
CpSc 2120: Algorithms and Data Structures

Instructor: Dr. Brian Dean

Fall 2021

Webpage: <http://www.cs.clemson.edu/~bcdean/>

MWF 9:05-9:55

Handout 5: Homework Assignment #1

Powers 208

1 Hashing Practice

The goal of this assignment is to perform the same computation as with lab 1, only faster, using hashing to speed things up. For full credit, your code should run in less than 10 seconds for the full `covid.txt` data set, with values of K ranging from 25 up to 1000 (slower programs will receive partial credit). The format of the output of your program should be the same as before (note that the worst-case and anticipated running times might now be different from lab 1).

No starter code is provided; you are welcome to incorporate aspects of your earlier lab 1 code or the lab 1 solution code into your submission.

Just as with lab 1, you should de-allocate all memory you have allocated by the time your program exits. You are still not to use standard template library classes like vectors, sets, maps, etc. (strings are fine).

2 Submission and Grading

Submit your code using `handin.cs.clemson.edu`. Zero points will be awarded for code that does not compile, so make sure your code compiles on the lab machines before submitting!

Final submissions are due by 11:59pm on the evening of Sunday, September 19. No late submissions will be accepted.