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# UML DESIGN DOCUMENT

for

## Hotel Reservation Systems

Version 1.0 approved

Prepared by Roomify

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# Revision History

Name	Date	Reason For Changes	Version
Roomify	2024-11-13	Phase1	1.0
Roomify	2024-12-11	Phase2	1.0

# 1 Introduction

This document outlines the UML design for the Hotel Reservation System. The system enables users to search for available rooms, make bookings, and manage reservations, while also providing administrators with tools to manage the hotel's room inventory and reservations. The design is represented using various UML diagrams, including Use Case Diagrams, Activity Diagrams, Class Diagrams, and Sequence Diagrams, along with detailed descriptions for each.

## 1.1 Purpose

The purpose of this document is to provide a detailed design of the Hotel Reservation System using Unified Modeling Language (UML). This design ensures that the system's structure and functionality are well-defined, helping developers, project managers, and stakeholders understand the system before development begins. The document serves as a foundation for building the system, ensuring clarity and consistency across all phases of the project.

## 1.2 Scope

The Hotel Reservation System allows customers to search, book, and manage their hotel reservations. It also enables administrators to manage room availability and monitor bookings. This document details the system's key features and functionality through UML diagrams, covering:

- User functionality: Searching for rooms, making bookings, managing user profiles, and receiving notifications.
- Admin functionality: Managing room inventory, overseeing reservations, and generating reports.

The UML diagrams in this document will help visualize the system's structure and behavior, ensuring a clear path for development.

## 2 Use Case Diagram

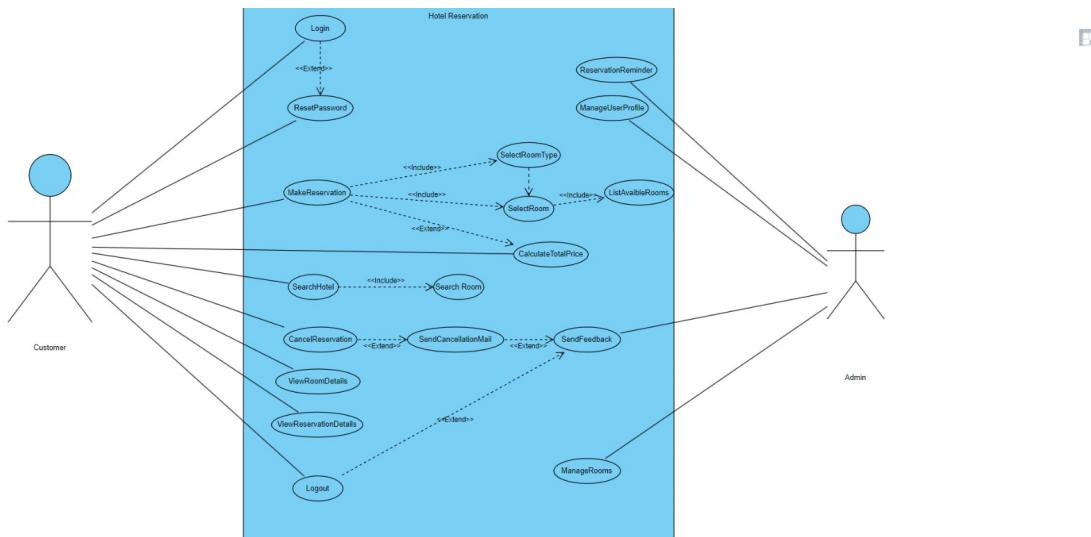


Figure 2.1: Use Case Diagram

# 3 Use Case Descriptions

## 3.1 Use Case 1: Login

Use Case ID:	1
Use Case Name:	Login
Use Case Type:	Essential
ImportanceLevel:	High

Primary Actor:	User
Description:	The user provides credentials to log into the system and access personalized features.
Stakeholders and Interests:	User: Wants secure access to their account. Admin : Ensures only authorized users log in.
Trigger:	The user enters their credentials on the login screen.
Type:	Manuel
Relationships:	Includes :None Extends: None
Normal Flow of Events:	1. User navigates to the login page. 2. User enters a username and password. 3. The system validates the credentials. 4. User is granted access to their account.
Subflows:	None
Exceptional Flows:	1. If credentials are invalid, an error message is displayed.

|

Figure 3.1: Use Case Description for Login

## 3.2 Use Case 2: Register

Use Case ID:	2
Use Case Name:	Register
Use Case Type:	Essential Detail
Importance Level:	High

Primary Actor:	Guest
Description:	Guests will register with their information to the system as a guest.
Stakeholders and Interests:	Guests will register to the system for reservation operations and current services.
Trigger:	Guests will click on the register or sign up button.
Type:	Internal
Relationships:	Association: Guests
Normal Flow of Events:	Guest will check their information while sign up process continues to create their account. Some information will be asked to guests to create an account for them.
Subflows:	A confirmation email might be sent to the guests email to create the account more safely.
Exceptional Flows:	Wrong or missing information while sign up can occur or the email may already be in the system of the reservation website.

Figure 3.2: Use Case Description for Register

### 3.3 Use Case 3: Reset Password

Use Case ID	3		
Use Case Name	Reset Password		
Use Case Type	Essential, Manage, Detail		
Importance Level	High		

Primary Actor:	User
Description:	The user resets his password as a result of the instructions and creates a new password.
Stakeholders and Interests:	- System: ensures the accuracy of the process and sends a confirmation e-mail. - User: Needs to change password.
Trigger:	The user initiates a password reset request from the login page by clicking the “Forgot Password” button.
Type:	Internal
Relationships:	Association: User, System
Normal Flow of Events:	<ol style="list-style-type: none"> <li>1. User clicks on the “Forgot Password” button.</li> <li>2. User enters e-mail associated to account.</li> <li>3. Approves the link sent to the e-mail.</li> <li>4. User creates new password.</li> </ol>
Subflows:	<p>3a. Invalid Email Address: if the entered email address does not match any account, the system notifies the user.</p> <p>5a. Link Expired or Invalid: if the user clicks an expired or already used reset link, the system displays an error message.</p>
Exceptional Flows:	<ol style="list-style-type: none"> <li>1. Email not Received: if the user does not receive the reset email. The system offers an option to resend the email.</li> <li>2. Technical Issues: if the system encounters a technical error while sending email, it notifies the user “Please try again later”.</li> <li>3. Password Policy Violation: if the new password does not meet system requirements, the system displays an error message.</li> </ol>

Figure 3.3: Use Case Description for Reset Password

### 3.4 Use Case 4: Search Hotel

Use Case ID	4		
Use Case Name	Search Hotel		
Use Case Type	Essential, Detail		
Importance Level	High		

Primary Actor	User
Description	Allows users to search for available hotels based on specific criteria such as location , dates, number of guests, and preferences.
Stakeholders and Interests	- System: Accurate availability data is provided top the user. - User: Needs to find a suitable hotel quickly and efficiently.
Trigger	User clicks on the 'Search' button after filling up the criterias
Type	Internal
Relationships	Association: User, System
Normal Flow of Events	<ol style="list-style-type: none"> <li>1. The user logs in to the site and fills up the input areas(e.g., check-in date, check-out dates, number of guests, location)</li> <li>2. User clicks the 'Search' button</li> <li>3. The system validates the input.</li> <li>4. The system retrieves available hotels from the database and displays them with details such as name, price and rating.</li> <li>5. User may filter the results based on preferences(e.g., price, rating)</li> </ol>
Subflows	4-a : If no hotels match the criteria, the system displays a message 'No hote are available right now. Please modify your search'. If user wants to refine the search , they can return to search form and adjust the criterias anytime
Exceptional Flows	<ul style="list-style-type: none"> <li>- If mandatory fields (e.g., dates, number of guests) are left blank, the system throws an error message: "Please fill in all required fields."</li> <li>- If it cannot connect to the database , the system throws an 'try again later' error.</li> </ul>

Figure 3.4: Use Case Description for Search Hotel

### 3.5 Use Case 5: Search Room

Use Case ID:	5
Use Case Name:	Search Room
Use Case Type:	Essential
ImportanceLevel:	High

Primary Actor:	User
Description:	The user searches for available rooms based on check-in/out dates and preferences.
Stakeholders and Interests:	User: Wants to quickly find suitable rooms. Admin : Ensures search functionality is efficient.
Trigger:	The user initiates a search by entering relevant details.
Type:	Manuel
Relationships:	Includes :None Extends: None
Normal Flow of Events:	1. User navigates to the search page. 2. User enters search criteria (e.g., check-in date, number of guests). 3. The system queries the database for matching rooms.
Subflows:	SF-1: Filter results by price or amenities.
Exceptional Flows:	1. If no rooms match the criteria, a “No rooms available” message is displayed.

Figure 3.5: Use Case Description for Search Room

### 3.6 Use Case 6: View Room Details

Use Case ID:	6		
Use Case Name:	View Room Details		
Use Case Type:	Essential, Detail		
Importance Level:	High		

Primary Actor:	User
Description:	Allows users to view detailed information about a specific room in a hotel,
Stakeholders and Interests:	- User: Needs to evaluate the room's details before making a reservation. - System: Ensures current details are presented to user.
Trigger:	The user clicks on the view details button next to the listed hotels.
Type:	Internal
Relationships:	Association: Guests, System, Admins
Normal Flow of Events:	1- User navigates to search results. 2- User clicks the “View Details” button next to the listed hotels. 3- The system displays the room details along with the hotel amenities by retrieving the data from the database.
Subflows:	3-a : If the user clicks on a room photo, the system opens an image gallery to display larger views of the room images.
Exceptional Flows:	If the room details fail to load due to a server timeout, the system displays a message: “Request timed out. Please refresh the page.”

Figure 3.6: Use Case Description for View Room Details

### 3.7 Use Case 7: View Hotel Amenities

Use Case ID:	7		
Use Case Name:	View Hotel Amenities		
Use Case Type:	Essential, Detail		
Importance Level:	Medium		

Primary Actor:	Guest, Admin
Description:	This use case allows guests and admins to view the amenities available at the hotel, including details about facilities such as pool, gym, restaurant, etc.
Stakeholders and Interests:	- Guest: Wants to explore hotel amenities to plan their stay better. - Admin/Support Team: Ensures that the list of amenities is up-to-date for guests.
Trigger:	Guest or admin clicks on the "View Hotel Amenities" button on the system
Type:	Internal
Relationships:	Association: Guest, Admin
Normal Flow of Events:	<ol style="list-style-type: none"> <li>1. Guest or admin logs into the system.</li> <li>2. Guest or admin clicks on the "View Hotel Amenities" button.</li> <li>3. The system retrieves the list of available amenities from the database.</li> <li>4. The system displays the amenities, including descriptions, images, and any associated costs (if applicable).</li> </ol>
Subflows:	If additional amenities (e.g., special offers, events) are available, they will be listed in the detailed view
Exceptional Flows:	If the database connection fails, an error message will be displayed. If no amenities are listed in the database, a message indicating that no amenities are currently available will be shown.

Figure 3.7: Use Case Description for View Hotel Amenities

### 3.8 Use Case 8 : Make Reservation

Use Case ID:	8		
Use Case Name:	Make Reservation		
Use Case Type:	Essential, Detail		
Importance Level:	High		

Primary Actor	User
Description	Users searches for availability and makes a reservation for a hotel room using the reservation system.
Stakeholders and Interests	-User: wants to find and book a hotel room efficiently -Admin: Ensures availability data is accurate and reservations are correctly processed. -System: Handles search, validation, reservation confirmation, and storage of reservation data.
Trigger	The user initiates the process by accessing the reservation system to book a room.
Type	Internal
Relationships	Association: User, System, Admin
Normal Flow of Events	<ol style="list-style-type: none"> <li>1. User selects “Make a Reservation” option.</li> <li>2. User enters search criteria and submits.</li> <li>3. The system displays available rooms based on the criteria.</li> <li>4. User selects a room and provides reservation details.</li> <li>5. The system sends a confirmation email with reservation details to the user.</li> <li>6. When the user goes to the hotel, they completes the reservation with the confirmation code given.</li> </ol>
Subflows	4a. Optional User Preferences: if the user provides optional preferences, the system includes these preferences in the reservation notes.

Figure 3.8: Use Case Description for Make Reservation

### 3.9 Use Case 9: View Reservation Details

Use Case ID:	9
Use Case Name:	View Reservation Details
Use Case Type	Essential, Detail
Importance Level:	High

Primary Actor:	User, Guest
Description:	Viewing the reservation details.
Stakeholders and Interests:	Guests will log out from the system safely while protecting their information. Admin will log out from the admin side and would like to protect account safety.
Trigger:	Guests and Admins click on the Logout button.
Type:	Internal
Relationships:	Association: Guests, Admins
Normal Flow of Events:	Guest logs in to the website and clicks on the reservation details button. System pulls the information from the database and will be listed on the screen.
Subflows:	If there are more than one reservation guests can view all of their reservations by choosing it.
Exceptional Flows:	If a guest has not logged in to the system, system will automatically redirect to the login page. And if there are no reservations there will be an error message about it.

Figure 3.9: Use Case Description for View Reservation Details

### 3.10 Use Case 10: Cancel Reservation

Use Case ID:	10		
Use Case Name:	Cancel Reservation		
Use Case Type:	Essential, Detail		
Importance Level:	High		

Primary Actor:	User, Guest
Description:	Allows the guest to cancel their reservation from the system.
Stakeholders and Interests:	- Guest: Needs the ability to cancel unwanted reservations. - Admin: Tracks cancellations to manage room availability.
Trigger:	Guest clicks on the “Cancel Reservation” button.
Type:	Internal
Relationships:	Association: Guests, Admins
Normal Flow of Events:	1. Guest logs into the system and navigates to their reservation details. 2. Guest clicks on the “Cancel Reservation” button. 3. The system asks for confirmation. 4. The system marks the reservation as canceled in the database. 5. A cancellation confirmation message is displayed.- If cancellation is within a refund period, the system processes a refund request.
Subflows:	- If cancellation is within a refund period, the system processes a refund request.
Exceptional Flows:	- If the reservation has already started, the system displays an error message. - If the database connection fails, an error is shown to the guest.Cancellation policies must be strictly enforced based on business rules.

Figure 3.10: Use Case Description for Cancel Reservation

### 3.11 Use Case 11: User Support

Use Case ID:	11		
Use Case Name:	User Support		
Use Case Type:	Essential, Detail		
Importance Level:	Medium		

Primary Actor:	Guest, Admin
Description:	Enables guests to contact user support for assistance.
Stakeholders and Interests:	- Guest: Resolves issues related to reservations and system usage. - Admin/Support Team: Provides solutions to ensure customer satisfaction
Trigger:	Guest clicks on the "Contact Support" or "Help" button.
Type:	Internal
Relationships:	Association: Guest, Admin
Normal Flow of Events:	1. Guest navigates to the "Support" or "Help" section. 2. Guest selects the type of issue (e.g., reservation, payment). 3. Guest provides a description of the problem. 4. The system sends the issue details to the support team. 5. The guest receives a notification confirming that the request has been submitted..
Subflows:	If live chat support is available, the system redirects the guest to an available agent.
Exceptional Flows:	If the support team is unavailable, the system informs the guest of delayed response time.

Figure 3.11: Use Case Description for User Support

### 3.12 Use Case 12: Logout

Use Case ID:	12
Use Case Name:	Logout
Use Case Type:	Essential, Detail
Importance Level:	Medium-High

Primary Actor:	Guest, Admin
Description:	Admin or guest whoever logged in to the system will be logged out.
Stakeholders and Interests:	Guests checks their reservation details to make plans. Admin aims to manage these operations more clearly and without errors.
Trigger:	Guests click on the Reservation Details button on the website.
Type:	Internal
Relationships:	Association: Guests , Include: Login
Normal Flow of Events:	Guest or Admin logins to the system and wants to logout. Clicks on the logout button and logout safely. Screen will be redirected to the login page.
Subflows:	Information will be automatically saved during the logout process.
Exceptional Flows:	There will be no logout button if there is no active session.

Figure 3.12: Use Case Description for Logout

### 3.13 Use Case 13: Send Feedback

Use Case ID:	13		
Use Case Name:	Send Feedback		
Use Case Type:	Essential, Detail		
Importance Level:	Medium		

Primary Actor:	User
Description:	Allows users to submit feedback regarding their experience with the hotel or the reservation system.
Stakeholders and Interests:	- User: Wants to share their experience, suggestions, or complaints. - Admin: Collects user feedback to improve services and identify issues
Trigger:	User clicks on the “Send Feedback” button.
Type:	Internal
Relationships:	Association: User, Admin
Normal Flow of Events:	<ol style="list-style-type: none"> <li>1. User navigates to the “Feedback” section.</li> <li>2. User writes the feedback and gives the rating. After writing the feedback user submits.</li> <li>3. The system saves the feedback to the database.</li> <li>4. The system displays the confirmation message.</li> </ol>
Subflows:	If the user uploads an optional attachment (e.g., a screenshot or document), the system validates the file format and size before saving it.
Exceptional Flows:	If the uploaded file exceeds the allowed size or is in an unsupported format, the system displays an error: “Invalid file format or size. Please upload a the file within the limits.”

Figure 3.13: Use Case Description for Send Feedback

### 3.14 Use Case 14: Apply Discount Code

Use Case ID:	14		
Use Case Name:	Apply Discount Code		
Use Case Type:	Essential, Detail		
Importance Level:	Medium		

Primary Actor:	User
Description:	User applies a valid discount code during the reservation or checkout process to receive a discount on the total cost.
Stakeholders and Interests:	-User: wants to apply a discount code to reduce the cost of their reservation.
Trigger:	The user enters a discount code during the checkout process.
Type:	Internal
Relationships:	Association: User, System
Normal Flow of Events:	<ol style="list-style-type: none"> <li>1. The user applies the discount code at the appropriate location before completing the reservation.</li> <li>2. User receives a confirmation code via e-mail.</li> <li>3. When the users go to the hotel, they complete the transaction at the discounted price.</li> </ol>
Subflows:	1a. If no discount code is found, the reservation will be completed at the regular price.
Exceptional Flows:	<p>1.Invalid Discount Code: The system notifies the user that the entered discount code is invalid or expired.</p> <p>2.Technical Error: If the system encounters an issue during validation, the user receives an error message and can retry the process.</p>

Figure 3.14: Use Case Description for Apply Discount Code

### 3.15 Use Case 15: Manage Rooms

Use Case ID:	15
Use Case Name:	Manage Rooms
Use Case Type:	Essential, Detail
Importance Level:	High

Primary Actor:	Admin
Description:	Managing rooms for the reservation system by doing CRUD operations.
Stakeholders and Interests:	-Admin operates rooms (room type, price, capacity etc.) creates updates and deletes rooms. -Guests need current room details to have better experience without errors.
Trigger:	Admin clicks on manage rooms button.
Type:	Internal
Relationships:	Association: Admin , Include: CheckAvailability, SearchRoom
Normal Flow of Events:	Admin logins to the system, clicks on the manage rooms button, system shows the current and available rooms and then admin chooses a activity (create , update ,delete) and signs out.
Subflows:	Adding rooms: when admin enters room details he checks the room information. Update rooms: System checks the correctness of updated information
Exceptional Flows:	Delete operation will be blocked if it is associated with an active reservation. If admin enters incomplete information the system will give an error.

