===Lab Info===

* 100 points

* Due 8:00pm on Wednesday 10/14/2015 for Monday Lab, Friday 10/16/2015 for Wednesday Lab.

==Assignment==

In this lab, you will do some time performance measuring on open and closed hashing method you programmed on Lab3 and Lab4. "'For those students that their Lab3 and Lab4 codes had problems they first need to fix it.'" Choose the size of the hash table as 600011 (prime number), generate random numbers between 0 to 2,147,483,647 (long) for load factor 0.2, start the timer hash the numbers using open hashing and then stop the timer and save the time, then use the same numbers for closed hashing start the timer hash the numbers and stop the timer, repeat the process for load factors 0.3, 0.4, 0.5, 0.6, 0.7 use different srands in order to get different sets of numbers (Do not apply rehashing for this assignment). There should be no duplication in the hash table, so be careful to first search for the number and if not in the table then add it. rand() and srand() and Timer class will be discussed in the lab.

Calculate the total time for the different load factors and different methods. Apply for 5 different seeds and calculate the average. Mention the time for 5 different seeds in your report, and draw a chart for the average time (time versus load factor). To ensure that the timing tests are “fair,” you must use the same seed for the random number generator for each structure. Submit a report to discuss:

(1) The overall organization of your experiment,

(2) Data generation,

(3) Summary of results (CPU timing)

(4) Observation and conclusion.

(5) The time for 5 different seeds and the average

(6) Chart for comparing the average time of two methods versus load factor

The most important part of this lab is your report.

===Files===

* Files to include in folder:

** all source files

** a functioning <tt>makefile</tt>

* Folder name: <tt>Lastname_Lab6</tt>

* Compressed file name: <tt>Lastname_Lab6.zip</tt> (or <tt>.rar</tt> or <tt>.tar.gz</tt>)

* Executable name: <tt>lab6</tt>

* Report.pdf