Problem Description: Take an integer n as input from the user. Write a program to calculate the factorial of a given integer. Here, Factorials (!) are products of every whole number from 1 to n. For example: If n is 3, then 3! will be 3 * 2 * 1 = 6.

Procedure: Try to write the C code by using any loop structure. Try to understand the problem by seeing the sample input/output given below.

Sample Input:
Enter a number: 5
Sample Output:
The Factorial of 5 is 120.

Hint: formula for Factorial number is

n!=n * (n-1) * (n-2) * (n-3) *......... * 3 * 2 * 1.

Problem Description: Take an integer n as input from the user. Write a program that displays the Fibonacci series up to n term. In Fibonacci series, the first two numbers are 0 and 1. The remaining numbers are sum of the previous two.

Procedure: Try to write the C code by using any loop structure. Try to understand the problem by seeing the sample input/output given below.

Sample Input:
Enter a number: 10
Sample Output:
The first 8 Fibonacci numbers are: 0 1 1 2 3 5 8 13 21 34

Hint: formula for Fibonacci series number is

N = N-1 + N-2

Problem Description 2: Write a program to find the GCD (Greatest Common Divisor) of two positive integer inputs.

Procedure: Try to write the C code by using any loop structure. Try to understand the problem by seeing the sample input/output given below.

Sample Input:
Enter two integers: 45 120
Sample Output:
GCD: 15

Problem Description: Take an integer n as input from the user. Write a program to display the pattern like right angle triangle with a number.

Procedure: Try to write the C code by using any loop structure. Try to understand the problem by seeing the sample input/output given below.

Sample Input:	
Enter number of rows: 5	
Sample Output:	
1	
12	
123	
1234	
12345	

Problem Description: Print the following patterns using nested loop if user input is 5.

Procedure: Try to write the C code by using any loop structure. Try to understand the problem by seeing the sample input/output given below.

Sample Input:		
Enter a number : 5		
Sample Output:		
Pattern 1:	Pattern 2:	
*	5 4 3 2 1	
* *	5 4 3 2	
* * *	5 4 3	
* * * *	5 4	
* * * * *	5	