

CPP Problem Design

Subject: Occurrence Counting

Contributor: 陳俊儒, 林承達, 廖宣瑋

Main testing concept: File I/O

Basics

- ☒ C++ BASICS
- ☐ FLOW OF CONTROL
- ☒ FUNCTION BASICS
- ☐ PARAMETERS AND OVERLOADING
- ☒ ARRAYS
- ☐ STRUCTURES AND CLASSES
- ☐ CONSTRUCTORS AND OTHER TOOLS
- ☐ OPERATOR OVERLOADING, FRIENDS, AND REFERENCES
- ☒ STRINGS
- ☐ POINTERS AND DYNAMIC ARRAYS

Functions

- ☐ SEPARATE COMPILATION AND NAMESPACES
- ☒ STREAMS AND FILE I/O
- ☐ RECURSION
- ☐ INHERITANCE
- ☐ POLYMORPHISM AND VIRTUAL FUNCTIONS
- ☐ TEMPLATES
- ☐ LINKED DATA STRUCTURES
- ☐ EXCEPTION HANDLING
- ☐ STANDARD TEMPLATE LIBRARY
- ☐ PATTERNS AND UML

Description:

Write a program that reads in an array of type int from a file, the file named "intArray.txt". Please note that the number of entries is not limited. Your program determines how many entries are used. The output is to be a two-column list. The first column is a list of the distinct array elements; the second column is the count of the number of occurrences of each element. The list should be sorted on entries in the first column, largest to smallest.

Input:

For the array values: -12 3 -12 4 1 1 -12 1 -1 1 2 3 4 2 3 -12

Output:

N Count

4 2
3 3
2 2
1 4
-1 1
-12 4

The two integers are divided by one tab(\t).

Sample Input / Output :

Sample Input	Sample Output
13 8 -4 0 8 -8 8 -1 12 0	N count 13 1 12 1 8 3 0 2 -1 1 -4 1 -8 1

- ☒ Easy, Only basic programming syntax and structure are required.
- ☐ Medium, Multiple programming grammars and structures are required.
- ☐ Hard, Need to use multiple program structures or more complex data types.

Expected solving time:

15minutes

Other notes: