the hotel.

## Software Scope

* The software to be produced is a Hotel Management System which is used to reserve the hotel rooms. The receptionist can book the rooms for the guests through the app. The Guest needs to tell their personal details to receptionist to reserve room. And the app should be able to record information about hotel guests, hotel rooms, reservations for the hotel rooms and prices for different hotel rooms and different reservation packages which will help the hotel employees to do their day-to-day tasks in the hotel and keep track of the hotel room reservations and hotel room availability
* This will be explained in detail in 2 – Functional Requirements’ section. There two types of the end users for this Hotel Management System. The first ones are the receptionist who uses the system for the reservation purposes and managing the hotel. and the admin user who initialize number of hotel rooms and their numbers and their type and view and the package prices and room prices room.

## Definitions, acronyms, and abbreviations

# Requirements

## Functional Requirements

1. the system shall allow to initialize the number of rooms and the type and view of each room

2. the system shall allow to initialize the room prices

3. the system shall allow to initialize the reservation package prices

4. The room has 2 types of views (Sea View or Garden View)

5. the room has 4 types (single room, twin bed room, suite, king room)

6. The system shall enable Occupy and release rooms(check-in and check-out guests)

7. The system shall allow to print the receipt for reservations

8. The system shall allow to display the available rooms for a certain time period

9. The system shall allow to display room details based on the entered room number

10. The system shall allow to display recorded guests

11. The system shall allow to record new guests

12. The system shall allow to reserve hotel rooms

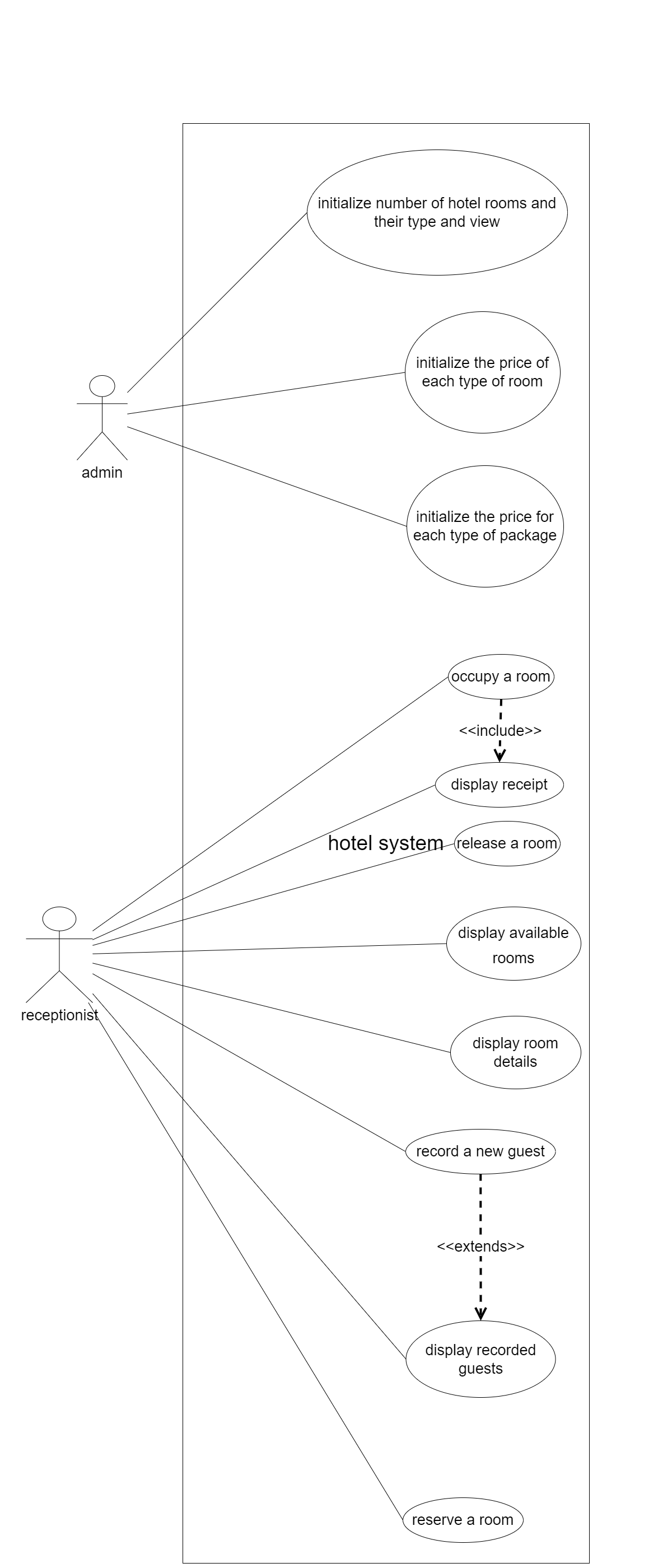
13. The system shouldn't allow the room view to have any effect on the reservation prices(the room view should have a price of zero)

