

CPP Problem Design

Subject: FormWord

Contributor: 謝公耀, 陳俊儒, 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:

Some word games require the player to find words that can be formed using the letters of another word. For example, given the word SWIMMING then other words WING, SING, MIMING, etc. Write a program that lets the user set a word and then output all the words contained in the file words.txt that can be formed from the letters of the set word. Please use the following partial class member function to do your project.

```
Class Form {
private:
    string input;
    string fileName;
public:
    void SetInputWord(string inputWord);
    void ProcessInputWord();
    void SetFileName(string fileName);
    void Load_CompaerWord();
    void PrintFoundWords();
};
```

Please note that the comparison is not case-sensitive, but the output should keep the case of the original file.

Input:

main.in & words.txt

Output:

sample.out

Sample Input / Output :

Sample Input	Sample Output
main.in	sample.out

- | |
|--|
| <p><input type="checkbox"/> Easy, Only basic programming syntax and structure are required.</p> <p><input checked="" type="checkbox"/> Medium, Multiple programming grammars and structures are required.</p> <p><input type="checkbox"/> Hard, Need to use multiple program structures or complex data types.</p> |
| Expected solving time:
30 minutes |
| Other notes: |