import java.util.Scanner;

public class HotelBookingSystem {

// Define hotel dimensions: 3 floors with 5 rooms each

private static final int FLOORS = 3;

private static final int ROOMS\_PER\_FLOOR = 5;

private static boolean[][] rooms = new boolean[FLOORS][ROOMS\_PER\_FLOOR];

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int choice;

System.out.println("Welcome to the Hotel Room Booking System!");

do {

System.out.println("\nMenu:");

System.out.println("1. View Rooms");

System.out.println("2. Book a Room");

System.out.println("3. Exit");

System.out.print("Enter your choice: ");

choice = scanner.nextInt();

switch (choice) {

case 1:

viewRooms();

break;

case 2:

bookRoom(scanner);

break;

case 3:

System.out.println("Thank you for using the system. Goodbye!");

break;

default:

System.out.println("Invalid choice. Please try again.");

}

} while (choice != 3);

scanner.close();

}

// View room status

private static void viewRooms() {

System.out.println("\nRoom Status:");

for (int floor = 0; floor < FLOORS; floor++) {

System.out.print("Floor " + (floor + 1) + ": ");

for (int room = 0; room < ROOMS\_PER\_FLOOR; room++) {

String status = rooms[floor][room] ? "[Booked]" : "[Available]";

System.out.print("Room " + (room + 1) + status + " ");

}

System.out.println();

}

}

// Book a room

private static void bookRoom(Scanner scanner) {

System.out.print("\nEnter floor number (1-" + FLOORS + "): ");

int floor = scanner.nextInt() - 1;

System.out.print("Enter room number (1-" + ROOMS\_PER\_FLOOR + "): ");

int room = scanner.nextInt() - 1;

if (isValidRoom(floor, room)) {

if (!rooms[floor][room]) {

rooms[floor][room] = true;

System.out.println("Room booked successfully!");

} else {

System.out.println("Sorry, that room is already booked.");

}

} else {

System.out.println("Invalid floor or room number.");

}

}

// Validate room selection

private static boolean isValidRoom(int floor, int room) {

return floor >= 0 && floor < FLOORS && room >= 0 && room < ROOMS\_PER\_FLOOR;

}

}

//output:

Welcome to the Hotel Room Booking System!

Menu:

1. View Rooms

2. Book a Room

3. Exit

Enter your choice: 1

Room Status:

Floor 1: Room 1[Available] Room 2[Available] Room 3[Available] Room 4[Available] Room 5[Available]

Floor 2: Room 1[Available] Room 2[Available] Room 3[Available] Room 4[Available] Room 5[Available]

Floor 3: Room 1[Available] Room 2[Available] Room 3[Available] Room 4[Available] Room 5[Available]