Figure 3.15: Use Case Description for Manage Rooms

### 3.16 Use Case 16: Manage User Profile

Use Case ID:	16
Use Case Name:	Manage User Profile
Use Case Type:	Supporting
ImportanceLevel:	Medium

Primary Actor:	Admin
Description:	The admin can view, update, or delete user profiles to ensure accurate and up-to-date information in the system.
Stakeholders and Interests:	User: Expects their information to be managed securely and correctly. Admin : Needs to maintain accurate user data for smooth system
Trigger:	The admin selects the “Manage User Profiles” option from the admin dashboard.
Type:	Manuel
Relationships:	Includes :None Extends: Admin Dashboard
Normal Flow of Events:	<ol style="list-style-type: none"> <li>1. Admin logs into the system.</li> <li>2. Admin navigates to the "User Profiles" section.</li> <li>3. Admin selects a user profile to view or edit.</li> <li>4. Admin updates user information or deletes the profile.</li> <li>5. The system validates and saves the changes.</li> <li>6. A confirmation message is displayed.</li> </ol>
Subflows:	SF-1:Admin filters users by name, email, or account status.
Exceptional Flows:	<ol style="list-style-type: none"> <li>1. If the profile does not exist, an error message is displayed.</li> <li>2. If invalid data is entered (e.g., invalid email), the system notifies the admin to correct the input.</li> </ol>

Figure 3.16: Use Case Description for Manage User Profile

### 3.17 Use Case 17: Send Confirmation Mail

Use Case ID:	17
Use Case Name:	Send Confirmation Mail
Use Case Type:	Supporting
ImportanceLevel:	Medium

Primary Actor:	System
Description:	The system automatically sends a confirmation email to the user after a successful reservation.
Stakeholders and Interests:	User: Wants to receive a confirmation email as proof of booking. Admin : Ensures the email system is reliable.
Trigger:	A successful reservation is made by the user.
Type:	Automatic
Relationships:	Includes :None Extends: Make Reservation
Normal Flow of Events:	1. User completes a reservation. 2. The system generates a confirmation email. 3. The email includes reservation details and is sent to the user.
Subflows:	None
Exceptional Flows:	1. If the email address is invalid, the system logs the error and notifies the admin.

Figure 3.17: Use Case Description for Send Confirmation Mail

### 3.18 Use Case 18: Reservation Reminder

Use Case ID:	18		
Use Case Name:	Reservation Reminder		
Use Case Type:	Essential, Detail		
Importance Level:	Medium		

Primary Actor:	System
Description:	The system sends a reservation reminder to the user before the scheduled reservation date to ensure the user remembers their booking details.
Stakeholders and Interests:	-User: Receives timely reminders to avoid missing their reservation. -System: Ensures that users are informed, and reservations are utilized effectively.
Trigger:	The system detects that the reservation date is approaching.
Type:	Internal
Relationships:	Association: User, System
Normal Flow of Events:	<ol style="list-style-type: none"><li>1. A reminder is set for a predefined time before the reservation.</li><li>2. System sends the reminder, notification with reservation details is sent to the user.</li><li>3. User receives the reminder; user reviews the reservation details.</li></ol>
Subflows:	2a. If the user has not requested a reminder, no notifications will be sent.
Exceptional Flows:	<ol style="list-style-type: none"><li>1.Notification Delivery Failure: Notification cannot be delivered due to server error or network issue.</li><li>2.Missing or Invalid Contact Information: User's email address or phone number is missing or incorrect.</li></ol>

Figure 3.18: Use Case Description for Reservation Reminder

### 3.19 Use Case 19: Send Cancellation Mail

Use Case ID:	19		
Use Case Name:	Send Cancellation Mail		
Use Case Type:	Essential, Detail		
Importance Level:	High		

Primary Actor:	System
Description:	Sends a cancellation email to the guest after their reservation has been successfully canceled, confirming the cancellation and providing relevant details.
Stakeholders and Interests:	<ul style="list-style-type: none"> <li>- User: Needed to receive confirmation of the reservation cancellation.</li> <li>- System: Ensures that guests are notified in a timely manner.</li> </ul>
Trigger:	The system successfully finalizes a reservation cancellation.
Type:	Internal
Relationships:	Association: User, System
Normal Flow of Events:	<ol style="list-style-type: none"> <li>1. The system detects that a reservation has been canceled.</li> <li>2. The system retrieves the guest's email address from the reservation details.</li> <li>3. The system generates a cancellation email including details of the reservation and cancellation confirmation message.</li> <li>4. The system sends the cancellation email to the guest's email address.</li> </ol>
Subflows:	If the cancellation is within a specific time frame (e.g., 24 hours before check-in), the system includes a reminder in the cancellation email about the hotel's cancellation policy, including any potential penalties or fees that may apply for last-minute cancellations.
Exceptional Flows:	If the system detects that the reservation was already canceled and the email was previously sent, it does not resend the cancellation email.

Figure 3.19: Use Case Description for Send Cancellation Mail

### 3.20 Use Case 20: Calculate Total Price

Use Case ID	20		
Use Case Name	Calculate Total Price		
Use Case Type	Essential, Manage, Detail		
Importance Level	High		

Primary Actor:	Admin
Description:	The system calculates the total price for a reservation based on the room type, duration, and any additional services selected by the guest.
Stakeholders and Interests:	- Admin: Ensures correct calculation of revenue and pricing for rooms. - Guest: Needs accurate pricing to confirm the reservation.
Trigger:	Guest selects a room, dates, and additional services, then clicks on "Calculate Price".
Type:	Internal
Relationships:	Association: Guest, Admin
Normal Flow of Events:	<ol style="list-style-type: none"> <li>Guest logs into the system and selects room type, reservation dates, and services.</li> <li>Guest clicks on the “Calculate Price” button.</li> <li>The system retrieves pricing details from the database.</li> <li>The system calculates the total price.</li> <li>The total price is displayed on the screen.</li> </ol>
Subflows:	If additional services (e.g., breakfast, transportation) are selected, the system includes them in the total price.
Exceptional Flows:	<ul style="list-style-type: none"> <li>If the database is unreachable, the system shows an error message.</li> <li>If invalid input (e.g., incorrect dates) is provided, an error is displayed.</li> </ul>

Figure 3.20: Use Case Description for Calculate Total Price

### 3.21 Use Case 21: Check Availability

Use Case ID:	21
Use Case Name:	Check Availability
Use Case Type	Essential , Detail
Importance Level:	High

Primary Actor:	Guest
Description:	Guests will check availability of the rooms they prefer.
Stakeholders and Interests:	Guests checks available rooms to make their reservation on specific dates.
Trigger:	Guests will not be able to click on the dates they want to choose if the room is unavailable.
Type:	Internal
Relationships:	Association: Guests
Normal Flow of Events:	Guest will check the room they prefer after they log in to the system. If the room of the hotel is not valid the dates will be grey so they will not be able to click on it.
Subflows:	If the room is available guests will see the other details after they choose the dates of their reservation or they may choose another date for the
Exceptional Flows:	If there is no available room guest will not be able to choose date so it means there is no available rooms or if there is a problem with the database connection an error message will be displayed.

Figure 3.21: Use Case Description for Check Availability

# 4 Activity Diagrams

## 4.1 Activity Diagram 1: Login

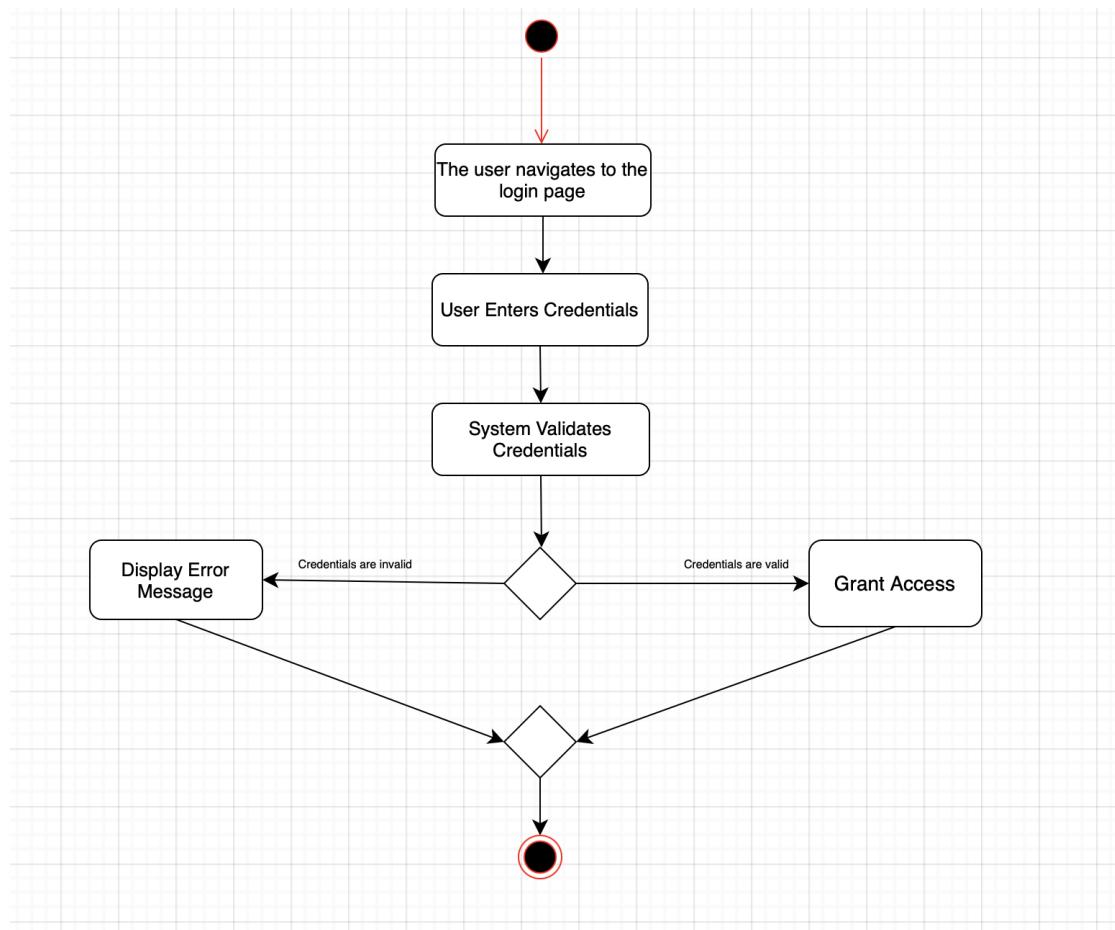


Figure 4.1: Activity Diagram for Login

## 4.2 Activity Diagram 2: Register

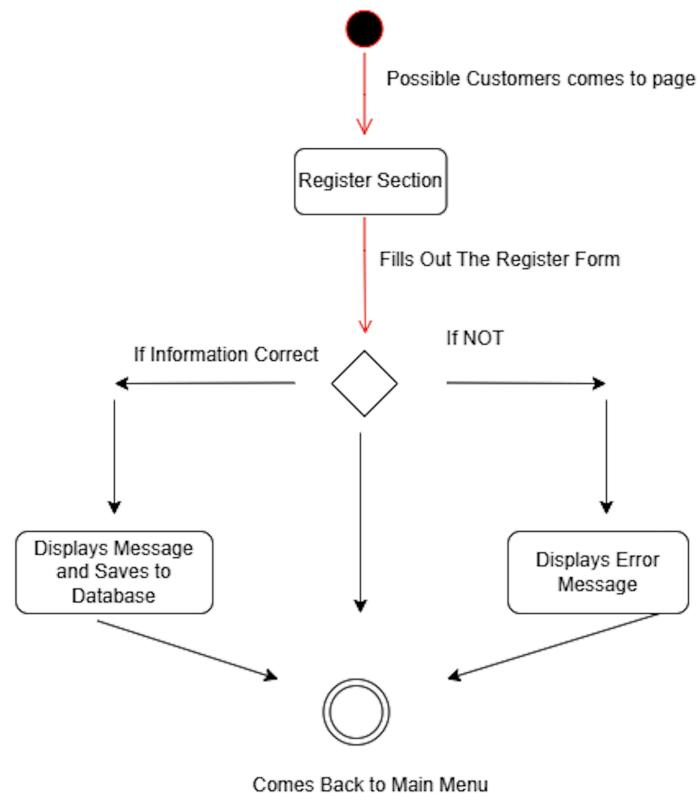


Figure 4.2: Activity Diagram for Register

### 4.3 Activity Diagram 3: Reset Password

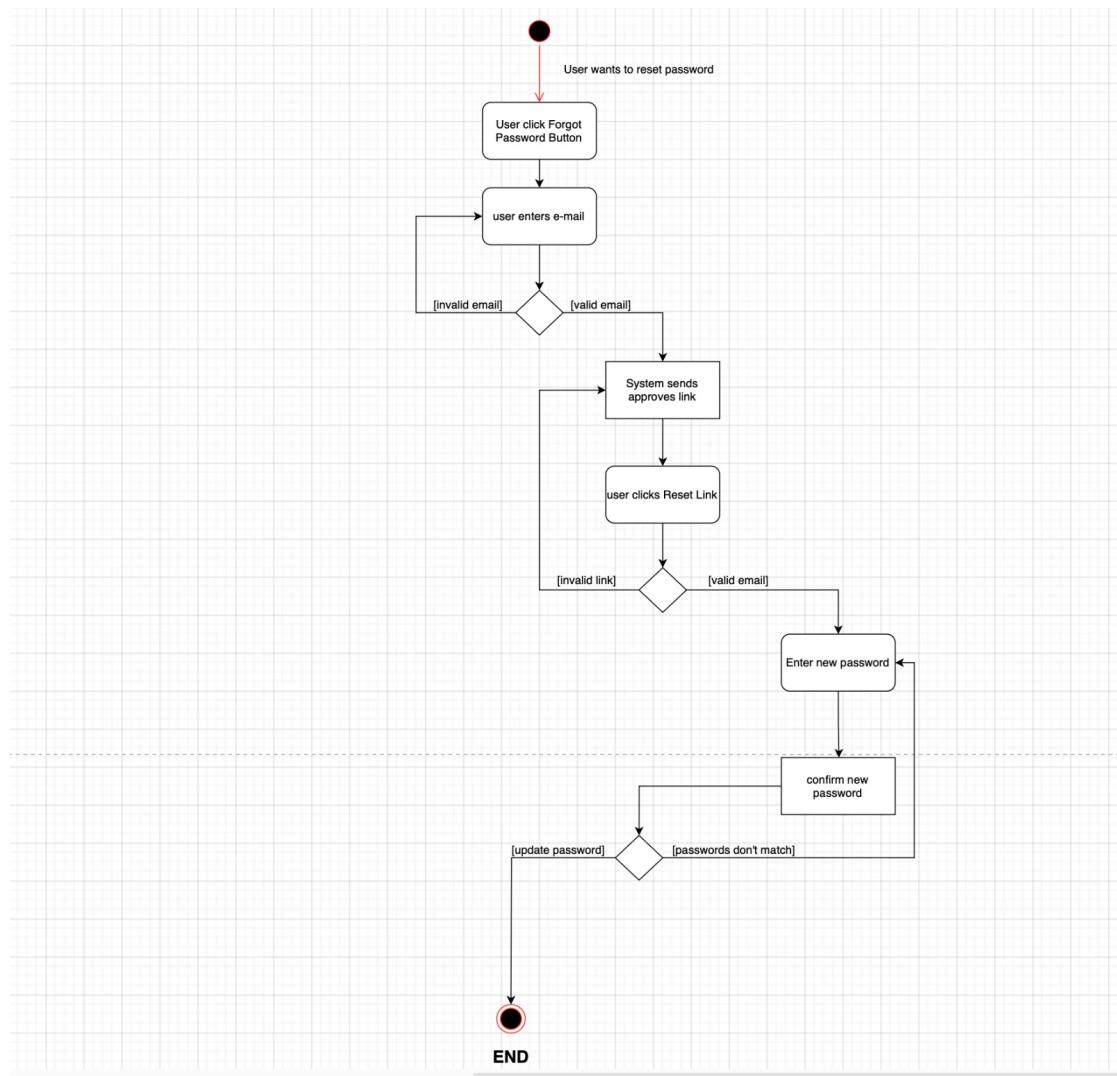
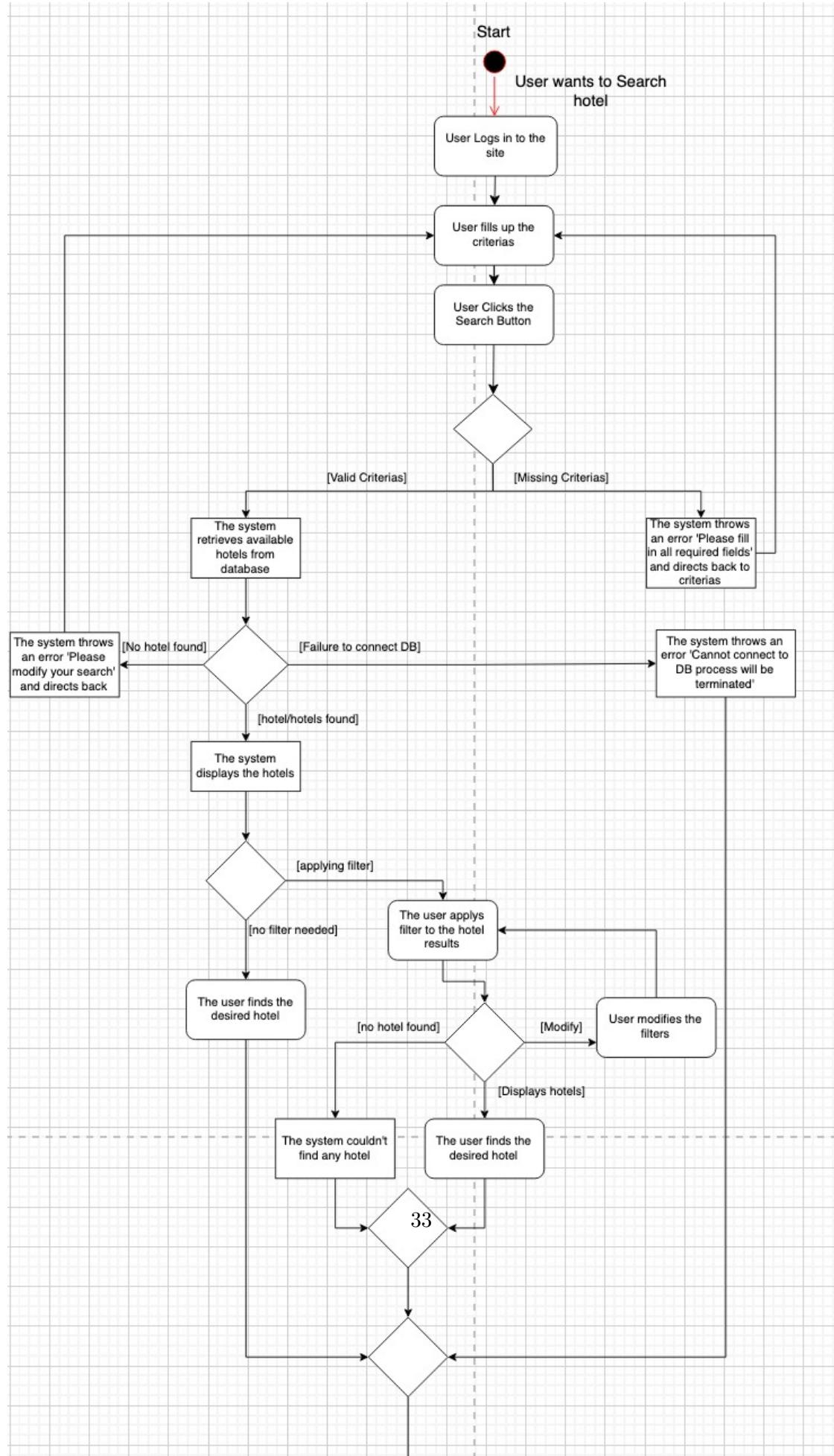


