# New Beginnings Summer 2018

# Practical Section – Proficiency Exam #1 – August 10, 2018

Focus: C++ Syntax, Flow Control, Dynamic Arrays, File I/O

**Summary:**

Write a C++ program which reads a text file, counts the number each alpha character occurs, and displays a histogram of all characters(a though z).

**Requirements:**

1. Create a dynamic array to hold the counts of each character. (This isn’t strictly necessary, but I want to see that you can do this.)
2. Ignore character case.
3. Only count alpha characters – a through z. (Ignore newlines, spaces, etc.)
4. Write the histogram to an output file in your local directory.
5. The histogram should have the format of - “letter - count - # of asterisks”
   1. Sample Output File(numbers below are not from Gettysburg.txt):

a - 53 - \*\*\*\*\*\*

b - 2 - \*

c - 25 - \*\*\*

d - 43 - \*\*\*\*\*

.

.

z - 0 -

1. Output 1 asterisk for each 10 characters counted:

0 => 0 asterisks

1-9 => 1 asterisk

10-19 => 2 asterisks

etc.

1. Use setw(5) from the iomapip library for printing the count. For example:
   1. cout << char\_variable << “-“ << setw(5) << char\_count << ….
   2. Remember to include the library - #include <iomanip>

Input File: /u/jgraalum/Gettysburg.txt