Nile University
جامعة النيل

Nile Haven Resort

A Seamless Escape

Software Requirements Specifications

Software Engineering CSCI313

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1. Introduction

1.1. Purpose

This SRS will provide the foundation and solid base of the requirements for our Hotel Reservation management system web application. It will allow for a clear understanding and provide a comprehensive view of what is to be expected from our newly introduced system, which is to be constructed. This document will explain the different functional and non-functional requirements of the reservation management system, the purpose of the features, the interfaces, and the constraints under which it will operate. Moreover, it can also be used in the future as the basis for a detailed understanding of how the project was started. It offers a guide for future developers and maintenance teams to follow in order to maintain and adjust this project as needed.

1.2. Scope

Travelers often face the challenge of finding suitable accommodations, especially in regions where they are not familiar. However, Nile Resort is here to make your travel experience seamless and enjoyable. Our goal is to provide a user-friendly website that offers an easy and convenient solution for booking and managing your stay at Nile Resort. Our web application will offer an intuitive and user-friendly interface for booking rooms at Nile Resort. Users can easily select their preferred check-in and check-out dates, room types, and any additional services they require. We will provide comprehensive information about Nile Resort, including room types. This will help travelers make informed decisions about their stay. Registered users will have the ability to manage their bookings, including making changes to their reservation or canceling it if necessary.

The software product to be developed will streamline the day-to-day operations and reservations at Nile Resort, catering to the needs of various stakeholders, including guests and the resort manager. The Nile Resort Management System will encompass two primary user roles: Guests and the Resort Manager. Guests will have the ability to check room availability and make reservations, they can select rooms based on their preferences and requirements. Guests can view and select any available offers and activities provided by Nile Resort during their stay. The Resort Manager will have access to financial reports, including revenue, expenses, and profit. He can update or modify booking details related to room costs, special categories, check-in and check-out dates, room changes, and guest information.

Our web application will include a dedicated customer support section, where users can get in touch with our staff for assistance and inquiries. The system will be able to handle many services to take care of all customers quickly and securely. The system should be user-friendly, easy to use, provide easy recovery of errors and fault tolerance, and lastly and most importantly have an overall end-user high subjective satisfaction.

1.3. Technologies we will use.

- Html to create and structure webpages.
- CSS to style and layout our web pages.
- Java Script to create interactive web content.
- Bootstrap framework to enable responsive development to style and layout our web pages.
- Django for back-end, and to rapidly develop and maintain our website.
- MySQL to manage the database.

1.4. Intended audience.

This document will handle:

Customer: to follow up and check if the building team is building the system in accordance to their expectations, and request changes anytime he wants.

Developer: to thoroughly understand the system's functionality and what is expected and what final product they should come up with.

Software Tester: will allow the tester to test scenarios for specific functionality to modify the project as much required changeability.

Software Architect: to be able to design and meet all the system's criteria and requirements in order to develop the complete software application.

Project Manager/SCRUM Master: to give him a complete picture of the entire project to be able to develop a good and smart plan for the project that will help the team in every possible way.

1.5. Overview

The remaining sections of this document will describe in deep detail the overall specifications for Nile Resort, which will include different functional and non-functional requirements, characteristics of users, and interfaces. It will also consist of assumptions and constraints.

2. Overall Description

2.1. Product Perspective

Our website will stand out by offering our guests a straightforward and personalized booking experience tailored to their preferences and budget. Accommodation details play a central role in determining the pricing, ensuring transparency for our guests. We provide a user-friendly interface for room reservations, allowing guests to easily select their preferred room type, check availability, and complete their booking. In addition to room reservations, guests have the option to customize their stay by selecting additional services and amenities. These may include add-ons like spa treatments, dining packages, or recreational activities.

Our aim is to give guests the flexibility to craft their ideal stay based on their individual needs and interests. For added convenience, our website allows guests to view a detailed program of available activities and events during their stay. Whether it's a fitness class, local excursions, or on-site events, guests can browse and reserve spots in advance. This ensures a seamless and well-planned experience, tailored to their preferences. By focusing on simplicity, personalization, and ease of use, our website aims to provide a stress-free booking process, allowing guests to focus on the excitement of their upcoming stay with us.

- Three sign-in choices are available on the system: user, receptionist, and hotel manager. The first option allows users to sign in. Each category has unique functionalities and can use the system to accomplish different functions.

- The system will include a database system that will store all the guests'data, room details and employee accounts, in addition to all the information required for the reservation.

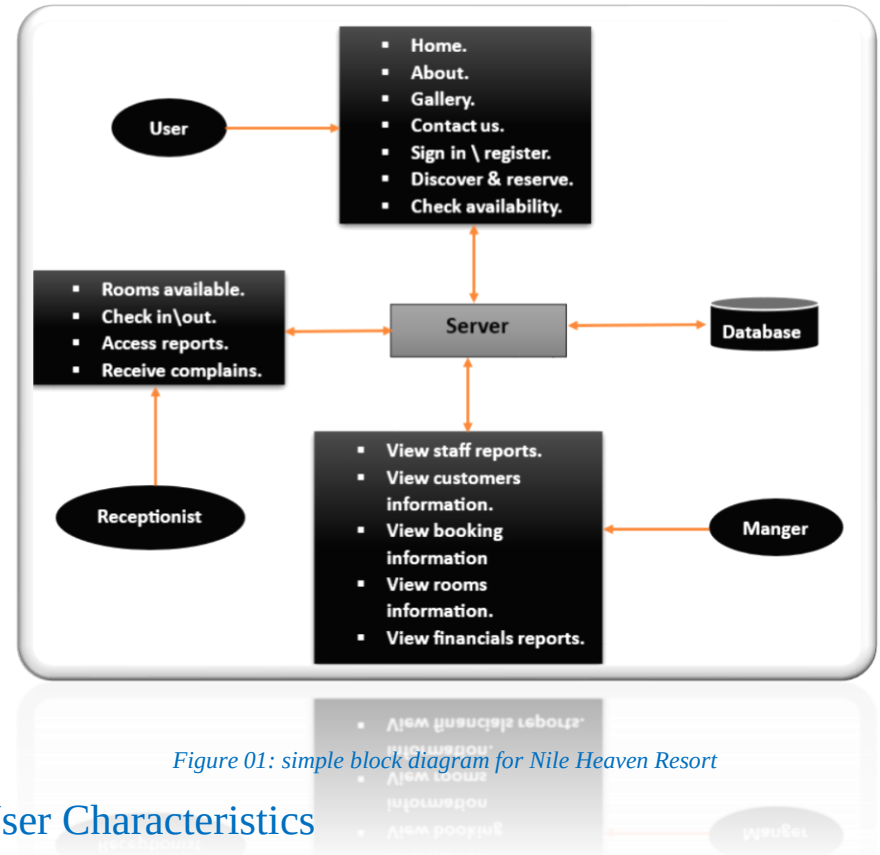


Figure 01: simple block diagram for Nile Heaven Resort

2.2. User Characteristics

As previously stated, the website can be logged in by three people, the first is the user "customer", the second is "the manager" and the third is "the receptionist".

- The customer will have access to many features, such as booking a room after selecting its type, in addition to checking the prices and completing or cancelling the reservation based on his needs.
- The receptionist will have less authority than the manager. He is responsible for checking in and out. He will also be able to check the availability of rooms, receive customer complaints.
- The manager will have full control over the website, including the ability to access employee and customer data stored in the database, delete a user or employee, and modify or change things. He will also have a full view of the room details and reservations.

2.3. Constraints

- Language Requirement: Software must be only in English.
- Reliability Requirements: System should sync frequently to backup server in order to avoid data loss during failure, so it can be recovered.

- Implementation Constraint: The languages used to implement the website are HTML, CSS, JavaScript and Bootstrap, and the system will use the current standard MySQL database engine.
- The Internet connection is a constraint for the System to operate.
- No one should be permitted to sign in as a user, receptionist, or hotelmanager unless the password and username are correct.
- The system should differ in the functionalities that each user,receptionist, and hotel manager have access to.
- The system should allow you to sign in if you already have an accountor join if you are creating an account for the first time.

2.4. Assumptions & Dependencies

- It is assumed that users will open the website from any source or device.
- It is assumed that all users of this system have internet to access thesite.
- This system depends on a reliable database, to store information aboutreservations, users, and staff.

3. Functional Requirements

3.1. User Class 1 – The User

Title: User Sign Up.

Description: The system shall allow the user to create an account so that the user can log in to the website.

The user enters the required information to sign up
Username:
Date of Birth:
Phone Number:
Email Address:
Password:

Title: Sign in.

Description: The system shall allow the user to enter a valid email address and password to log in to the website.

The user enters the required information to sign in
Email Address:
Password:

Title: Forgot password.

Description: The system shall allow the user to change his password by entering his registered email address and the verification code sent via email then enter the new password.

The user enters the required information to change password
Registered email address:
Verification code sent via email:
New password:

Title: Check Availability.

Description: The system shall allow the user to enter the appropriate dates for him in addition to the type of room he wants with the features he wants, and the number of Childs he has and the available rooms with these additions are shown to him, so he chooses the room he wants with the appropriate price for him.

The information required to check the availability
Check in data
Check out data
Number of rooms
The type of the room
Number of children

Title: Discover & Reserve.

Description: The system shall allow the user to explore the available room types, in addition to the features of each room and the view that the room overlooks, then he books the room he likes.

Title: Resort Services.

Description: The system shall allow the user to choose the appropriate program for him.

The user selects the appropriate service for him.
Swimming Pool
Food & Drink
Restaurant
Fitness
Beauty Spa
Resort Beach

Title: My Booking & Profile.

