



## **IT313-Software Engineering**

### **Design Document**

#### **Guest house Booking System**

Group 6

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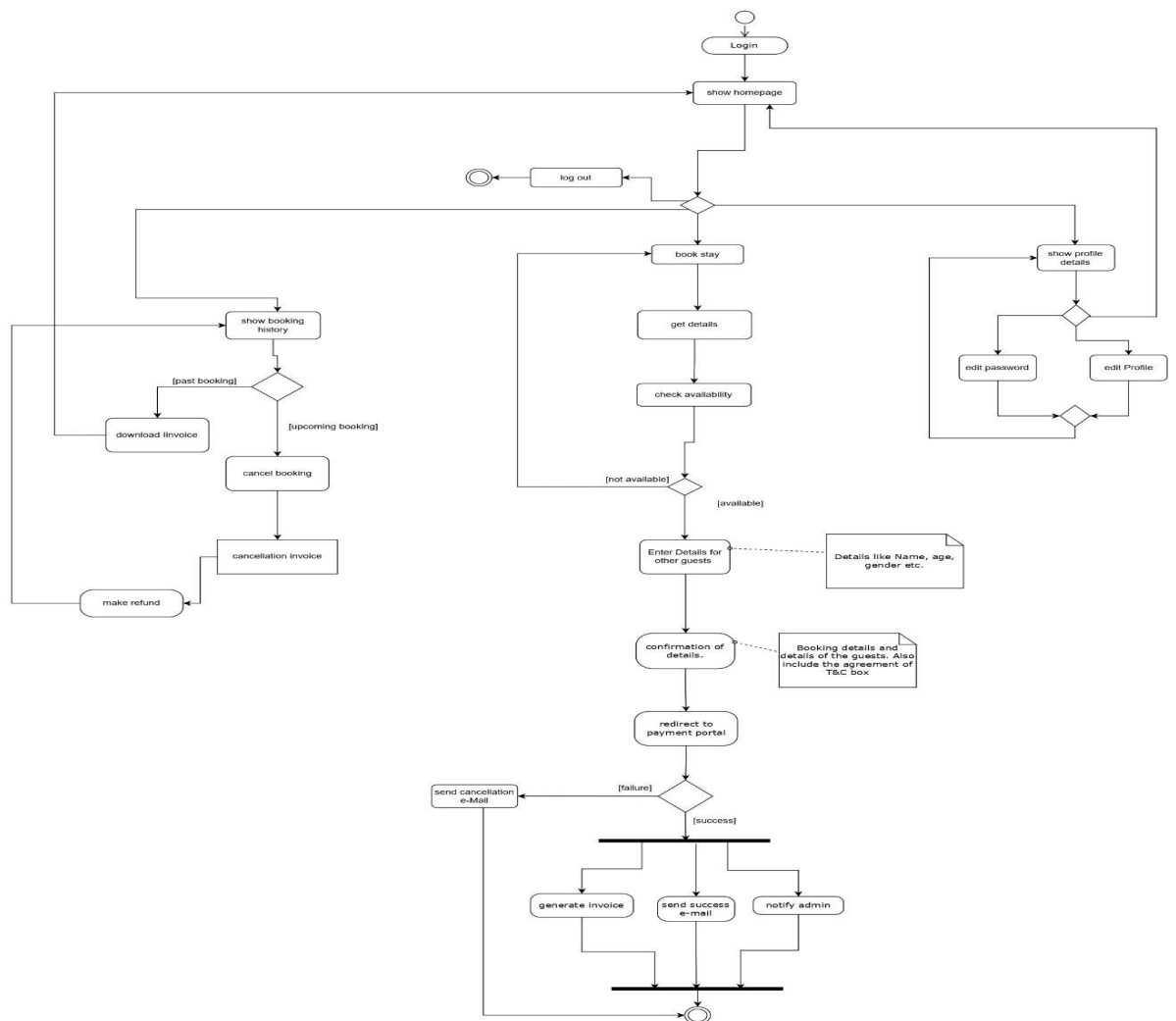
## 1.Activity Diagram

