UML LAB INTERNAL-II

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AIM: To streamline and automate the various operational tasks involved in managing a hotel, from room reservations and guest check-ins to billing and reporting

Description:
The Hotel Management System is a comprehensive software solution designed to simplify and streamline the management of hotel operations. It provides a centralized platform for hotel staff to efficiently handle a wide range of tasks, including room bookings, guest check-ins and check-outs, room service requests, billing and invoicing, inventory management, and reporting.

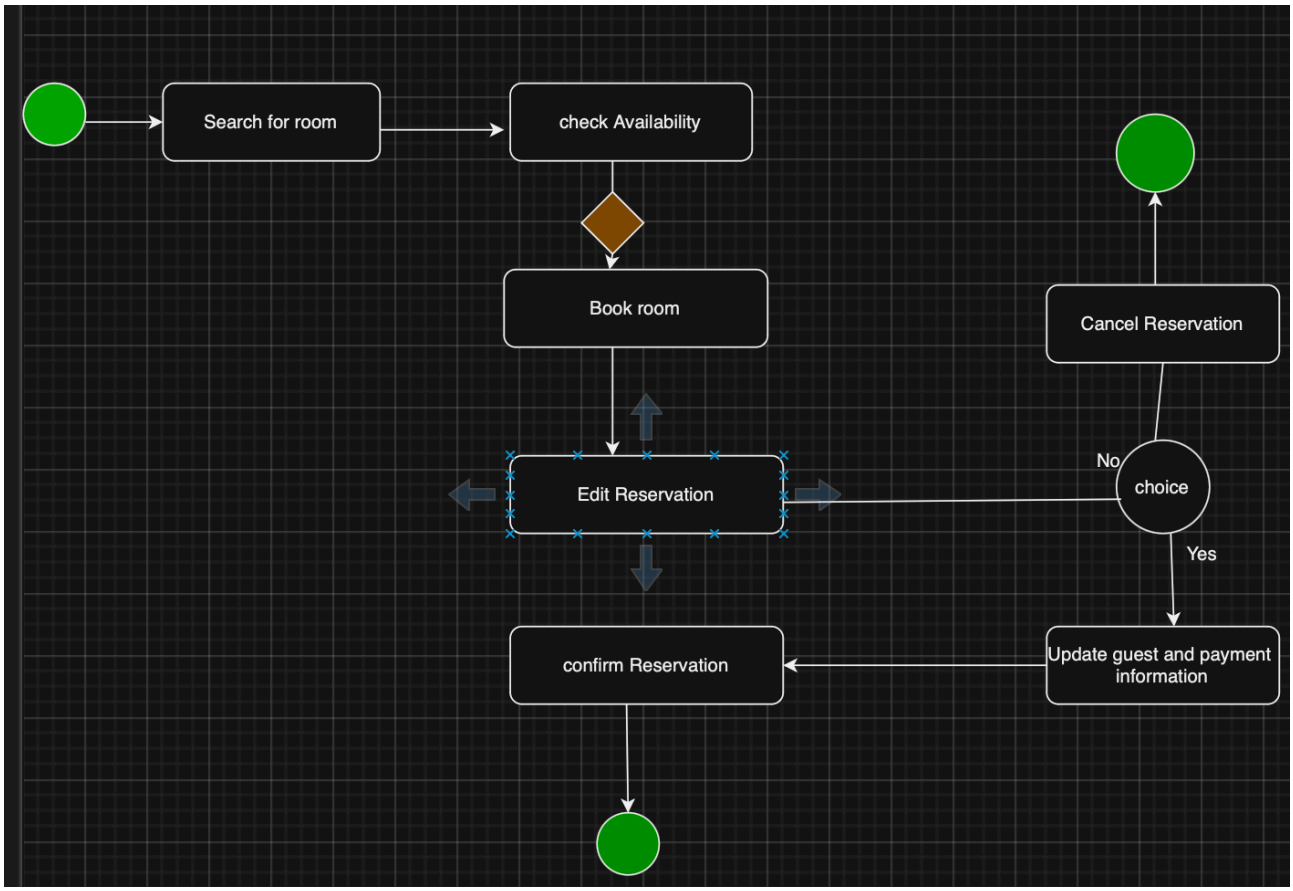
The system allows guests to make room reservations online, view available room options, and manage their bookings conveniently. It facilitates seamless communication between hotel staff and guests, ensuring prompt service delivery and personalized guest experiences.