Description: The system should allow the user to cancel and view his reservation, as well as write any complaints.

3.2. User Class 2 – Receptionist

Title: Receptionist log in.

Description: System shall allow the registered receptionist to login by providing a valid username and valid password.

Title: Receptionist view.

Description: System shall display from the receptionist page the receptionist's functionalities, such as viewing the Rooms available, check in, check out and receive complaints.

Title: Receptionist complaints.

Description: System should allow the receptionist to receive user complaints.

Title: Check in/out review.

Description: System should allow the receptionist to be able to access the check-in/out for the customers.

3.3. User Class 3 – The Hotel Manger

Title: Manger log in.

Description: System shall allow the manager to login by providing a valid email address and valid password.

Title: View staff report.

Description: The system shall allow the manager to check the reports of the staff and all the information that relates to them.

Title: View customer’s information.

Description: The system shall allow the manager to access customers' data, starting from their personal data to the reservations data they made, such as appointments, privileges, and anything else.

Title: View booking information.

Description: The system shall allow the manager to view all reservation data, including dates and prices and all its data.

Title: View financial reports.

Description: The system shall allow the manager to check the financial reports and the daily profit, as well as the viewing of workers' salaries.

4. Non-Functional Requirements

A nonfunctional requirement is a characteristic that determines how a system operates. It improves the efficiency of the software and demonstrates the system's performance. Based on the testing performed on our system we were able to analyze and quantify some quality attributes of the major non-functional requirements that must be highlighted.

Performance:

- The time it takes to navigate from one page to another should not be more than 3 seconds.

Availability:

- The system should be capable of operating 24 hours a day, seven days a week.

Recoverability:

- The system should recover after a failure within 5 hours.

Maintainability:

- The system is easy to maintain as we followed the best methods for keeping clean code and there are no unused functions to make the system as maintainable and understandable as possible.

Reliability:

- The rate of failures should be no more than five times per year.

Useability:

- A ten-minute tutorial should be enough for a user to know all about the system’s features and be able to use it. It was determined after showing people who were unfamiliar with our system and who know how to browse on the internet, all agreed that it would not take more than ten minutes to become familiar with the system.

Security:

- To ensure system reliability and privacy and data security, we will utilize the following methodologies such as not everyone is allowed to control who can create, see, copy, change, or delete information, and no one is allowed to log in unless they have the correct password and username or email address, and the system should validate the password and username.

5. Interfaces

5.1. System Interface

For a first-time user of the website, he/she should be able to firstly see the website's Homepage when he/she visits the website, see Figure 02.

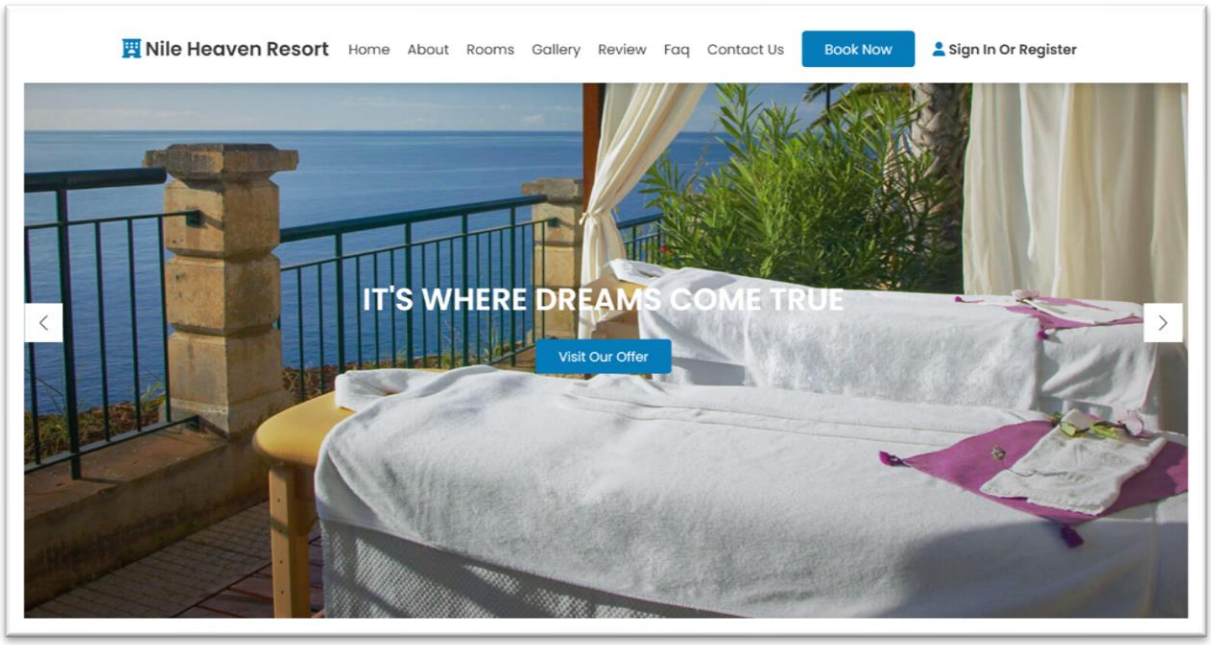


Figure 02: Homepage

The system has three users: The Guest, the Receptionist, and Hotel Manager, therefore the log in system has three views, one for each user.

The system displays a page where you can sign in or register from the home page. So, if the user does not have an account, the system prompts him to create one by entering his first name, last name, date of birth, email address, and password.

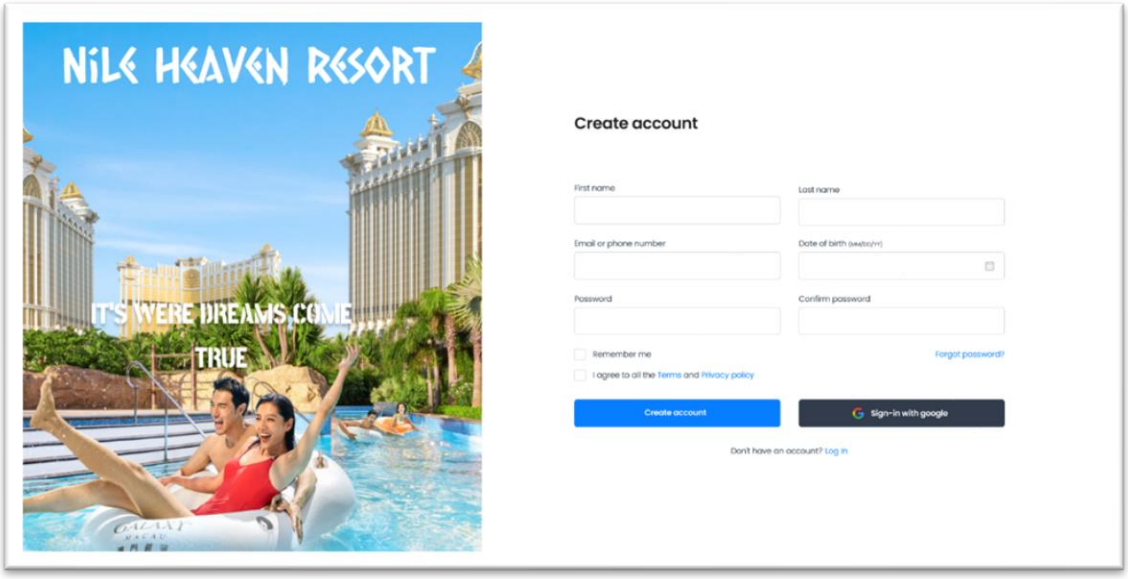


Figure 03: Register

If you sign in as a Guest, Receptionist or Hotel Manger the system will ask for your email and password. If you forget your password, the system will also give you the option to sign in with your Facebook account in case if you are a guest user.

