American International University-Bangladesh (AIUB)

Department of Computer Science and Engineering

Faculty of Science &Technology (FST)

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CSC 00191- Object Oriented Analysis And Design (OOAD)

Section: D

Project Title: Basic Hotel Reservation System

Submitted by:

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1. Project Title: **Basic Hotel Reservation System**

2. Project Overview:

Introduction:

The "Basic Hotel Reservation System" is a simplified software solution designed to manage hotel room reservations. It aims to provide a user-friendly interface for both guests and hotel staff to make and manage reservations efficiently. This project is developed as an academic exercise to demonstrate the principles of object-oriented analysis and design. And this particular project is made to give a static and a dynamic view of how this software would work, what are the attributes, functions and objects as well as their work and behaviour.

Features that are implemented:

User Management: How the user uses the software and how the software helps the user

Room Management: Reserving capabilities of user and allowed by administrative.

Reservation Management: Work of administration.

Check-in/Check-out: Database of information on user's activity

Admin panel: monitoring user and employee behaviours and managing over-all issues around the hotel.

3. Justification:

1. **Academic Relevance:**

This project aligns with the academic objectives of our course/module by providing a hands-on opportunity to apply theoretical concepts of object-oriented analysis and design (OOAD) in a practical setting.

Developing a Basic Hotel Reservation System allows us to explore key OOAD principles such as abstraction, encapsulation, inheritance, and polymorphism in a real-world scenario.

