CSE 102 Offline-2 for A2 + B2 + C2

Task-1. Print the sum of the following series up to n-th term. Here, n is an integer, $n \geq 1$

$$\frac{1}{1!} - \frac{1\times(1+2)}{2!} + \frac{1\times(1+2)\times(1+2+3)}{3!} - \ldots\ldots\ldots + (-1)^{n-1}\frac{1\times(1+2)\times(1+2+3)\times\ldots\ldots\ldots}{n!}$$

Sample Input	Sample Output
2	-0.5
3	2.5
4	-5.0

- You are not allowed to use any formula. You have to calculate each term and sum all of them.

Task-2. A **Perfect number** is a positive integer that is equal to the sum of its proper factors. For example, 6 is a perfect number as its proper factors sum up to 6.
The proper factors of 6 are : 1, 2, 3 (Proper factor is any factor other than the original number)
As 1+2+3 = 6, 6 is a perfect number.
Another perfect number is 28.

Write a C program to print all Perfect numbers in the range from n1 to n2 (n1, n2 are integers where n1 < n2). You have to take n1, n2 as inputs.

Special Instructions:

You cannot use any function from math.h.
You cannot use array or function.

Submission Instructions:

1. Create a folder with your student id (2105xxx).
2. Create separate files for each task and rename them as problem_1.c, problem_2.c, etc.
3. Put only the .c files created in step 2 in the folder created in step 1.

4. Zip the folder (2105xxx.zip) and upload it on Moodle.

Plagiarism Policy:

You will be penalized -100% in case of plagiarism, irrespective of the source and destination.

Submission Deadline: January 10, 2023, 11:00 PM