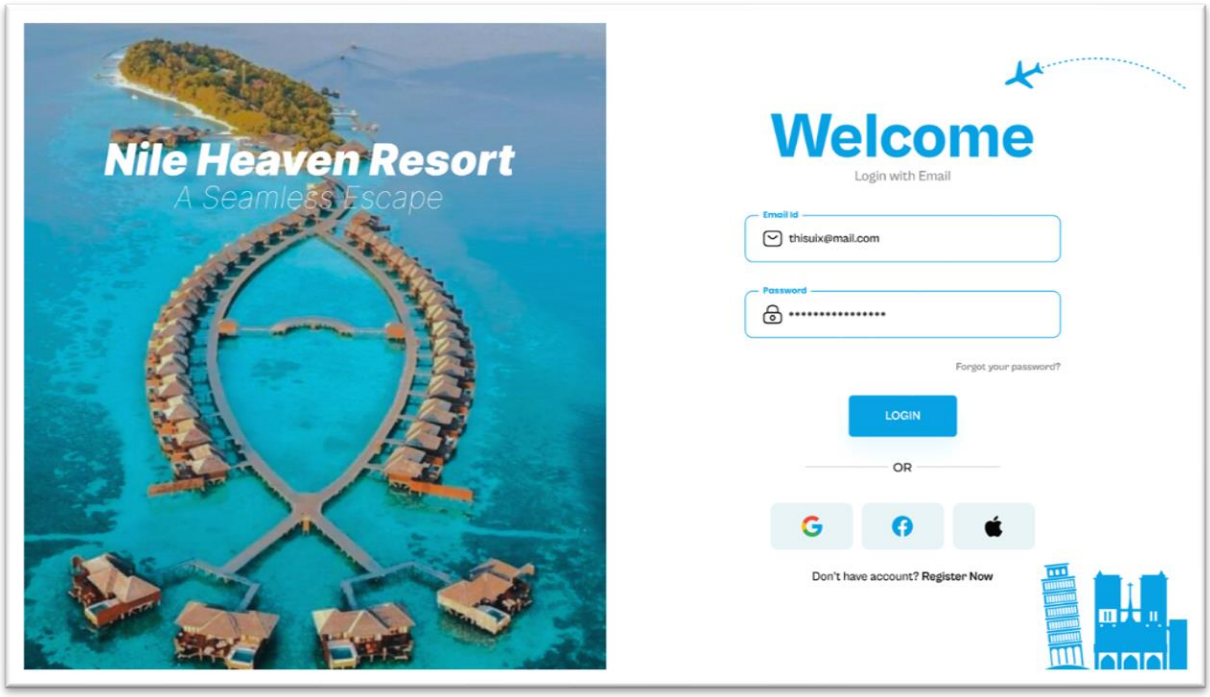
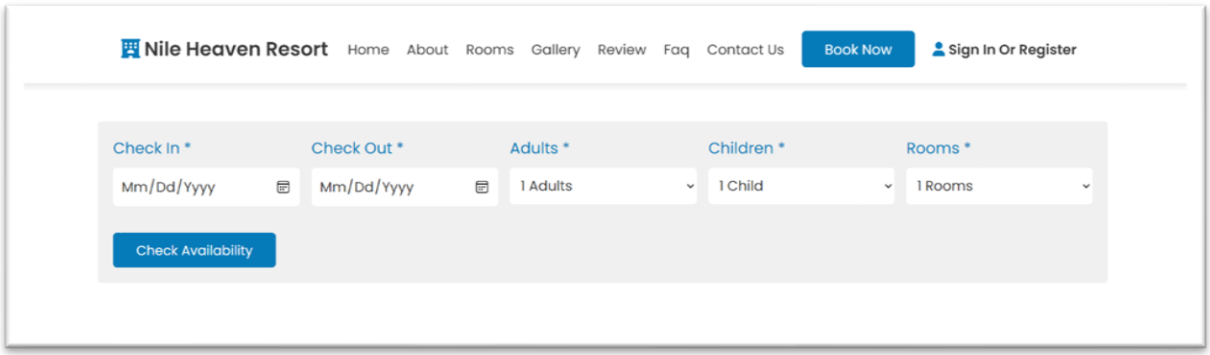
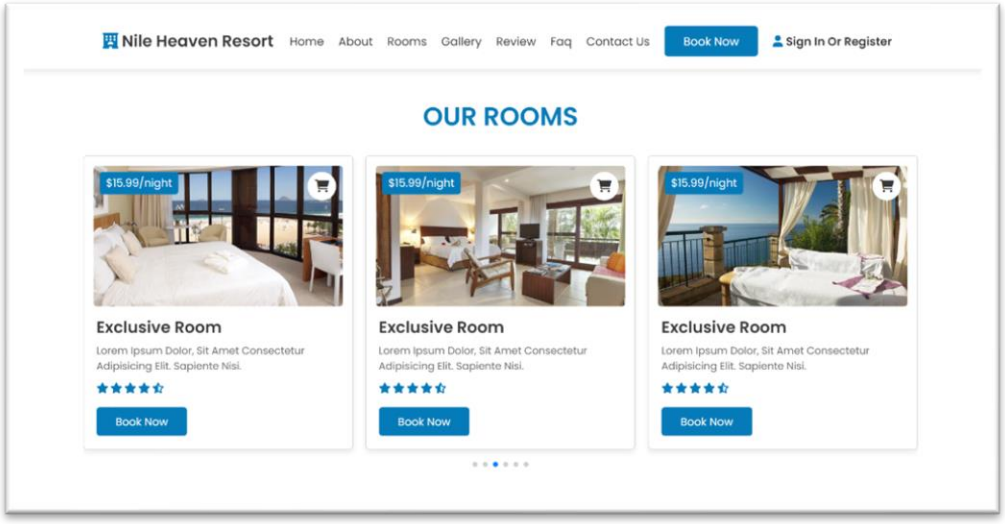
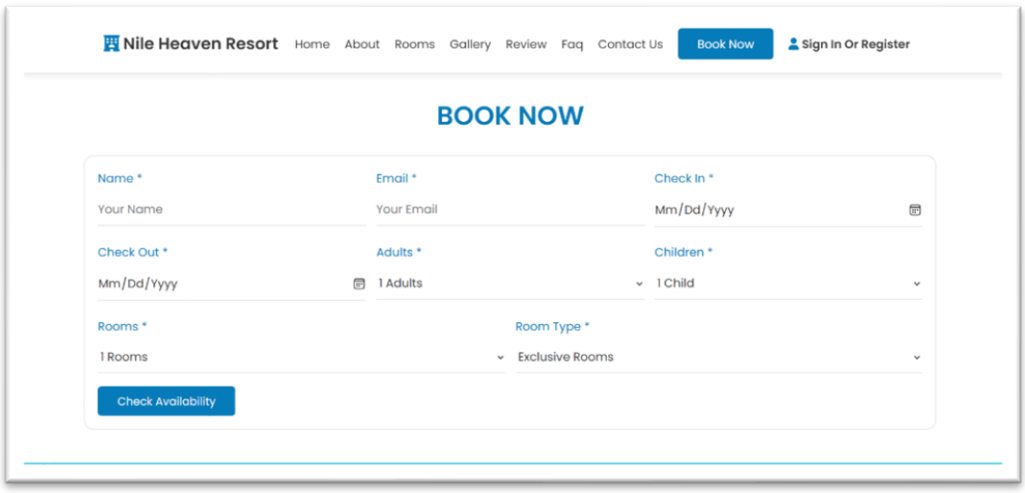


Figure 04: Sign In

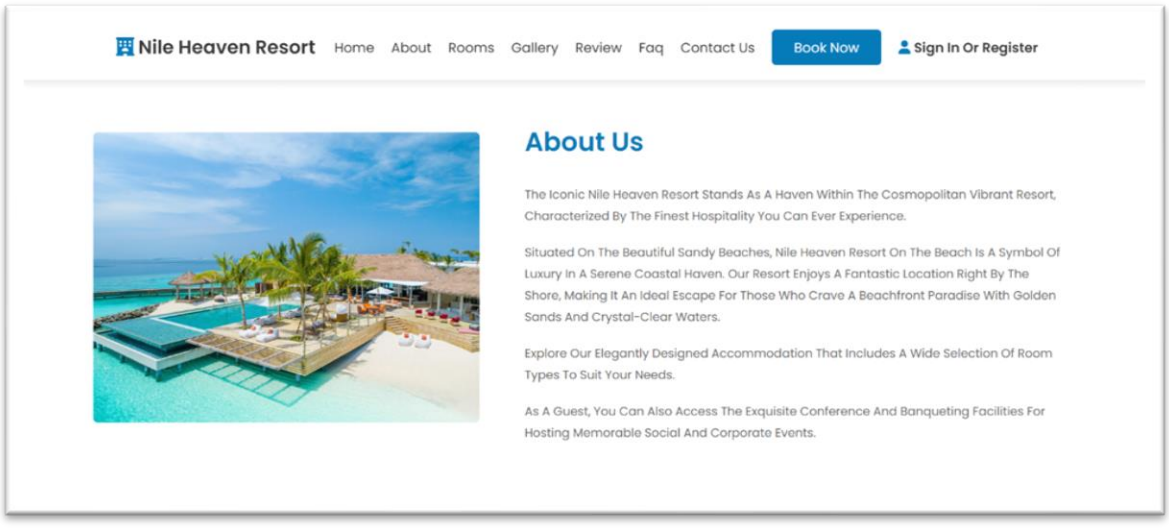
The guest/user will be able to check the availability of the desired date as well as the prices of the room based on its type. The user will be able to view pictures of the rooms that have been uploaded to our website. So, the user can select the type of room that best suits his needs and fits within his budget, and then reserve it after checking its availability.







From About Us section, the guest/user will be able to find all the ways we can help him to ensure we can keep on track with our customers every step starting with the first step that is visiting our website to make him satisfied and more comfortable, as well as more details about what our services are and who we are, as well as they will find all our social media accounts, our email and phone number.



If you signed in as a receptionist, the system would take you to the Receptionist page and display the Receptionist's functionalities, such as View Bookings, and Receive Complaints.

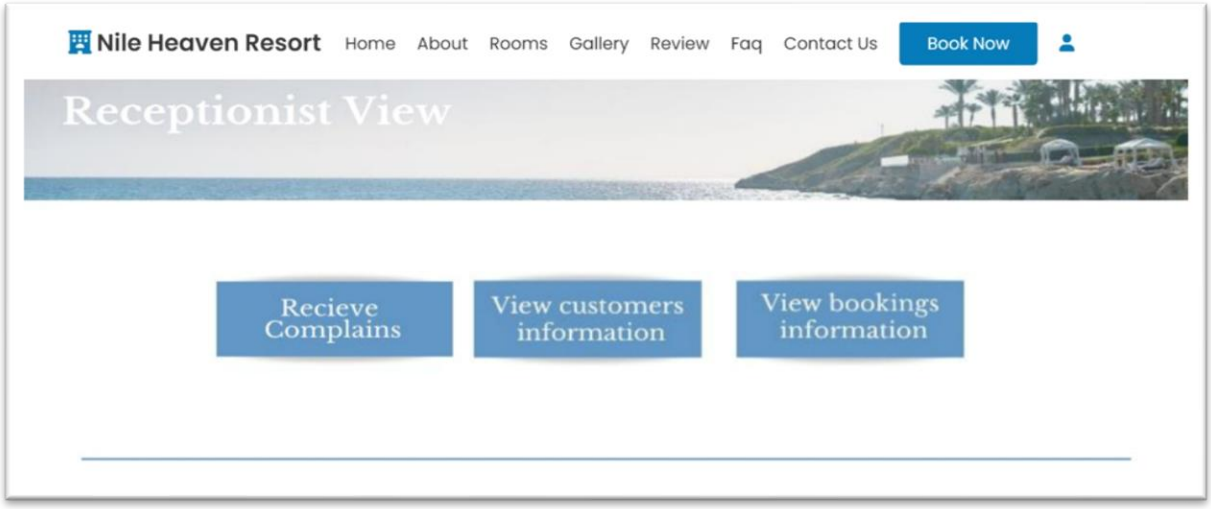


Figure 09: Receptionist View

If the user joined as a Hotel Manager, the system would display a page of the Hotel Manager. View the options available to the manager. View the staff report, the rooms information, the customers information, the bookings information, and the financials report.

