Tutorial: Sorting

1. Use the debugger to step through the Selection sort algorithm covered in the lecture. Make sure you understand how it works.

2. Given the array [3,5,4,9,2], sort this array using the Selection sort. Show all of your working with annotation at each step to show what you are doing.

3. Use the debugger to step through the Insertion sort algorithm covered in the lecture. Make sure you understand how it works.

4. Given the array [“Gill”,”Ron”,”Eva”,”Ali”,”Tom”], sort this array using the Insertion sort. Show all your working with annotation at each step to show what you are doing.

5. Implement the Bubble sort algorithm as a Java method using an appropriate data structure (explain your choice of data structure). Test the method with suitable data.

6. Use the *SLinkedList.zip* file given earlier in the course as a starting point to do the following:

    a. Re-implement the insertion sort algorithm using a single linked list.
    b. Briefly discuss the advantages and disadvantages over the implementation presented in the lecture.
    c. Use your new algorithm to sort the text data in the file Tennyson.txt and store the results either in another file or print to the screen and capture as a screenshot.