

CSCI313

Hotel Reservation System



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1.Introduction

1.1.Purpose

A hotel reservation system allows to give guests a fast and convenient way to reserve a room directly from the hotel's website. In addition, allowing guests to amend their booking, recording payment and payment type and accepting reservations for the room service.

1.2.Scope

Hotel reservation system is website that makes booking hotel rooms easier. It allow guests to search for available rooms based on their preferences, such as date, location, price, and room type, also it allow guests to book rooms online and pay securely using various payment methods, such as credit card or bank transfer. It enables to order room service online and track the status of their orders.

1.2.Technologies Used

HTML.

CSS

Javascript

MY SQL

1.2.Intended Audience

Guests: who want to book hotel rooms online with ease and convenience. They can also modify or cancel their bookings, order room service, and pay securely using the system.

Hoteliers: who want to increase their online visibility and revenue by offering their rooms on the platform. They can also manage reservations, inventory, pricing, and guest information using the system.

Software Tester: To design and execute all the tests that verify the system's functionality and quality according to the client's specifications.

Project Manager /SCRUM Master: To draw the roadmap for the project and make sure that the objectives and activities are well-defined and that the team collaborates effectively.

1.3.Overview

Hotel reservation website focusing on its features and functionalities. The website serves as a platform for guests to conveniently make room reservations directly from the hotel's site. It emphasizes a user-friendly interface that caters to users of all technical abilities, ensuring a seamless booking experience. The paper highlights key features such as real-time availability updates, 24/7 bookings, and the ability to handle reservations, pricing, and guest.

2.Overall Description:

The hotel reservation website is a user-friendly platform that lets guests easily book rooms directly from the hotel's site. It aims to provide a hassle-free and secure booking experience. With a strong focus on functionality and user-friendliness, it offers real-time room availability updates, flexible booking options, secure payment processing, and the ability to manage reservations, all while adhering to high standards of performance, security, scalability, reliability, and usability.

3.Functional Requirements:

The website boasts a range of functional features to facilitate an efficient booking process:

User Registration and Login:

The website enables users to create personalized accounts by providing their personal information. This feature ensures that registered users have a secure and personalized experience. It simplifies the booking process by storing their details for future reservations.

Search and Book Rooms:

Guests have the ability to search for available rooms effortlessly. They can refine their search based on specific criteria such as dates, location, room type, and price range. Detailed room information, including images, amenities, and prices, is readily accessible. Once guests have found the perfect room, they can book it with ease and receive an instant confirmation, minimizing any uncertainty.

Availability Management:

The website maintains real-time updates on room availability, ensuring that guests can trust the accuracy of the information provided. This system's reliability prevents double bookings and optimizes the overall user experience.

Payment Processing:

Security is paramount. The website provides secure payment processing, accepting various payment methods such as credit cards. This ensures the confidentiality of user data and payment information, enhancing guest trust in the platform.

User Profiles:

Guests can access their user profiles, which allow them to view and update their contact information and preferences. This personalization feature contributes to a more tailored and enjoyable experience.

Cancellation and Modification:

The platform accommodates changes to reservations, allowing guests to cancel or modify bookings within a specified timeframe and adhering to appropriate cancellation policies. This flexibility adds convenience and peace of mind for users.

Booking and Service:

The website is available 24/7, allowing guests to make reservations at any time, catering to various time zones and schedules. Additionally, the platform accepts reservations for room services, enhancing the overall convenience of a guest's stay.

4.Non-Functional Requirements:

The system places significant emphasis on non-functional requirements to ensure a seamless and secure user experience. These include:

Performance: The website responds quickly to user requests, ensuring minimal latency even during peak booking times.

Security: User data and payment information are encrypted and securely stored, and access control mechanisms protect administrative functionalities.

Scalability: The platform is designed to handle an increasing number of rooms as the business grows.

Reliability: The website operates 24/7 with minimal downtime for maintenance, ensuring guests can make reservations at their convenience.

Usability: The user interface is designed to be user-friendly and accessible to a wide range of users, regardless of their technical abilities.

Interface

5.1. System Interface

When the user opens the website, they are going to see home page as shown in Figure 2. This home page extends a warm welcome, offering users a range of options to explore, including Accommodations, Profile, Reservations, and Login functionalities.