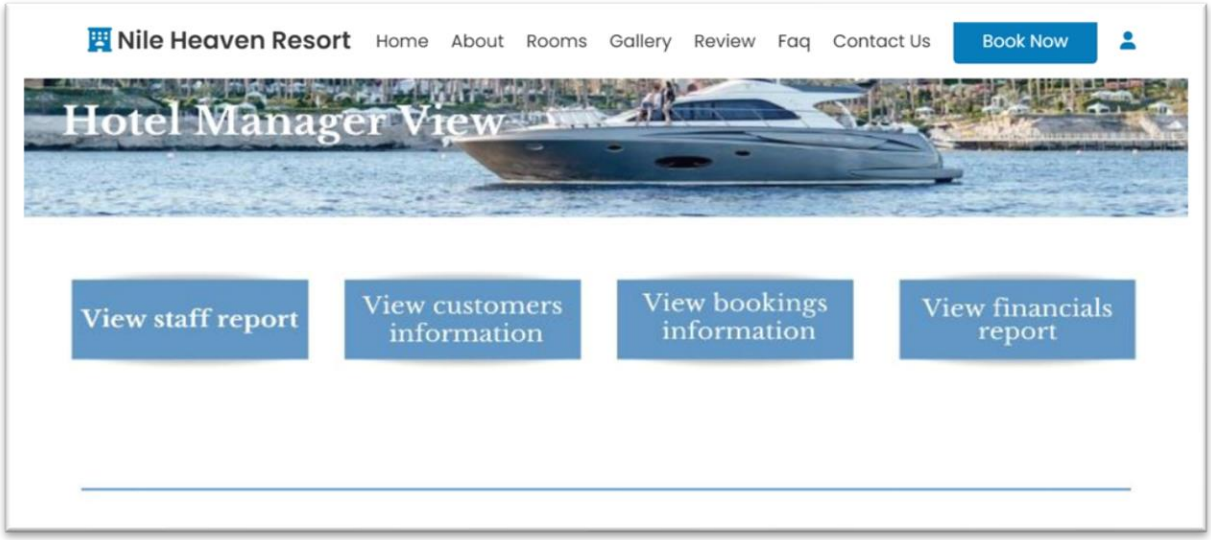


Figure 10: Hotel Manger

This section shows all frequently asked questions that may concern guests.

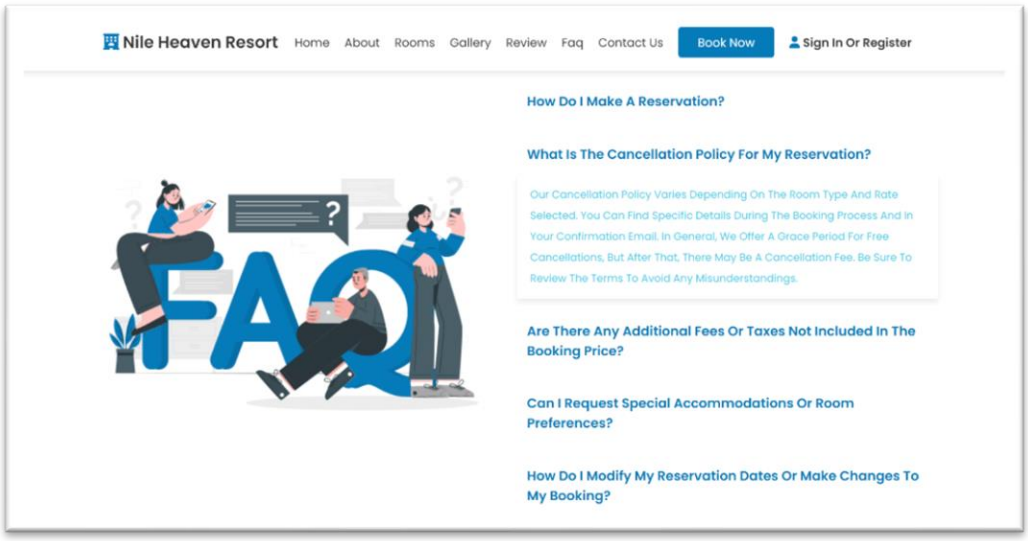


Figure 11: FAQ

This section displays all clients' reviews and their true opinions about our services and resort.

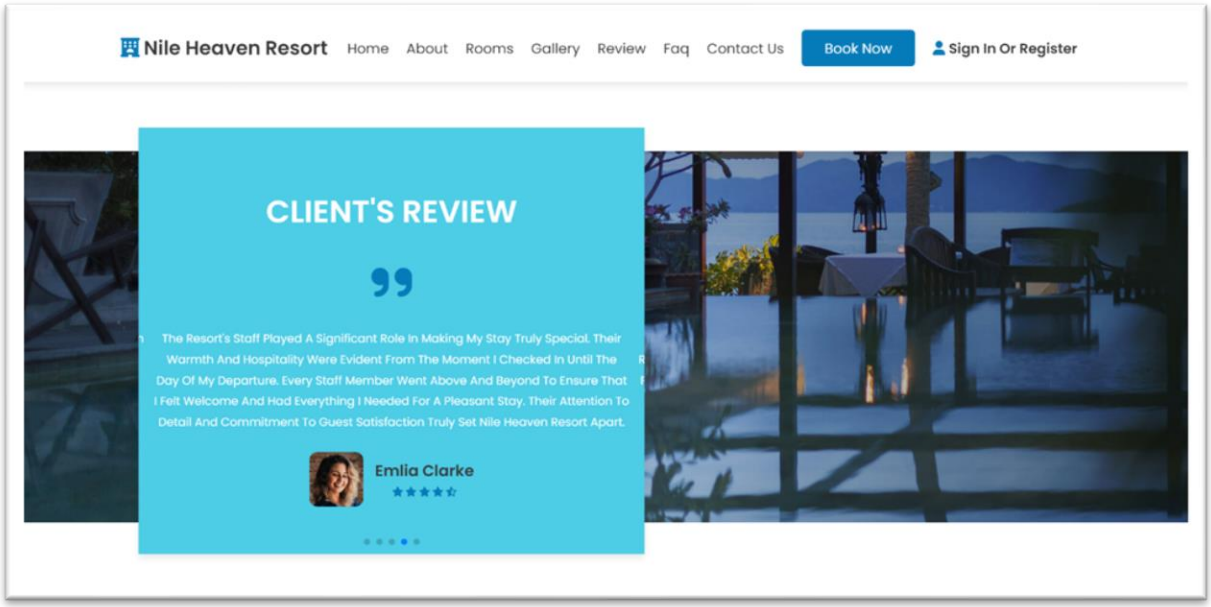


Figure 12: Client's Review

Here Guests can find all our exclusive services and can explore and reserve it.

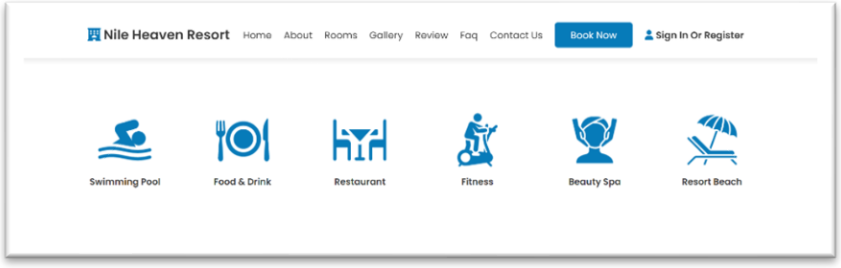


Figure 13: Services

The website will easily keep the users up to date on the special offers that are available at the time by visiting our website and checking the offers section.