## Non Functional Requirements

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| --- | --- |
|  | **Details** |
| Usability: | The user should be able to learn how to use the system within 30 minutes |
| **Maintainability:** | The system should be able to be easily maintained because design patterns were used to build this system (factory pattern) if any time problem happened to system, it is necessary that it can accept the maintenance easily because there is no benefit from software if it does not have maintenance, so if software crashed or down, the software is died. |
| Adaptability: | The system should be able to easily accept the changes such as adding new types of rooms and adding new room views. If any time something new is introduced to system, it is necessary that it can accept the changes easily. |
| Efficiency: | The system was developed by a team of two and requires minimal computer hardware requirements |
| **Performance:** | The system should start within 3 seconds and should give a response to any request the user gives within at most 10 seconds |

# Systm Models

## Use Case Model



## Use Case Tables

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 1 | |
| Use Case Name: | Release a room | |
| Actors: | Receptionist | |
| Pre-conditions: | Admin has initialized system parameters and Guest make check-out | |
| Post-conditions: | The receptionist will release the rooms | |
| Flow of events: | **User Action** | **System Action** |
| 1. receptionist make check-out request to the system based on guest request |  |
|  | 1. System asks the receptionist what is the room number |
| 1. Receptionist enters the room number. |  |
|  | 1. System asks the receptionist which room reservation to check-out |
| 1. Receptionist enters the room reservation to check-out |  |
|  | 1. System will remove the reservation |
| Exceptions: | **User Action** | **System Action** |
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|  |  |
| Includes: |  | |
| Notes and Issues: |  | |

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| --- | --- | --- |
| Use Case ID: | 2 | |
| Use Case Name: | Occupy rooms | |
| Actors: | Receptionist | |
| Pre-conditions: | Admin has initialized system parameters and Guest make check-in | |
| Post-conditions: | The receptionist will Occupy the rooms | |
| Flow of events: | **User Action** | **System Action** |
| 1. receptionist make check-in request to the system based on guest request |  |
|  | 1. System asks the receptionist what is the room number |
| 1. Receptionist enters the room number. |  |
|  | 1. System asks the receptionist which room reservation to check-in |
| 1. Receptionist enters the room reservation to check-in |  |
|  | 1. The system will display the receipt for the reservation 2. System increments the number of visits of guests by one |
| Exceptions: | **User Action** | **System Action** |
|  |  |
|  |  |
| Includes: | Display receipt | |
| Notes and Issues: |  | |

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| --- | --- | --- |
| Use Case ID: | 3 | |
| Use Case Name: | Initialize the price for each type of package | |
| Actors: | admin | |
| Pre-conditions: | non | |
| Post-conditions: | completed initialize price for each type of package successfully | |
| Flow of events: | **User Action** | **System Action** |
|  | System requests user to enter the price for each reservation package |
| User enters the price for each reservation package |  |
|  | System stores the price for each reservation package |
| Exceptions: | **User Action** | **System Action** |
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|  |  |
| Includes: |  | |
| Notes and Issues: |  | |
| Use Case ID: | 4 | |
| Use Case Name: | display recorded guests | |
| Actors: | Receptionist | |
| Pre-conditions: | Admin has initialized system parameter | |
| Post-conditions: | display all the recorded guests | |
| Flow of events: | **User Action** | **System Action** |
| 1. Receptionist requests to display all the recorded guests |  |
|  | 1. System will display a list of all the recorded guests |
|  | 1. The system will ask the receptionist if he wants to record a guest |
| 1. User enters his answer |  |
|  | 1. If the user’s answer was yes will start the guest recording process |
|  | 1. The system will ask the user to enter the guest information |
| 1. User enters the guest information |  |
|  | 1. If the guest entered has the same national id of a recorded guest the system will display a warning massage and entered guest won’t be recorded else the entered guest will be recorded |
| Exceptions: | **User Action** | **System Action** |
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|  |  |
| Includes: | Record a new guest | |
| Notes and Issues: |  | |
| Use Case ID: | 5 | |
| Use Case Name: | Record a new guest | |
| Actors: | Receptionist | |
| Pre-conditions: | Admin has initialized system parameter | |
| Post-conditions: | New guest add to list | |
| Flow of events: | **User Action** | **System Action** |
| 1. Receptionist requests to add a new Guest in the list |  |
|  | 1. System ask receptionist to enter guest information |
| 1. User enter guest information |  |
|  | 1. If the guest entered has the same national id of a recorded guest the system will display a warning massage and entered guest won’t be recorded else the entered guest will be recorded |
| Exceptions: | **User Action** | **System Action** |
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| Includes: |  | |
| Notes and Issues: |  | |

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| Use Case ID: | 6 | |
| Use Case Name: | Initialize the price for each type of room | |
| Actors: | admin | |
| Pre-conditions: | non | |
| Post-conditions: | completed initialize price for each type of rooms successfully | |
| Flow of events: | **User Action** | **System Action** |
|  | 1. System requests user to enter the price for each type of room |
| 1. User enters the price for each type of room |  |
|  |  | 1. System stores the price for each type room |
| Exceptions: | **User Action** | **System Action** |
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| Includes: |  | |
| Notes and Issues: |  | |