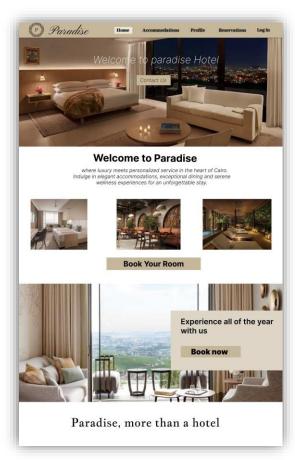


Figure 1: Paradise Hotel

Figure 2: Home Page

When the user picks the accommodations option from the tool bar, it will show the user the room options available, as shown in Figure 3, which are (Nile-View, Pool-View, and Garden View), a brief description of each room, and an option to view details of each room.

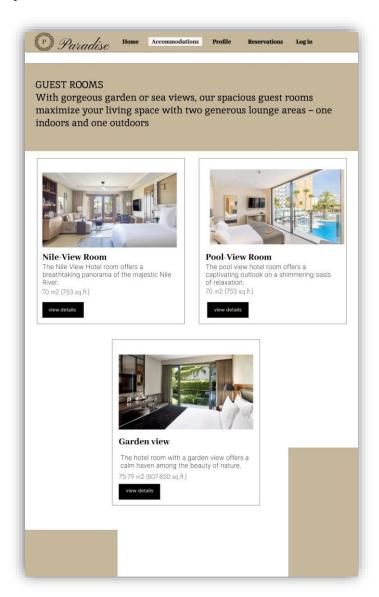


Figure 3: Guest Rooms

When the user presses on the view details options of a specific room, it will take the user to one of the following pages: Figure 4, Figure 5, and Figure 6. Each page has a brief description of the room along with two options to choose from: a single room or a double room. A single room has only one bed and accommodates one person. A double room has two separate beds and can accommodate two people.





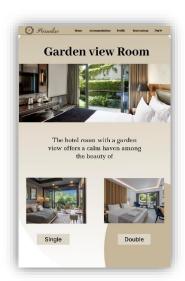


Figure 4: Nile-View Room Room

Figure 5: Pool-View Room

Figure 6: Garden View

Once the user has chosen their preferred room type, based on what they choose, they will move to one page accordingly, as shown in Figure 7, Figure 8, Figure 9, Figure 10, Figure 11, and Figure 12. Each page shows the details of the room, such as the room size, which varies between two sizes, the amenities provided in the room, and the price of the room per night. The page also provides an option to book the room after viewing its details.







Figure 7: Nile-View Single Room

Figure 8: Nile View Double Room

Figure 9: Pool-View Single Room







Figure 10: Pool-View Double Room Room

Figure 11: Garden-View Single Room

Figure 12: Garden View Double

When the user picks the option to book a room, the website asks the user to input the check-in and check-out dates. Then, the user can press "Check Availability" to determine if the room will be occupied within the selected dates or not.

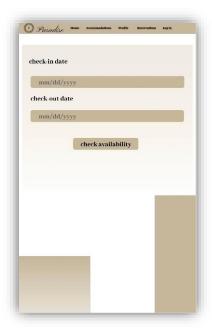


Figure 13: Check Availability

Once a user selects a room for booking, the system displays its availability status. If the room is currently unavailable, a message informs the user that the room is unavailable on this date and specifies the date when the room is expected to become available again as shown in Figure 14. However, if the room is available, the user starts the process to complete the reservation.



Figure 14: Room unavailable

As shown in Figure 15 and 16, if the room is available, users are required to either log in if they have an existing account or sign up if they don't.



Figure 15: Log in

Figure 16: Sign up

In Figure 17, the users choose a payment method: credit card or fawry.



Figure 17: Payment method

In Figure 18, the confirmation of the user's reservation is displayed, including the check-in and check-out dates. If users wish to make any changes to their reservation, they can click on the "Reservations" button and will be directed to Reservations page as shown in Figure 19. In Figure 19, users have the option to modify or cancel their reservation. However, if the users cancel the reservation after the specified date, they will be required to pay a fine.





Figure 18: Reservation Confirmed

Figure 19: Modify or Cancel Reservation

In Figure 20, it is a profile page and includes the user's information. In addition to the "Log Out" button.