Key features of the Hotel Management System include:

- User-friendly interface for staff and guests
- Reservation management with real-time availability tracking
- Check-in and check-out processes with digital guest registration
- Room service management for handling guest requests
- Billing and invoicing functionalities with support for multiple payment methods
- Inventory management for tracking room availability and amenities
- Reporting tools for analyzing hotel performance and guest satisfaction metrics

Overall, the Hotel Management System aims to improve operational efficiency, enhance guest satisfaction, and drive revenue growth for hotel businesses.

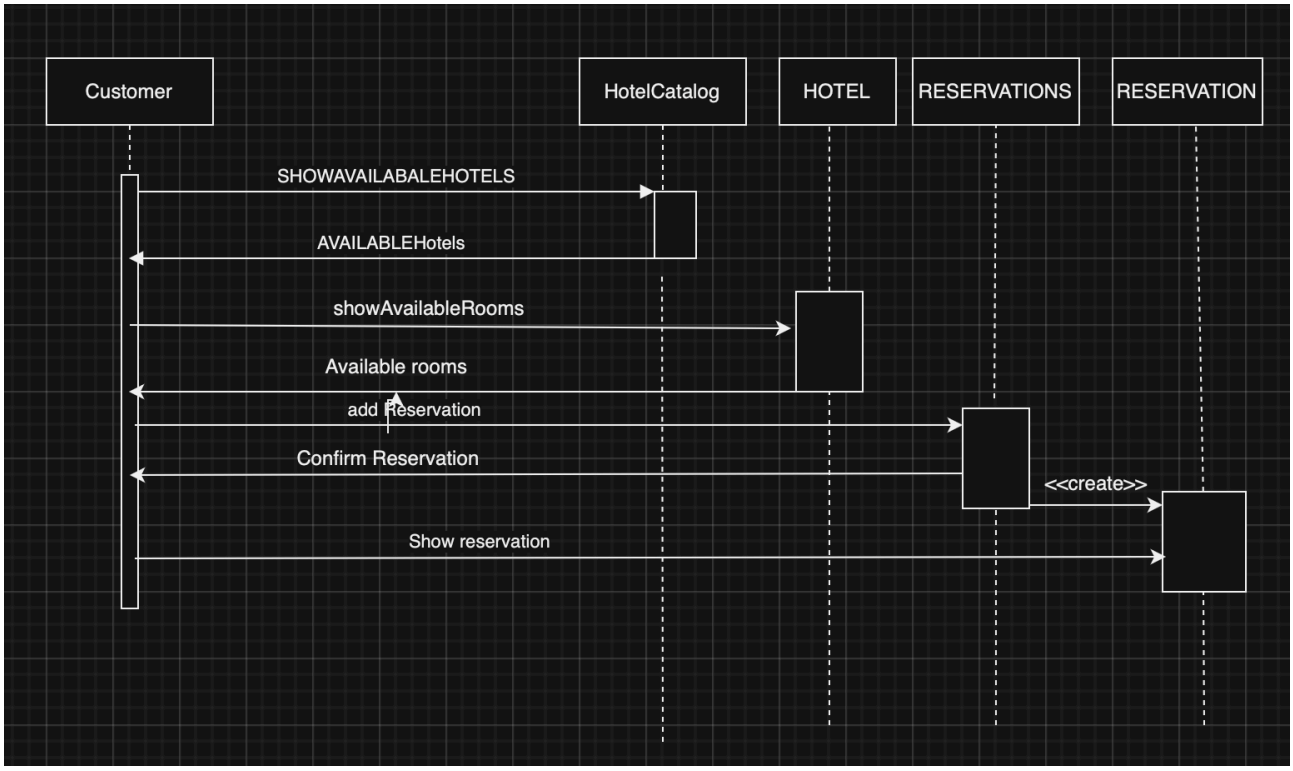
STATE CHART DIAGRAM:



It Depicts the various states that an object or system can exist in and the transitions between those states in response to events or actions.

Customer search for rooms, check availability, and reserves.There are states to cancel reservation.if the reservation is successful guest and payment information are updated and reservation is confirmed.