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| Use Case ID: | 7 | |
| Use Case Name: | initialize Number of hotel rooms and their type and view | |
| Actors: | admin | |
| Pre-conditions: | non | |
| Post-conditions: | completed initialize Number of rooms and their type and view successfully | |
| Flow of events: | **User Action** | **System Action** |
|  | 1- system asks the user to enter the number of hotel rooms |
| 2- user enters the number of hotel rooms |  |
|  | 3- System asks the user to enter the number of rooms of each type |
| 1. User enters the number of rooms of each type |  |
|  | 1. System asks the user to enter the number of rooms with each type of view |
| 1. User enters the number of rooms with each type of view |  |
|  | 1. System stores the number of rooms and the type and view of each room |
| Exceptions: | **User Action** | **System Action** |
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| Includes: |  | |
| Notes and Issues: |  | |

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| --- | --- | --- |
| Use Case ID: | 8 | |
| Use Case Name: | display available rooms | |
| Actors: | Receptionist | |
| Pre-conditions: | Admin has initialize system parameter | |
| Post-conditions: | display available rooms to receptionist | |
| Flow of events: | **User Action** | **System Action** |
| 1. Receptionist requests the system to display available rooms |  |
|  | 1. System will ask the user to enter the filter start date |
|  | 1. User enters the filter start date |  |
|  |  | 1. System will ask the user to enter the filter end date |
|  | 1. User enters the filter end date |  |
|  |  | 1. System will display available rooms |
| Exceptions: | **User Action** | **System Action** |
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| Includes: |  | |
| Notes and Issues: |  | |

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| --- | --- | --- |
| Use Case ID: | 9 | |
| Use Case Name: | display a room details | |
| Actors: | Receptionist | |
| Pre-conditions: | Admin has initialize system parameter | |
| Post-conditions: | Receptionist can display a room details based on a room number | |
| Flow of events: | **User Action** | **System Action** |
| 1. Receptionist requests the system to display a room detail |  |
|  | 1. System will ask the user to enter the number of the room |
|  | 1. User enters the number of the room |  |
|  |  | 1. System displays the details of the room the entered number |
| Exceptions: | **User Action** | **System Action** |
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| Includes: |  | |
| Notes and Issues: |  | |

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| --- | --- | --- |
| Use Case ID: | 10 | |
| Use Case Name: | Print receipt | |
| Actors: | Receptionist | |
| Pre-conditions: | Admin has initialize system parameter | |
| Post-conditions: | receipt is printed for the customer | |
| Flow of events: | **User Action** | **System Action** |
| 1. Receptionist requests the system to display the receipt of a reservation |  |
|  | 1. the system will ask the user to enter the number of the room that has that reservation |
|  | 1. The user enters the number of the room |  |
|  |  | 1. The system will ask the user to select which reservation to display the receipt for |
|  | 1. User enters his selection |  |
|  |  | 1. The receipt will display to the user |
| Exceptions: | **User Action** | **System Action** |
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| Includes: |  | |
| Notes and Issues: |  | |

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| Use Case ID: | 11 | | |
| Use Case Name: | Reserve a room | | |
| Actors: | Receptionist | | |
| Pre-conditions: | Admin has initialized system parameter | | |
| Post-conditions: | room reservation has been made | | |
| Flow of events: | **User Action** | **System Action** | |
| 1. Receptionist requests the system to reserve a room | |  |
|  | | 1. System will ask the user which type of room would he like to reserve |
|  | 1. User enters the type of room | |  |
|  |  | | 1. The system will ask the user what would he like the view the view of the room to be |
|  | 1. User enters the room view | |  |
|  |  | | 1. If there aren’t any rooms with the required specifications the system will tell the user there are no available rooms with the required specifications and reservation process terminates else the system will display the rooms with the required specs and asks the user to choose one of these rooms |
|  | 1. User enters the room number of the room he chooses | |  |
|  |  | | 1. The system will ask the user to enter the reservation start date |
|  | 1. User enters the reservation start date | |  |
|  |  | | 1. The system will ask the user to enter the reservation end date |
|  | 1. User enters the reservation end date | |  |
|  |  | | 1. If the entered reservation period collides with other reservation periods foe the selected room the system will display a warning massage and terminate the reservation process else the system will ask the user to enter the number of guests in the reservation |
|  | 1. User enters the number of guests in the reservation | |  |
|  |  | | 1. System asks the user to enter the national id of each guest |
|  | 1. user enters the national id of each guest | |  |
|  |  | | 1. System records the reservation data entered and guests who are in the reservation |
| Exceptions: | **User Action** | | **System Action** |
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| Includes: |  | | |
| Notes and Issues: |  | | |

# Ownership Report

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| **Item** | **Owners** |
| All of this document, and update of this document | *Ahmed Mohamed Ahmed Mohamed Shamaa*  *Omar mohamed* |