

CSCI 33500 - Spring 2016 - Homework #3 Sorting Programming.

Due in class Monday April 4th

1 Mergesort Implementation

For this section, implemented the Mergesort algorithm, as described chapter 7.6.1 (page 306) of the book. Your code should be contained in only one `main.cpp` file.

The goal of this section is simply to get a working implementation of the algorithm, in preparation for the next section. You should have this section finished by Thursday, April 31st.

It is imperative that you work on this implementation alone, as it is the knowledge and analysis of the algorithm that will be graded, and not the code itself.

2 Experiments & Analysis

- 2.1 Modify your code so that it keeps tracks of how many comparisons are made to sort the input.
- 2.2 Write a procedure that tests your mergesort algorithm on a large number of random arrays. Save your results.
- 2.3 What is the average number of comparison you expect? Compute the average number of comparisons you do and compare your empirical results with theoretical numbers.

3 How to submit

Your homework should be zipped in a single file containing your code, and A PDF readme documenting your code and analysis of the experiments. Name your zip `HW3- $\$$ STUDENTNAME.zip`, and email it to `fg297@hunter.cuny.edu` by noon on Monday April 4th.