

Lab 6: Sorting

UWYO COSC 2030

1 Introduction

This lab will introduce you to some basic sorting algorithms. There will be three algorithms included in the lab: Quicksort, Mergesort, and Heapsort. Quicksort will already be completed for you; it is there for you to reference. Mergesort and Heapsort will need to be completed.

2 Assignment

Link: <https://classroom.github.com/a/gXP4PTP9>

Complete the functions `heapify` and `mergeSort`. Do **not** change `main` or the function declarations. The `MAXSIZE` variable is defined at the beginning of the file – start by setting the value to 100 ensure you are sorting correctly. You can also uncomment the print statements in `main`. Make sure you re-comment out the print statements after you ensure you are sorting correctly. Once you are sorting correctly, increase `MAXSIZE` up to 100,000 and run the code again.

Both functions require you to write recursive calls.

3 Timings

Run your code on both your own computer and a Raspberry Pi for comparison. Include the timings for both sorting algorithms on both devices in your README. Please include the `MAXSIZE` used for your timings. Note that your code may not run on the Pis if especially large values are chosen for `MAXSIZE`.

4 Submission

Turn in on Github Classroom. Please include a README with your name and lab section.