

CS211 Data Structures and Algorithms Lab
Autumn 2022
Assignment#0

Due on 12 August [Friday]

Objective:

The objective of this assignment is to practice file operations. Note that this assignment is not considered for evaluation. But the marks (maximum 10, which will not contribute to the grading) will be provided so that you can be well prepared for the upcoming assignments, and make you understand the evaluation process.

All submissions should be through Moodle. Submission through emails will be strongly ignored.

Inputs:

Note that your program should accept an input file through a command-line argument. A typical execution of your program will be './a.out sample.txt' (if your program is written in C). The input file name can be anything (don't hard-code "sample.txt").

The input file contains one integer per line.

Task and output:

The output should be written to a file named 'output.txt' which should contain only 5 lines of data:

- (i) First line should contain the total numbers in given the file
- (ii) Second line should contain the minimum number present in the file
- (iii) Third line should contain the maximum number present in the file
- (iv) Fourth line should contain the sum of the numbers
- (v) Fifth line should contain the average of numbers - up to two decimal points.

Submission and Evaluation:

- The program you submit should output: "output.txt" when run.
- The main file of your program should be named as **<roll no>.<extension>**, where roll no. specifies your roll no. and the extension depends on the language you choose (in our case ".c" is a mandatory for this assignment). Ex: 210010001.c
- Do the stress test of your program well before submission.
 - (i) You may use the attached sample input files for testing; the corresponding output files are also attached;
 - (ii) We have some hidden inputs with us to test your program. The mark you obtain is purely based on whether your program correctly gives outputs for the hidden inputs.
- If your program has only a single source file, please submit the file as it is. If your program has multiple source files, please submit your code as a zip file where the name

of the zip file should be your roll number. **It is important that you follow the input/output conventions** exactly (including the naming scheme) as we may be doing an automated evaluation. ***There will be a penalty of 10% (on the mark you deserve otherwise) if you do not follow the naming conventions exactly.***

- Follow some coding style uniformly. Provide proper comments in your code.
- Submit only through moodle. **Submit well in advance**. Any hiccups in the moodle at the last minute is never acceptable as an excuse for late submission. Submissions through email or any other means will be ignored.
- Acknowledge the people (other than the instructor and TA) who helped you to solve this assignment. The details of the help you received and the names of the people who helped you (including internet sources, if applicable) should come in the beginning of the main file as a comment. *Copying others' programs and allowing others to copy your program are serious offences and a deserving penalty will be imposed if found.*
- To be considered for the evaluation, you have to submit your program by **12th August 2022 (11:59 pm)**.