

1.) Draw a UML diagram for hotel reservation system. In a hotel reservation system, a customer can make online booking for a hotel, by specifying the accommodation requirements such as type of room (AC/Non-AC, One bed/two bed), total no of rooms, duration of stay. The system selects a suitable hotel as per customer's requirements. If a hotel is found then the availability of rooms in that hotel is checked. The charges are calculated for the selected requirement and these are acknowledged to the customer. If the customer is satisfactory about the selection made by the system, then he confirms the reservation.

### **Aim:**

To design a UML diagram for a Hotel Reservation System that models the process of online booking by a customer, including room selection, hotel selection, availability check, cost calculation, and confirmation.

### **Procedure:**

#### **1. Identify the Use Cases:**

- Understand the different functionalities required in the hotel reservation system, such as booking, availability check, and payment.

#### **2. Define Actors:**

- Identify the actors involved, such as Customer, Hotel, and System.

#### **3. Draw Use Case Diagram:**

- Represent the interactions between the actors and use cases using an oval shape for use cases and stick figures for actors.

#### **4. Design Class Diagram:**

- Identify the major classes such as Customer, Hotel, Room, Booking, and Payment.
- Define attributes and methods for each class.
- Establish relationships between classes, like association, aggregation, and inheritance.

#### **5. Create Sequence Diagram:**

- Show how objects interact in a sequential manner for hotel booking, confirmation, and payment.

#### **6. Design Activity Diagram:**

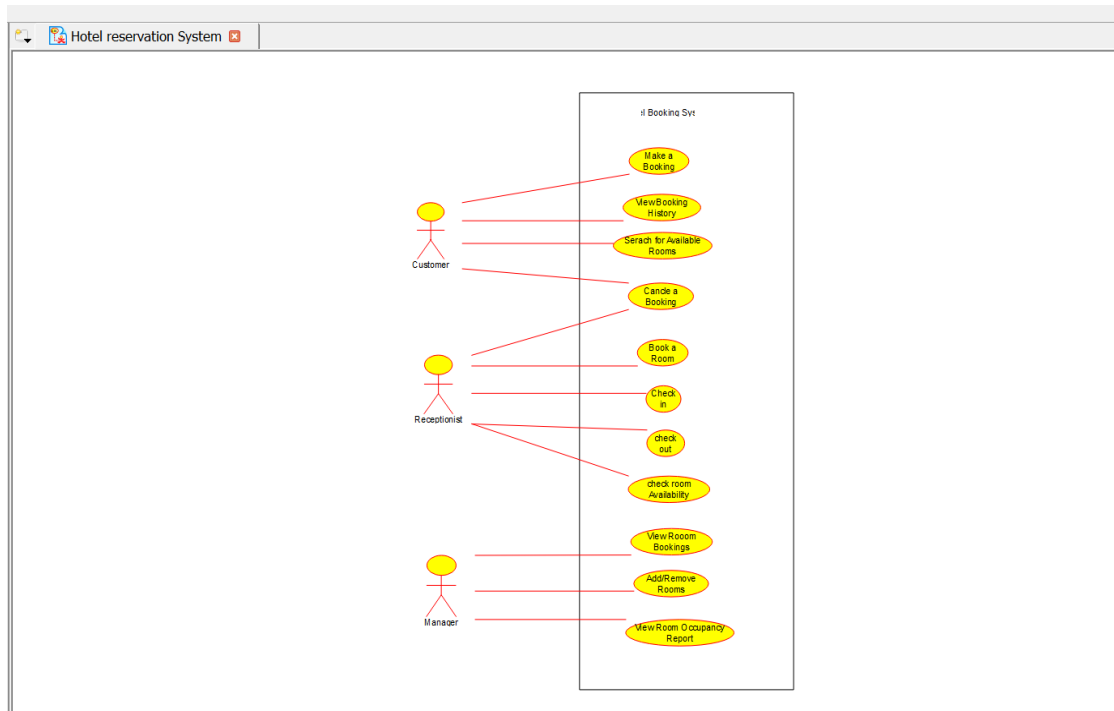
- Represent the workflow of booking a hotel using activities like search hotel, check availability, calculate charges, confirm booking, and make payment.

