Math 1116 Lab #5

Due: Tuesday, March 4 by 8:30am.

Problem:

The exponential function

$$e = \sum_{n=0}^{\infty} \frac{1}{n!} = \frac{1}{1} + \frac{1}{1} + \frac{1}{1 \cdot 2} + \frac{1}{1 \cdot 2 \cdot 3} + \cdots$$

can be written as follows:

$$e^x = 1 + \frac{x^1}{1!} + \frac{x^2}{2!} + \frac{x^3}{3!} + \ldots\ldots + \frac{x^n}{n!}$$

Write a complete C^{++} program to solve this problem.

Do not use built-in functions for *power* or *factorial*. Use a loop of your choice to solve *power* and use a loop of your choice to solve *power*.

The function should calculate the exponential value of *x* by using 25 terms in the above series.

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Enter x: 1
The result is: 2.71828
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Part A: **Submit a handwritten version of this problem**

Part B: **Submit a working .cpp program for this problem.**