

CSE 5311 Homework Assignment 1 (Fall 2019)

Due date: 9/4 (Wednesday) (type, print, and hand-in in class)

(1) [60 points]

Implement the insertion sort and merge sort algorithms with any programming language you choose and run them with input number lists. Generate the list elements with a random function and increase the list size incrementally until you find the execution time of your merge sort program is consistently shorter. Draw the two curves in a figure (execution time vs input list size) about the two programs. Using the example to discuss why the asymptotic analysis is meaningful. Attached program codes in your submission.

(2) [40 points] Problem 2-1 on Page 39 of the CLRS textbook.