CGB1201 – JAVA PROGRAMMING PROJECT REVIEW-2

Department of CSE(Artificial Intelligence and Machine Learning)
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Title of the Project

- **HOTEL MANAGEMENT SYSTEM**

Abstract

- Staff management and assignment for room service.

- Capturing and storing user details, including identity verification through AADHAR and PAN numbers.

- Room reservation management, allowing users to choose between AC and non-AC rooms and check room availability.

Abstract with CO/PO Mapping

Abstract	CO	POs	PSO
Handling the check-in and check-out process, including calculating and displaying the dates. Billing for room stay and food services based on the user's choices and duration of stay.	CO5	PO1,PO2,PO3,PO4, PO5,po6	PSO!,PSO2,PSO3

Introduction

☐ This Hotel Management System is a simple Java program that helps manage hotel operations. It has a menu-driven interface that allows users to assign staff for housekeeping, collect guest information, book rooms, handle check-in and check-out dates, and create bills. Guests can choose between AC and non-AC rooms, check if a room is available, and get their check-in and check-out dates automatically. The system also calculates the total bill, including room and food charges. This program makes hotel management easier and provides a smooth experience for both staff and guests.

Java Programming - Concepts Used

- **Class and Methods**:
- The program is defined inside the Main class, with different functionalities implemented as static methods.

- **Static Methods**:
- All methods are marked as static, meaning they can be called directly using the class name or from within the main method without creating an object of the class.

- **Control Structures**:
- **Conditional Statements**: The if-else statements are used for decision-making, such as assigning staff or checking room availability.
- **Loops**: The while(true) loop is used to keep the program running until the user chooses to exit.
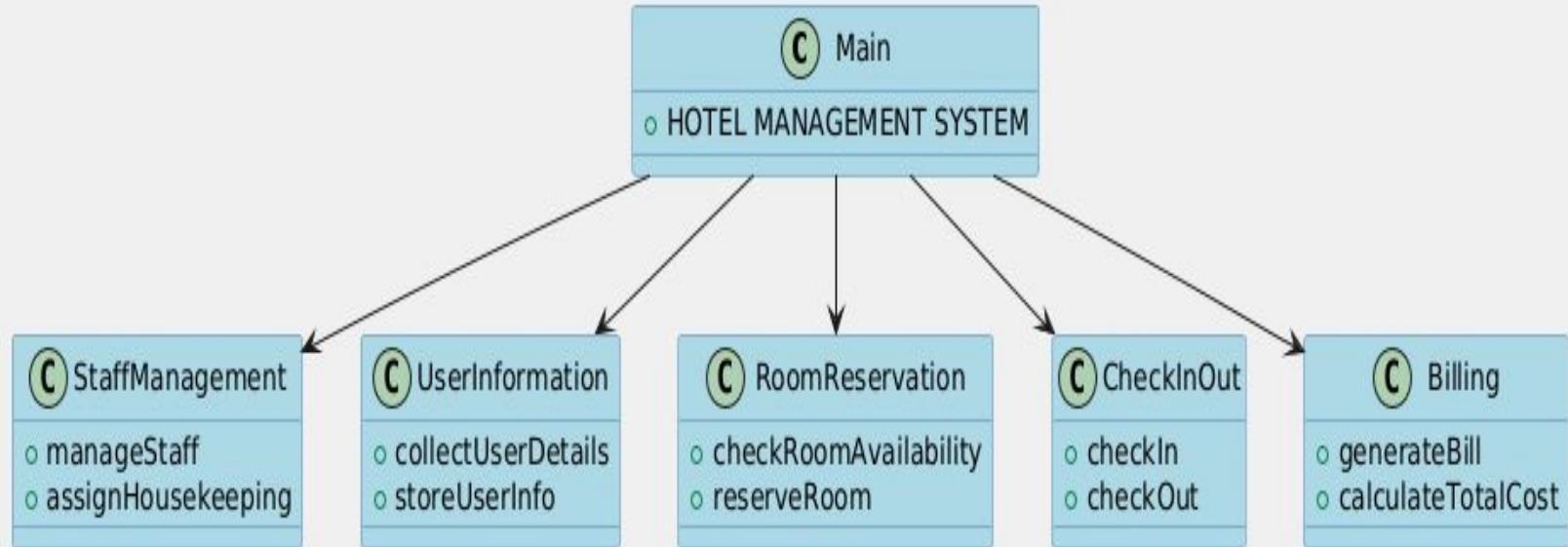
Java Programming - Concepts Used

- **Ternary Operator**:

• Ternary expressions like (b == 1) ? "AC ROOM" : "NON AC ROOM" simplify conditional assignments.

- **Date and Time API**:

• The java.time.LocalDate class is used for handling dates, particularly for calculating check-in and check-out dates.

Proposed Architecture

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Proposed Architecture - Description

- 1. **Main Module:** Acts as the central hub, connecting all other modules.

- 2. **Staff Management:** Handles staff-related tasks like managing staff and assigning housekeeping.