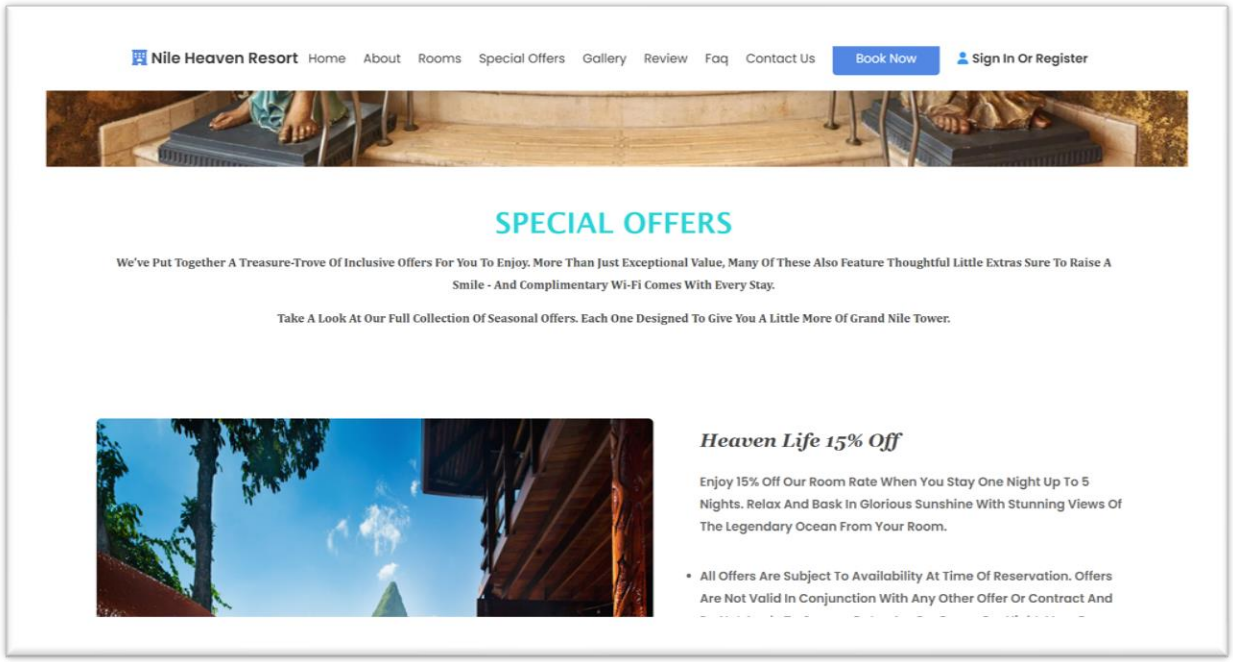


Figure 14: Special Offers

For personalized assistance with reservations or any inquiries, this section ensures that and if any guests want to leave a review for us.

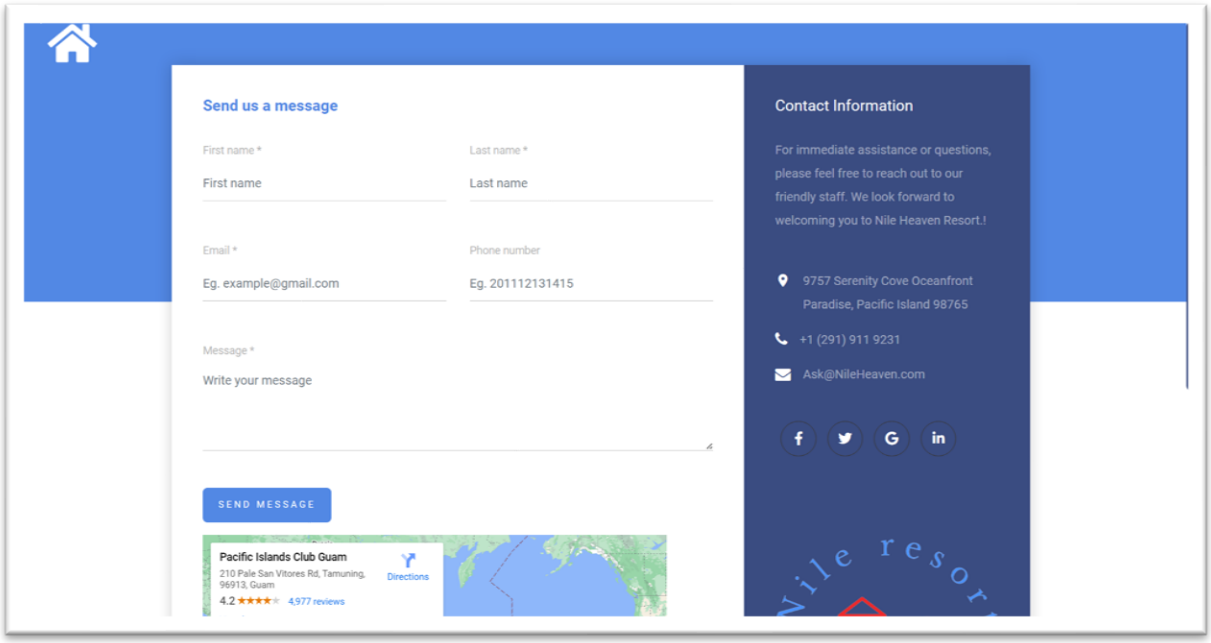


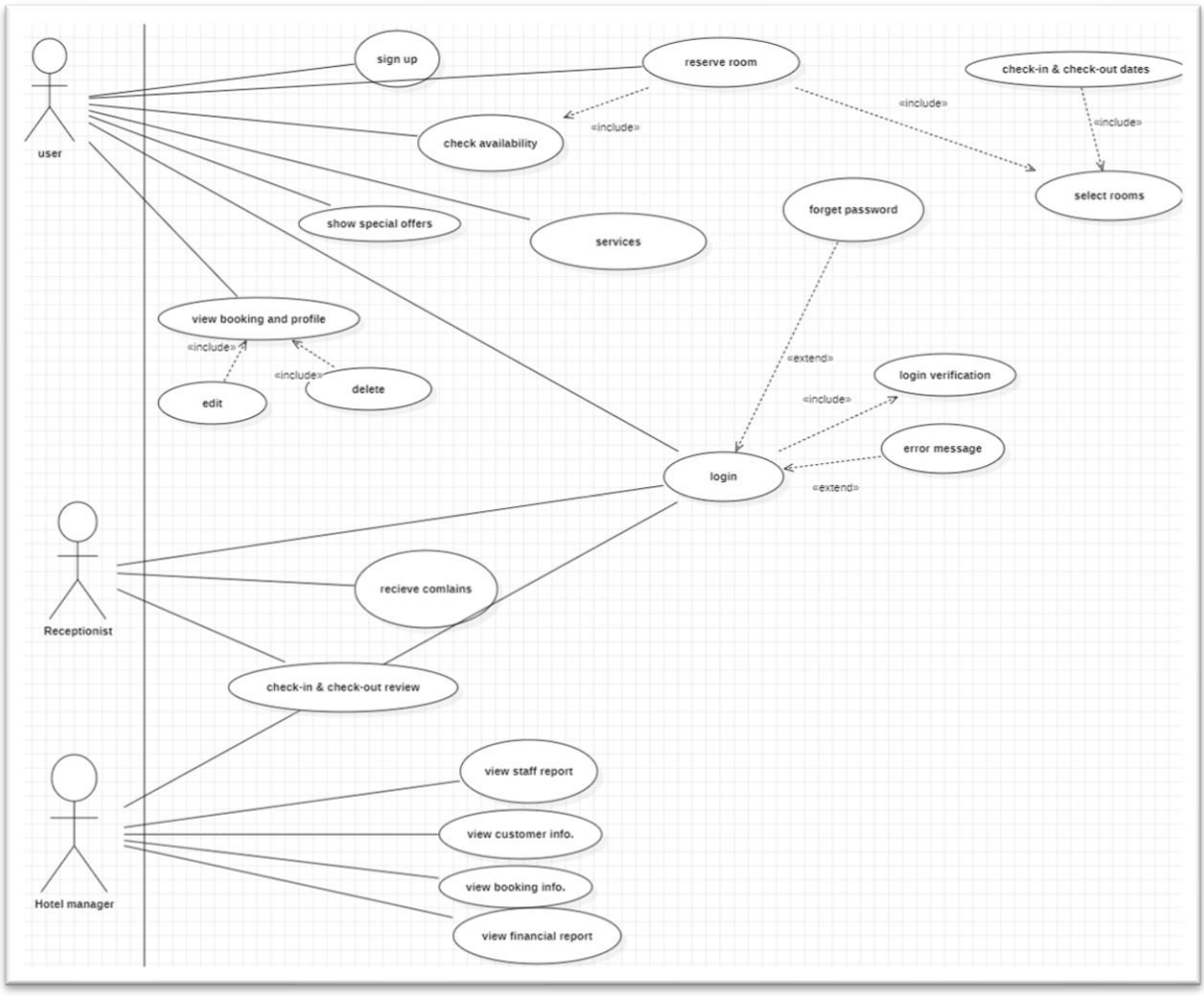
Figure 15: Contact us.

5.2. Software Interface

From the user's login to the website until the confirmation of the room reservation, all information entered by the user, receptionist, and manager from rooms, reservations, workers, are stored in the database. Such as the data of users and receptionists who log in to the website, information about booking rooms and guaranteed features, in addition to checking in and checking out, and hotel employee’s data.

