**Lab 5 – Reviewing the last lab submission**

**Part I (Implementing the Selection Sort & Bubble Sort)**

1. Implement the following unmodified algorithms (from lecture notes) in C. When implementing, use a **counter** which counts the number of times that the loops are implemented:

* Selection sort
* Bubble sort

1. Put the following numbers through both C programs – [1, 5, 4, 3, 2, 6, 7, 8]. How many times is each loop encountered? (Your counter variable should tell you this)

**Part II (Implementing the modified Selection Sort & modified Bubble Sort)**

1. Implement the modified algorithms (from your final lab submission) in C. Again, when implementing, use a **counter** which counts the number of times that the loops are implemented
2. Repeat 2. with the modified algorithms from 3. Have your changes made the sorting programs more efficient?

**Part III (Quicksort)**

1. Research the **Quicksort** algorithm:
   1. What steps are involved in the Quicksort?
   2. What is its Big O?