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import java.util.Scanner;

public class Hotel {

    static int FLOORS = 3;
    static int ROOMS = 5;
    static int[][] hotel = new int[FLOORS][ROOMS];

    // Initialize hotel with 0 (all rooms empty)
    public static void initialize() {
        for (int i = 0; i < FLOORS; i++) {
            for (int j = 0; j < ROOMS; j++) {
                hotel[i][j] = 0;
            }
        }
    }

    // Display hotel rooms
    public static void viewRooms() {
        System.out.println("\nHotel Room Status:");
        for (int i = 0; i < FLOORS; i++) {
            System.out.print("Floor " + (i + 1) + ": ");
            for (int j = 0; j < ROOMS; j++) {
                if (hotel[i][j] == 0)
                    System.out.print("[Empty] ");
                else
                    System.out.print("[Booked] ");
            }
            System.out.println();
        }
        System.out.println();
    }

    // Book a room
    public static void bookRooms(Scanner sc) {
        System.out.print("Enter Floor (1-" + FLOORS + "): ");
        int f = sc.nextInt();
        System.out.print("Enter Room (1-" + ROOMS + "): ");
        int r = sc.nextInt();

        if (f < 1 || f > FLOORS || r < 1 || r > ROOMS) {
            System.out.println("Invalid Floor/Room.\n");
            return;
        }
    }
}

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        if (hotel[f - 1][r - 1] == 1) {
            System.out.println("Room is Already Booked.\n");
        } else {
            hotel[f - 1][r - 1] = 1;
            System.out.println("Room Booked Successfully!\n");
        }
    }
}

// Menu
public static void menu() {
    Scanner sc = new Scanner(System.in);
    while (true) {
        System.out.println("===== HOTEL BOOKING SYSTEM =====");
        System.out.println("1. View Rooms");
        System.out.println("2. Book Rooms");
        System.out.println("3. Exit");
        System.out.print("Enter your choice: ");
        int choice = sc.nextInt();

        switch (choice) {
            case 1:
                viewRooms();
                break;
            case 2:
                bookRooms(sc);
                break;
            case 3:
                System.out.println("THANK YOU!");
                return;
            default:
                System.out.println("Invalid Choice.\n");
                break;
        }
    }
}

public static void main(String[] args) {
    initialize();
    menu();
}
}

```

Output : -

===== HOTEL BOOKING SYSTEM =====

1. View Rooms

2. Book Rooms

3. Exit

Enter your choice: 1

Hotel Room Status:

Floor 1: [Empty] [Empty] [Empty] [Empty] [Empty]

Floor 2: [Empty] [Empty] [Empty] [Empty] [Empty]

Floor 3: [Empty] [Empty] [Empty] [Empty] [Empty]

===== HOTEL BOOKING SYSTEM =====

1. View Rooms

2. Book Rooms

3. Exit

Enter your choice: 2

Enter Floor (1-3): 2

Enter Room (1-5): 3

Room Booked Successfully!

===== HOTEL BOOKING SYSTEM =====

1. View Rooms

2. Book Rooms

3. Exit

Enter your choice: 1

Hotel Room Status:

Floor 1: [Empty] [Empty] [Empty] [Empty] [Empty]

Floor 2: [Empty] [Empty] [Booked] [Empty] [Empty]

Floor 3: [Empty] [Empty] [Empty] [Empty] [Empty]

===== HOTEL BOOKING SYSTEM =====

1. View Rooms

2. Book Rooms

3. Exit

Enter your choice: 2

Enter Floor (1-3): 2

Enter Room (1-5): 3

Room is Already Booked.

===== HOTEL BOOKING SYSTEM =====

1. View Rooms

2. Book Rooms

3. Exit

Enter your choice: 3

THANK YOU!