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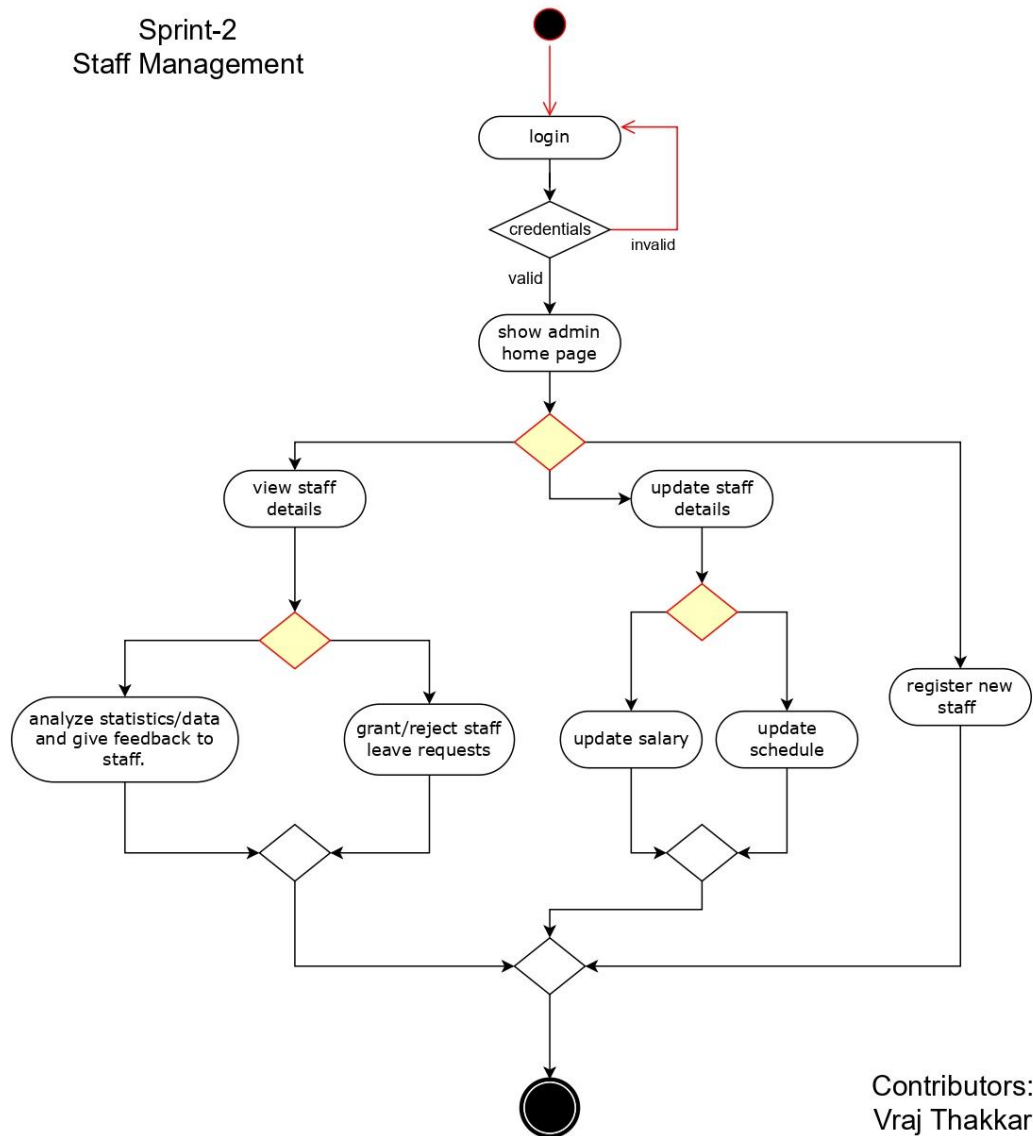
### 1.Activity Diagram