Figure 4.3: Activity Diagram for Reset Password

## 4.4 Activity Diagram 4: Search Hotel



## 4.5 Activity Diagram 5: Search Room

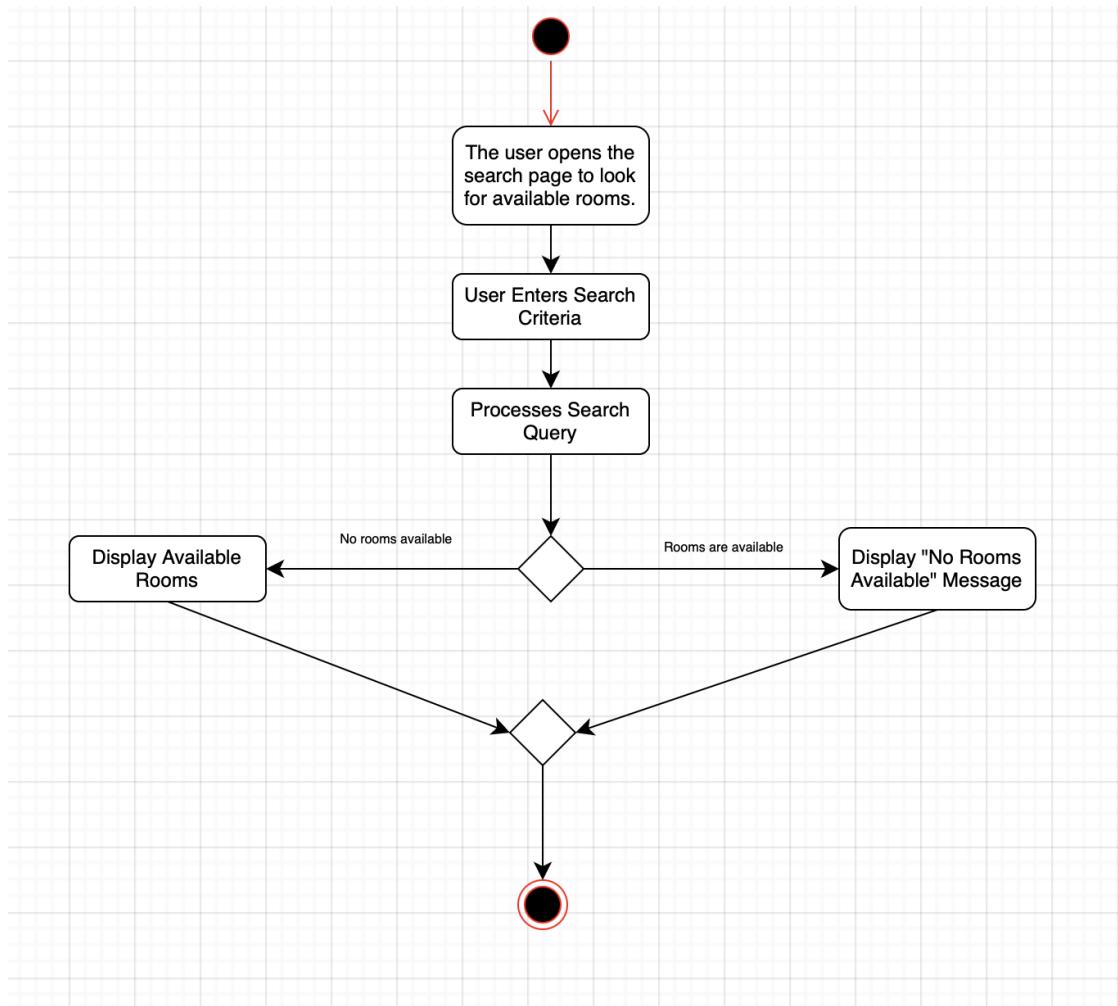


Figure 4.5: Activity Diagram for Search Room

## 4.6 Activity Diagram 6: View Room Details

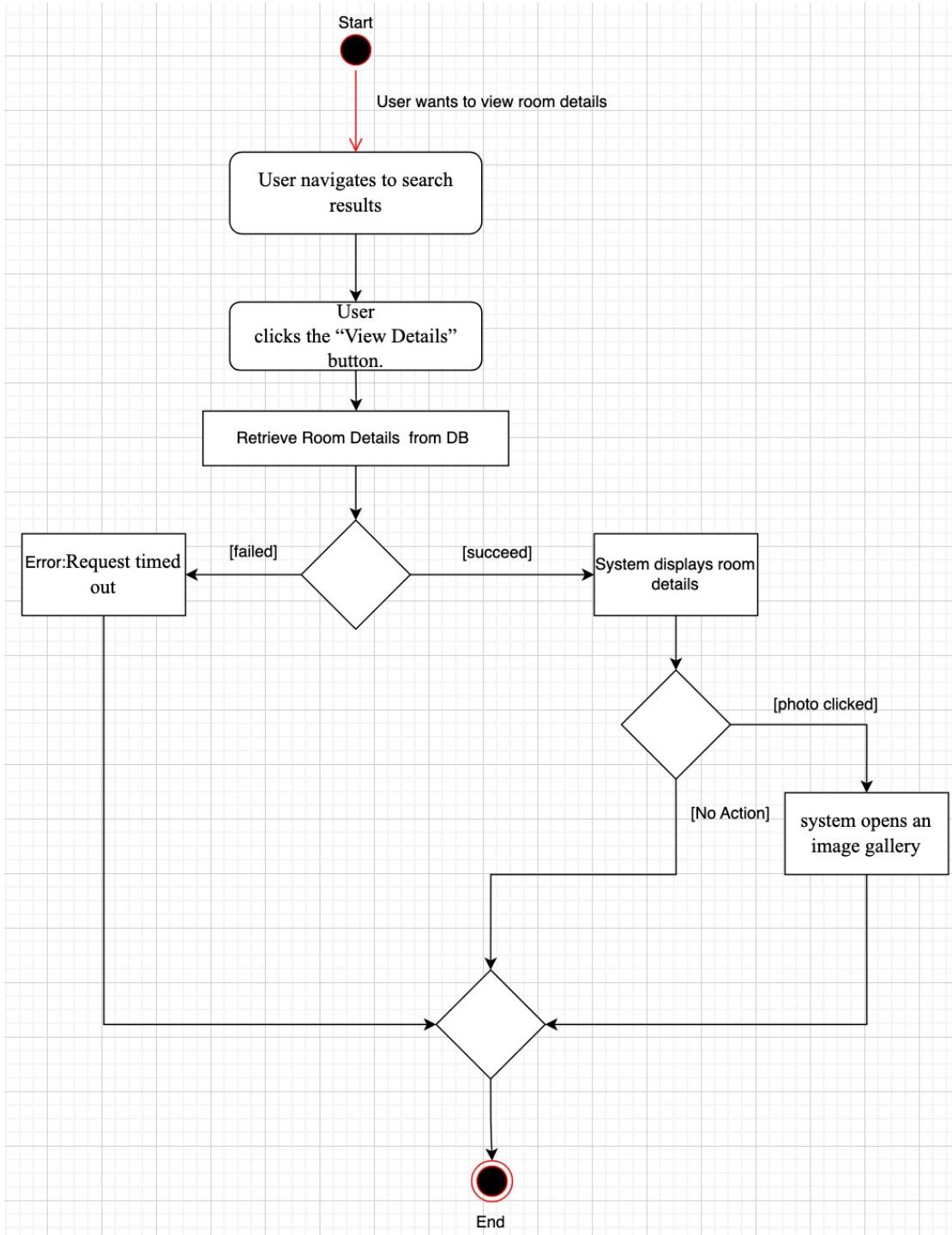


Figure 4.6: Activity Diagram for View Room Details

## 4.7 Activity Diagram 7: View Hotel Amenities

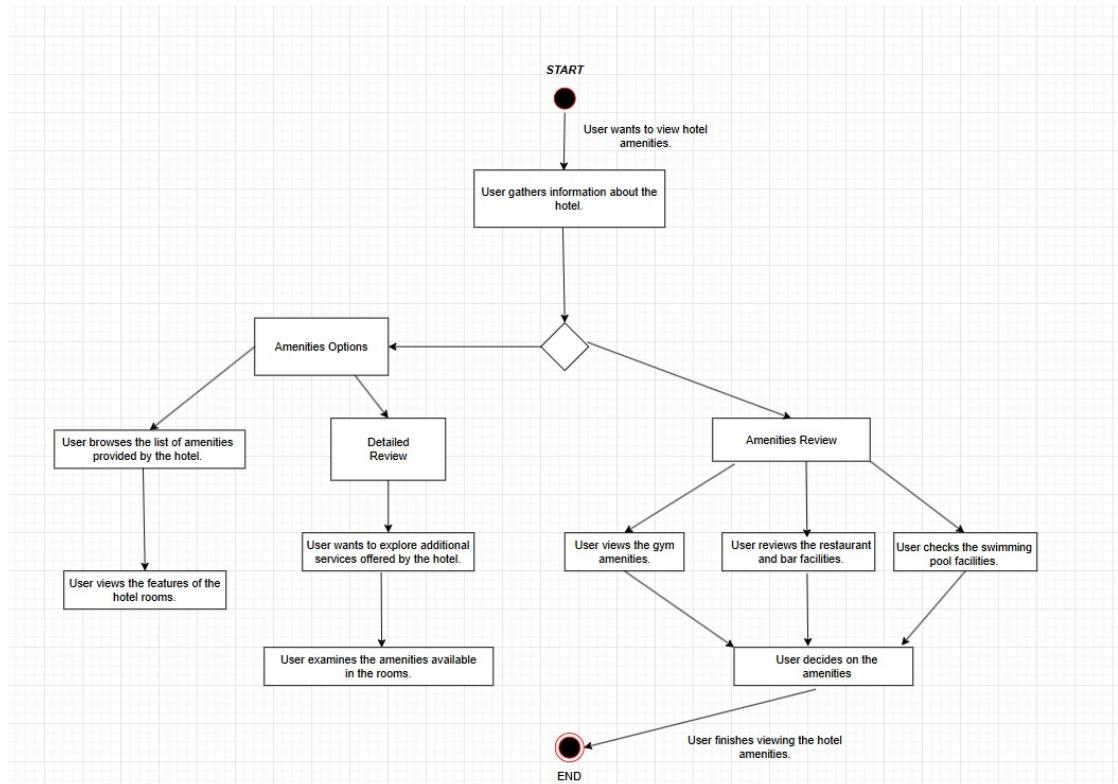


Figure 4.7: Activity Diagram for View Hotel Amenities

## 4.8 Activity Diagram 8: Make Reservation

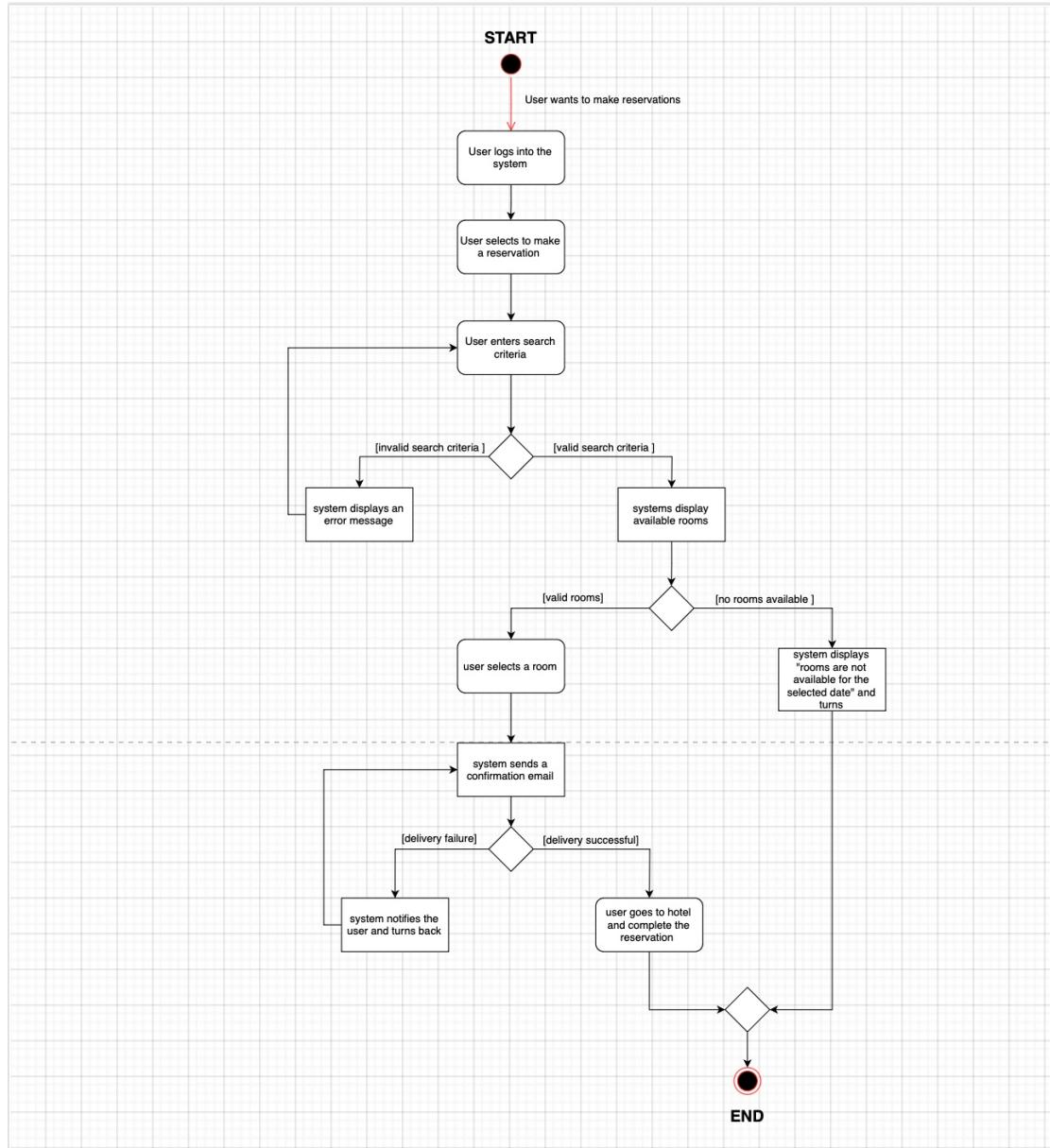


Figure 4.8: Activity Diagram for Make Reservation

## 4.9 Activity Diagram 9: View Reservation Details

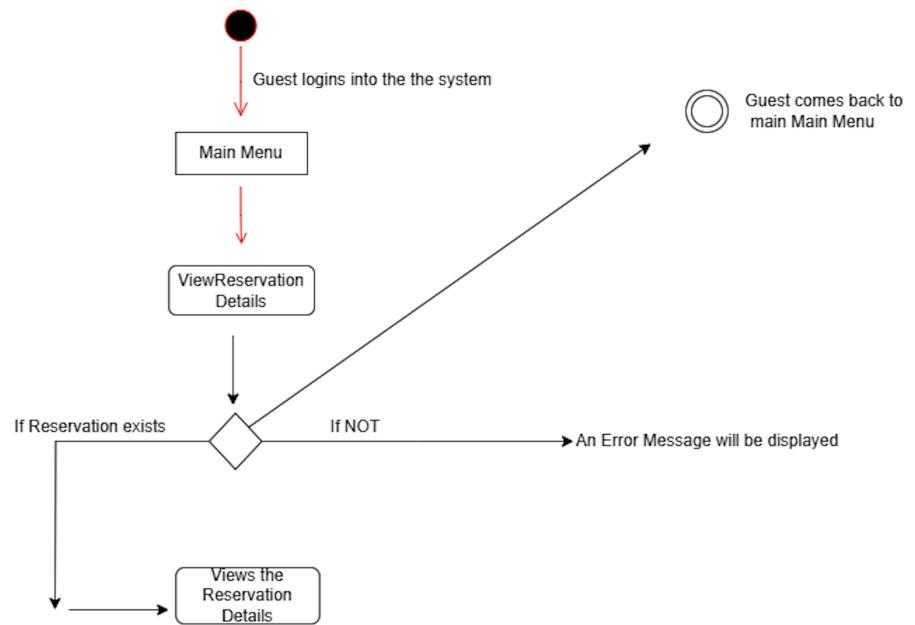


Figure 4.9: Activity Diagram for View Reservation Details

## 4.10 Activity Diagram 10: Cancel Reservation

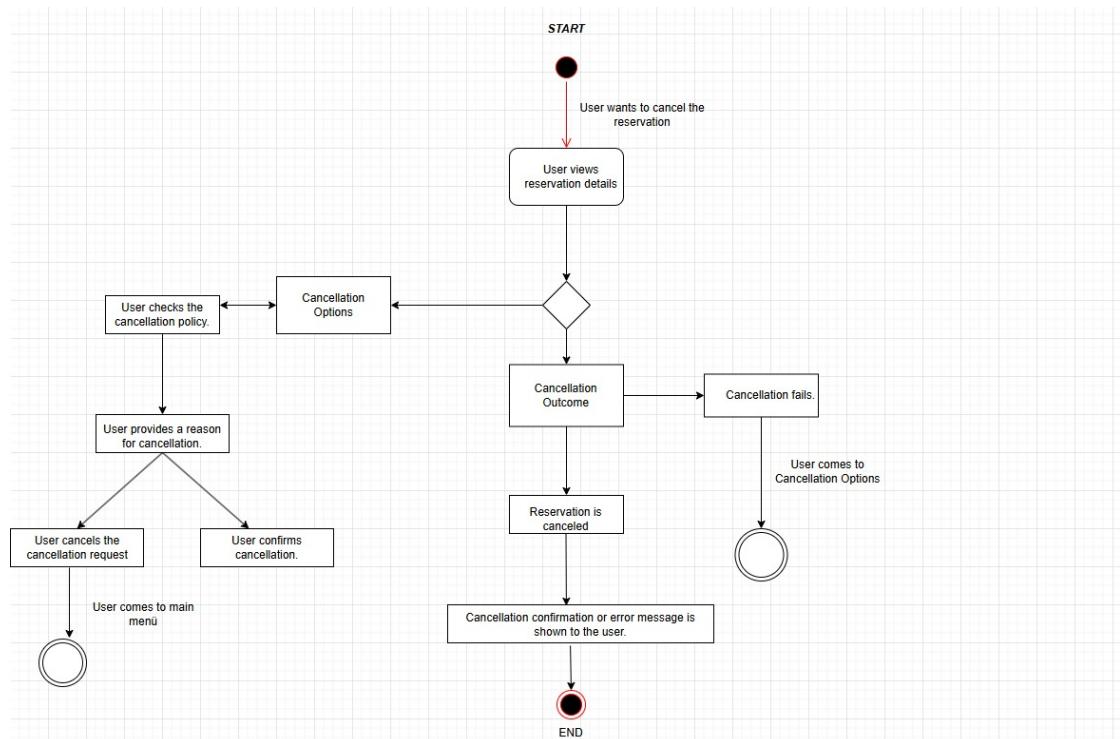


Figure 4.10: Activity Diagram for Cancel Reservation

