C 程式設計題

命題者：SCY

題目名稱(中文/英文)：Selection sort

主要測試觀念： Selection sort

Basics	Decision and Loops	Functions
☐ Keywords and Identifier	☐ Programming if...else	■ User-defined Functions
☐ Variables and Constants	☐ Programming for Loops	☐ Function Types
☐ Programming Data Types	☐ do...while Loops	■ Programming recursion
☐ Expressions	☐ break and continue	☐ Storage Class (variable life)
☐ Basic Input/Output	☐ switch...case Statement	
☐ Programming Operators	☐ Programming goto	

Arrays and Strings	Pointers	Structure and Union
☐ Arrays	☐ Pointers And Arrays	☐ Structures and Pointers
☐ Multi-dimensional Arrays	☐ Pointers And Functions	☐ Structure and Function
☐ Arrays and Functions	☐ Dynamic Memory Allocations	☐ Programming Unions
☐ Strings and Functions		

Files I/O	Miscellaneous	Other
☐ Files Input/Output basics	☐ Enumeration	☐ Programming logic training
☐ Character I/O and String I/O	☐ Preprocessor	☐ Programming structure/design training
☐ Block I/O	☐ Low level programming	
☐ Advanced File I/O manipulations	☐ Error handling	☐ Localization issues
	☐ Standard/advanced library	☐ _____

題目說明： Given a series of integers, please write a selection sort function to sort the input integers and output in an non-increasing order.

輸入說明： 先輸入將被排序的整數個數 K，然後，再輸入 K 個整數。

輸出說明： 將輸入的 K 個整數做 Selection sort，然後以降冪方式依序輸出 K 個整數。

IO 範例 :

	Sample Input	Sample Output
第一組測資與輸出	10 2 3 5 6 8 9 7 4 1 0	9 8 7 6 5 4 3 2 1 0
第二組	6 -5 -3 0 2 1 7	7 2 1 0 -3 -5
第三組	9 0 0 -1 5 6 -7 -8 -0 10	10 6 5 0 0 0 -1 -7 -8

附屬資料：
☑解答程式：Selection sort.c(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（如單迴圈等）
□中，需用到多項程式設計語法與結構（如雙層迴圈等）
■難，需用到多項程式結構或較為複雜之資料型態或結構（如遞迴、串連等）

解題時間：15 分鐘。

其他註記：