#### **7. Verify and Validate the UML Diagrams:**

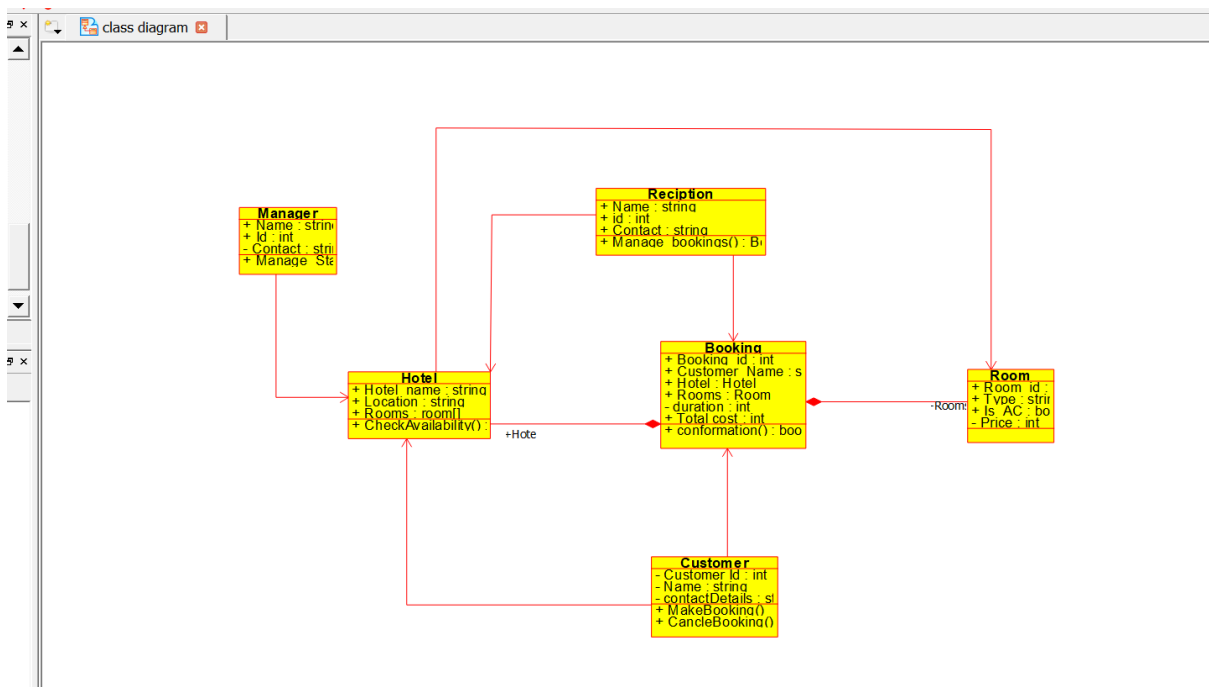
- Ensure all diagrams are correctly representing the system's functionality.

- Check for consistency between different diagrams.