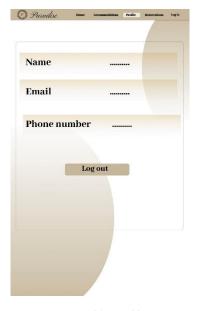


Figure 20: Profile

5.2. Software Interface

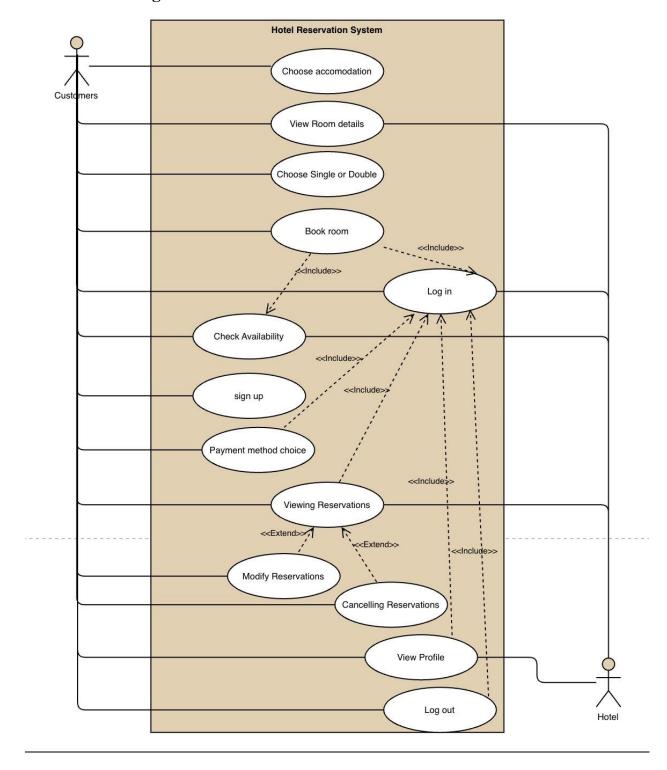
Paradise hotel reservation system is developed using HTML, CSS and java script. It ensures that the website is accessible and usable on various devices, such as smartphones and tablets.

5.3. Hardware Interface

The website requires a stable internet connection to enable users to access the system from anywhere. The system also needs a database interface, as it interacts with a backend database to store and retrieve data related to room availability, reservations, guest information, billing records, and other relevant data.