Sprint-1  
Online Booking  
System



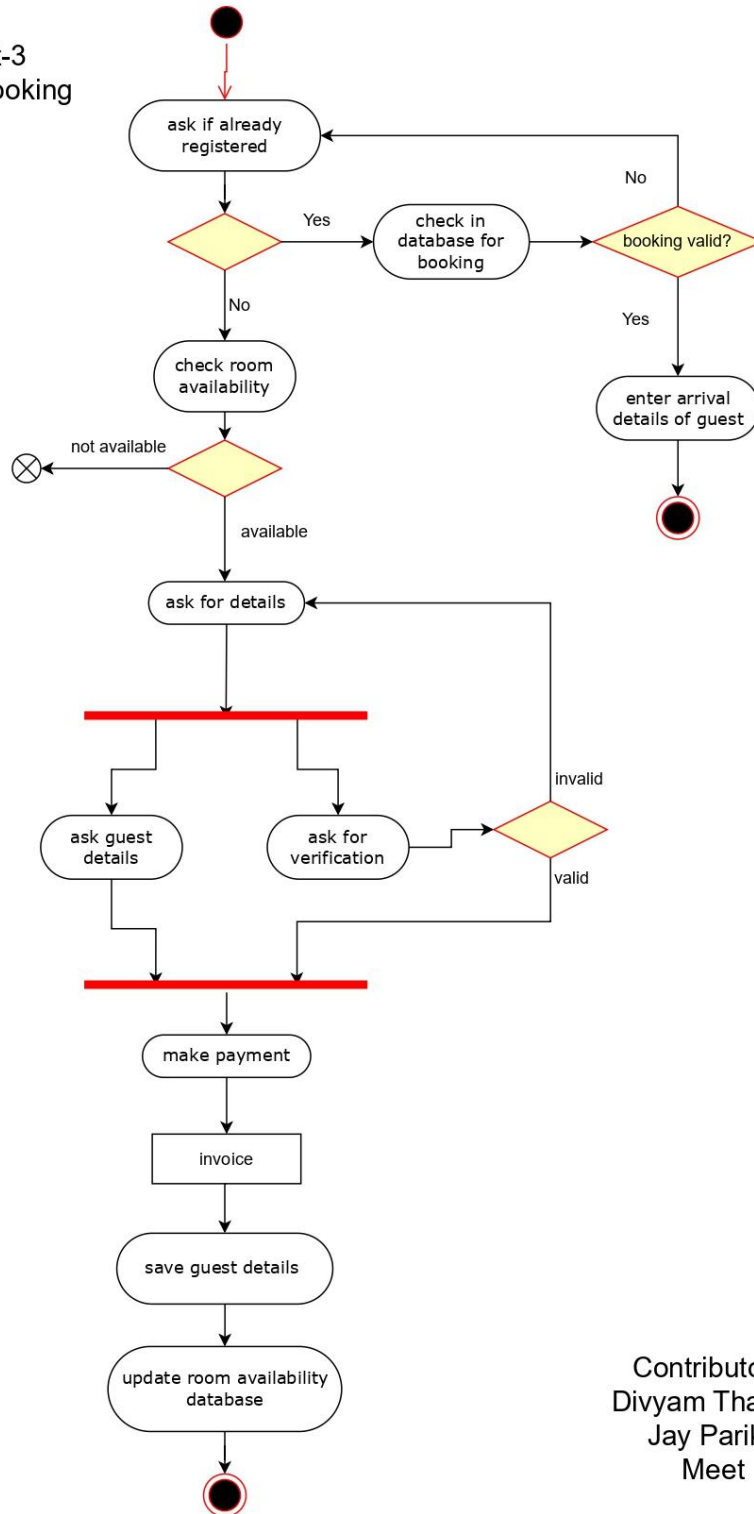
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Sprint-2  
Staff Management