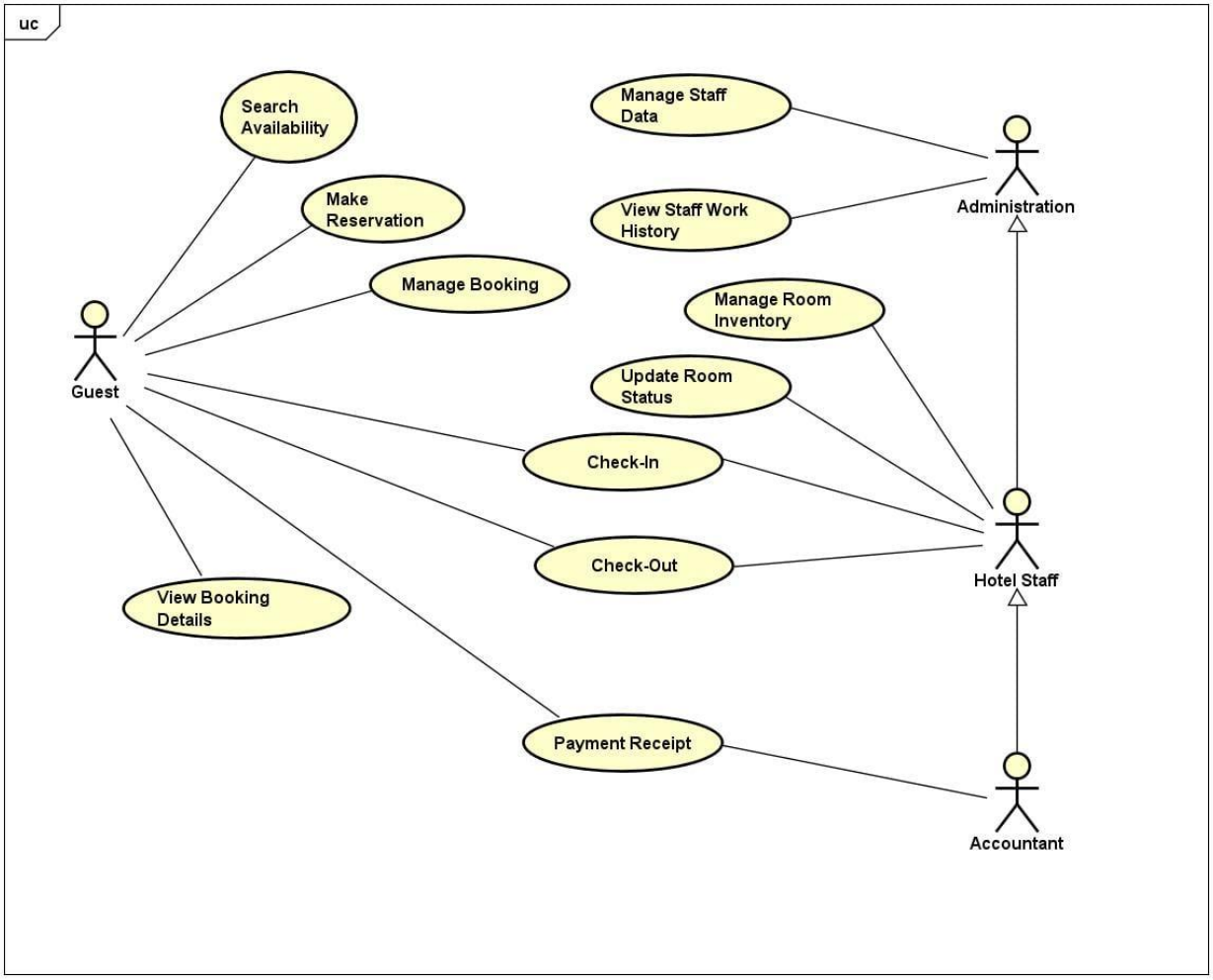
2. **Innovation and Creativity:**

While the project focuses on fundamental features of a reservation system, there's room for creativity and innovation in design decisions, user interface design, and implementation strategies.

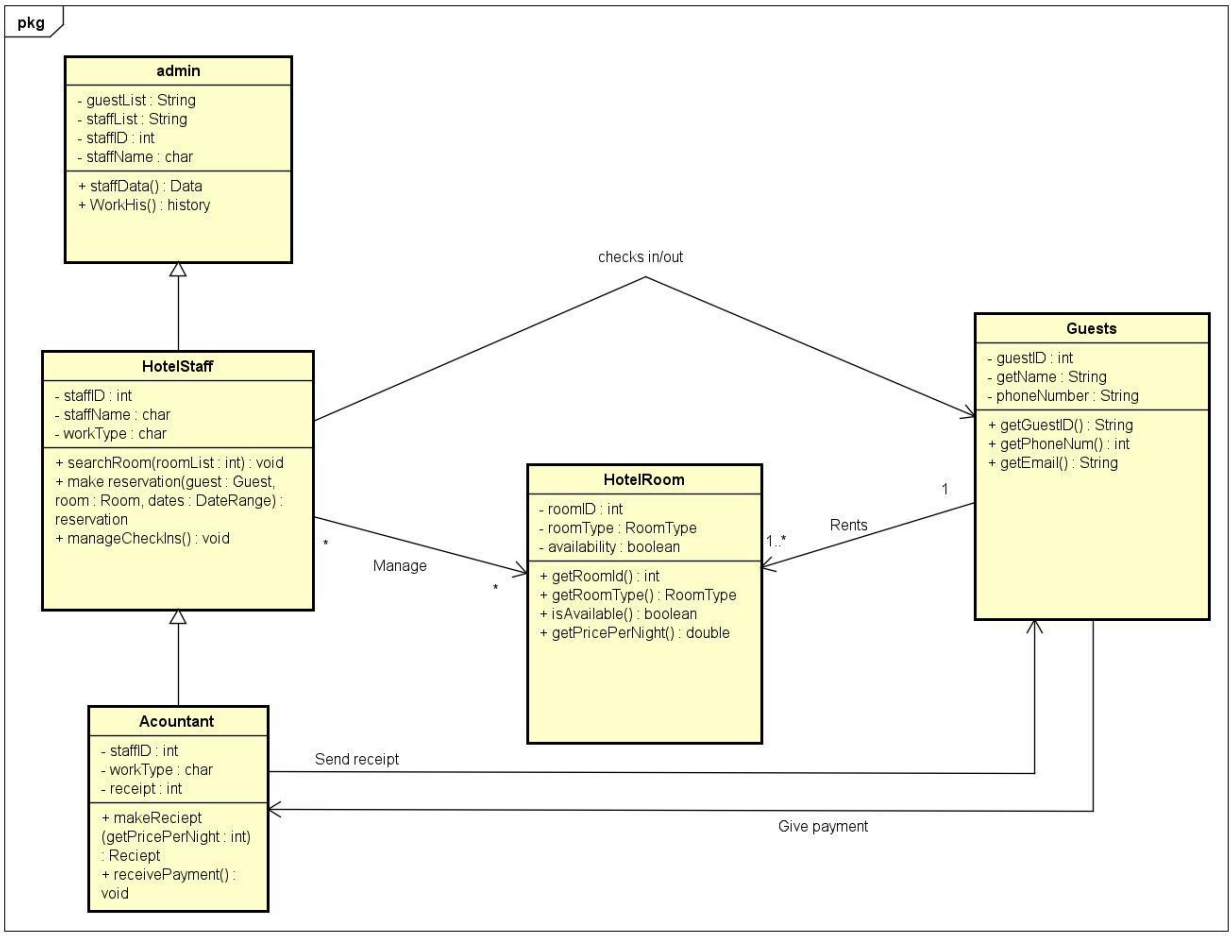
4. Project case study:

Introducing hotel reservation system, a hotel reservation software designed to streamline the booking process for guests and optimize operations for hotel staff. Guests utilize the software to search for available rooms, make reservations, and manage bookings with ease. Hotel staff manage room inventory, check-ins, and check-outs through the software's intuitive interface. Administration keeps track of hotel staff data and work history for particular day. And there will be an accountant who will make a payment receipt taking the information of hotel room, and give it to the guest, and guest shall pay the payment according to the receipt.

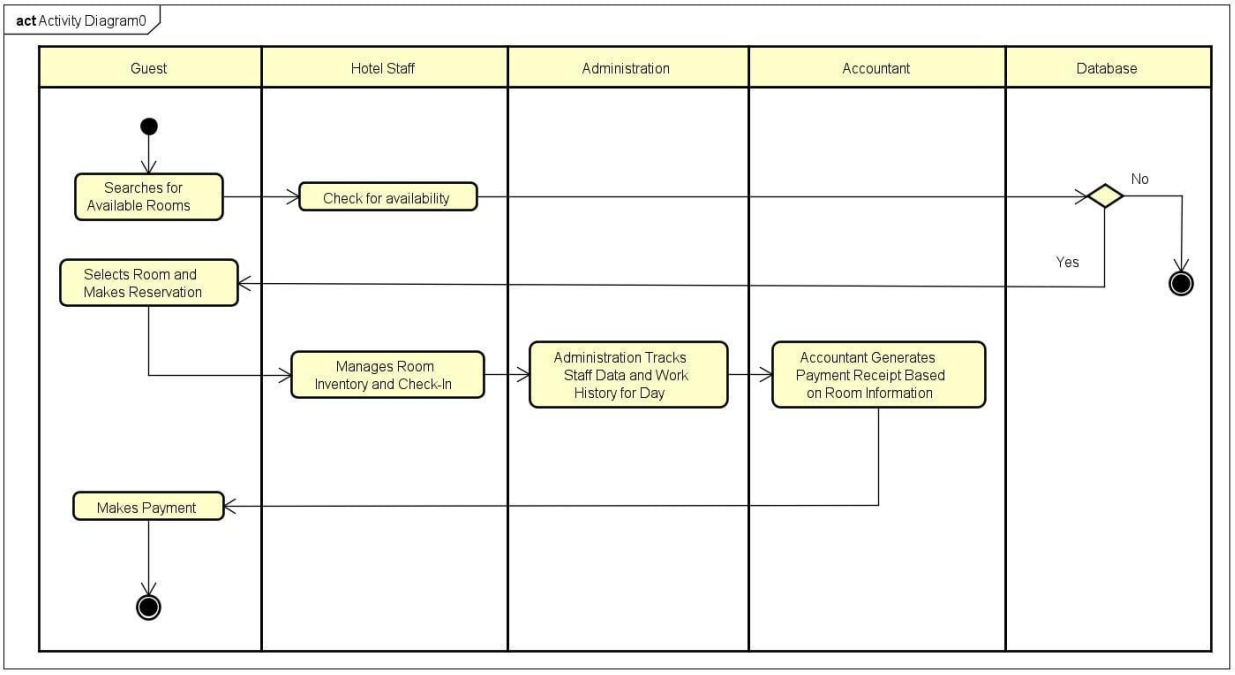
5. Use Case Diagram:



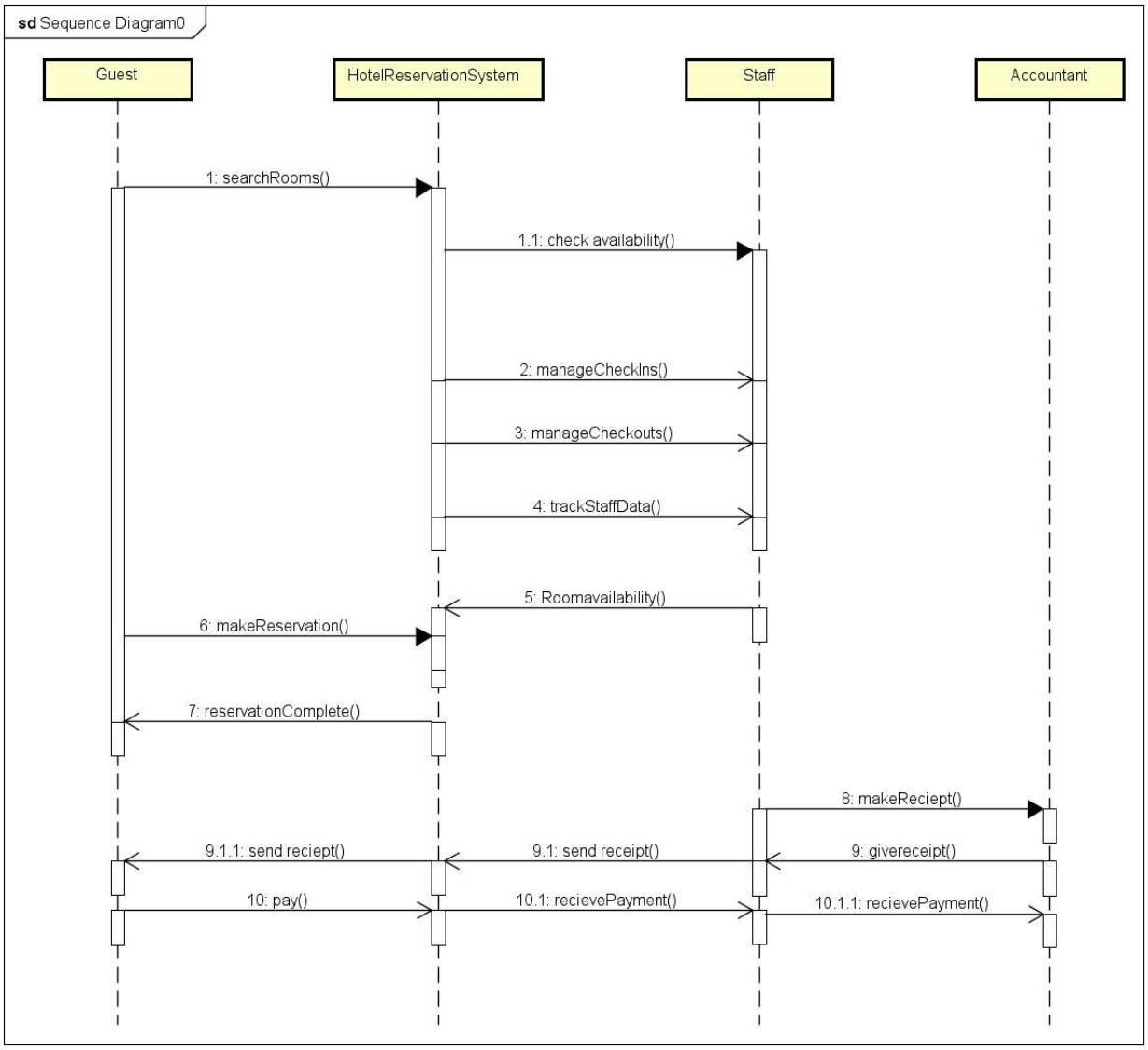
6. Class diagram of the project:



7. Activity Diagram of the project:



8. Sequence Diagram of the project



9. Conclusion:

In conclusion, the use of diagrams, including class diagrams and sequence diagrams, has been instrumental in the development of the Hotel Reservation System. These diagrams have provided a visual representation of the system's architecture, components, and interactions, enabling a clear understanding of the software's design and functionality. By documenting the relationships between classes, attributes, and methods in the class diagrams, we were able to establish a solid foundation for the system's implementation. Additionally, the sequence diagrams illustrated the flow of interactions between actors and system components, guiding the development of the software's features and functionalities. Overall, the use of diagrams has played a crucial role in ensuring the efficiency, clarity, and effectiveness of the development process, resulting in a robust and user-friendly Hotel Reservation System.