## 4.11 Activity Diagram 11: User Support

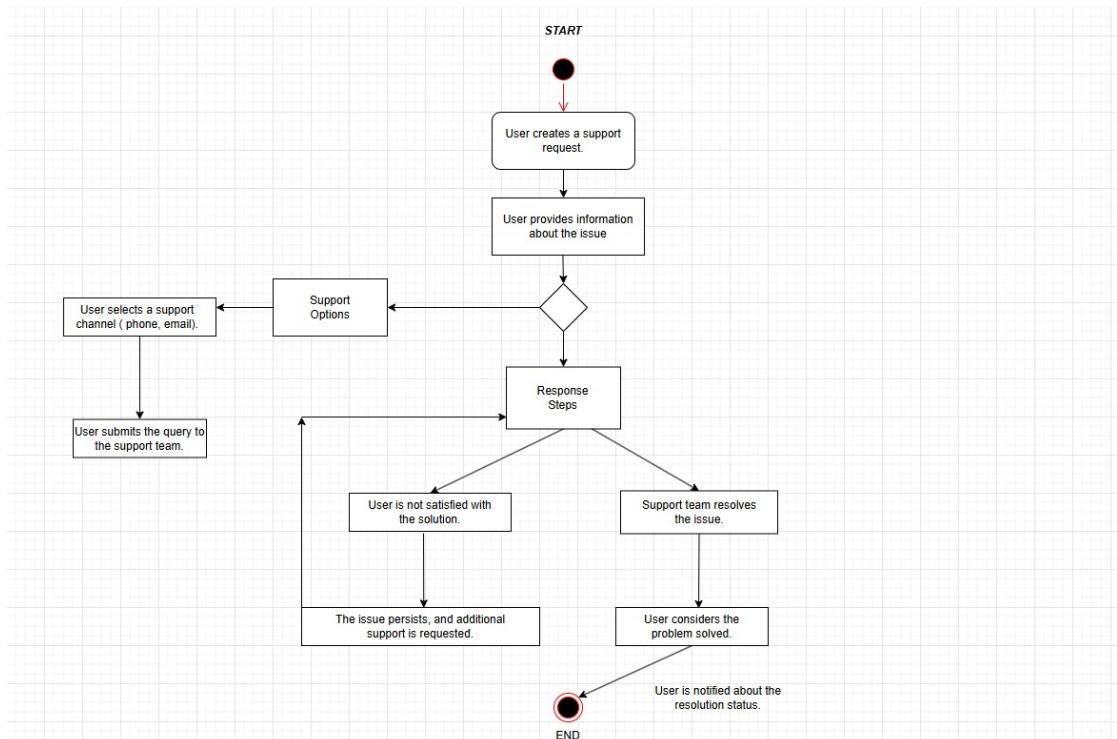


Figure 4.11: Activity Diagram for User Support

## 4.12 Activity Diagram 12: Logout

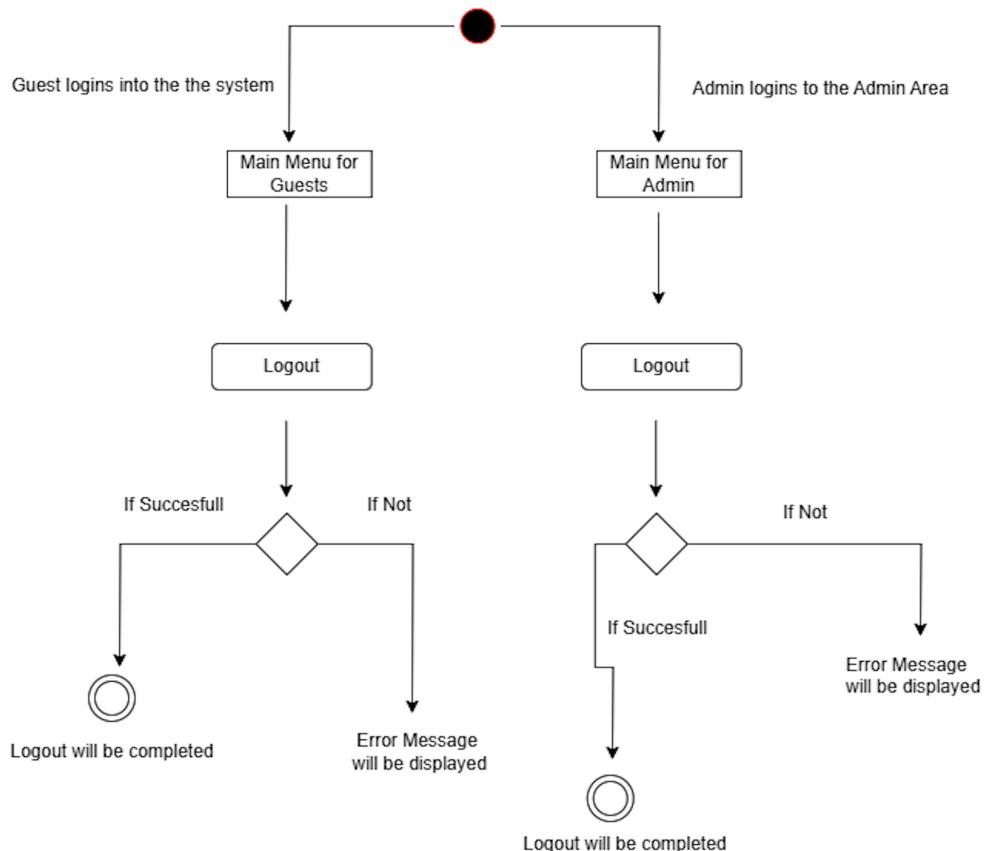


Figure 4.12: Activity Diagram for Logout

#### 4.13 Activity Diagram 13: Send Feedback

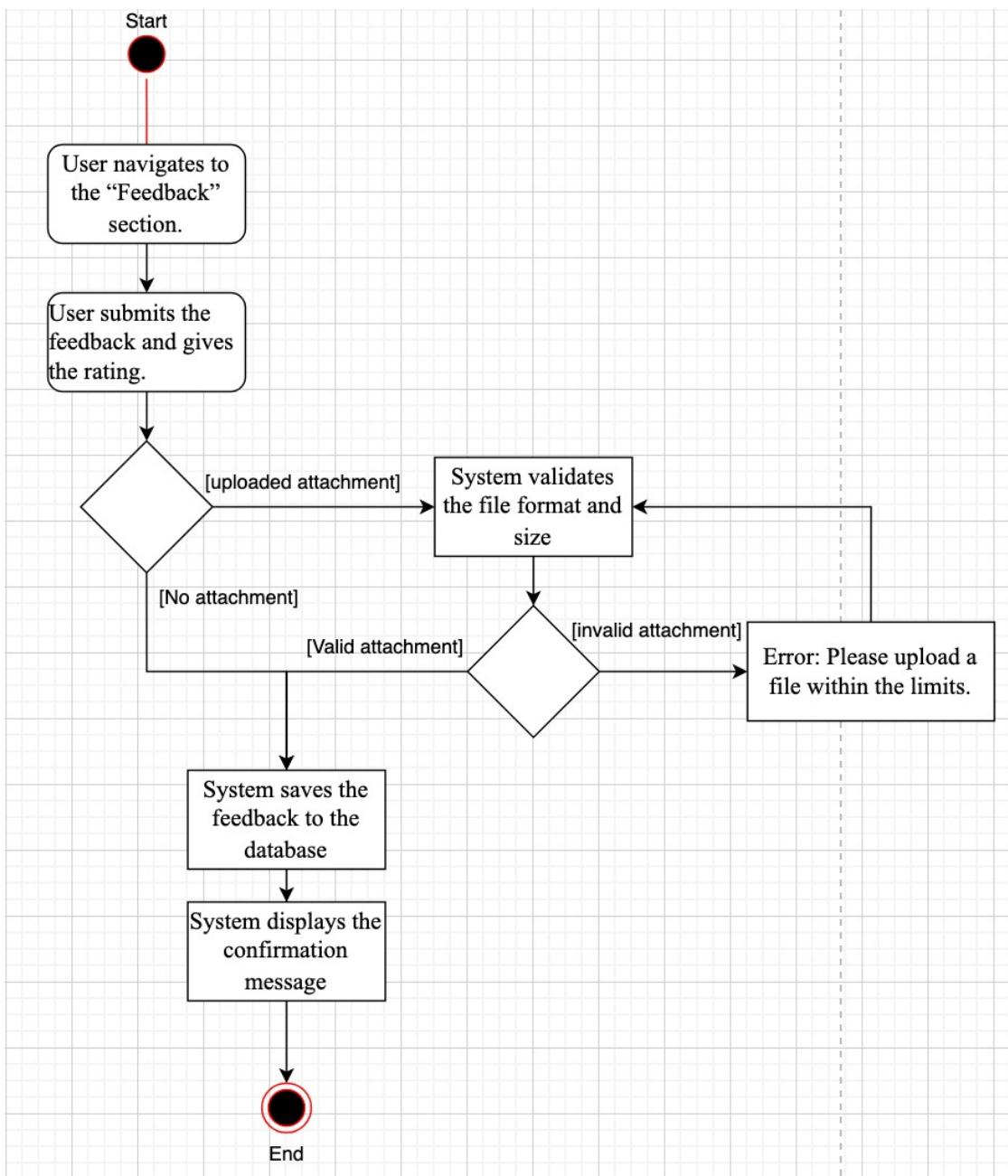


Figure 4.13: Activity Diagram for Send Feedback

## 4.14 Activity Diagram 14: Apply Discount Code

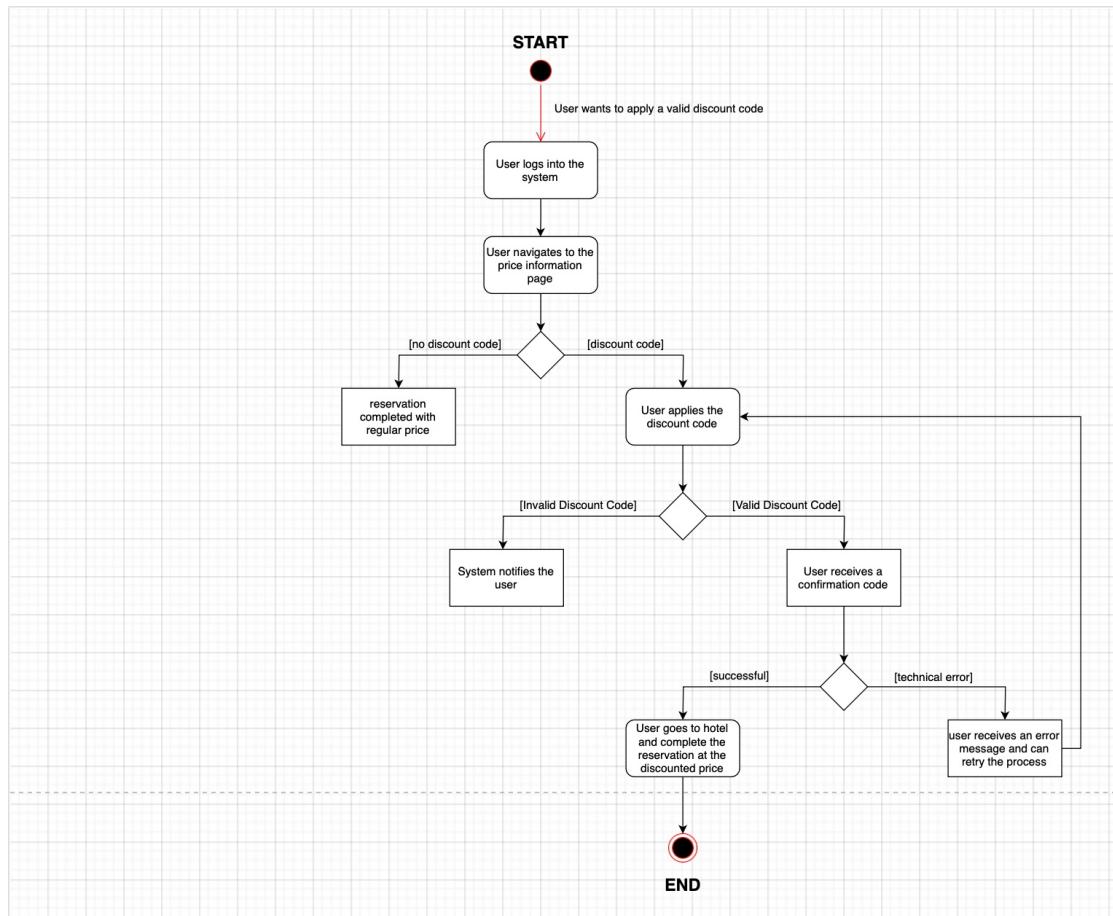


Figure 4.14: Activity Diagram for Apply Discount Code

## 4.15 Activity Diagram 15: Manage Rooms

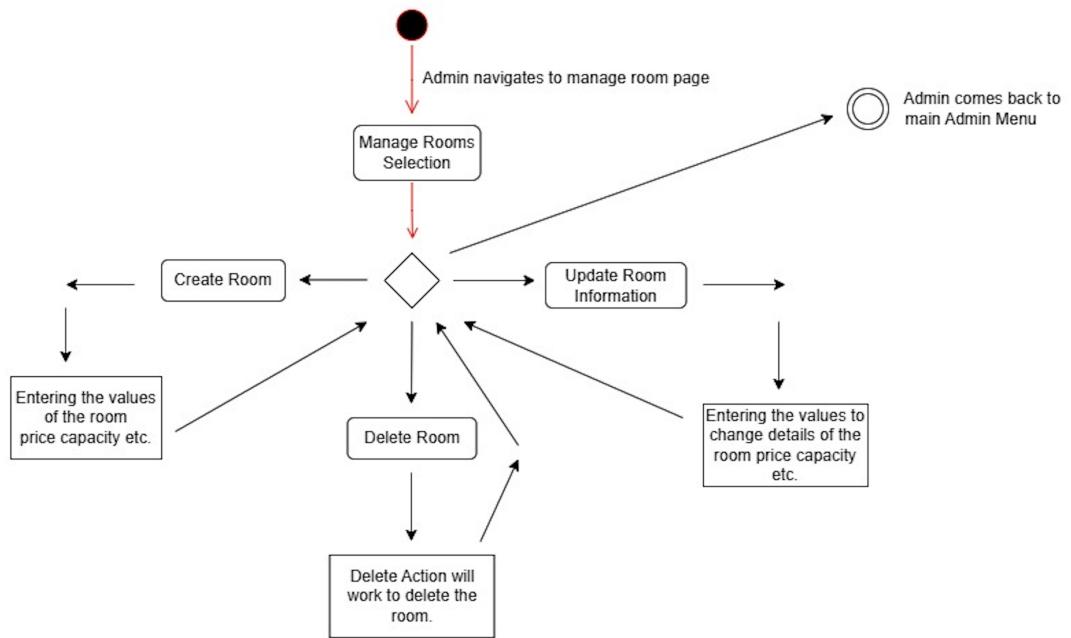


Figure 4.15: Activity Diagram for Manage Rooms

## 4.16 Activity Diagram 16: Manage User Profile

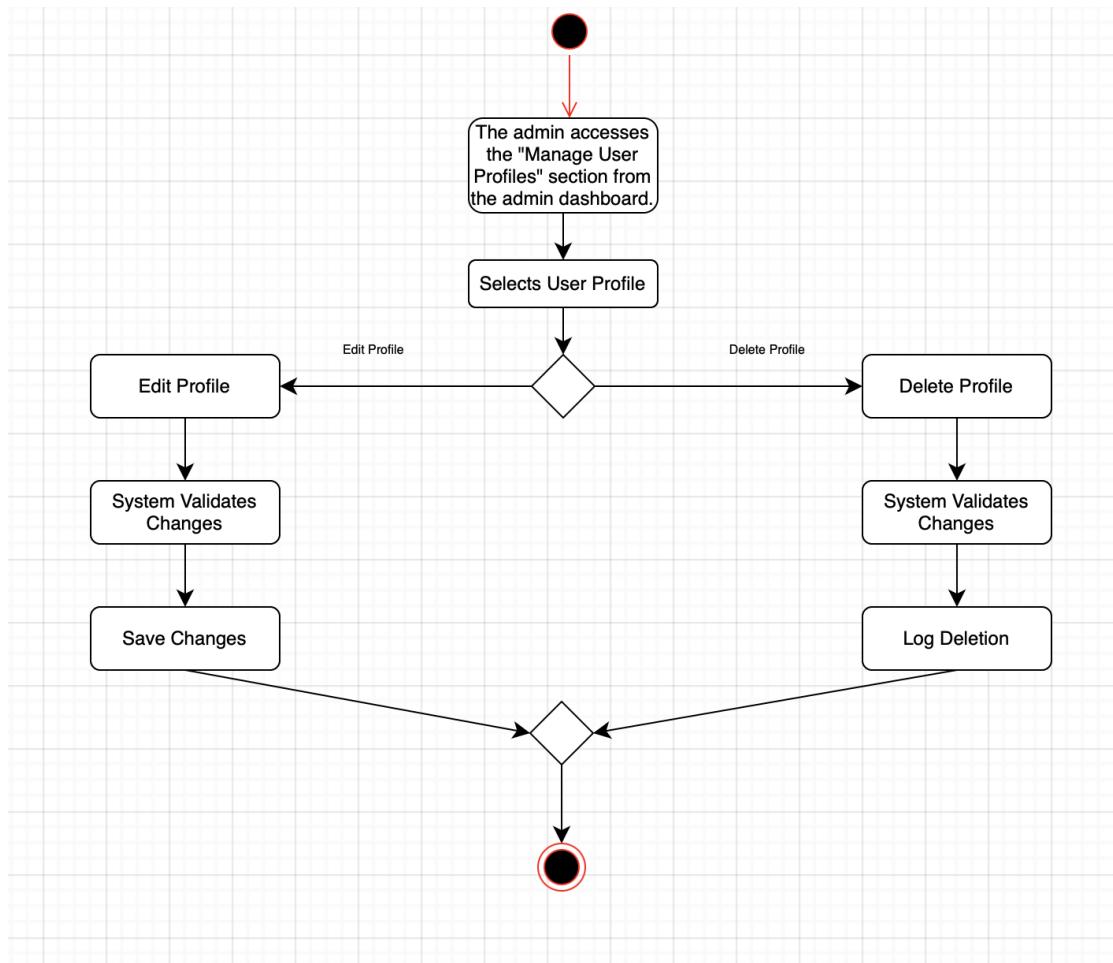


Figure 4.16: Activity Diagram for Manage User Profile

#### 4.17 Activity Diagram 17: Send Confirmation Mail

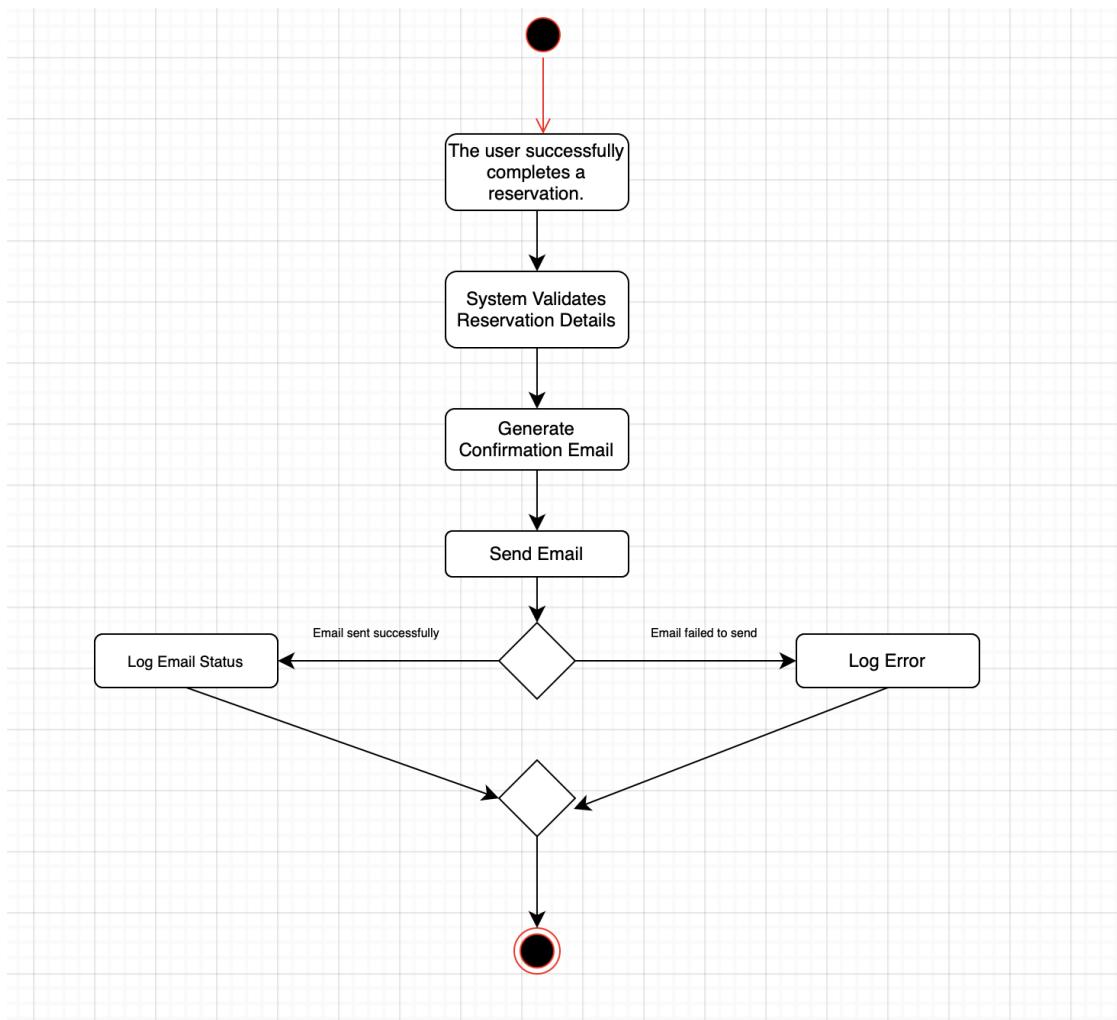


Figure 4.17: Activity Diagram for Send Confirmation Mail

