AMA2222 Lab 4 (week 5)

4a) A geometric series is defined as the sum of successive terms with a common ratio:

$$\sum_{i=0}^{n-1} ar^i = a + ar + ar^2 + \cdots ar^{n-1}$$

where $a$ is the initial value, $r$ is the common ratio, $n$ is the number of terms. Write a C++ program that reads these three parameters and evaluate the series. Notice that $a$ and $r$ can be any real numbers. Refer to the example:

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Enter the initial term: 1
Enter the common ratio: 0.5
Enter the number of terms: 3
The geometric series is 1.75
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4b) Write a C++ program that reads a sentence as a string and counts the number of times a target word appears. Assume the input sentence is all lowercase letters and without punctuation marks. Refer to the sample below. Notice that in this example "ito", "tokyo" and "toto" should not be counted as the word "to". (Hint: think of the spacebar)

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Enter a sentence: mr ito goes to tokyo to work in toto company
Enter a word: to
This word appears 2 times in the sentence.
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