**CPP程式設計題**

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| **命題者︰SCY** |
| **題目名稱(中文/英文)：Reversal** |
| **主要測試觀念：** **File I/O**   |  |  | | --- | --- | | **Basics** | **Functions** | | * C++ BASICS 1 * 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 | * 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 | |
| **題目說明：The text file words.txt, which is included, contains an alphabetically sorted list of English words. Note that the words are in mixed upper and lowercase.**  **Write a program that reads this file and finds the longest word that reverses to a different word. For example, "stun" reverses to make the word "nuts" but is only four letters long. Find the longest such word.**  **Depending upon the speed of your computer and your implementation, execution of this program may take from minutes to hours.**  **輸入說明：words.txt**  **輸出說明：The longest reverses word.**  **IO範例 :**   |  |  |  | | --- | --- | --- | |  | **Sample Input** | **Sample Output** | | 第一組測資與輸出 | words.txt | desserts | |  | 改變word.txt 的內容以測試的正確性。 | | |
| **附屬資料︰**  🗹解答程式：Reversal.cpp(檔名)  🗹測試資料：input.txt, output.txt |
| * 易，僅需用到基礎程式設計語法與結構 * 中，需用到多項程式設計語法與結構 * 難，需用到多項程式結構或較為複雜之資料型態或結構 |
| **解題時間：20**分鐘。 |
| **其他註記：**  **Read the list of words into an array or vector and then search the array or vector for the reversed word.** |