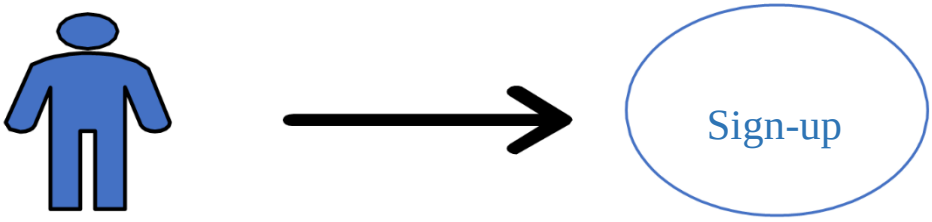
6. Diagrams

6.1. Use Case Diagram



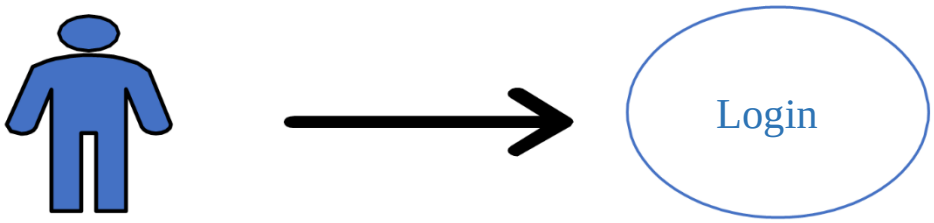
6.2. Use Case Scenarios

Use Case 01



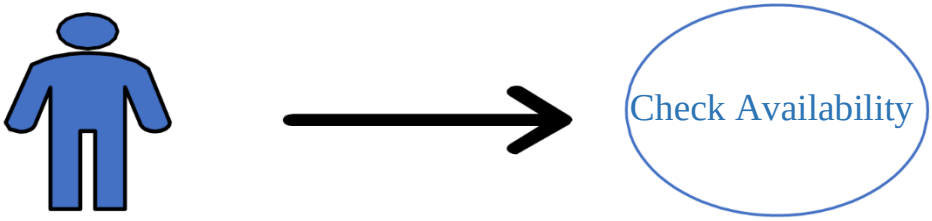
Use Case Name	Sign-up
Actors	User (unregistered)
Main Success Scenario	1. System displays a page where the user can join from the home page. 2. System prompts the user to create an account by entering his first name, last name, email address, and password. 3. User enters the required information. 4. User clicks on the join button. 5. System checks that the username is available and not already in use by another user. 6. System validates the information and creates the account.
Exceptions	1. The user presses the join button without entering all the required information. 2. Username is already used in the system. 3. The information entered by the user is invalid.
Actions	1.1 System alerts the user that he must enter the required information. 1.2 User completes the required information. 2.1 The system notifies the user that the username already exists. 2.2 System asks the user to enter another username. 2.3 The user chooses a different username that does not exist in the system.
Pre-condition	The user has internet connection.
Post-condition	1. User is successfully registered and created an account. 2. The number of user accounts has increased by one. 3. User information is stored in the database.

Use Case 02



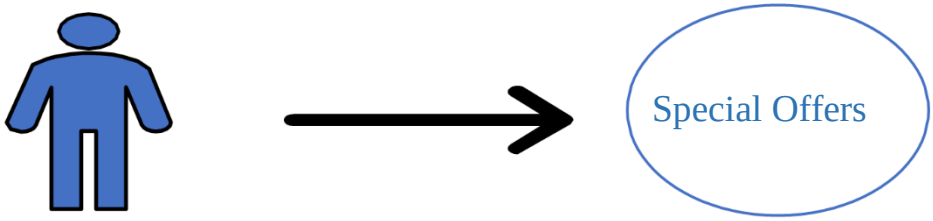
Use Case Name	Login
Actors	User (registered) / Receptionist/ Hotel manager
Main Success Scenario	1. The system displays a page where the user can sign infrom the home page. 2. The system has three end users: The Customer, The Receptionist, and Hotel Manager. 3. The system asks the user for their email or member number and password. 4. If the user forgets his password, the system gives theuser the option to sign in with his Facebook account. 5. User enters the required information. 6. User clicks on the sign in/ Facebook log in button. 7. The system checks the validation of the userinformation and logs him into the system.
Exceptions	1. The user presses the sign in button without enteringall the required information. 2. The User is unregistered into the system. 3. The information entered by the user is invalid. 4. User enters the correct username or password, or theuser cancels the operation.
Actions	1.1 System alerts the user that he must enter the required information. 1.2 User completes the required information. 2.1 The system notifies the user that he is unregistered to the account. 2.2 User enters the correct username or password, or the user cancels the operation.
Pre-condition	User/ Receptionist/ hotel manager has an account.
Post-condition	1. User is successfully logged into the system. 2. The user has access to the functions of the user. 3. The receptionist has access to the functions of the receptionists. 4. The hotel manager has access to the functions of thehotel manager.

Use Case 03



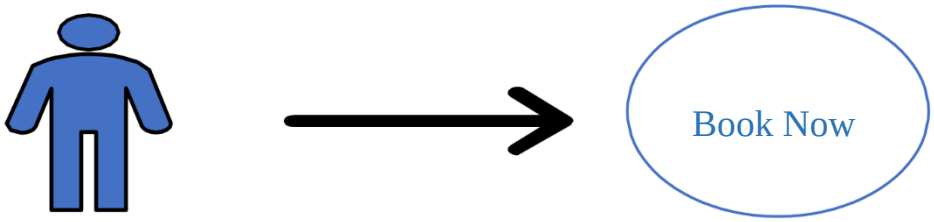
Use Case Name	Check availability
Actors	User
Main Success Scenario	1. The user clicks on the button to check availabilityof rooms. 2. User enters check-in and check-out date thenclicks on search button. 3. The system displays to the user all the availablerooms with the desired date.
Exceptions	user did not find any available rooms with the desired dateor with the within the desired budget.
Actions	The system prompts the user to select another date.
Pre-condition	The user should be logged in.
Post-condition	The system displays the available of the rooms with thedesired date.

Use Case 04



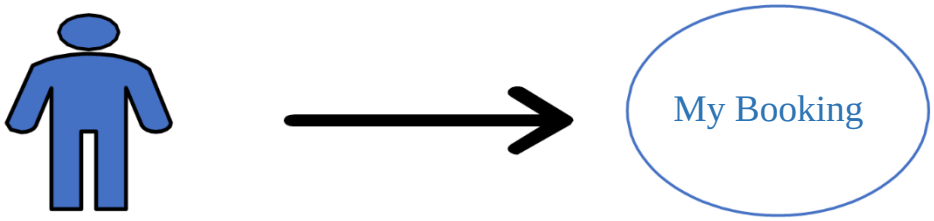
Use Case Name	Special offers
Actors	User
Main Success Scenario	1. The user presses the special offers button. 2. The system displays all the available offers for the users. 3. The user clicks on the offer, he wants to learn more about it. 4. The system displays all the offer details.
Exceptions	There are no special offers available.
Actions	The system notifies the user that no offers are currently available.
Pre-condition	User should be logged in.
Post-condition	The system displays all of the available specials offers.

Use Case 05



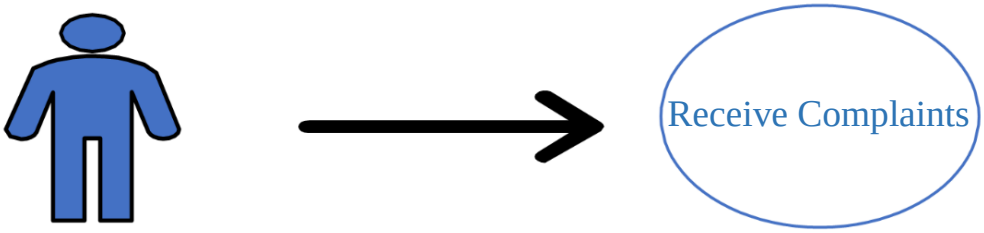
Use Case Name	Book Now
Actors	User
Main Success Scenario	1. The user presses the book now button. 2. The system displays pictures of the different typesof rooms. 3. If the user finds the desired room, he clicks the "I'll reserve" button. 4. The system requests the necessary informationfrom the user in order to book the room. 5. The system checks the information of the user 6. System checks the validation of the information of the user. 7. The system reserved the room successfully.
Exceptions	1. The user cancels the operation of booking theroom after pressing "I'll reserve “button. 2. The user enters incorrect data while reserving the room.
Actions	1.1 System will cancel the operation of reserving theroom. 2.2 System alerts the user to enter the correct information. 2.3 User enters the correct data or cancel the operation.
Pre-condition	User should be logged in.
Post-condition	1. User is able to view pictures of the hotel’s rooms. 2. The user reserves the desired room. 3. Number of available rooms will decrease by one.

Use Case 06

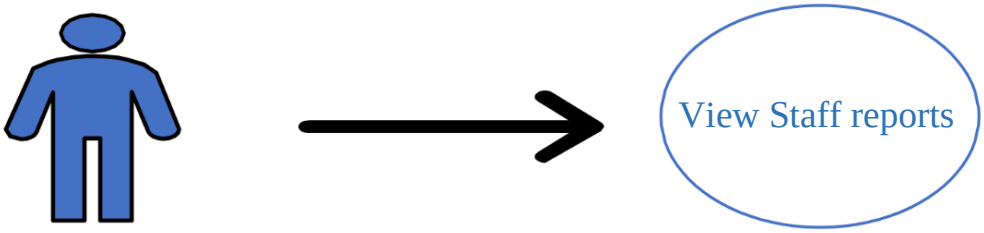


Use Case Name	My Booking
Actors	User
Main Success Scenario	1) The user clicks on “My Booking” button if he wants to view it to cancel his reservation. 2) The system asks the user for his name and the reservation number. 3) The user clicks on “How was your stay?” button,If the user wants to record any complaints. 4) The user writes his complaints and clicks on the send button. 5) The system receives complaints and stores them ina database.
Exceptions	The user did not click on the “send” button.
Actions	The system alerts the user that he should clicks on send button to save the complaints.
Pre-condition	The user should be logged in.
Post-condition	The system displays “My booking” view.