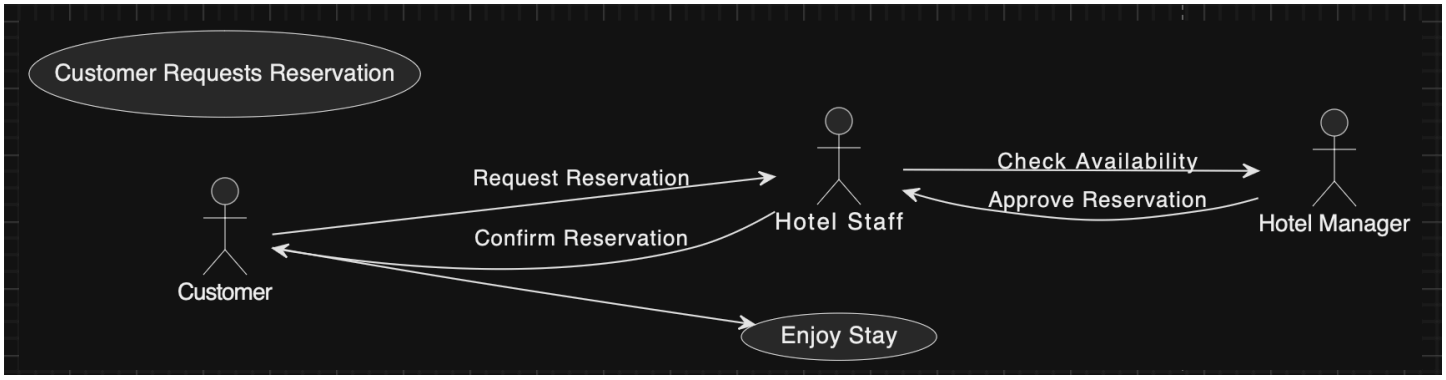
SEQUENCE DIAGRAM:



Actors: Customer, HotelCatalog,Hotel,Reservations,reservation

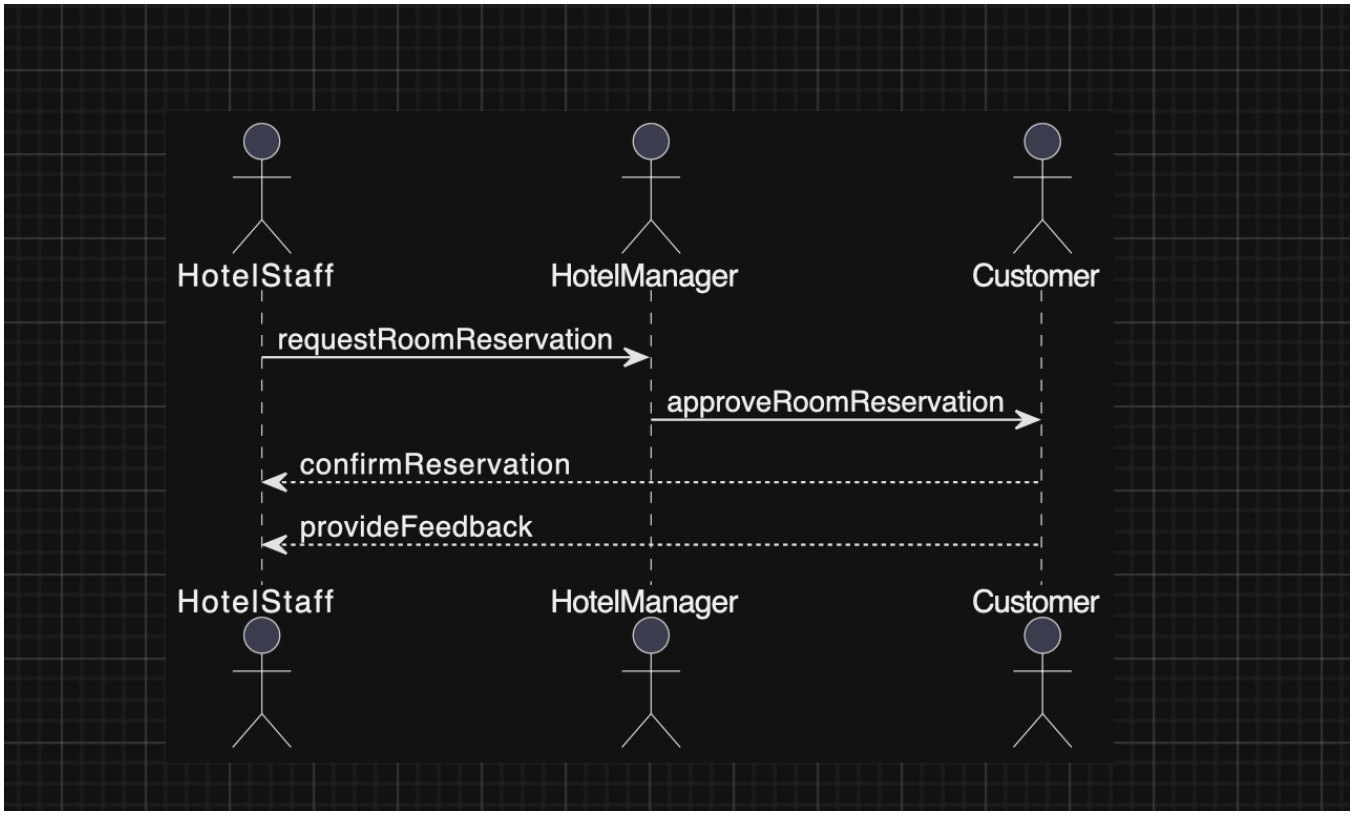
Customer requests Hotel catalog to show available hotels, and it displays available hotels.And customer requests specific hotel to display available rooms and they display it,customer requests to add reservation and reservation is confirmed.