#### 4.18 Activity Diagram 18: Reservation Reminder

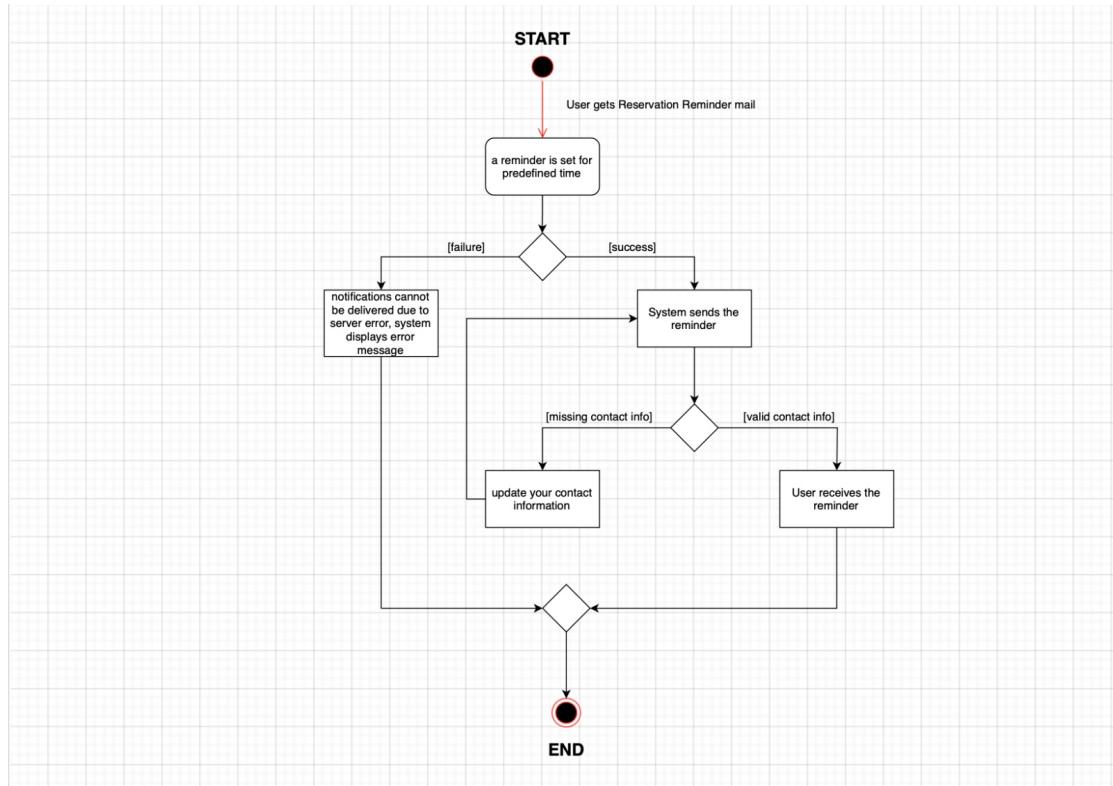


Figure 4.18: Activity Diagram for Reservation Reminder

## 4.19 Activity Diagram 19: Send Cancellation Mail

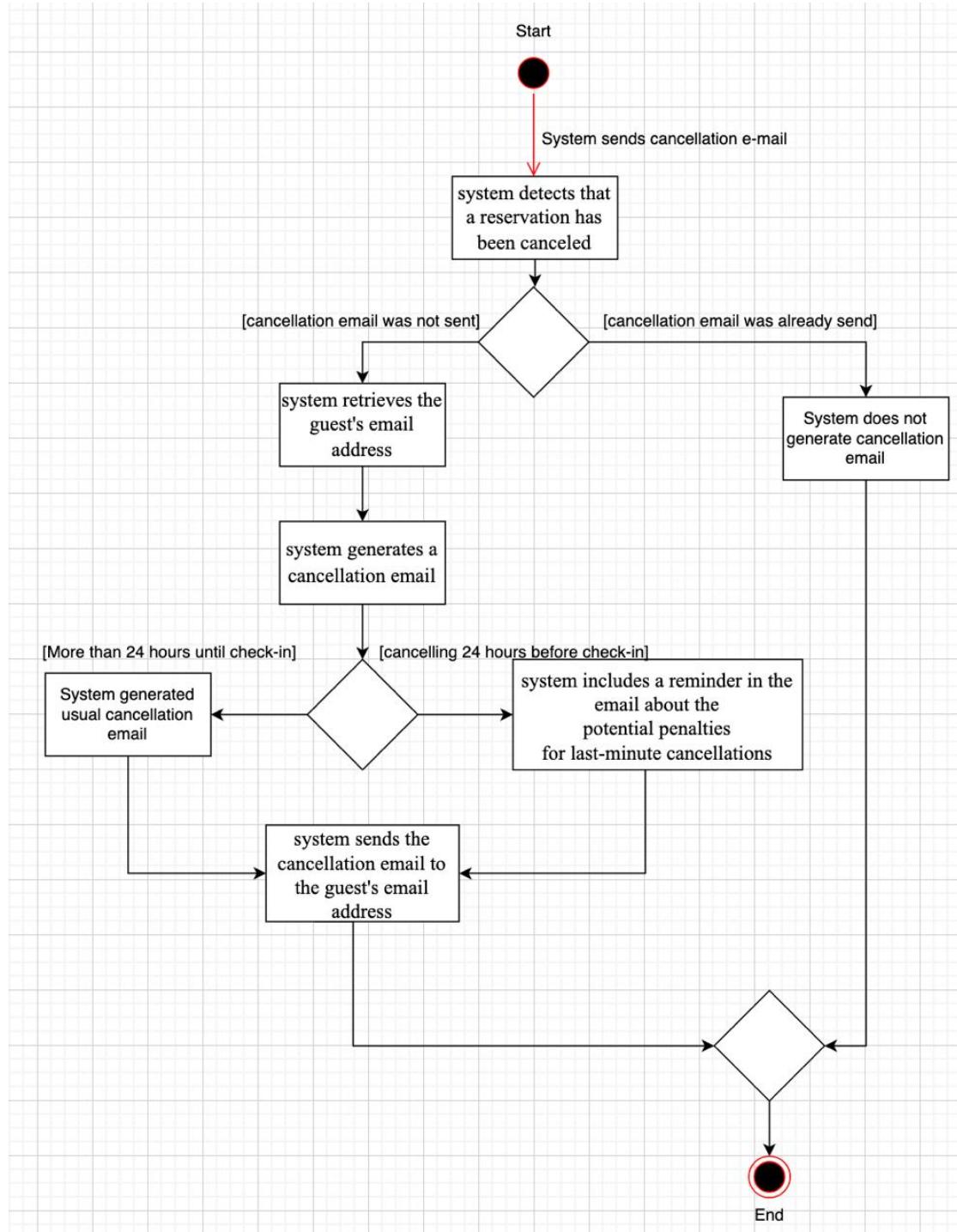


Figure 4.19: Activity Diagram for Send Cancellation Mail

## 4.20 Activity Diagram 20: Calculate Total Price

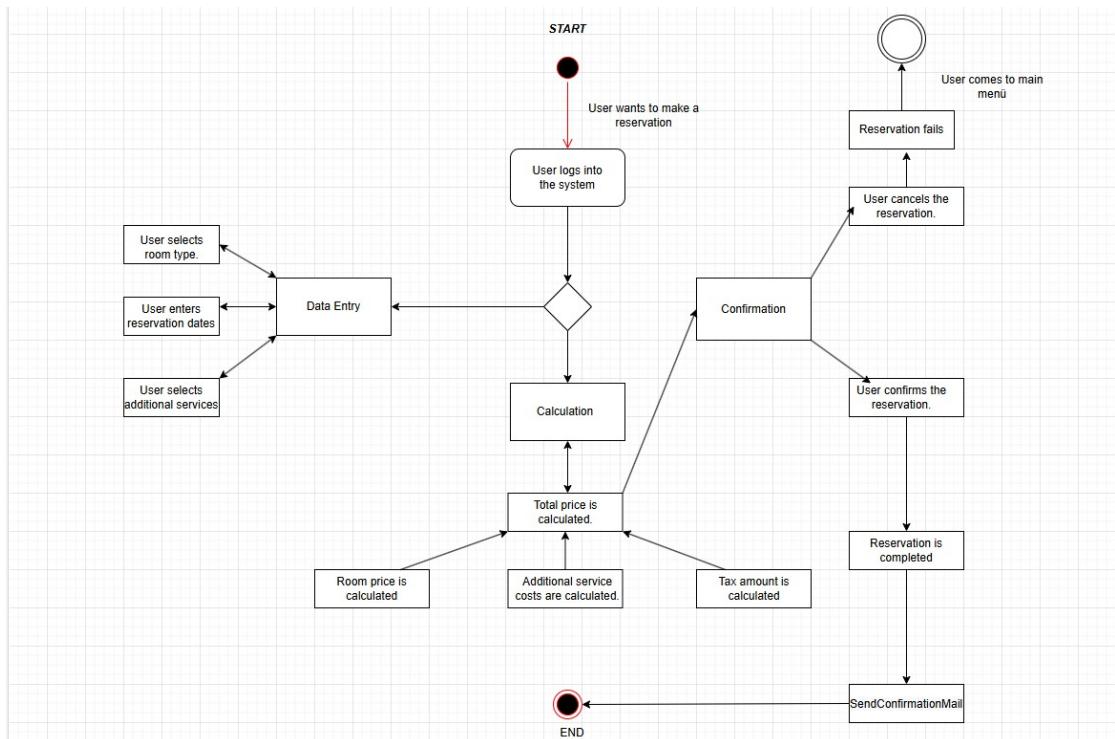


Figure 4.20: Activity Diagram for Calculate Total Price

## 4.21 Activity Diagram 21: Check Availability

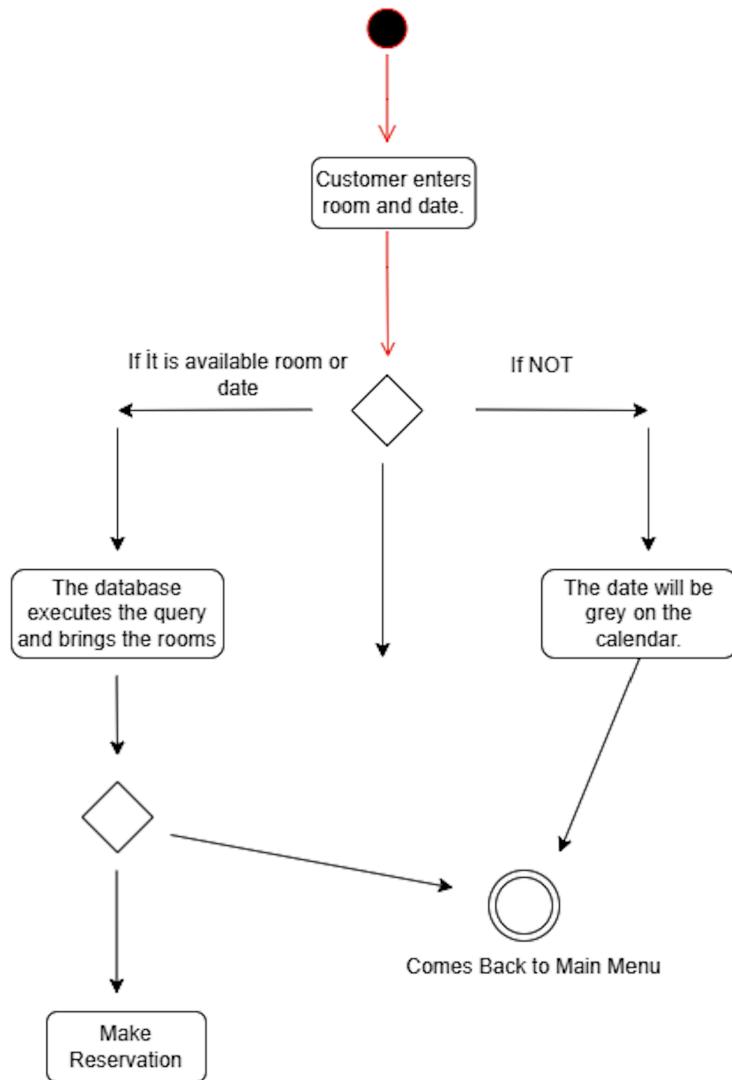


Figure 4.21: Activity Diagram for Check Availability

## 5 Class Diagram

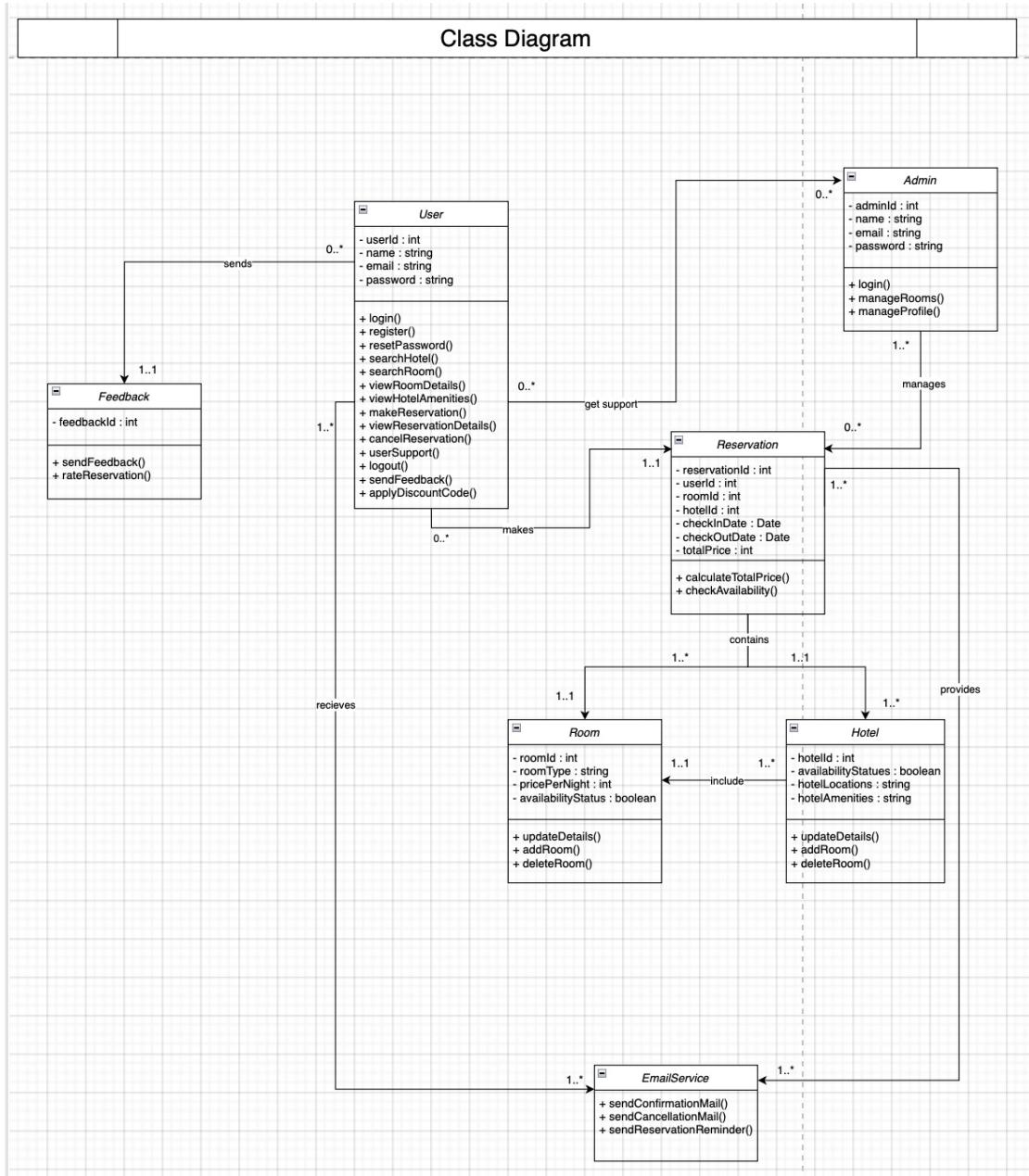


Figure 5.1: Class Diagram

# 6 Sequence Diagrams

## 6.1 Sequence Diagram 1: Login

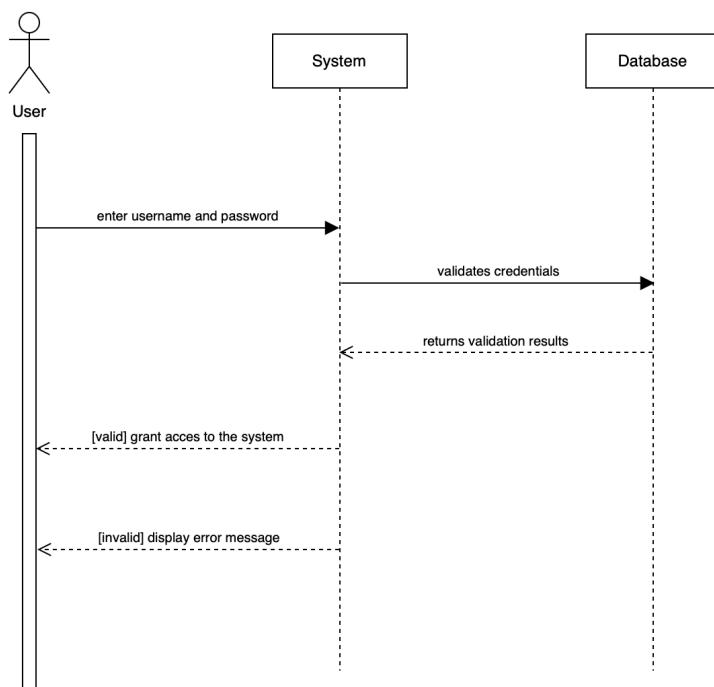


Figure 6.1: Sequence Diagram for Login

## 6.2 Sequence Diagram 2: Register

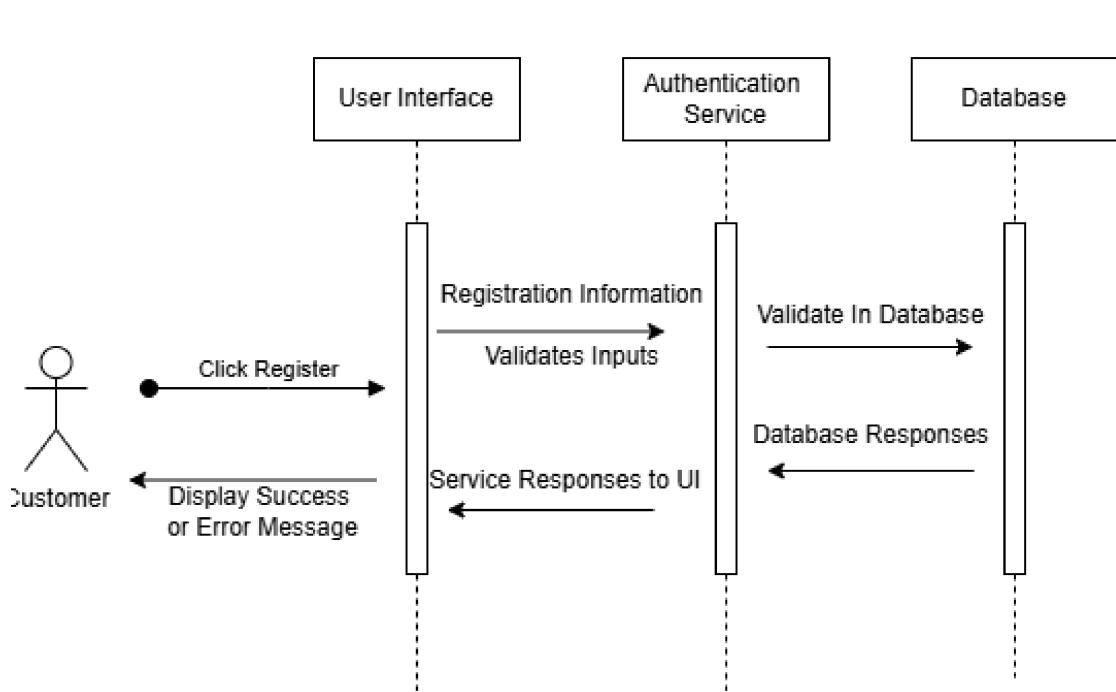


Figure 6.2: Sequence Diagram for Register