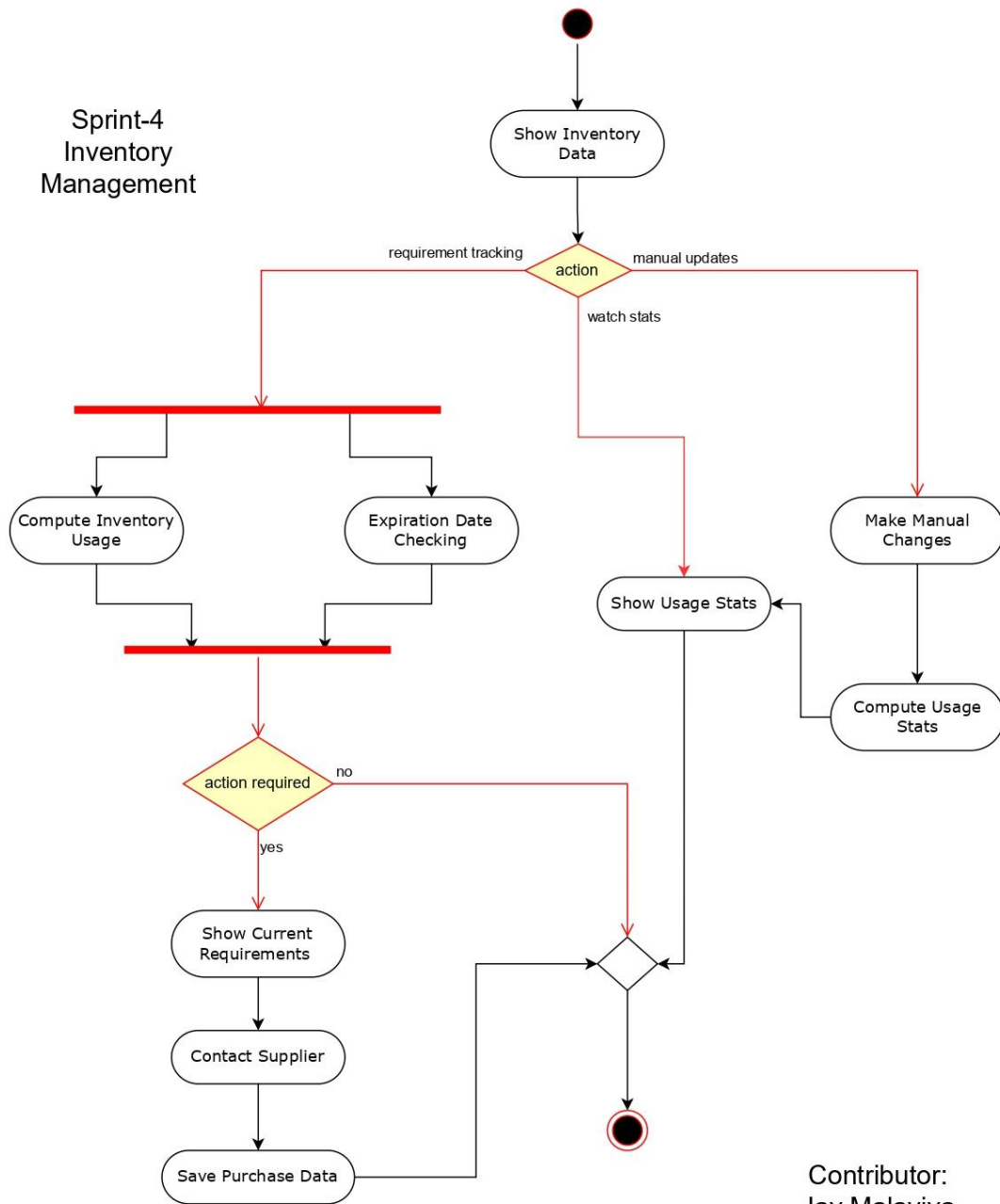
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Sprint-3  
Offline Booking



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## Sprint-4 Inventory Management



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The activity diagram for our Guesthouse Booking and Management System intricately illustrates the dynamic flow of activities across four core components: online booking, staff management, inventory management, and offline booking.