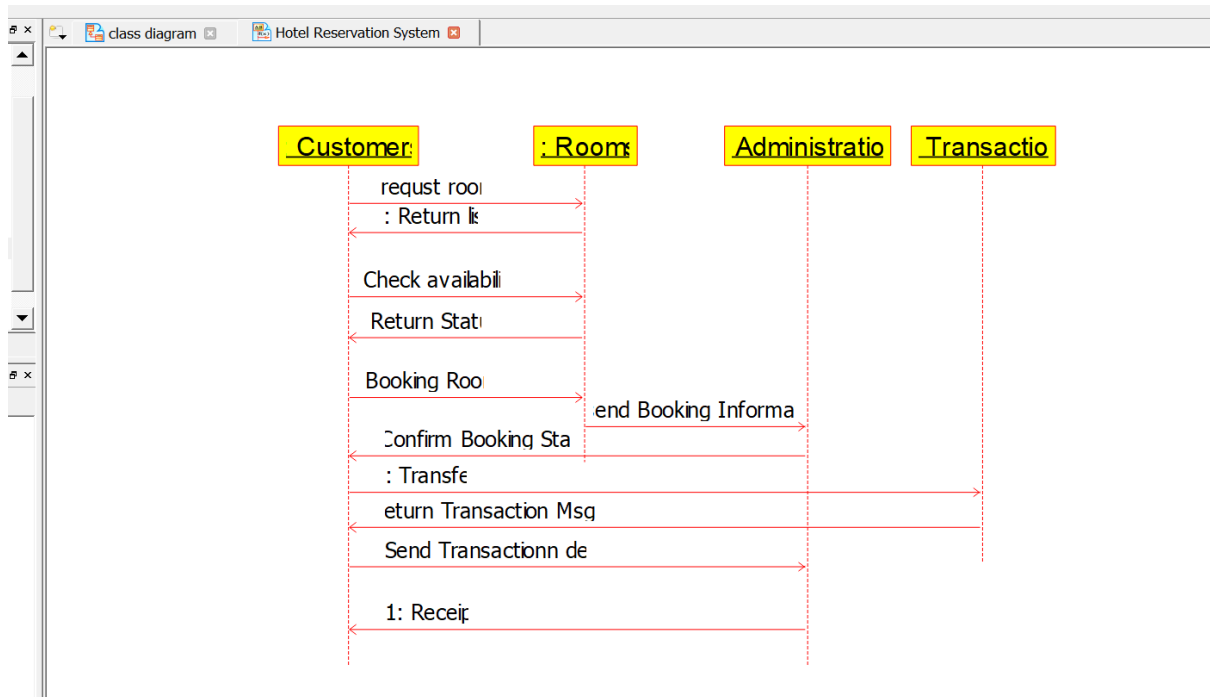
## Use Case Diagram:



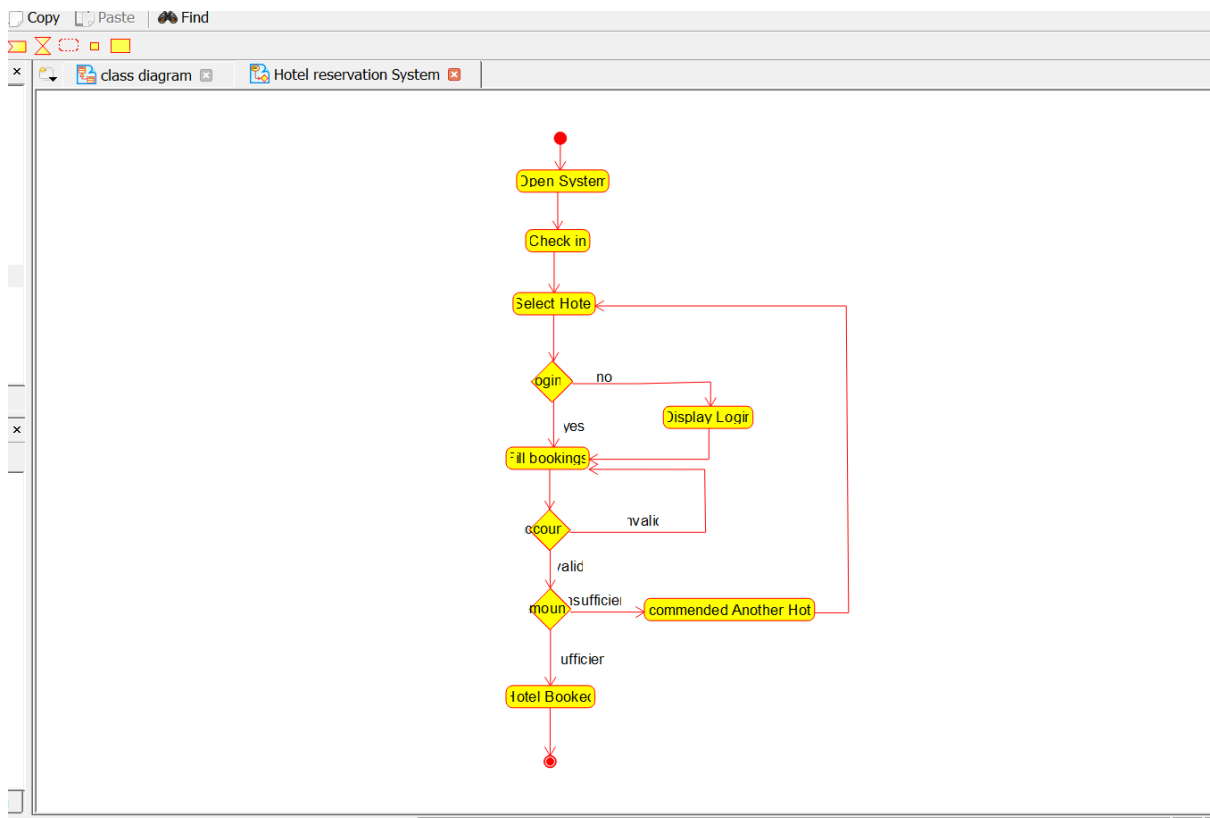
## Class Diagram:



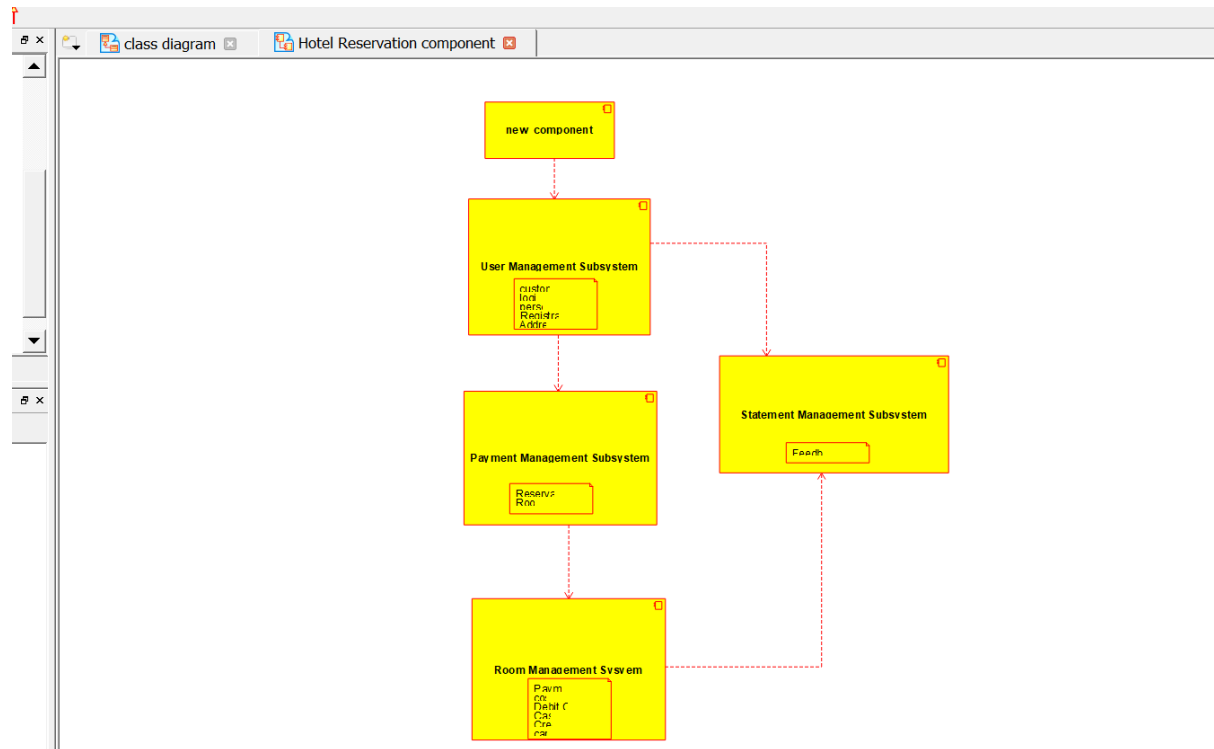
## Sequence Diagram:



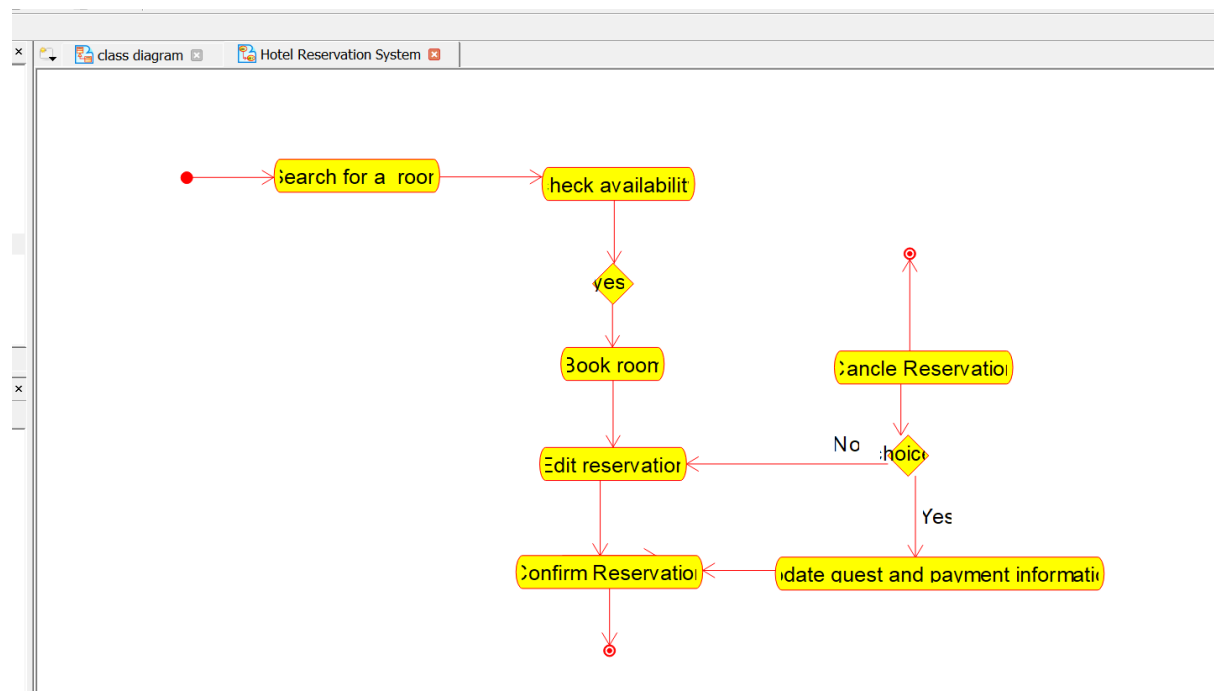
## Activity Diagram:



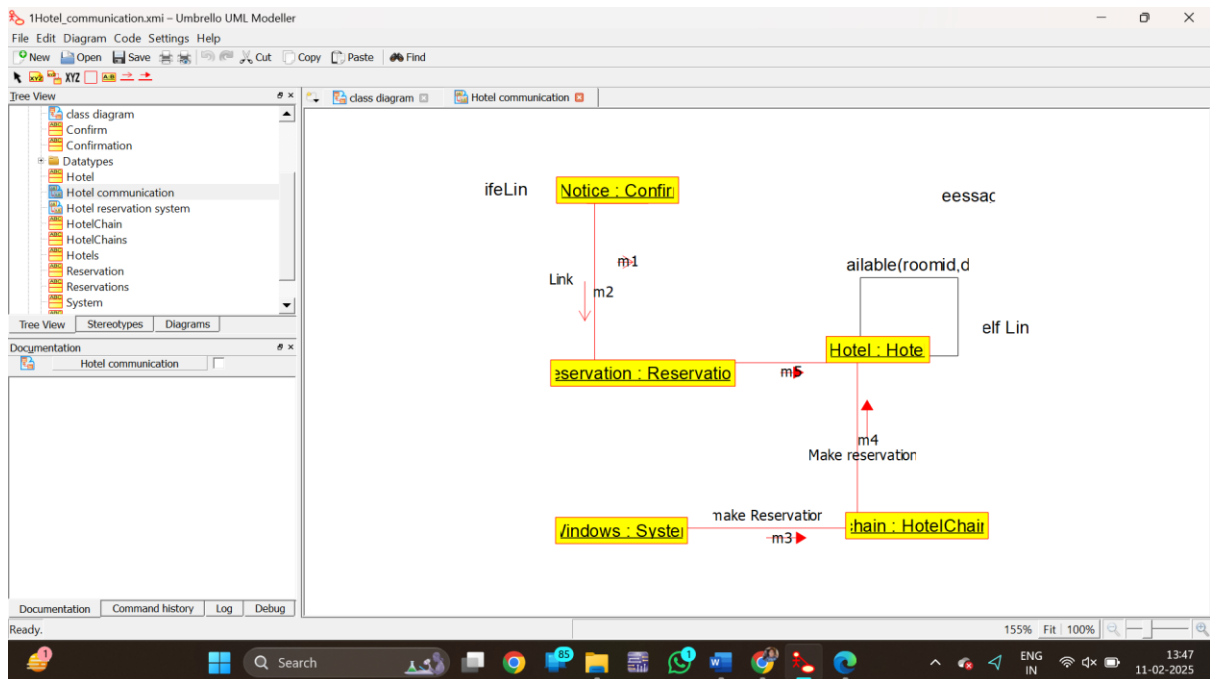
## Component Diagram:



