

# Object-Oriented Programming HW1

## Notice:

- This homework contains 1 problems.
- Maximum score is 100 points.
- The deadline of HW1 is 2024/3/5 23:59.
- **Please follow the output format or you will get 0 point.**
- Naming rule: studentID\_HW1.cpp

For example, if your studentID is 112511777, you should hand in the file named 112511777\_HW1.cpp.

- -5% of your score if there exist naming error.

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## Problem – I/O practice (100 pts)

### Description

Write a program that prompt the user to input the name of a text file and then **outputs the number of words** in the file to the screen. You can consider a “word” to be any text that is surrounded by whitespace (for example, a space, carriage return, newline) or borders the beginning or end of the file.

Please also computes all of the following statistics for the file and outputs the statistics to both the screen and to another file if the file exists: **the total number of occurrences of characters in the file, the total number of non-whitespace characters in the file, and the total number of occurrences of letters in the file.**

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### Input/Output Format

*All textfile is provided by TA (include 2 sample cases and 3 hidden cases), all you need to do is ask user to enter the filename and output the required informations.*

#### Sample\_textfile1:

Hello, my name is !@\$!#@, I am currently studying at National Yang Ming Chiao Tung University.

#### Sample\_textfile2:

A .

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Please enter the filename: Sample_textfile1.txt
Please enter the output filename: Sample_output1.txt
Total number of words: 16
Total number of characters: 94
Total number of non-whitespace characters: 79
Total numebr of letters: 70

Please enter the filename: Sample_textfile2.txt
Please enter the output filename: Sample_output2.txt
Total number of words: 2
Total number of characters: 5
Total number of non-whitespace characters: 2
Total numebr of letters: 1

Please enter the filename: 123.txt
File "123.txt" does not exist.
```

*\*\*The sample output file will upload to newE3.*

*Hint: You may find some useful functions inside the library <cctype>, include it and enjoy coding!*