#### Online Booking Activity:

- Initiated by the "Guest," the online booking activity involves selecting dates, choosing a room, and completing the reservation process.
- The system validates the booking details, processes payment securely, and generates a confirmation.
- Exception paths may include unsuccessful payment or room unavailability, redirecting the process accordingly.

#### Staff Management Activity:

- "Staff/Receptionist" initiates activities updating/reject the leave requests, updating staff schedule and salary.
- The system also can add new staff by admin side.
- The admin can also analyse the statistics and give necessary feedback to the staff.

#### Inventory Management Activity:

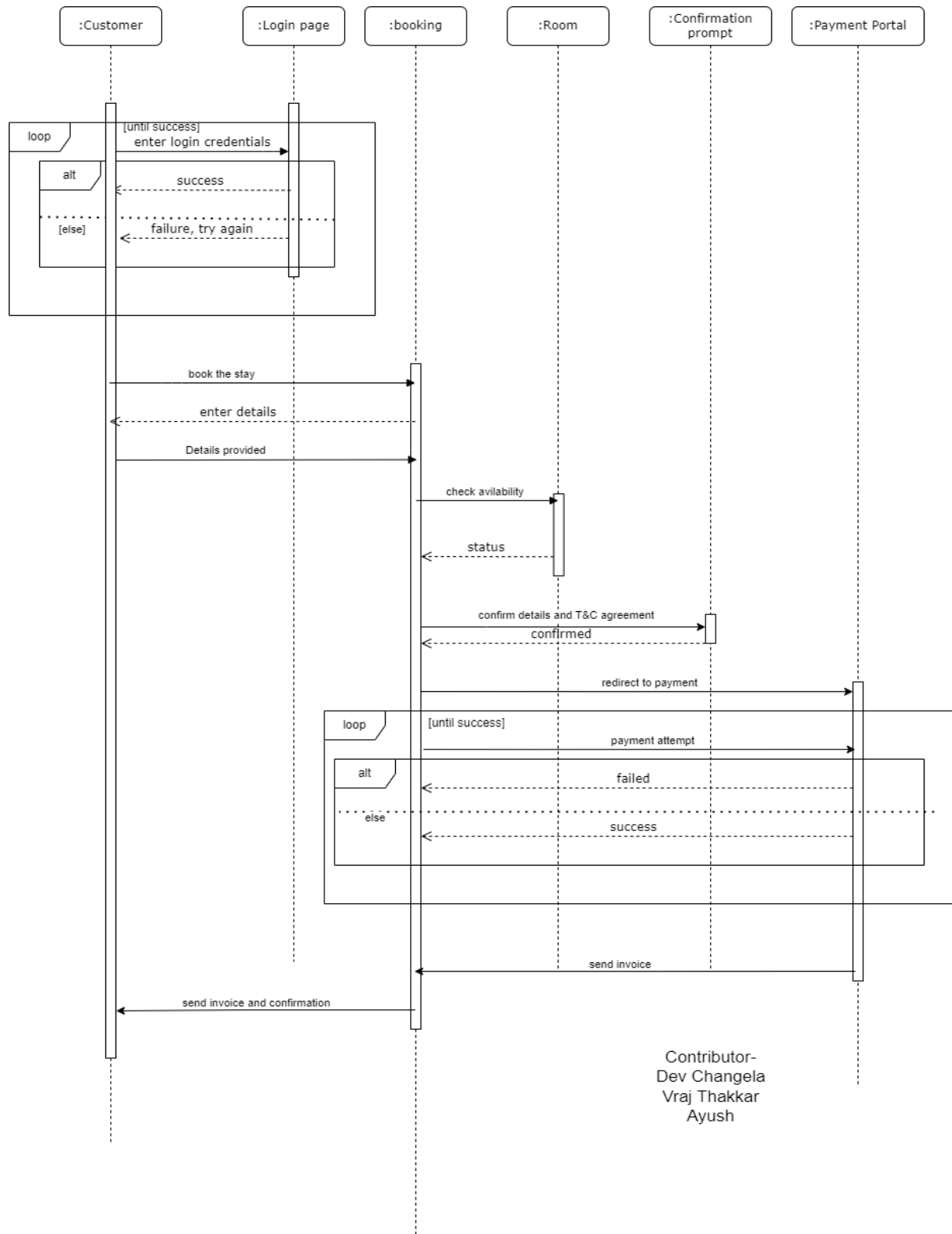
- The system shows the inventory data and also show the usage statistics.
- The system monitors room occupancy, updates inventory status, and alerts staff to any discrepancies.
- If inventory stock is about to get empty, the the staff can also approach the supplier regarding the inventory required.
- Exception paths may involve system errors or discrepancies in inventory data.

