**Lab 4 – Starting Sorting**

*All work must be uploaded on Webcourses at the end of the class.*

1. Using the pseudo code of the two sorting algorithms *– Selection Sort and Bubble Sort*, shown in your lecture notes:
   1. Make at least one change to **each** algorithm to improve its efficiency.
   2. Using 1, 2, 4, 3, highlight exactly how it is more efficient.
2. Research (using the internet or books) one other sorting algorithm:
   1. In your own words, describe how this algorithm works.
   2. What is the Big O of this algorithm? Explain why this is so.
   3. State where you got your information (exact website or book).
3. What is the **Big O** of (outline how you got your answer):
   1. The iterative GCD algorithm (from Lab 1).
   2. The tree-drawing algorithm (from Lab 2).
   3. The Rock/Paper/Scissors algorithm (from Lab 2).
4. Take Lab 4 Quiz in WebCourses.

**Finally ….**

Upload a WORD document (answering Q1, Q2, Q3) in Webcourses in the submission icon provided:

**\*\* All of this lab will go towards your final CA mark. Ensure this is your own work, as if there is evidence of copying you will receive 0.**