**Lab 7 – Reviewing searching and merge sort**

**Part I Starting Searching**

1. Write an algorithm, in pseudo code, which searches for the max. and min. of N numbers in an **unordered** array A.
2. What is this algorithm’s Big O? Why?
3. Implement the algorithm in 1. in C.
4. Write an algorithm, in pseudo code, which searches for a particular number in an **ordered** array A.
5. What is this algorithm’s Big O? Why?
6. Implement the algorithm in 4. in C.

**Part II Looking at the Merge part of the Merge Sort**

1. Read the merge sort notes from last week. This outlines the **Merge** part of the Merge Sort algorithm. Illustrate/draw how the **Merge** part of the Merge Sort Algorithm works on the following two lists – [1,2,5,7] and [3, 4, 6, 8].