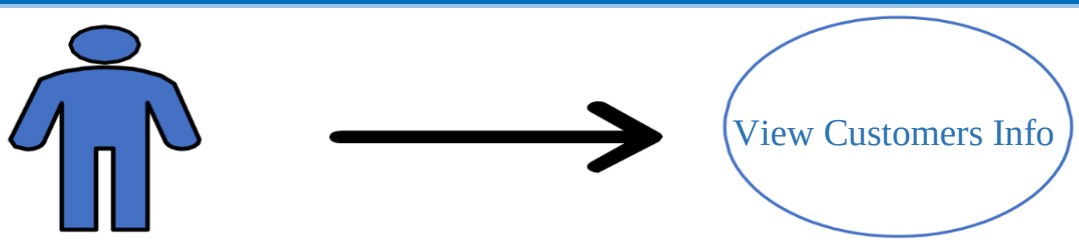
Use Case 07

	
Use Case Name	Receive Complaints.
Actors	Receptionist
Main Success Scenario	1) The receptionist clicks on “Receive complaints”button. 2) The system displays all complaints with dates. 3) The receptionist chooses the complaint he wantsto view its details. 4) The system displays all the details.
Exceptions	There are no received complaints
Actions	The system notifies the receptionist that there are noreceived complaints.
Pre-condition	Receptionist should be logged in.
Post-condition	Received complaints page is displayed.

Use Case 08

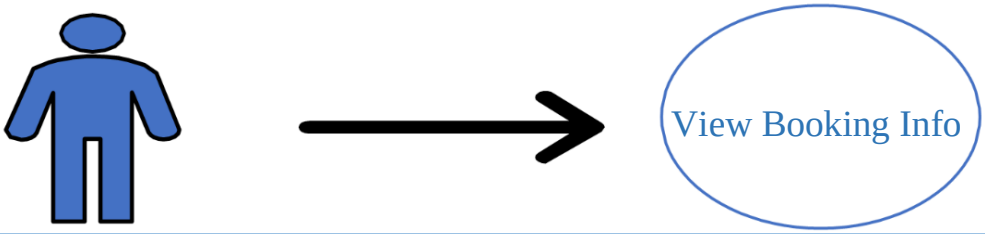
	
Use Case Name	View staff reports.
Actors	Hotel manager.
Main Success Scenario	1) The hotel manager clicks on “View staff report”button. 2) The system displays a download button. 3) The hotel manager presses on download button 4) The system downloads a file with all the staffreports. 5) The hotel manager opens the file and searches forthe desired report.
Pre-condition	Hotel manager should be logged in.
Post-condition	The hotel manager displays the staff reports that he wantsto check.

Use Case 09



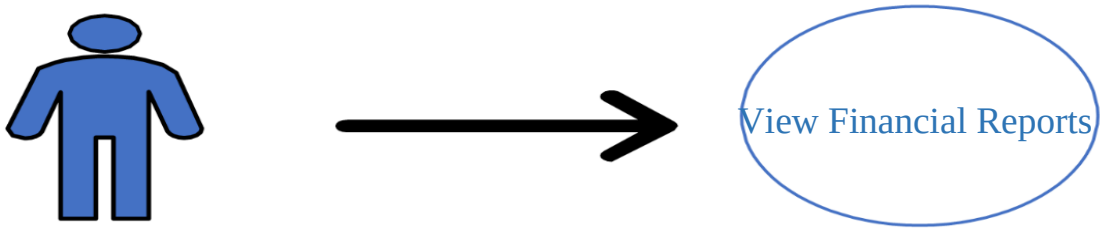
Use Case Name	View customers information.
Actors	Hotel manager.
Main Success Scenario	1) The hotel manager clicks on “View customersinformation” button. 2) The system displays a download button. 3) The hotel manager presses on download button 4) The system downloads a file with all thecustomers’ information. 5) The hotel manager opens the file and view thecustomers information.
Pre-condition	Hotel manager should be logged in.
Post-condition	The hotel manager displays the customer information thathe wants to check.

Use Case 10



Use Case Name	View bookings information.
Actors	Hotel manager.
Main Success Scenario	1) The hotel manager clicks on “View bookinginformation” button. 2) The system displays a download button. 3) The hotel manager presses on download button 4) The system downloads a file with all the bookinginformation. 5) The hotel manager opens the file and viewbooking information.
Pre-condition	Hotel manager should be logged in.
Post-condition	The hotel manager displays the booking information.

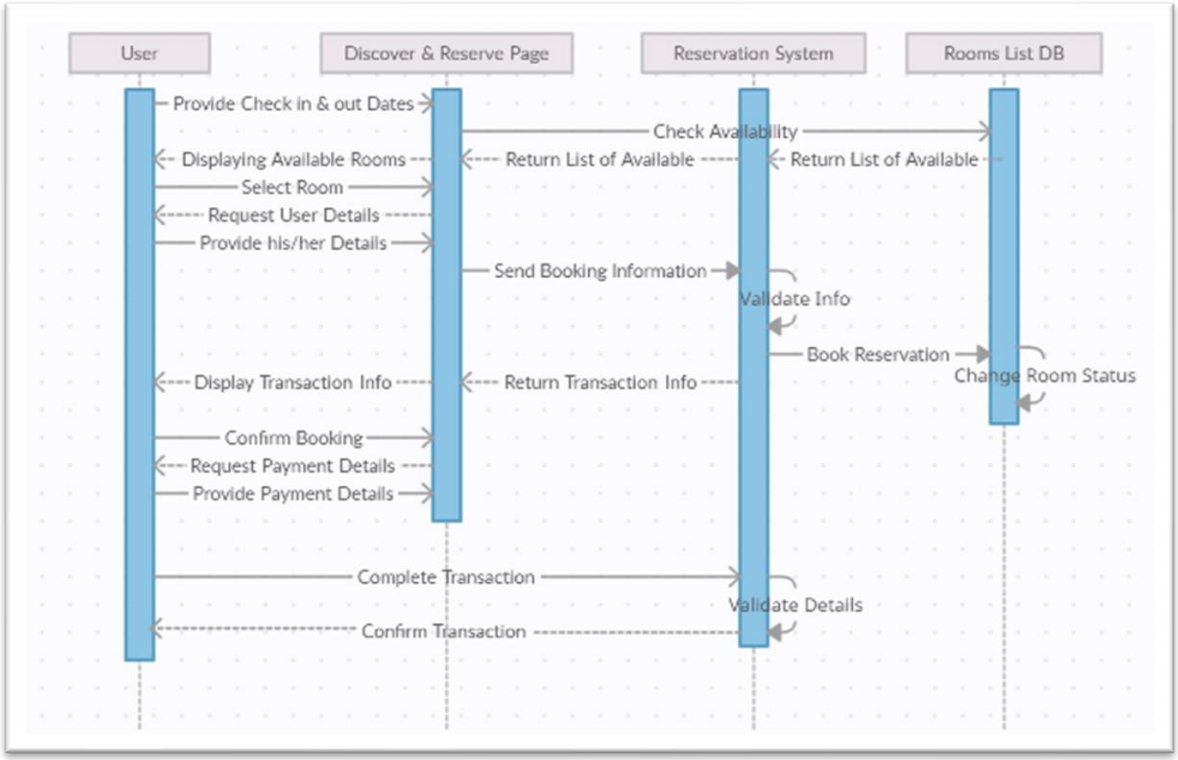
Use Case 11



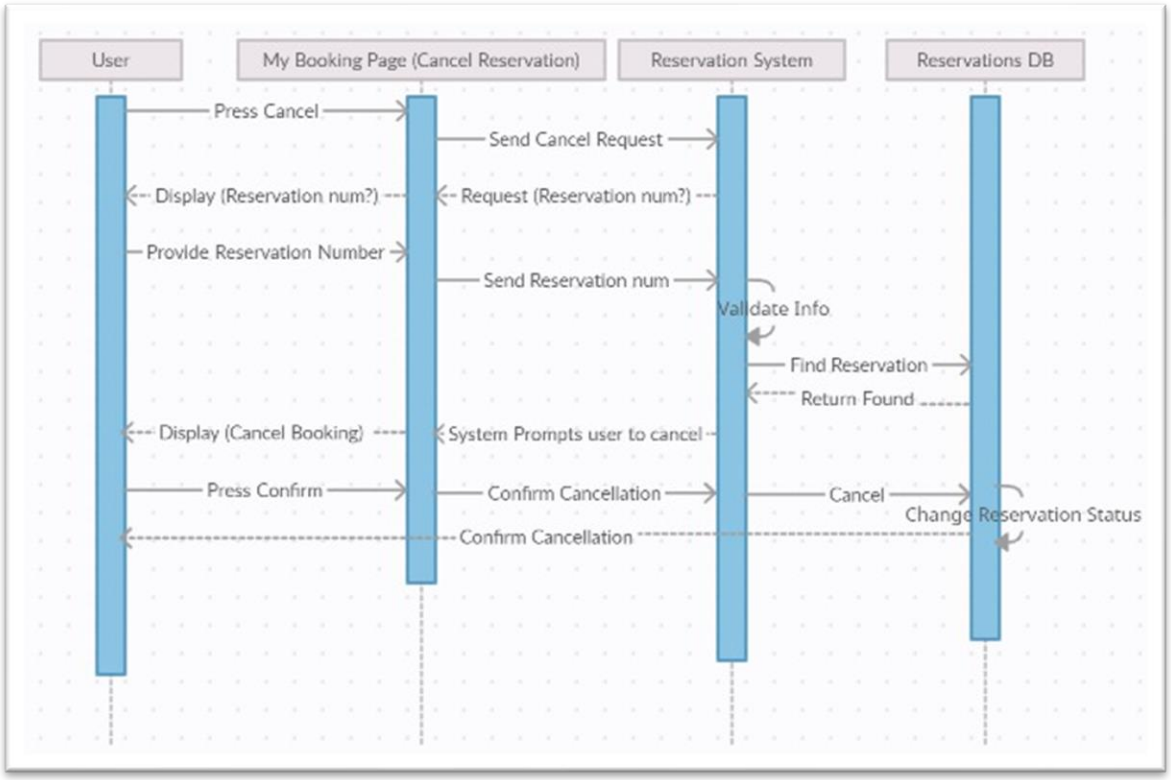
Use Case Name	View Financial Reports.
Actors	Hotel manager.
Main Success Scenario	1) The hotel manager clicks on “View financialreports” button. 2) The system displays a download button. 3) The hotel manager presses on download button 4) The system downloads a file with all the financialreports. 5) The hotel manager opens the file and searches forthe desired financial report.
Pre-condition	Hotel manager should be logged in.
Post-condition	Financial reports are displayed.