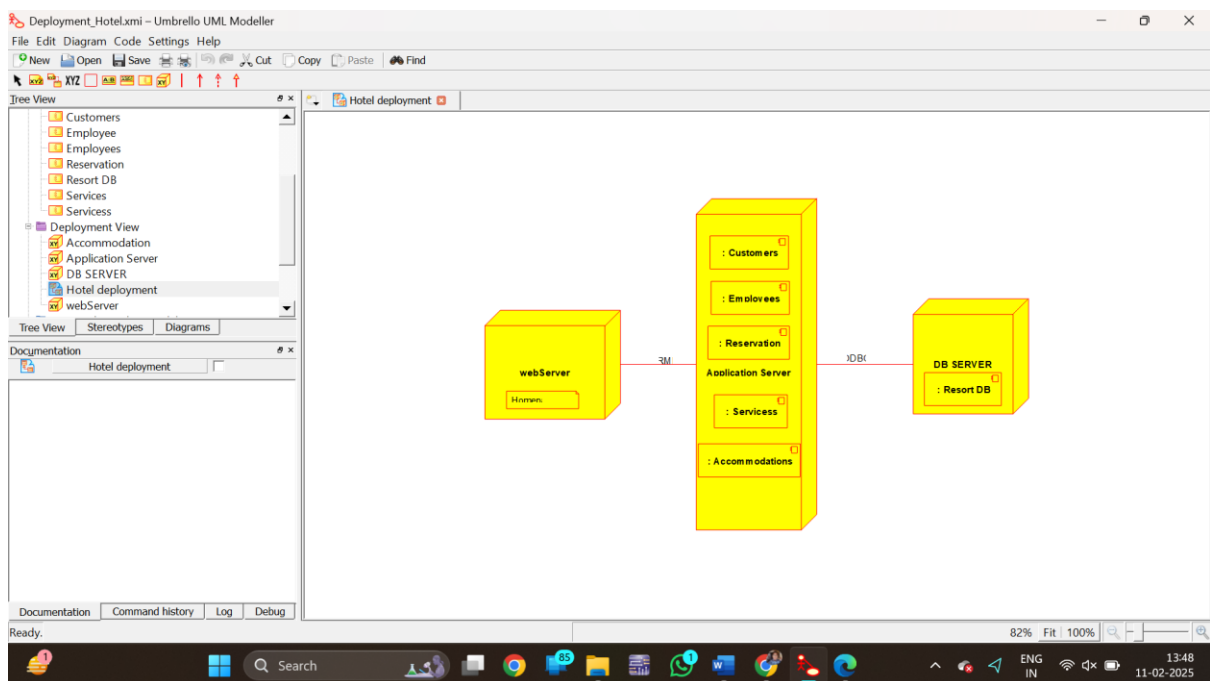
## State Diagram:



## Communication Diagram:



## Deployment Diagram:



## Result:

A UML diagram for a Hotel Reservation System is successfully designed, which includes use case, class, and sequence diagrams to model the online booking process.