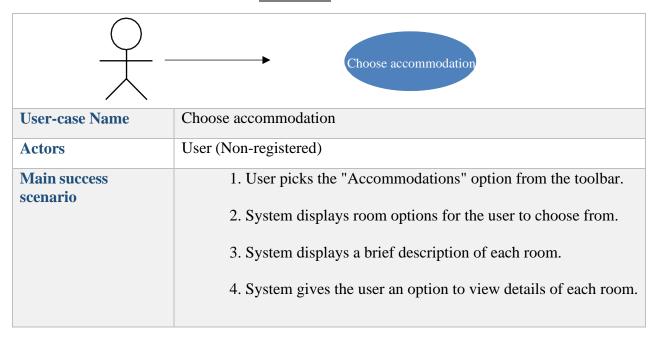
6. Diagrams

6.1. Use case Diagram

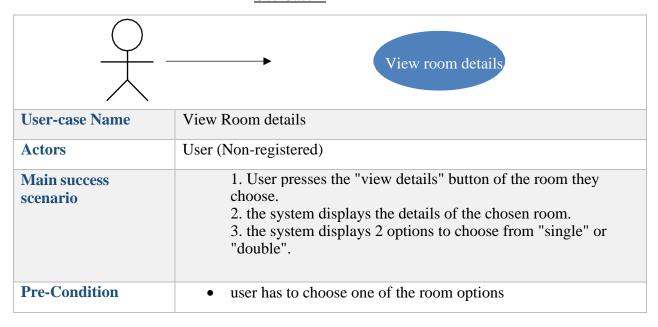


6.1.1. Use case scenarios

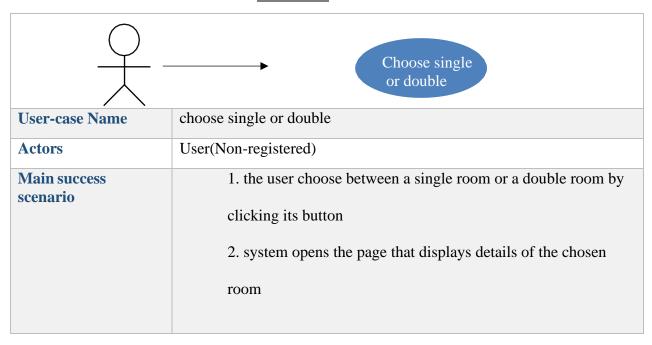
Use Case 1



Use Case 2



Use Case 3



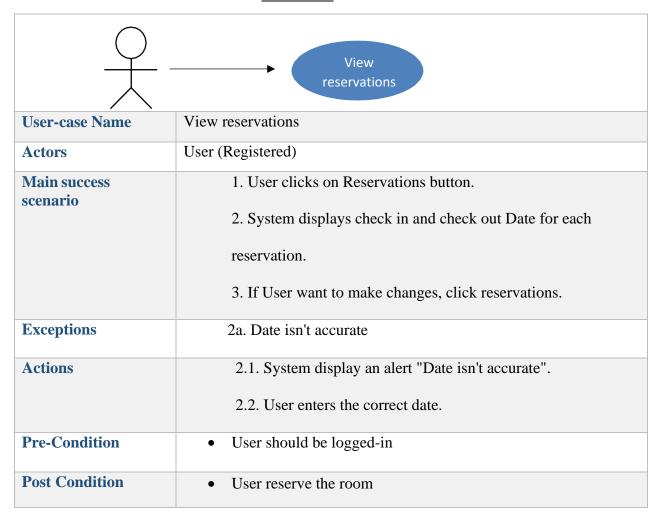
	Book
User-case Name	Book room
Actors	User (Non-registered)
Main success scenario	 User presses the "book room" button. the website asks the user to input the check-in and checkout dates.
Exceptions	 User clicks on the "Check Availability" button without filling all of the required information "check-in and checkout dates". 2.check-in date or/and checkout date is/are not valid.
Actions	 2.1. System display to the user/shelter an alert "Username or Password are not valid". 2.2. User/shelter enters the correct username or password. 3.1. System display to the user an alert "Please fill in all the required fields". 3.2. User/shelter fills the missing information.
Pre-Condition	 User has to pick a room from accommodations. User has to pick the type of the room.
Post Condition	User press check availability to complete booking process.

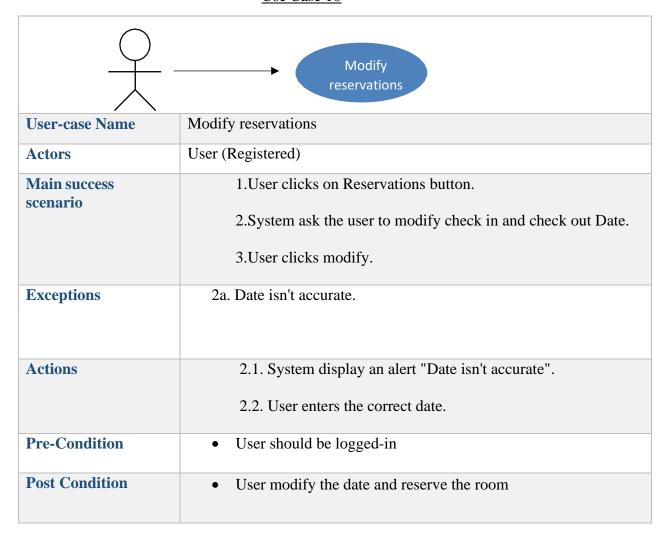
	Check availability
User-case Name	Check Availability
Actors	User/ Hotel (Non-registered)
Main success scenario	 user presses "Check Availability" button. system checks if the room will be occupied within the
	selected dates or not.
Actions	 If the room is currently unavailable system display to the user the message "The room is not available until" and specifies the date when the room is expected to become available again. if the room is available the system takes the user to the log in page
Pre-Condition	User have to input the check-in and checkout dates.
Post Condition	The system takes the user to log in page if the room is available to complete reservation.

