

Problem set number 8 supplement

CS470 Spring 2005

due date April 24, 2005, 11:59pm

Exercise 8.1, stage two

For the stage two of E8.1, you need to run the sorting algorithms on the files obtained from here

<http://www.cs.ua.edu/470/spring2005/files.zip>

Populate your running time measurements into the following spreadsheet

<http://www.cs.ua.edu/470/spring2005/measurements.xls>

As a result you will obtain several figures.

The main part of your assignment is to **explain why** the average running time changes the way it does. Finally, you must write a detailed recommendation on which sorting algorithm you would use depending on the “characteristics” of the input on which your algorithm will run (you should infer the meaning of “characteristics” by recalling how files were generated). In particular, say which algorithm would likely be better than others. Be creative when writing your report.

When grading this major project, I will be looking at how your recommendations relate to our knowledge of the theoretical running time of the algorithms, and our intuition how quickly the algorithms should run on a given input.

Submit your report along with the populated spreadsheet.