# Homework 1

**Due** Apr 11 by 11:59pm **Points** 30 **Submitting** a file upload **File Types** pdf
**Available** Mar 31 at 12am - Apr 13 at 11:59pm 14 days

This assignment was locked Apr 13 at 11:59pm.

Description: **HW1**

Below is a test data file and the sorted version of the file. Do not view in the Canvas viewer. Download and view with a text editor.

- **data.txt** (https://canvas.oregonstate.edu/courses/1870028/files/92756750/download?download_frd=1)
- **sorted.txt** (https://canvas.oregonstate.edu/courses/1870028/files/92756755/download?download_frd=1)

Test your code on the flip server using the script below. Run using sh HW1.sh.

**HW1.sh** (https://canvas.oregonstate.edu/courses/1870028/files/93041783/download?download_frd=1)

Submit the write up to Canvas

Submit one **.zip** file to TEACH that contains: (replace ** with py, c or cpp)

- toogesort.**
- mergesort3.**
- merge3Time.**
- stoogeTime.**
- data.txt
- sorted.txt
- HW1.sh script file

**https://teach.engr.oregonstate.edu/teach.php?type=assignment** (https://teach.engr.oregonstate.edu/teach.php?type=assignment)

**HW 1 Sp21 - Rubric**

| Criteria | Ratings | | | | | Pts |
|---|---|---|---|---|---|---|
| P1. MergeSort3<br>Description, pseudocode, running time | **5 pts**<br>**Full Marks** | **4 pts**<br>**One error or missing item** | **3 pts**<br>**Two errors or missing items** | **2 pts**<br>**Three or more errors or missing items** | **1 pts**<br>**Major errors** | 5 pts |
| P2. Stooge Sort<br>Description, pseudocode, running time | **5 pts**<br>**Full Marks** | **4 pts**<br>**One error or missing item** | **3 pts**<br>**Two errors or missing items** | **2 pts**<br>**Three or more errors or missing items** | **1 pts**<br>**Major errors** | 5 pts |
| P3. Merge Sort 3 Implementation<br>Comments, compiles/runs on flip using script, reads from data.txt & produces correct results.<br>Pseudocode submitted in Canvas | **5 pts**<br>**Full Marks** | **4 pts**<br>**One error or missing item** | **3 pts**<br>**Two errors or missing items** | **2 pts**<br>**Three or more errors or missing items** | **1 pts**<br>**Major errors** | 5 pts |
| P3. Stooge Sort Implementation<br>▶ mments, compiles/runs on flip using script, reads from data.txt & produces correct results.<br>Pseudocode submitted in Canvas | **5 pts**<br>**Full Marks** | **4 pts**<br>**One error or missing item** | **3 pts**<br>**Two errors or missing items** | **2 pts**<br>**Three or more errors or missing items** | **1 pts**<br>**Major errors** | 5 pts |
| P4. merge3Time & stoogeTime Comments, compiles/runs, displays times Pseudocode and explanation. | **5 pts**<br>**Full Marks** | **4 pts**<br>**Minor error** | **3 pts**<br>**several errors or missing items** | **2 pts**<br>**Major errors** | | 5 pts |

| Criteria | Ratings | | | | Pts |
|---|---|---|---|---|---|
| P5 a) Collect running times for merge sort 3 & stooge sort<br>All values > 0. At least 10 values.<br>Is this best, worst or average case running times? | **1 pts**<br>**Full Marks** | | **0.5 pts**<br>**Minor Error** | **0 pts**<br>**No Marks** | 1 pts |
| P5 b) Plot data, give equation and graph best fit curve for Merge sort 3. Compare to theoretical running time. | **2 pts**<br>**Full Marks** | **1 pts**<br>**One error or missing item** | **0.5 pts**<br>**Two errors or missing items** | **0 pts**<br>**No Marks** | 2 pts |
| P5 b) Plot data, give equation and graph best fit curve for Stooge sort. Compare to theoretical running time. | **2 pts**<br>**Full Marks** | **1 pts**<br>**One error or missing item** | **0.5 pts**<br>**Two errors or missing items** | **0 pts**<br>**No Marks** | 2 pts |
| | | | | | Total Points: 30 |

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