6.3. Sequence Diagrams

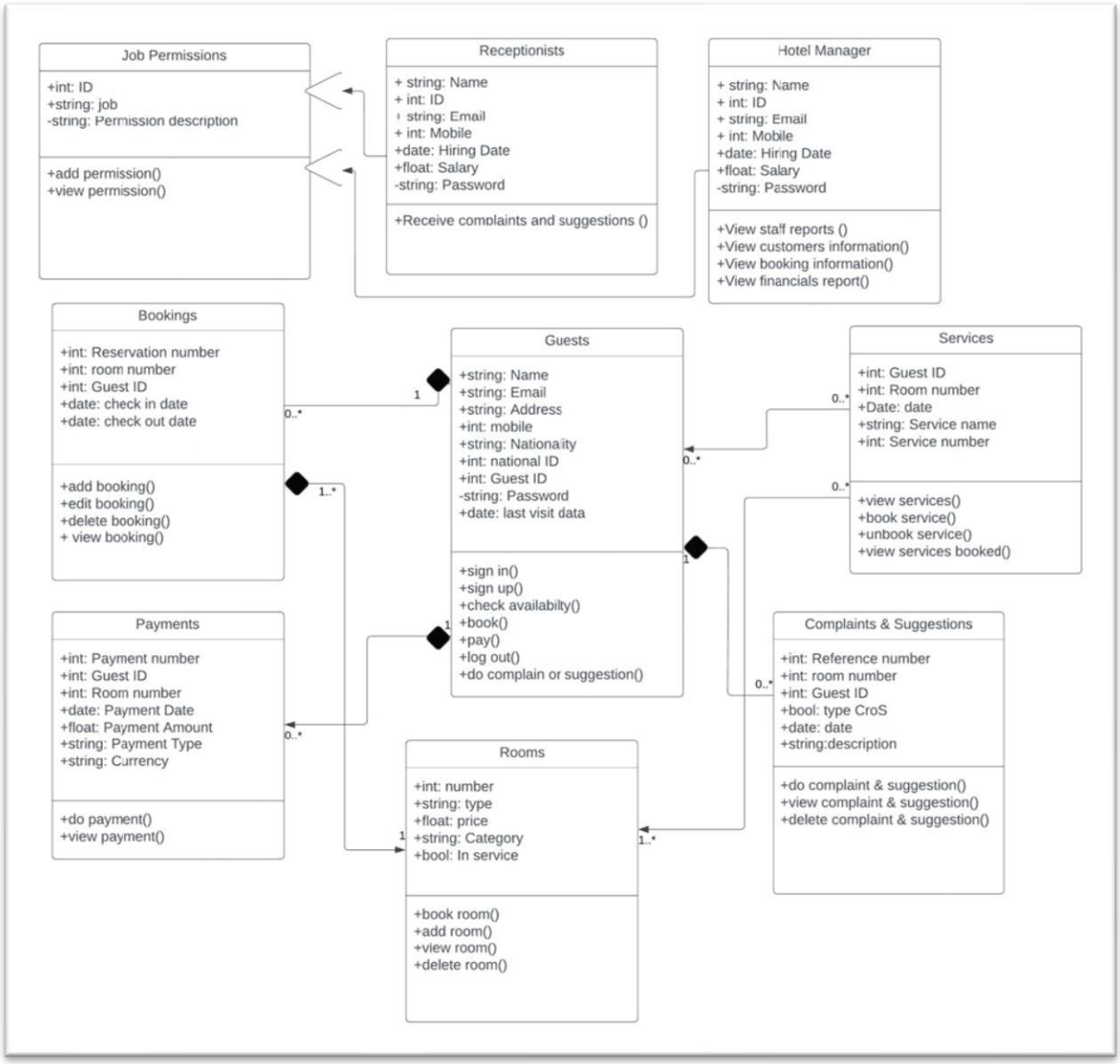
6.3.1. Sequence Diagram for Making a Reservation



6.3.2. Sequence Diagram for Cancelling a Reservation



6.4. Class Diagram



7. Test Cases

Test Case ID: Sign-up_1
Module Name: Sign-up.
Pre-conditions:

- Access to chrome browser.
- User has internet connection.
- User does not have account.

Step	Test steps	Test Data	Excepted Result	Actual Result	Status (pass/fail)	Notes
1	Navigate to the link of website.		Site should open.	Site opened.	Pass	
2	User clicks on Sign-up button from home page.		Users navigate to signup page successfully, System prompts the user to create an account by entering his username, phone number, date of birth, email address, and password.	Users navigated to signup page successfully, System prompts the user to create an account by entering his username, phone number, email address, date of birth and password.	Pass	
3	User enters his username, phone number, date of birth, email address and Password.	Username = moashraf Phone number = 0111213145 Date of birth = 02/09/2003 Email Address = mohamedashraf23@gmail.com Password = ABCD@1234	User data entered successfully.	User data entered successfully.	Pass	
4	User clicks on the join button.		A massage appears that the registration was successful.	A massage appeared that the registration was successful.	Pass	

Post-conditions:

- User is successfully registered and created an account.
- The number of user accounts has increased by one.
- User information is stored in the database.

Test Case ID: Check availability_2
Module Name: Check availability.
Pre-conditions: User should be logged in.

Step	Test steps	Test Data	Excepted Result	Actual Result	Status (pass/fail)	Notes
1	Clicks on “check availability of rooms” button.		the system displays all the available rooms.	The system displays a calendar to enter the check in/out dates.	Pass	
2	User enters check in/out dates.	Check in date: 01-01-2024 Check out date: 04-01 2024	the system displays all the available rooms with the desired dates.	the system displayed all the available rooms with the desired dates to the user.	Pass	If the dates are valid.

Post-conditions:

- The system displays the available of the rooms with the desired date.

Test Case ID: My Booking_3.
Module Name: My Booking.
Pre-conditions:

- User should be logged in.

Step	Test steps	Test Data	Excepted Result	Actual Result	Status (pass/fail)	Notes
1	Click on “My Booking” button.		The system displays the screen that asks for the name and reservation number.	The system displays the screen that asks for the name and reservation number.	Pass	
2	Provide name and reservation number.	Mariam Mohamed. 321456789	The system displays the “my booking” details.	The system displays the “my booking” details.	Pass	The user entered correct name and Reservation number.

Post-conditions:

- The system displays “My booking” view.

Test Case ID: Negative My Booking_4.
Module Name: Negative My Booking.
Pre-conditions: User should be logged in.

Step	Test steps	Test Data	Excepted Result	Actual Result	Status (pass/fail)	Notes
1	Click on “My Booking” button.		The system displays the screen that asks for the name and reservation number.	The system displays the screen that asks for the name and reservation number.	Pass	
2	Provide name and reservation number.	Mohamed Ashraf. 30309024554	The system alerts a message “Incorrect information try again”.	The system alerted a message “Incorrect information tr again”.	fail	The user entered incorrect name and reservation number .

Post-conditions:

- The system does not display “My booking” view to the user.

Test Case ID: Positive Discover Special Offers & Book_5.
Module Name: Positive Discover Special Offers & Book.
Pre-conditions: Receptionist should be logged in.

Step	Test steps	Test Data	Excepted Result	Actual Result	Status (pass/fail)	Notes
1	Clicks on "Special Offers" button.		The system displays different types of rooms.	The system displayed different types of rooms.	Pass	
2	Click on "Book now" button.		The system displays the screen that requires some information.	The system displays the screen that requires some information.	Pass	
3	Provide credit card information.	1234-5678-9101 Giza, building 2 123	The system alerts "reservation has been complete".	"Reservation has been complete".	Pass	If the user entered valid informtion.

Post-conditions:

- The system displays pictures of the resort's special offers.
- The user successfully reserves the desired room.
- Number of available rooms will decrease by one.

Test Case ID: Negative Discover Special Offers & Book_6.
Module Name: Negative Discover Special Offers & Book.
Pre-conditions: Receptionist should be logged in.

Step	Test steps	Test Data	Excepted Result	Actual Result	Status (pass/fail)	Notes
1	Clicks on "Special Offers" button.		The system displays different types of rooms.	The system displayed different types of rooms.	Pass	
2	When user finds the desired room, he clicks the "Book now" button.		The system alerts" the room has been reserved".	The system displays the screen that requires some information.	Pass	
3	The system requests the necessary credit card information.	1234-5678-9101 Giza, building 2 123	The system alerts "Incorrect information, please try again".	"Incorrect information, please try again".	fail	If the user entered incorrect information.

Post-conditions:

- The system displays pictures of the resort's special offers.
- The user fails to reserve the desired room.
- The number of available rooms will be the same.

8. Future Work

My booking:

The system shall allow the user to show, modify or cancel his booking.

Dashboards:

The system shall allow each of the Receptionist and the Hotel manager to view and control all guest's data and reservations with different admin privileges for each one of them.

Forgot Password:

The system shall allow the user to change his password by entering his registered email address and the verification code sent via email then enter the new password.

9. Appendix A

Scrum Retrospective Video:
Scrum Retrospective Video.mp4

GitHub Link:
https://github.com/TheAdventurerr/Nile-Heaven-Resort.git