Activity diagram:



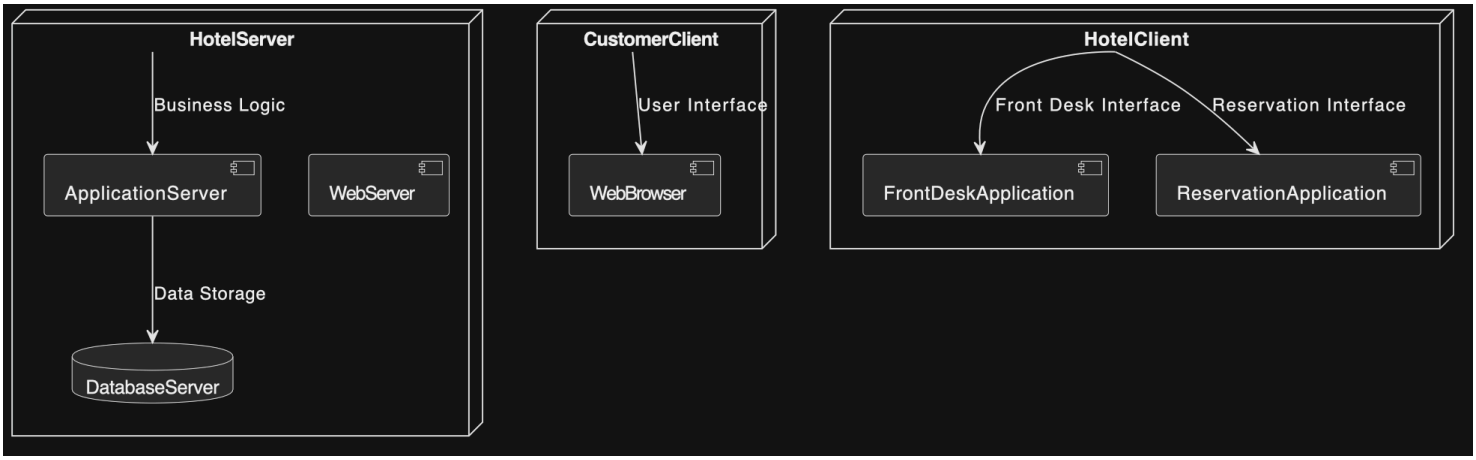
In this activity diagram for a Hotel Management System, the Customer initiates a room reservation, which is processed by the Hotel Staff. The Staff checks room availability and forwards the request to the Hotel Manager for approval. Once approved, the Staff confirms the reservation with the Customer, who subsequently enjoys their stay.

COLLABORATION DIAGRAM:



This collaboration diagram illustrates the interaction between actors in a Hotel Management System. The process begins with the HotelStaff actor initiating a room reservation request to the HotelManager. Upon receiving the request, the HotelManager reviews and approves it, then notifies the Customer of the reservation approval. The Customer, in turn, confirms the reservation with the HotelStaff. Additionally, after their stay, the Customer provides feedback to the HotelStaff. This diagram showcases the flow of communication and actions between different roles within the system, highlighting the seamless coordination required for effective hotel management. It emphasizes the pivotal role of the HotelStaff and HotelManager in facilitating reservations and ensuring customer satisfaction. Ultimately, this collaboration diagram serves as a visual representation of the interactions and dependencies between actors, aiding in understanding the overall process of room reservation and feedback collection in the Hotel Management System.

DEPLOYMENT DIAGRAM:



This deployment diagram illustrates the physical deployment architecture of a Hotel Management System. It consists of four main nodes: WebServer, ApplicationServer, DatabaseServer, and Client. The WebServer hosts the WebApplication component, which serves as the interface for client interaction. The ApplicationServer contains three components: BookingService, PaymentService, and CustomerService, responsible for handling booking requests, processing payments, and managing customer-related operations, respectively. These components communicate with the HotelDatabase hosted on the DatabaseServer to retrieve and store data. Finally, the Client node represents end-user devices, such as web browsers, accessing the system through the WebApplication. Arrows indicate deployment relationships, showing how components are deployed on servers and accessed by clients. This diagram visually depicts the distribution of system components across physical nodes, facilitating understanding of the system's architecture and deployment topology.