### 6.3 Sequence Diagram 3: Reset Password

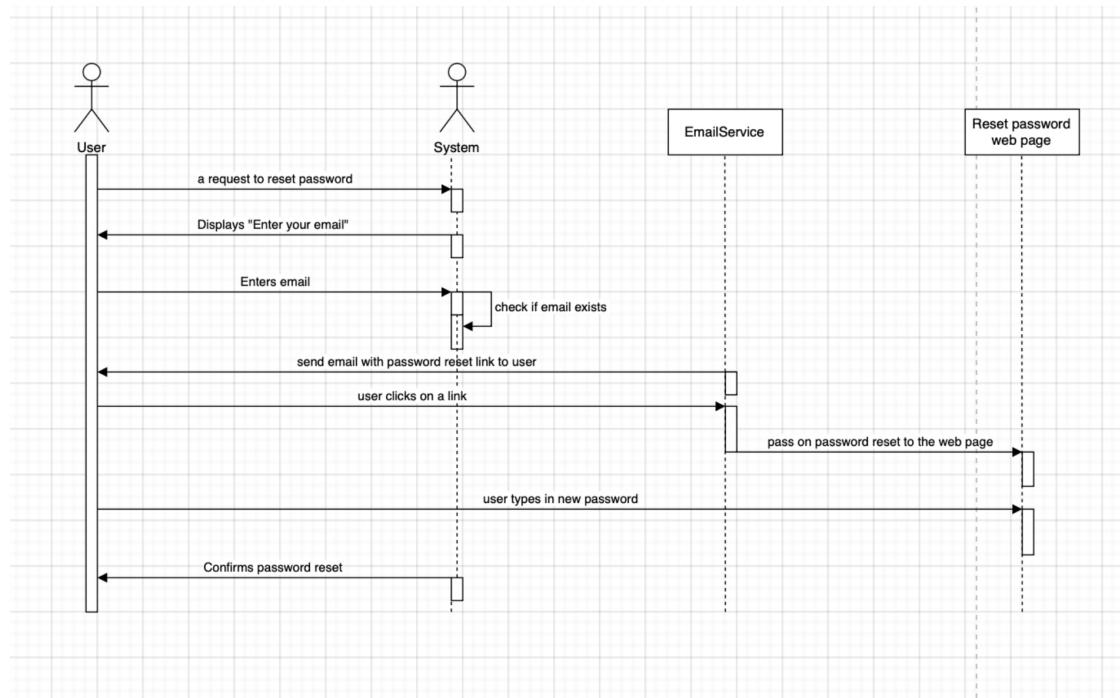


Figure 6.3: Sequence Diagram for Reset Password

## 6.4 Sequence Diagram 4: Search Hotel

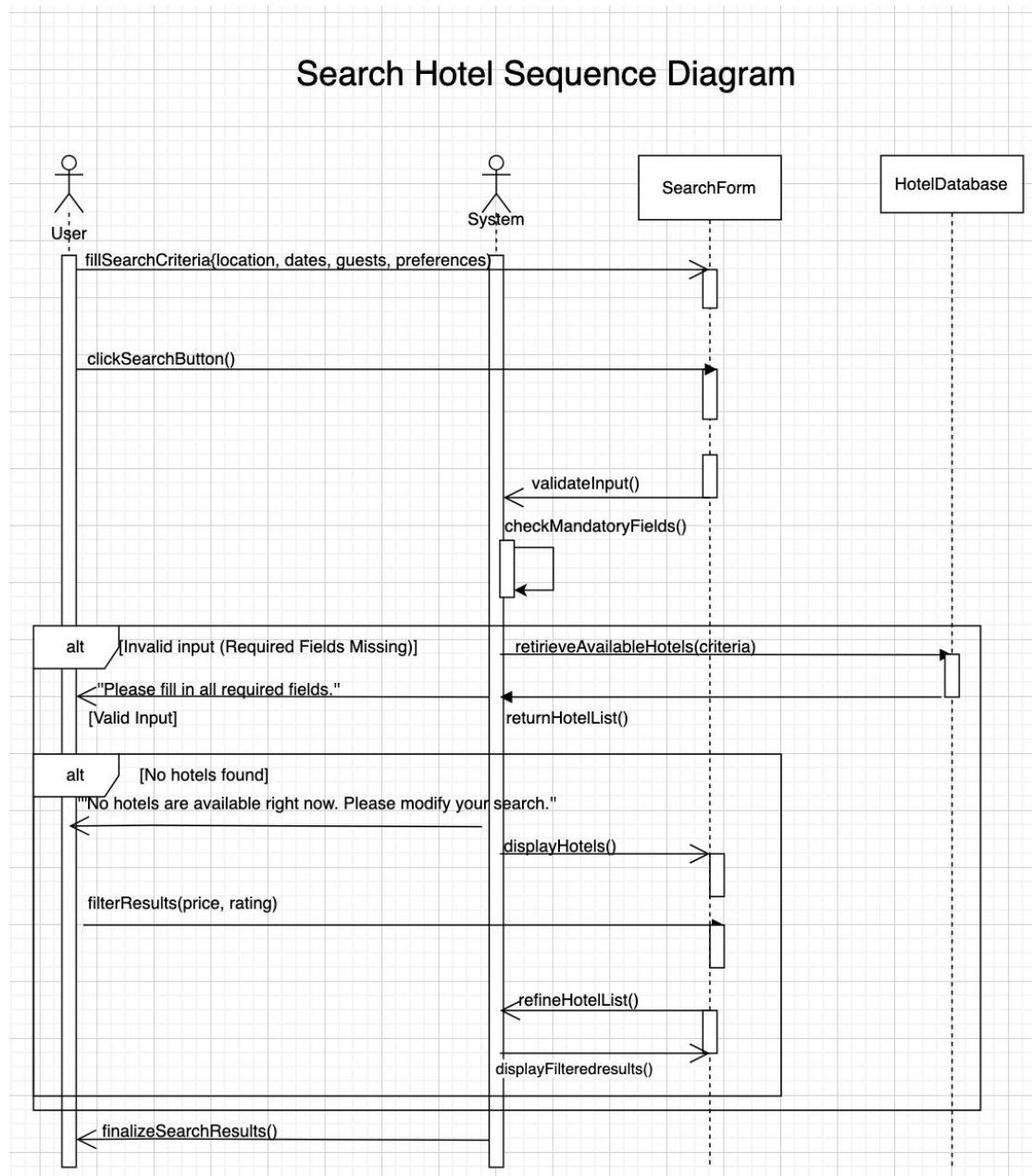


Figure 6.4: Sequence Diagram for Search Hotel

## 6.5 Sequence Diagram 5: Search Room

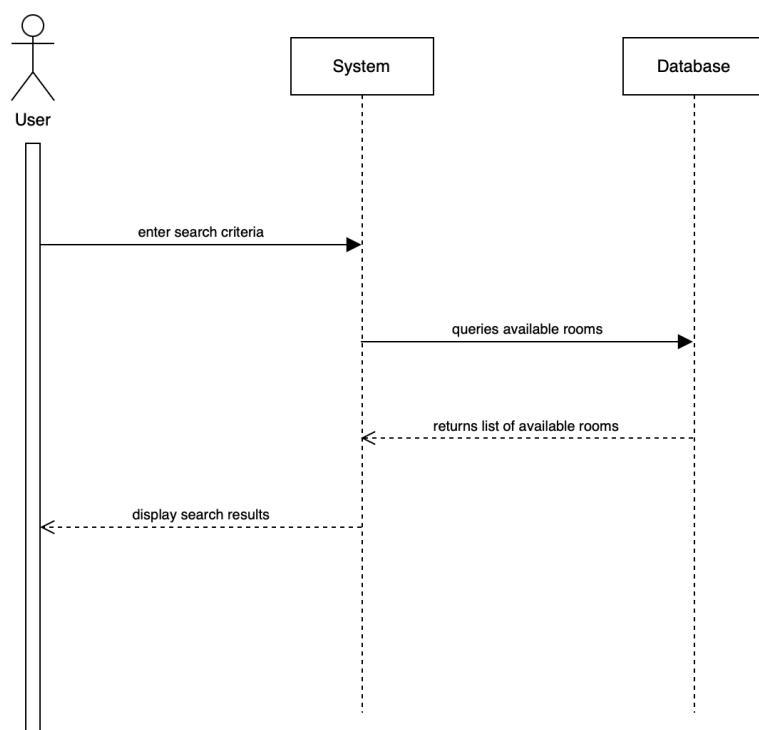


Figure 6.5: Sequence Diagram for Search Room

## 6.6 Sequence Diagram 6: View Room Details

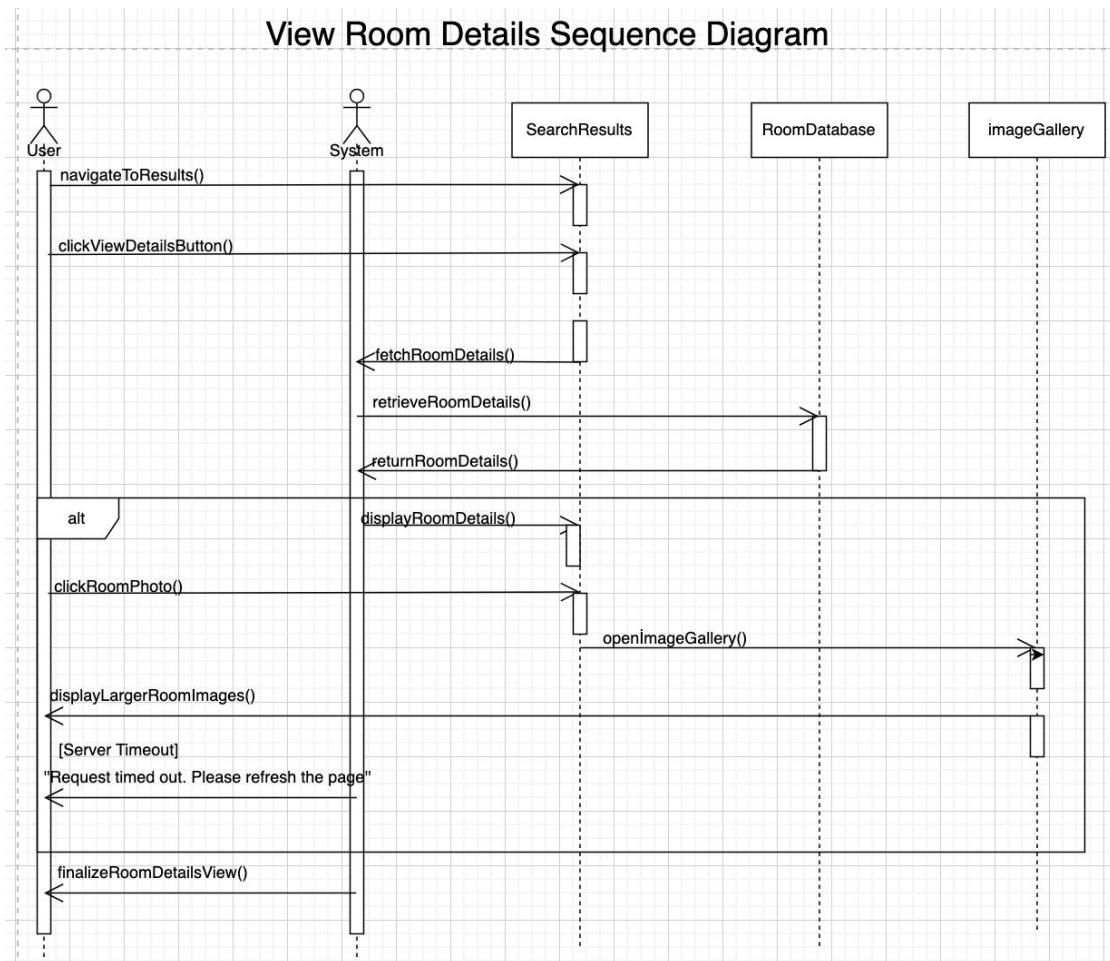


Figure 6.6: Sequence Diagram for View Room Details

## 6.7 Sequence Diagram 7: View Hotel Amenities

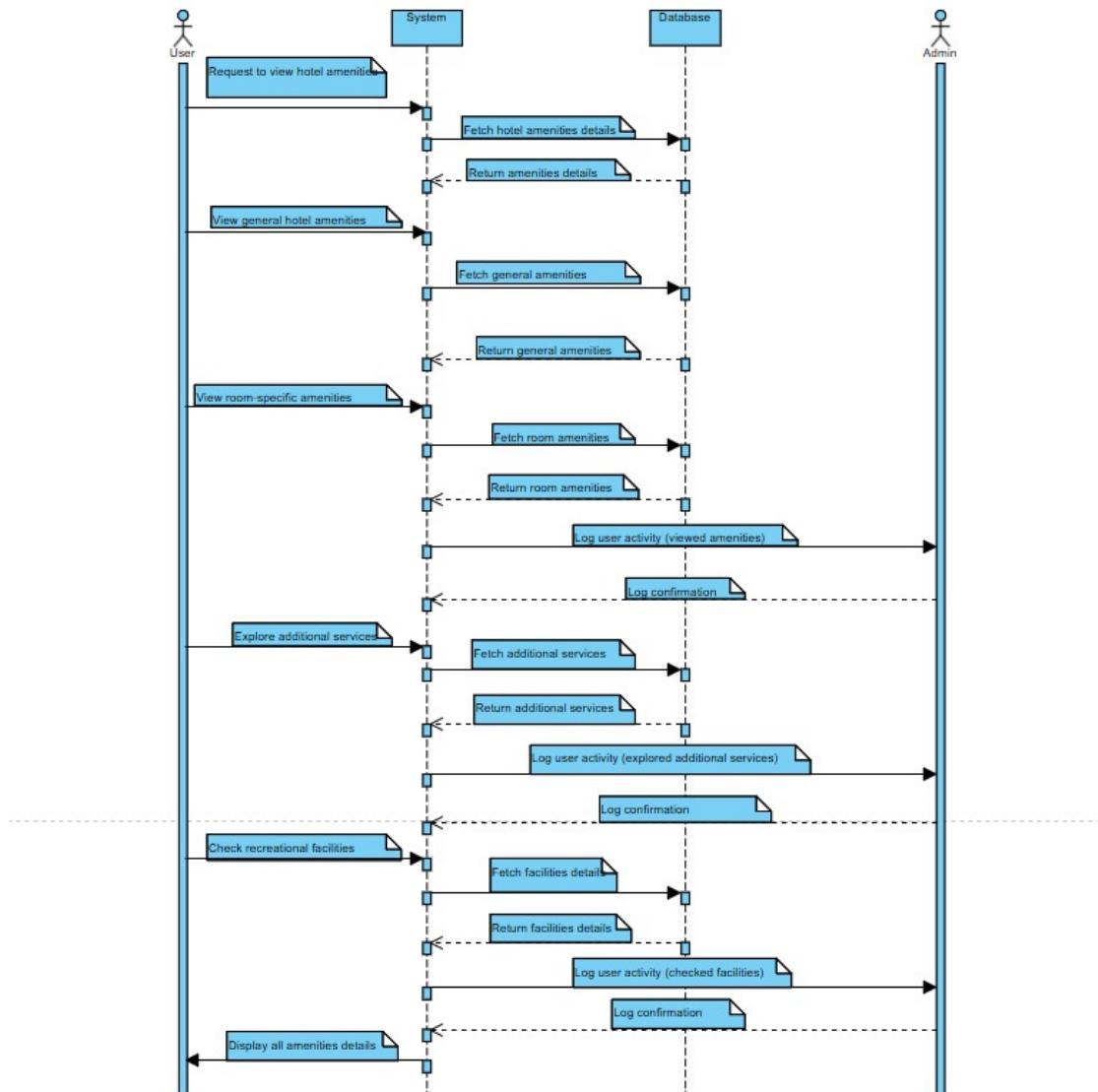


Figure 6.7: Sequence Diagram for View Hotel Amenities

## 6.8 Sequence Diagram 8: Make Reservation

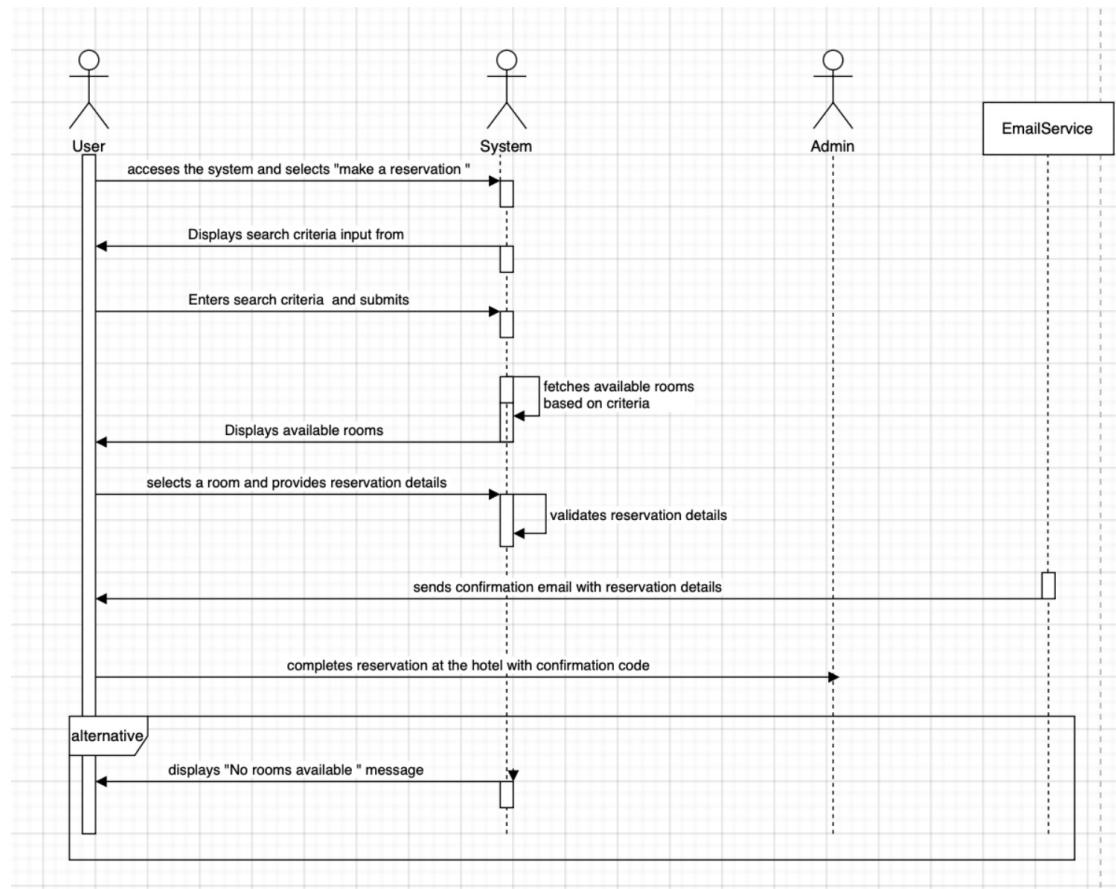


Figure 6.8: Sequence Diagram for Make Reservation

## 6.9 Sequence Diagram 9: View Reservation Details

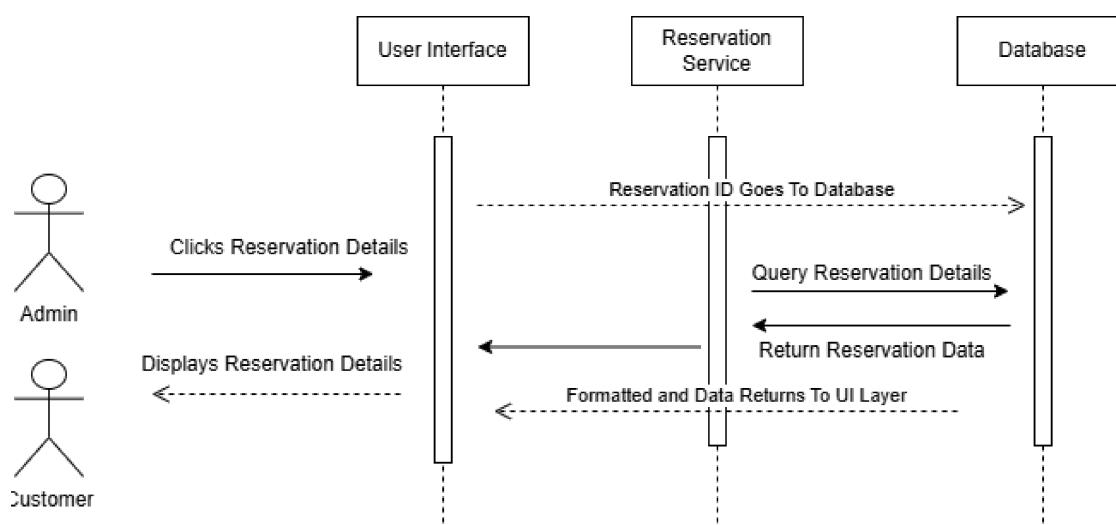


Figure 6.9: Sequence Diagram for View Reservation Details

