***Loops and conditional***

1. **Write a C# program that accepts an integer and determines if the number is even or odd. Display the result.**

* **Example Input: 7**
* **Output: The number 7 is odd.**

1. Write a C# program that accepts five numbers and displays the 2nd smallest of the five.

* **Example Input:** 4, -3, 7, 2, 0
* **Output:** 0

1. Write a program that calculates the factorial of a given number using a for loop.

* **Example Input:** 5
* **Output:** 120 (5 × 4 × 3 × 2 × 1 = 120)

1. Write a program that takes two integers as input and prints all the prime numbers between them using nested loops.

* **Example Input:**
  + Start: 10
  + End: 30
* **Output:** 11, 13, 17, 19, 23, 29

1. Create a program that initializes an integer array and finds the largest number in it using a foreach loop.

* **Example Array:** {3, 1, 4, 1, 5, 9}
* **Output:** 9

1. Write a program that prints the following number pattern using nested loops:  
   For n = 5, the output should be:

1

2 3

4 5 6

7 8 9 10

11 12 13 14 15

1. Write a program that prints a pyramid pattern using stars (\*) based on the input height. Use nested loops. (optional)

* **Example Input:** n = 4
* **Output:**

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1. Write a program that takes an array of integers and calculates the sum of even numbers and odd numbers separately using loops. (optional)

* **Example Input:** {1, 2, 3, 4, 5, 6}
* **Output:**
  + Sum of Even Numbers: 12
  + Sum of Odd Numbers: 9

9 - Write a program that compares two arrays and prints their common elements using loops. (optional)

* **Example Input:**
  + Array 1: {1, 2, 3, 4}
  + Array 2: {3, 4, 5, 6}
* **Output:** 3, 4

***Class && Object***

Create a **Hotel Reservation System** where the program manages room bookings for a hotel. Each room has the following properties:

* Room Number
* Room Type (e.g., Single, Double, Suite)
* Price Per Night
* IsBooked (whether the room is already booked or not)
* HotelName = "Grand Stay Hotel"; as constant

You need to:

1. Create a class Room with appropriate properties.
2. Allow the user to input details for at least 2 rooms.
3. Then assign data to all field , then print the data .