EECS 660 Homework 3 Instructions

The goal of this homework is to implement the **linear-time** median finding algorithm. We will be running your program on inputs with different sizes, and performing regression on your runtime with both linear and $O(nlogn)$ lines. You will receive full credit if the runtime of your program fits better with the linear line than the $O(nlogn)$ line (measured by sum of squared errors).

Please read the following instructions carefully.

1. Input format:
Your program should read in an input text file that contains a set of unsorted numbers.

4,2,5,1,3

For example, the above array contains 5 numbers and they are unsorted.

2. Output format:
The program should output the median of the unsorted array. For the array above, the program would output the following:

3

3. Execution of submission:
Your program should be able to run from the console using the command:

"python3 [Your_Program] input.txt"

Your program should simply print to **stdout**, not an output file. **Python 3** will be used as the interpreter.

Note: Do not sort whole array for finding the median, otherwise it will get a zero for the submission.

4. Submission:
You only need to submit the python file via Blackboard. Name the file as "medain_username#", with **username#** corresponding to your **KU inline username with your initials**. For example, if my online username is c123z456, my program should be named "median_c123z456.py". Please submit your python file via Blackboard. **The submission deadline is 11:59 April 26th, 2021**.

5. Questions and/or feedbacks:
Contact the instructor Cuncong Zhong at cczhong@ku.edu for logistic issues, or the grader

Chiehen Hung at seanhung0621@ku.edu for technical issues.