## 6.10 Sequence Diagram 10: Cancel Reservation

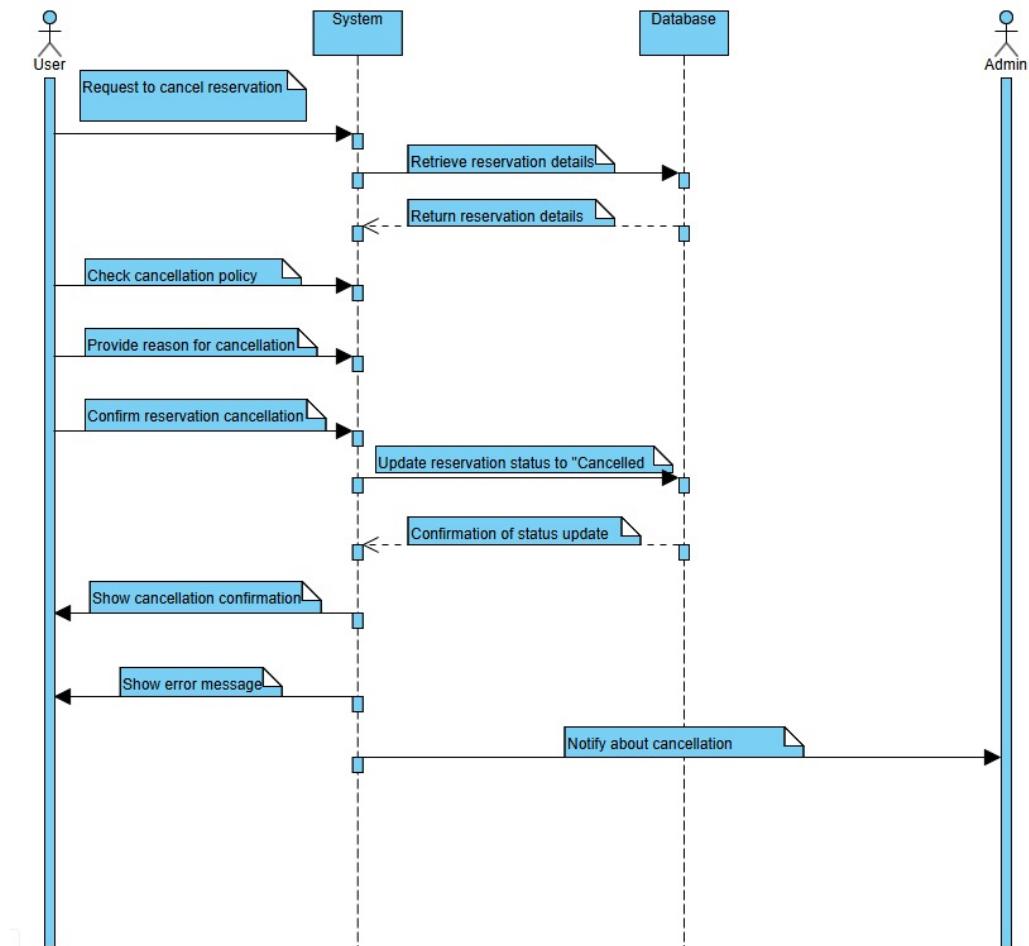


Figure 6.10: sequence Diagram for Cancel Reservation

## 6.11 Sequence Diagram 11: User Support

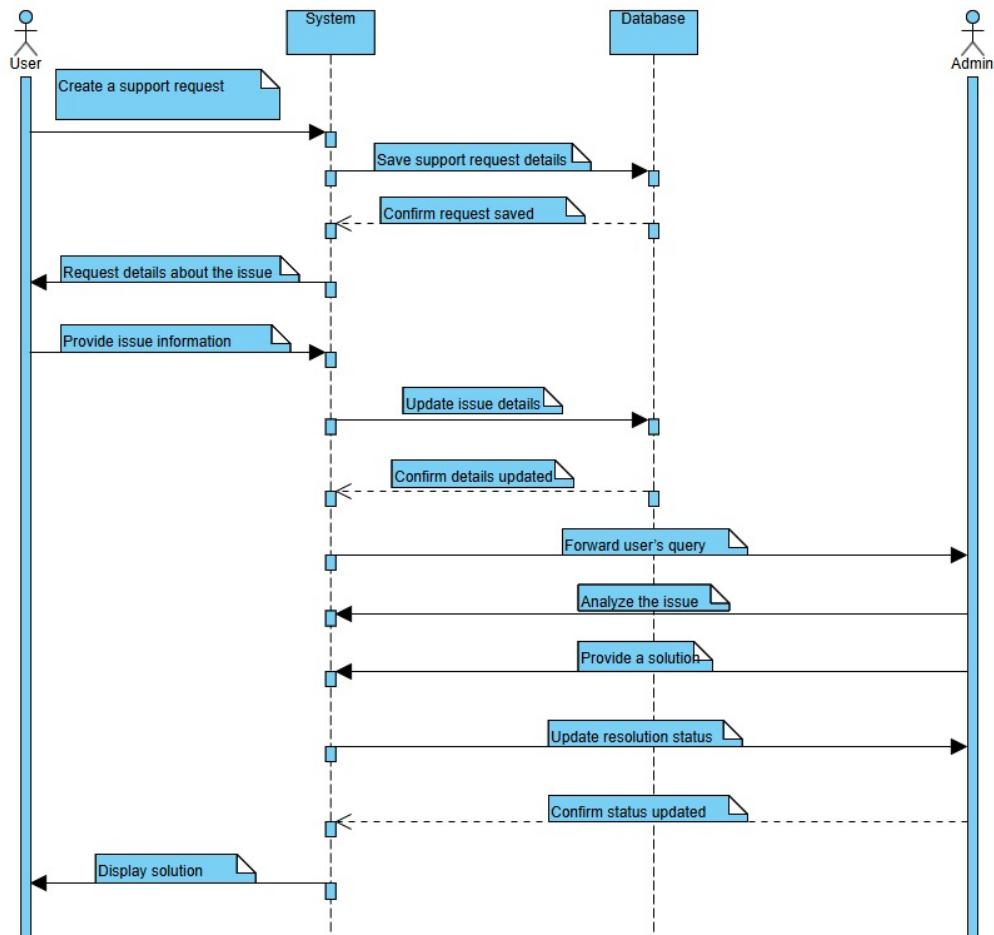


Figure 6.11: Sequence Diagram for User Support

## 6.12 Sequence Diagram 12: Logout

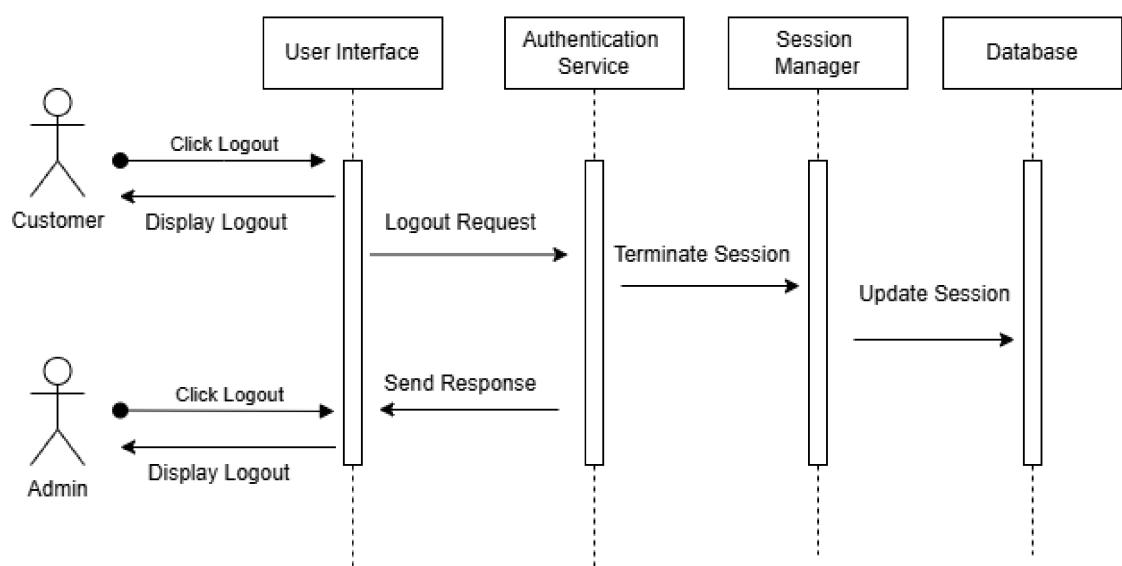


Figure 6.12: Sequence Diagram for Logout

## 6.13 Sequence Diagram 13: Send Feedback

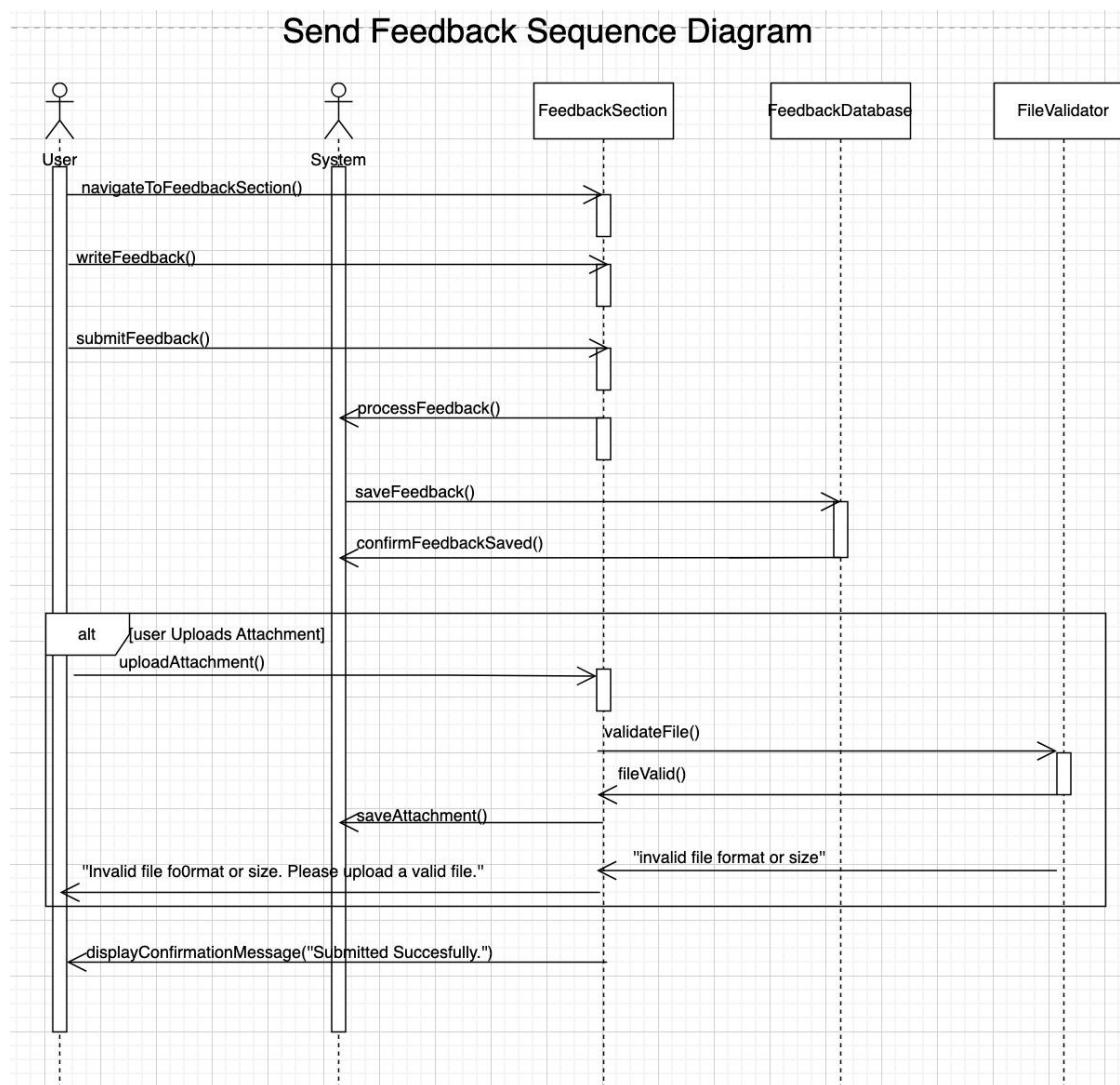


Figure 6.13: Sequence Diagram for Send Feedback

## 6.14 Sequence Diagram 14: Apply Discount Code

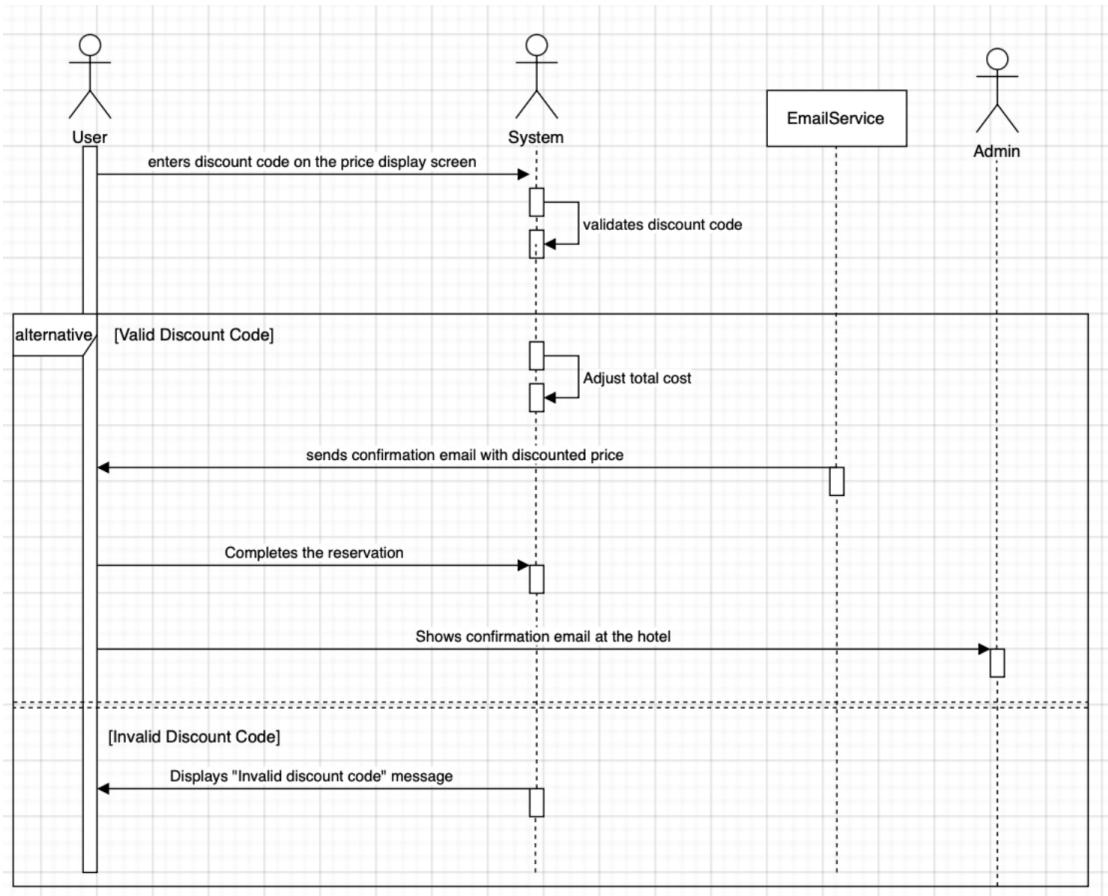


Figure 6.14: Sequence Diagram for Apply Discount Code

## 6.15 Sequence Diagram 15: Manage Rooms

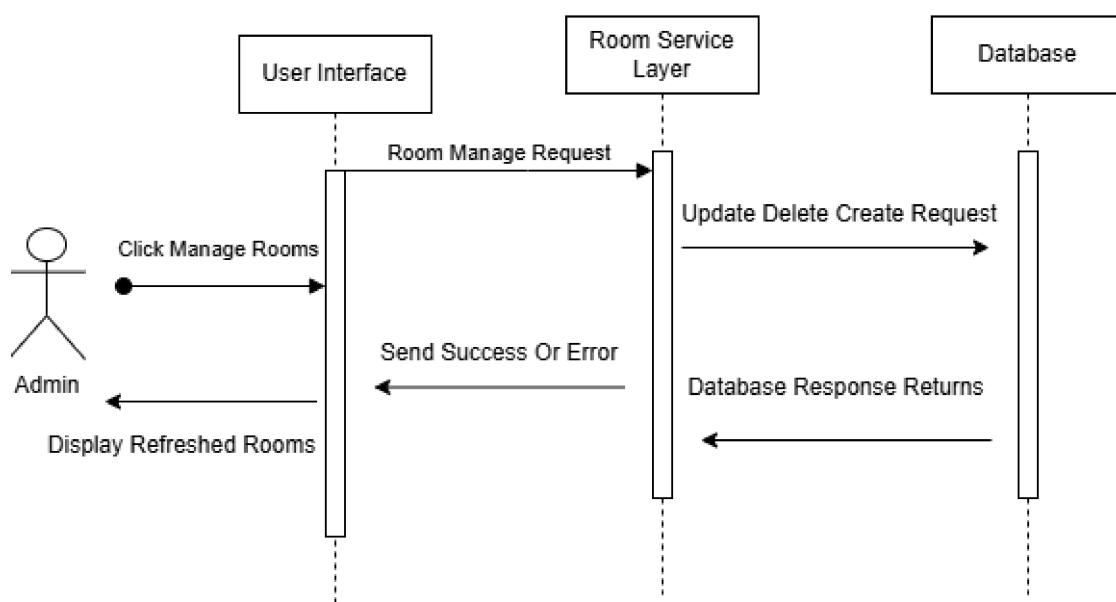


Figure 6.15: Sequence Diagram for Manage Rooms

## 6.16 sequence Diagram 16: Manage User Profile

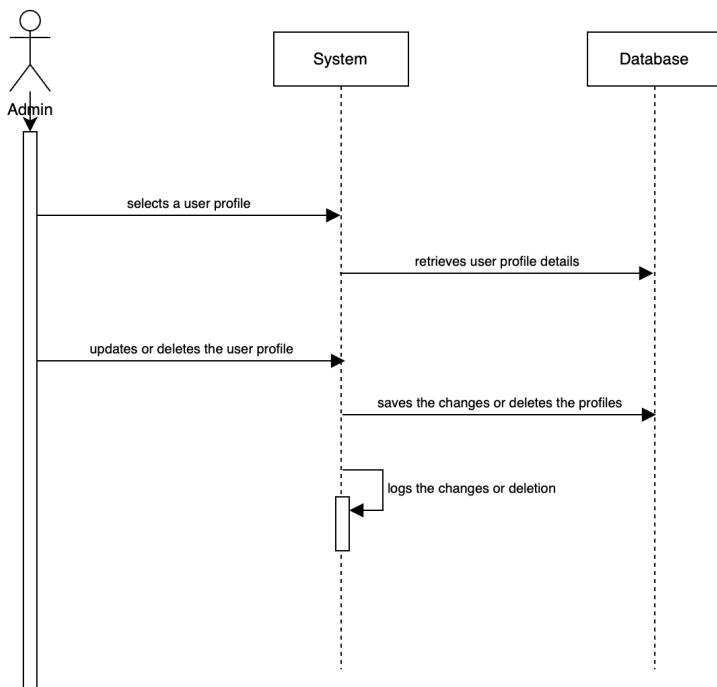