- 3. **User Information:** Collects and stores user details.

- 4. **Room Reservation:** Manages room availability checks and reservations.

- 5. **Check-In/Check-Out:** Handles guest check-in and check-out processes.

- 6. **Billing:** Generates bills and calculates total costs.

List of Modules

- **Staff Management**
- **User Information**
- **Room Reservation**
- **Check-In and Check-Out**
- **Billing**

Module Description

- 1.Staff Management: Assigns staff for room services and Displays available staff and assigns one based on the user's choice.

- 2. User Information: Collects user details. and Gathers information like name, age, AADHAR, and PAN for record-keeping.

- 3. Room Reservation: Handles room bookings. And Lets users pick AC or non-AC rooms and checks if rooms are available.

Module Description (Cont..)

- **4. Check-In and Check-Out: Manages stay dates. And Calculates check-in and check-out dates based on how long the user stays.**

- **5. Billing: Generates the bill. And Calculates total costs for the room and food, based on the user's stay.**

- **This breakdown helps keep everything simple and easy to understand.**

Results and Discussion


```
                    WELCOME TO HOTEL MANAGEMENT
-------------------------------------------------------------------
        1.HOTEL STAFF
        2.USER INFORMATION
        3.RESERVATION
        4.CHECH-IN & CHECK-OUT
        5.BILLING PROCESS
        6.EXIT
-------------------------------------------------------------------
Enter your Option: 1

HOTEL STAFFS:
1.RAM
2.SAM
3.SOMU
Enter a number for staffs to managing rooms: 2
SAM WILL TAKE CARE OF YOUR HOUSE KEEPING...
-------------------------------------------------------------------
        1.HOTEL STAFF
        2.USER INFORMATION
        3.RESERVATION
        4.CHECH-IN & CHECK-OUT
        5.BILLING PROCESS
        6.EXIT
-------------------------------------------------------------------
Enter your Option: 2

USER DETAILS:
Enter user name: sandhya
Enter user age: 24
```

Results and Discussion (Cont..)


```
Enter your AADHAR NUMBER:
9876654
Enter your PAN NUMBER:
9876545
---------------------------------------------------------------------------
        1.HOTEL STAFF
        2.USER INFORMATION
        3.RESERVATION
        4.CHECH-IN & CHECK-OUT
        5.BILLING PROCESS
        6.EXIT
---------------------------------------------------------------------------
Enter your Option: 3

RESERVATIONS:
PRESS 1 - AC ROOMS
PRESS 2 - NON AC ROOMS
1
        YOU HAVE CHOOSE AC ROOMS...
Enter room number: 405
Okay...Here is your key for 405 room
---------------------------------------------------------------------------
        1.HOTEL STAFF
        2.USER INFORMATION
        3.RESERVATION
        4.CHECH-IN & CHECK-OUT
        5.BILLING PROCESS
        6.EXIT
---------------------------------------------------------------------------
Enter your Option: 4
```

Results and Discussion (Cont..)


```
                CHECK-IN  & CHECK-OUT PROCESS:
        Enter how many days to you want stay in our Hotel? : 5
                CHECK-IN DATE : 2024-11-22
                CHECK-OUT DATE : 2024-11-27
--------------------------------------------------------------------
        1.HOTEL STAFF
        2.USER INFORMATION
        3.RESERVATION
        4.CHECH-IN & CHECK-OUT
        5.BILLING PROCESS
        6.EXIT
--------------------------------------------------------------------
Enter your Option: 5

BILLING:
How many days do you want room: 5
Enter which room you have choose:AC ROOM
--------------------------------------------------------------------
                HOTEL MANAGEMENT BILL
        FOOD BILL              : 5000
        ROOM BILL             : 15000

        _____
        TOTAL                 : 20000

        _____
                THANK YOU FOR COMING.....
--------------------------------------------------------------------
        1.HOTEL STAFF
        2.USER INFORMATION
        3.RESERVATION
```

Results and Discussion (Cont..)


```
How many days do you want room: 5
Enter which room you have choose:AC ROOM
---------------------------------------------------------------------
              HOTEL MANAGEMENT BILL
       FOOD BILL              : 5000
       ROOM BILL             : 15000
       _____
       TOTAL                 : 20000
       _____
              THANK YOU FOR COMING.....
---------------------------------------------------------------------
       1.HOTEL STAFF
       2.USER INFORMATION
       3.RESERVATION
       4.CHECH-IN & CHECK-OUT
       5.BILLING PROCESS
       6.EXIT
---------------------------------------------------------------------
Enter your Option: 6

              THANK YOU..
---------------------------------------------------------------------


...Program finished with exit code 0
Press ENTER to exit console.
```

Conclusion

⬜ The hotel management system simplifies key tasks like assigning staff, booking rooms, managing check-ins and check-outs, and creating bills. By organizing these processes, it helps hotel staff work more efficiently and improves the customer experience. This system is a strong starting point that can be easily expanded in the future.

Thank You

ANY QUERIES???