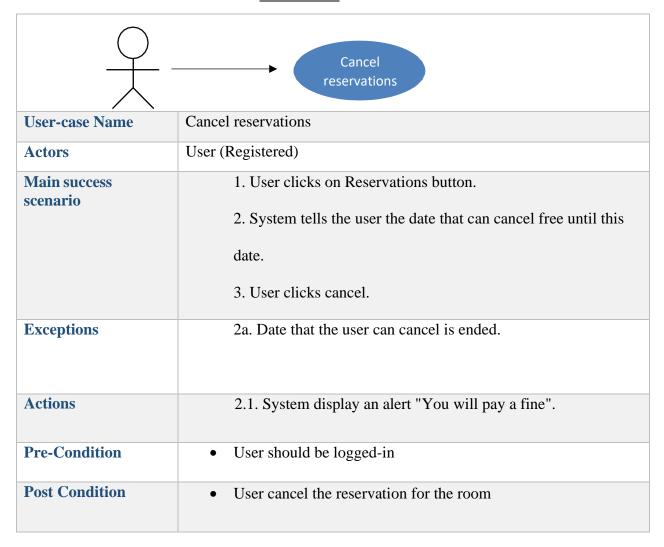
	Log-In
User-case Name	Log-In
Actors	User/Hotel (Registered)
Main success scenario	 System ask user/hotel to enter email and password and log in or create new account and sign up. User clicks "Log in". User enters email and password then click log in. System check if email and password are valid.
Exceptions	3a. Email or password aren't valid
	3b. User click log in without filling required data
Actions	3.1. System display an alert "Email or password aren't valid"3.2. User enter correct email or password3.3. System display an alert "please fill all required data"3.4. User fills all data
Pre-Condition	 User should open the website User should have an account
Post Condition	 User is logged in to the system User have access to the system functions

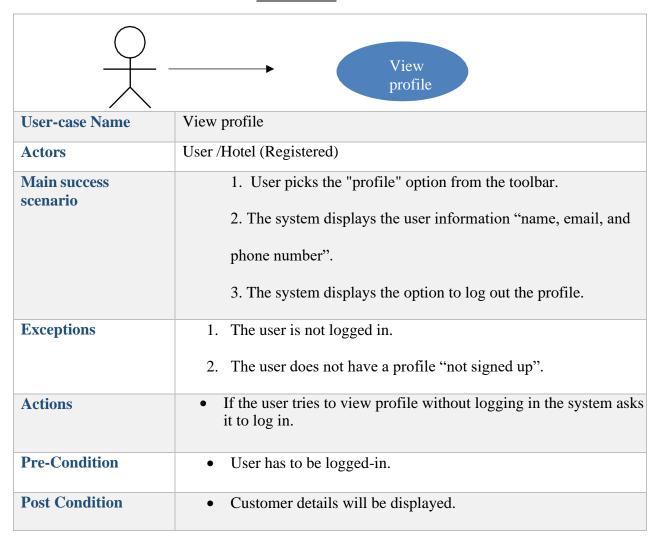
	Sign up
User-case Name	Sign up
Actors	User (Non-Registered)
Main success scenario	 System ask user to enter email and password and log in or create new account and sign up. User clicks "Sign Up." User provides necessary details like: name, phone number, email and password. User gives the system the required data and click sign up. System checks data for accuracy and completeness.
Exceptions	4a. User clicks sign up without filling the data.5a. Data isn't accurate like email exists or phone exists.
Actions	 4.1. System display an alert "Please fill in all the required fields". 4.2. User fills the missing information. 5.1. System display to the user "Email already registered". 5.2. User enters another email.
Pre-Condition	User should open the website
Post Condition	 Another user is added to the system. User is successfully registered. User information is stored in the database.

	Choose Pavment				
User-case Name	Payment method choice				
Actors	User (Registered)				
Main success scenario	 User clicks on payment button. System ask the user to choose payment method. if user choose pay by credit, the system asks the user to write card number and validation number. if user choose pay by fawry, the system will display a number to pay on it. User clicks Reserve. System checks that the data is correct. 				
Exceptions	3a. Card number or validation number isn't correct.				
Actions	3.1. System display an alert "The card number or validation number aren't correct".3.2. User enters the correct card number or validation number.				
Pre-Condition	User should be logged-in.				
Post Condition	 User pay for the room successfully. User reserve the room.				





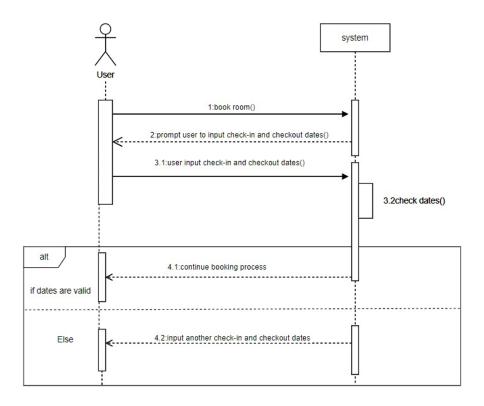




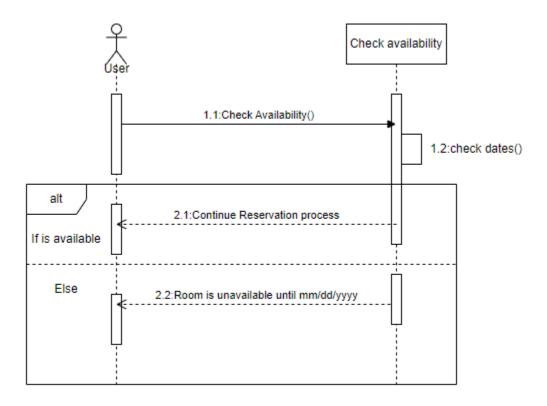
	Log out
User-case Name	Log out
Actors	User (Registered)
Main success scenario	 User clicks on log out. System confirms the user's intention to log out. Upon confirmation, the system ends the user's current session. The system redirect the user to the login page.
Exceptions	2a. User click cancel log out.
Actions	2.1. System display to the User an alert "Are you sure you want to cancel log out".2.2. If user clicks yes the system cancel log out process, if user clicks No the system will continue log out process.
Pre-Condition	 User should to open the website. User should have an account. User should be logged in the system.
Post Condition	User is logged out from the system.

6.2. Sequence Diagram

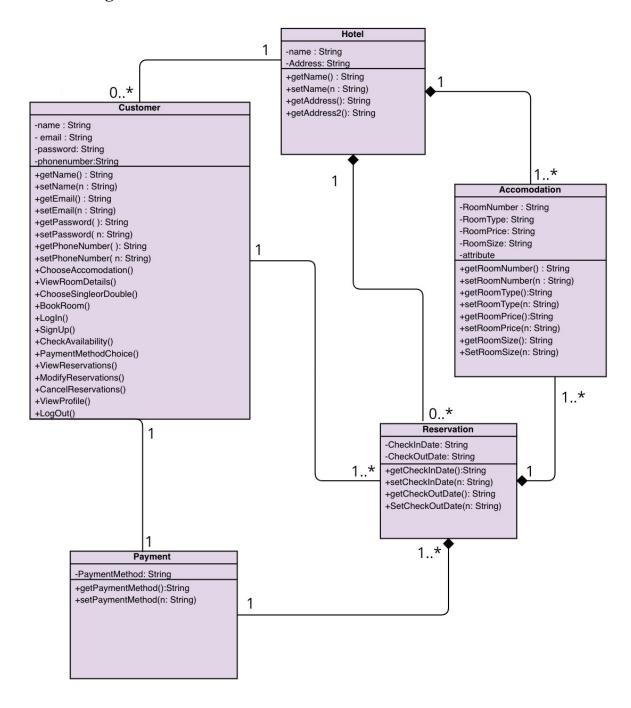
6.2.1 Book Room



6.2.2 Check Availability



6.3. Class Diagram



7. Future work

• Payment method function:

This feature incorporates two procedures: one for Fawry and the other for credit card transactions. The system prompts the customer to select a payment method and subsequently requests input regarding the specific details associated with the chosen method.

• Modify Reservation:

This feature enables customers to make changes to their reservation, allowing for the adjustment of check-in and check-out dates. It also allows modifications to the reservation, ensuring there are no conflicts with other dates.

• Cancel Reservation:

This functionality allows customers to cancel their reservation. Cancellation is free up to a certain date, and beyond that date, customers are required to pay a penalty.

• View Profile:

This feature provides the customer with his/her information, where they can view the information that was provided during the sign-up process.