Figure 6.16: Sequence Diagram for Manage User Profile

## 6.17 Sequence Diagram 17: Send Confirmation Mail

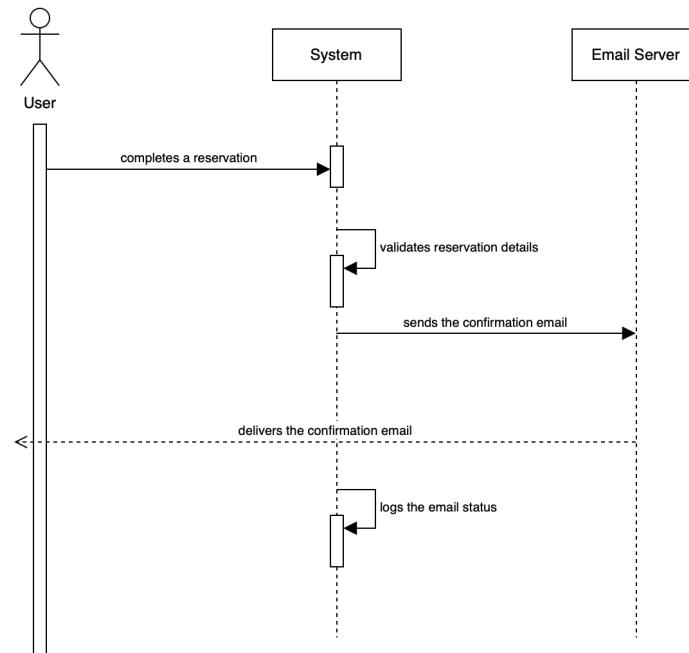


Figure 6.17: Sequence Diagram for Send Confirmation Mail

## 6.18 Sequence Diagram 18: Reservation Reminder

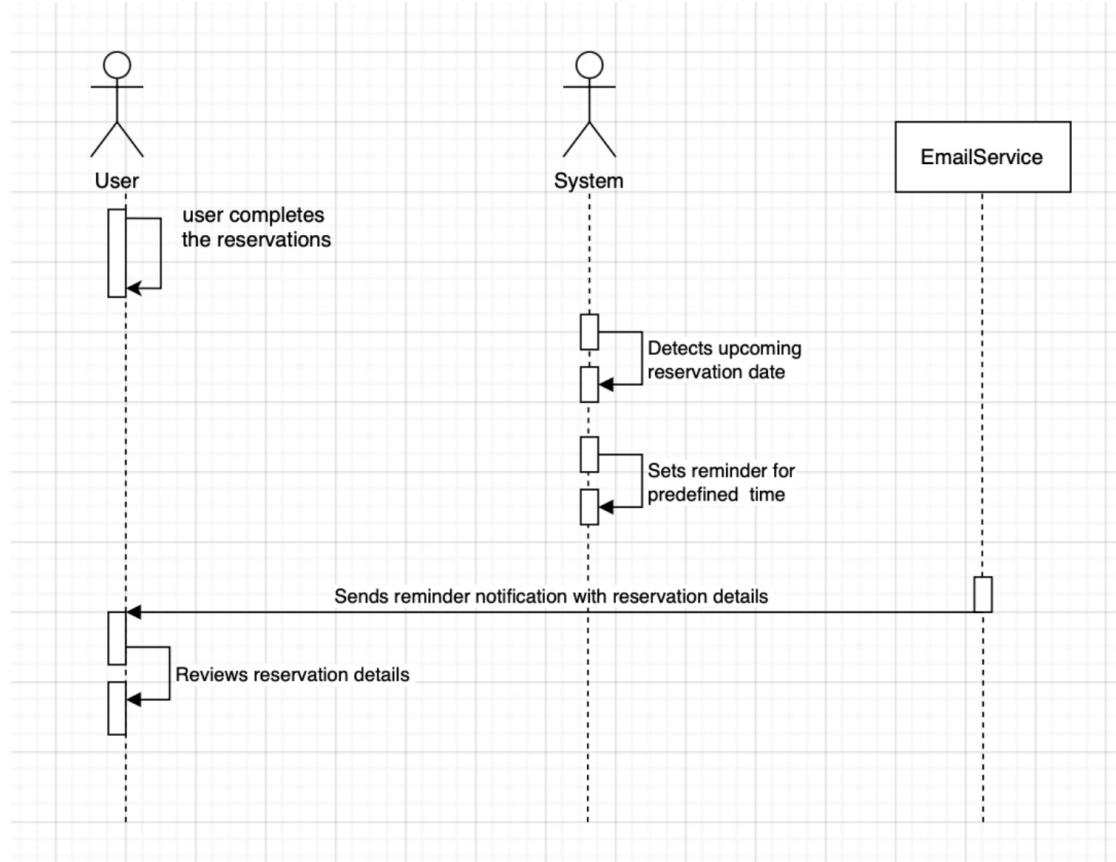


Figure 6.18: Sequence Diagram for Reservation Reminder

## 6.19 Sequence Diagram 19: Send Cancellation Mail

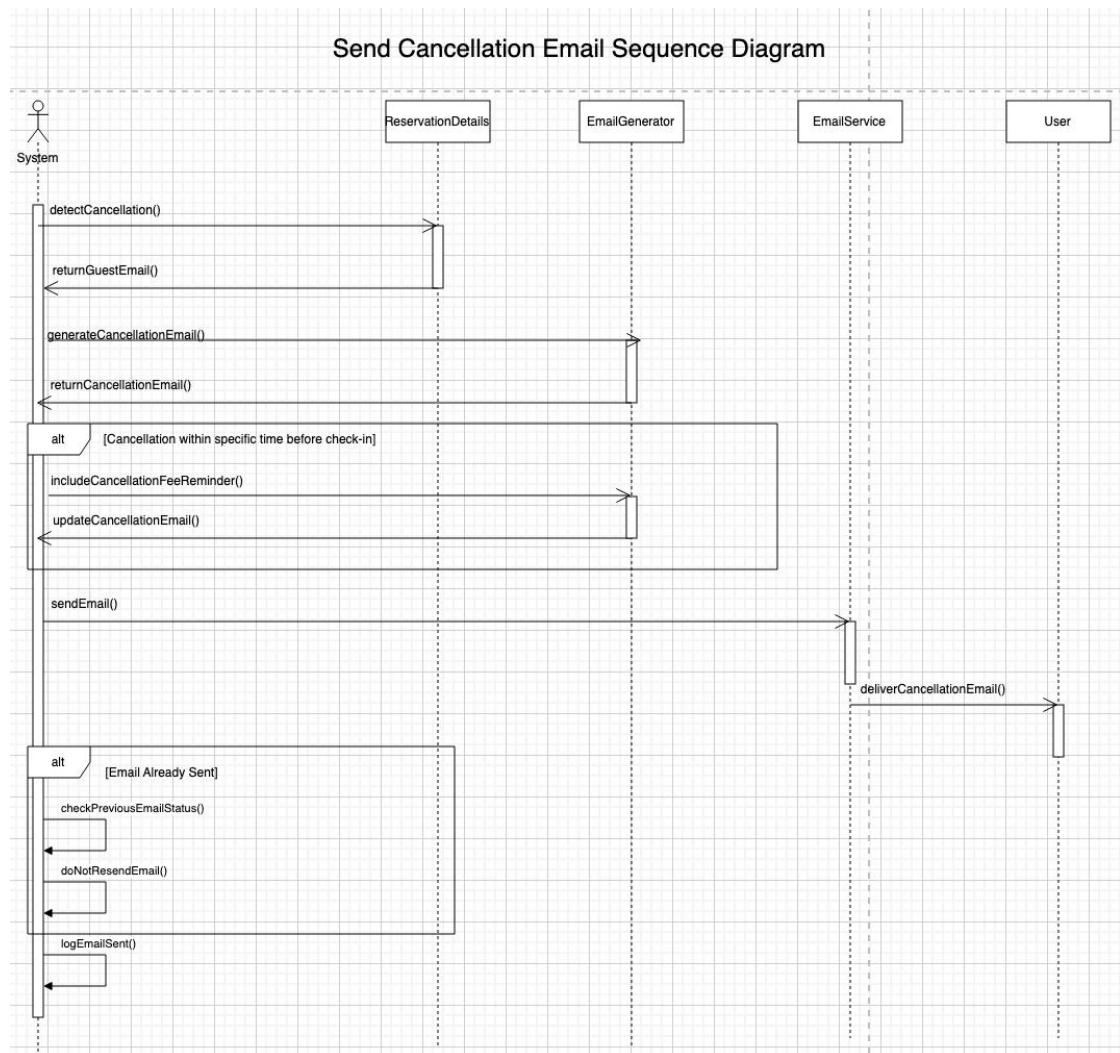


Figure 6.19: Sequence Diagram for Send Cancellation Mail

## 6.20 Sequence Diagram 20: Calculate Total Price

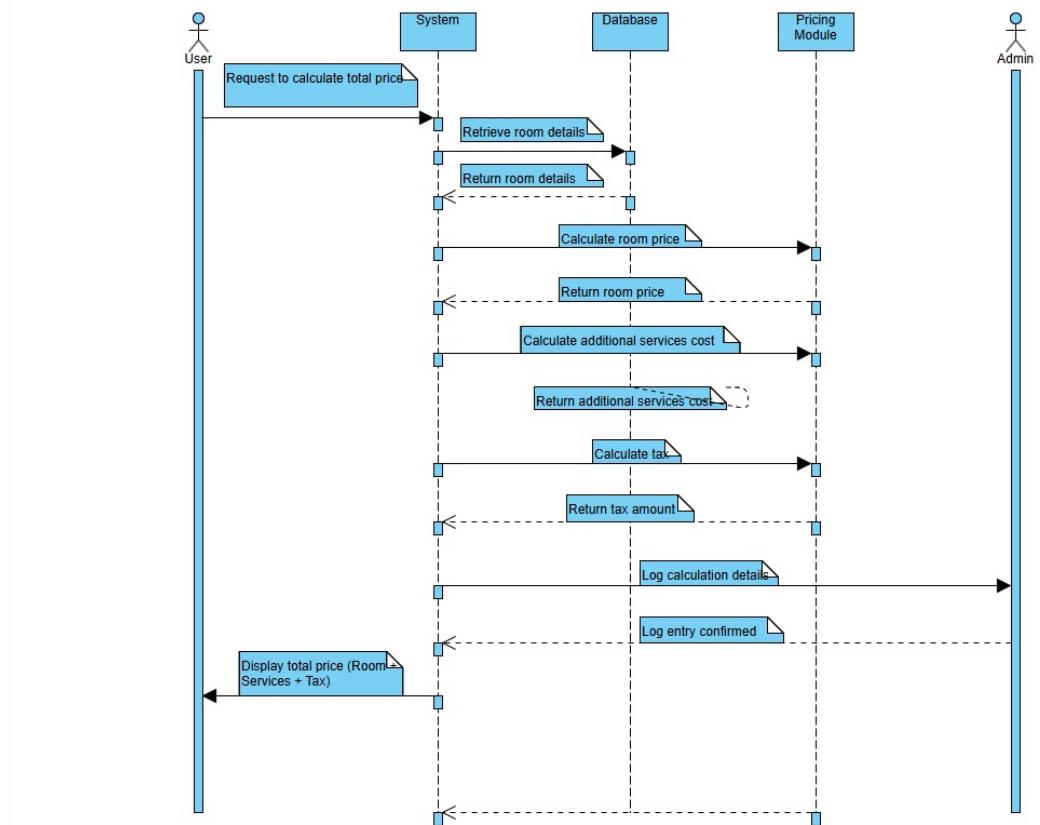


Figure 6.20: Sequence Diagram for Calculate Total Price

## 6.21 Sequence Diagram 21: Check Availability

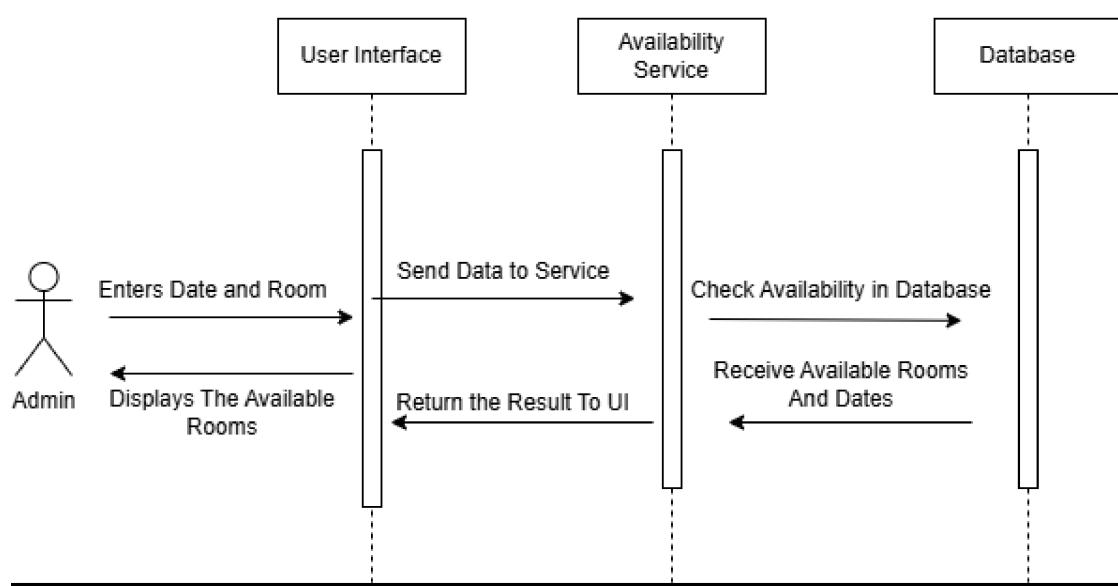


Figure 6.21: Sequence Diagram for Check Availability

# Appendices / Glossary

**Actor:** An entity interacting with the system (e.g., User, Admin).

**UML:** Unified Modeling Language, used for visualizing the design of a system.