Problem Set 3 Exercise #05: Positive Numbers First

Reference: Lecture 7 notes

Learning objective: One-dimensional array; Simple algorithm design

Estimated completion time: 25 minutes

Problem statement:

[CS1010 AY2013/14 Midterm Test, Q8]

Write a program **positive_first.c** that contains a function

```
int is_positive_first(int numbers[], int size)
```

This function returns 1 if all the positive numbers (if any) appear before all the non-positive numbers (if any) in the array **`numbers`**, or 0 otherwise. You may assume that 1 ≤ **`size`** ≤ 9.

For example, it will return 1 for the array {3, 1, -4, 0, -5} because all the positive numbers (i.e. 3 and 1) in this array appear before the non-positive numbers (i.e. -4, 0 and -5).

As another example, it returns false for the array {3, 1, -4, 0, 5} because the positive number 5 appears after the non-positive numbers (i.e. -4 and 0) in the array.

Sample run #1:

```
Enter the number of elements: 5
Enter 5 elements: 3 1 -4 0 -5
All positive numbers appear before non-positive numbers
```

Sample run #2:

```
Enter the number of elements: 5
Enter 5 elements: 3 1 -4 0 5
Some positive numbers appear after non-positive numbers
```