

ECE 36800 – Data Structures Programming Assignment 1 – Bonus

Description:

Since each character in a string is within the range ‘a’-‘z’ and ‘A’-‘Z’, it is possible to design a sorting algorithm with linear cost. Implement a linear sorting algorithm (e.g., bucket sort, radix sort, etc.) to sort the strings and record the running time.

What to submit:

1. `sorttest3.cpp`: The test sorting program of your chosen linear sorting algorithm only.
2. A word document `proj1part3.docx`: This file should have the following parts:
 - Test result: Test each of the sorting function with your simple text file and record the result. You do not need to show the content of the output text file.
 - Running result: After the above step, test each of the sorting function with the long input file `randomwordlist.txt` and record the result. You do not need to show the content of the output text file.
3. Push all your files under the “proj1/bonus” directory before the deadline.

Grading Policy:

This bonus is worth 20% of Assignment 1.

Note: If your program does not compile, the whole 20 points will be deducted.

1. **Executability** (2%)
2. **Programming style** (2%)
3. **Program Specifications/Correctness** (16%)