8- Test Cases

Test Case ID: Fun_5.1 Test Designed by: <Name>

Test Priority (Low/Medium/High): Med Test Designed date: <Date>

Module Name: Check availability function Test Executed by: <Name>

Test Title: Verify check in and check out dates

Test Execution date: <Date>

Description: check if room is available within entered check in

and check out dates that the room is not reserved in

Pre-conditions: User have to input the check-in and checkout dates

Dependencies:

			Expected Result	Actual Result	Status	Notes
Step	Test Steps	Test Data			(Pass/Fail)	
						If the user
1	Navigate to accommodations page	Check in date: 13/11/2023	Room is available	As expected	Pass	already logged in.
2	Click on view details button	Check out date: 20/11/1023		Navigate to choose payment method		
3	Choose type of the room					
4	Click on book room button					
5	Enter check in date					
6	Enter check out date					
7	Click on check availability					

Post-conditions: User entered an available check in and out date and complete reservation process.

Test Case ID: Fun_5.2 Test Designed by: <Name>

Test Priority (Low/Medium/High): Med Test Designed date: <Date>

Module Name: Check availability function Test Executed by: <Name>

Test Title: Verify check in and check out dates

Test Execution date: <Date>

Description: check if the room is available within entered check in and check out dates that the room is already reserved in.

Pre-conditions: User have to input the check-in and checkout dates

Dependencies:

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
-	·			system display to the user the message "The room is not available until" and specifies the date when the room is expected to become available		
1	Navigate to rooms page	Check in date: 13/11/2023	Room is not available	again.		
2	Click on view details	Check out date: 17/11/1023		As expected		
3	Choose type of the room					
4	Click on book room button					
5	Enter check in date					
6	Enter check out date					
7	Click on check availability					

Post-conditions: User will choose other check in and out dates and check the availability again.

Test Case ID: Fun_8 Test Designed by: <Name>

Test Priority (Low/Medium/High): Med

Test Designed date: <Date>

Module Name: Payment method choice

Test Executed by: <Name>

Test Title: Verify payment with valid card number and validation

number Test Execution date: <Date>

Description: Test the validity of the card's numbers

Pre-conditions: User must be logged in.

Dependencies:

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1	User chooses credit card as a payment method		Payment is confirmed and room is reserved	As expected	Pass	
2	User writes card number and validation number	Validation number:2439741				
3	Click on reserve button					

Post-conditions: User complete payment for the room successfully and reserve the room.

Test Case ID: Fun_6 Test Designed by: <Name>

Test Priority (Low/Medium/High): Med

Test Designed date: <Date>

Module Name: Hotel website login screen

Test Executed by: <Name>

Test Title: Verify login with valid email and password

Test Execution date: <Date>

Description: Test the hotel website's login page

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
			User should be able to login	Not as expected		User entered invalid email
1	Navigate to login page	Email= example@gmail.com				and password
2	Provide correct email	Password: 278hfe32		Login failure		
3	Provide correct password					
4	Click on Login button					

Post-conditions: User is logged in to the system, the account session details are logged in database, and the user has access to more system functions.

Test Case ID: Fun_7 Test Designed by: <Name>

 Test Priority (Low/Medium/High):
 Med
 Test Designed date: <Date>

 Module Name:
 Hotel website sign up screen
 Test Executed by: <Name>

Test Title: Verify sign up with valid email and password

Test Execution date: <Date>

Description: Test the hotel website's sign up page

Pre-conditions: User should open the website and shouldn't have signed up before

Dependencies:

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1	Navigate to login page	First name = Sarah	User should be able to sign up	As expected	Pass	
2	Provide first and last name	Last name = Mohamed		User is navigated to		
3	Provide valid password	Phone number =010******		dashboard with successful		
4	Click on Login button	Email= example@gmail.com		sign up		
		Password: 278hd				

Post-conditions:

The new user is added to users' database and the user successfully signed up to the hotel website.

Test Case ID: Fun_10 Test Designed by: <Name>

Test Priority (Low/Medium/High): Med Test Designed date: <Date>

Module Name: Modify reservations function Test Executed by: <Name>

Test Title: Modify check in or/ and check out dates

Test Execution date: <Date>

Description: Test if the dates are can be modified when the user

modify them by entering new check in and out dates

Pre-conditions: User should be logged-in

Dependencies:

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1	Navigate to Reservations page	Check in date: 13/11/2023	Check in and check out dates Are modified	As expected	Pass	
2	Click modify button	Check out date: 17/11/1023		User is navigated to reservations page to see the		
3	Enter new check in and check out dates			modified check in and check out dates		
4	Check availability again					

Post-conditions:

Check in and check out dates are modified and the new dates are displayed in Reservations page.