#### Offline Booking Activity:

- In scenarios where guests prefer offline booking, staff initiates the process by recording reservation details manually.
- The system validates and processes offline bookings, updating the reservation and inventory databases.
- Exception paths may include incomplete information or data entry errors, prompting correction processes.

## 2. Sequence Diagram

### Online Booking



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The sequence diagram for the Guesthouse Booking System depicts the flow of messages and actions between various components of the system during a particular scenario or use case. It shows the interactions between the customer, hotel staff/admin and the booking page.

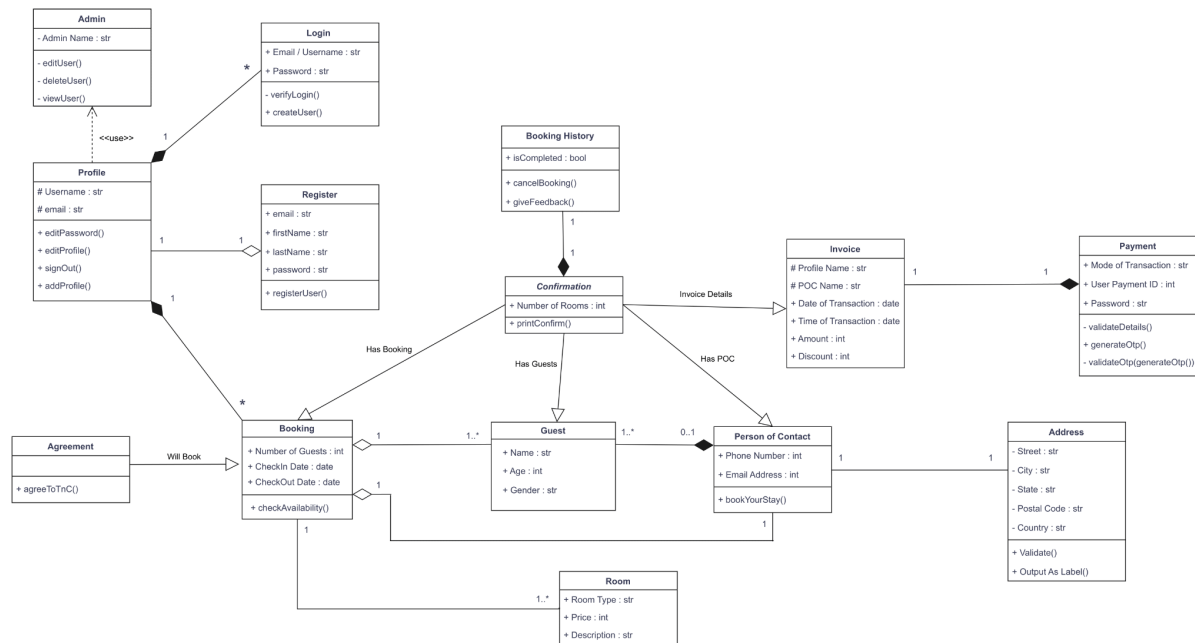
The user enters its credentials in the login page after which he/she selects the stay in the hotel/guesthouse on the specific dates and gives its details. The user thereafter gets status of availability of that particular room and guesthouse on that particular day. If the room is available he/she then proceeds to the payment portal where they complete their transaction. If the transaction is failed the user is sent again to the booking page else he gets the invoice of the transaction done by him.

