

Problem 1: (Rank strings) Write a program to receive three strings and rank them with the descending lexicographic (dictionary) order. See Lecture 7 for the lexicographic order.

If the user enters

A B C[enter]123[enter]aaa![enter]

then the screen has the following output.

```
Please enter three strings:
A B C
123
aaa!
Descending dictionary order:
aaa!
A B C
123
```

Problem 2: (Count spaces) Write a program to receive a string and count the number of spaces.

If the user enters

I'm working on PIC 10A Homework 2.[enter]

then the screen has the following output. (Notice that the sentence is enclosed in double quotes in the output!)

```
Please enter a sentence: I'm working on PIC 10A Homework 2.
"I'm working on PIC 10A Homework 2." has 6 spaces.
```

Instructions:

- All code must be written originally by yourself. You are not allowed to (even partially) copy code from anyone else. Incident of cheating or plagiarism will be reported to the Dean's office and results in a zero grade in this assignment.
- (5pt) Write two programs to solve above questions. Name your files **RankString.cpp** and **CountSpace.cpp**, and submit them to CCLE. You must name the files EXACTLY as instructed, otherwise 2.5 points will be deducted each.
- (5pt) Add declaration in the beginning of each cpp file to show the ownership.
- (10pt) Write your code with good practice as introduced in class.
- (Problem 1 50pt & Problem 2 30pt) Code compiles with Visual Studio 2019 and solves the questions. Students may lose the majority of points if their code doesn't compile with VS 2019. Students should test their work with Apporto virtual machines if they don't have Visual Studio 2019 available on their own computer. Please manually log out your account after using the virtual machine.

To receive full credits, the output must look EXACTLY the same as instructed above, including words, spaces, symbols, etc. Your code should not only work for the above examples, but also work for other different inputs.