Overall, the sequence diagram provides a visual representation of the steps involved in the order placement process and the interactions between the different components of the system.



### 3. Class Diagram

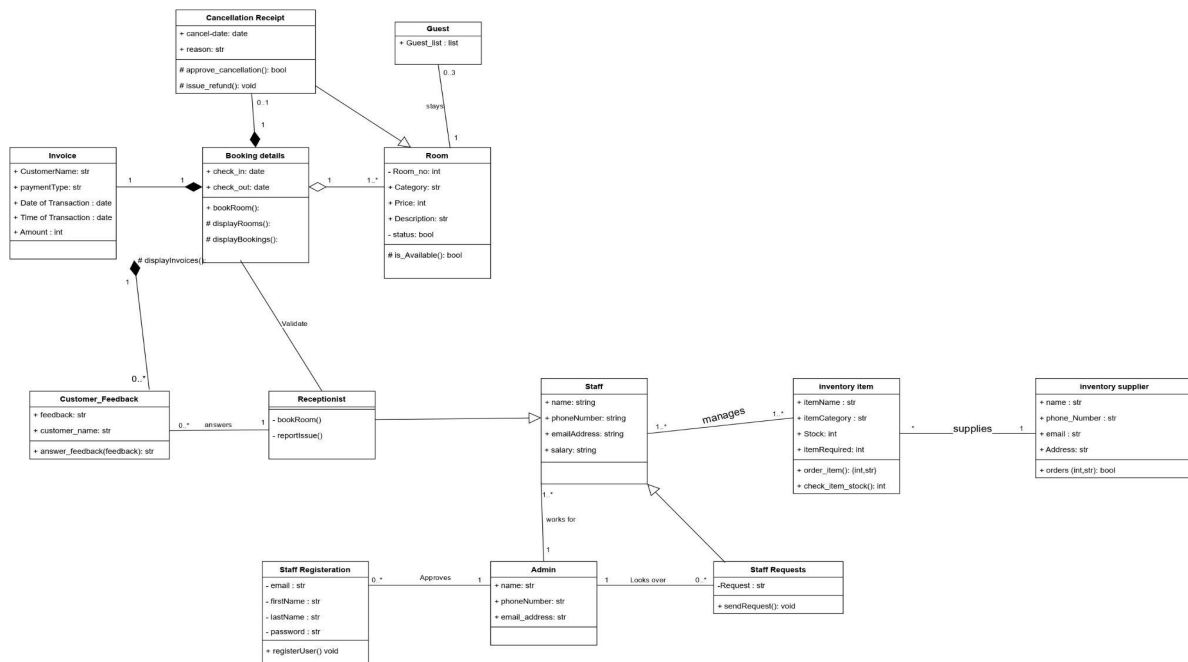
#### Online Booking Class Diagram



Contributed by:  
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Dev Changela

The Booking class diagram encapsulates the essential components and relationships governing the booking functionalities within our Guesthouse Booking and Management System. This Booking class diagram serves as a blueprint for implementing a robust and intuitive booking system, aligning with the dynamic needs of our users.

## Management Class Diagram



contributed by:  
Dev Changela

The Management class diagram outlines the foundational classes and relationships governing the administrative aspects of our Guesthouse Booking and Management System. Key classes include "Staff/Receptionist" representing individuals responsible for day-to-day operations, "Hotel Admin" representing the administrative authority, and "Room" and "Booking details" classes carrying essential details for effective management. This Management class diagram provides a structured overview for implementing efficient administrative processes, facilitating seamless coordination and control within the system.