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Lab 5

Organization:

For this lab we need to use labs 2 and 3 which I did not do so well on, I had to get both working properly to finish this lab. So the first part was to completely redo labs2 and 3 with better implementation and organization all together, I tried organize it as neat as possible. The Make file is designed so the labs stay in their own folders. For the main file I initialize each hash table. From there using the loadFactor and k I generate a certain number of random numbers into arrays and these arrays are sent to each of the hash-tables. Its set up in a way where the times of data structure are also sent to arrays to be easily averaged.

CPU Timing

Load factor	.3	.4	.5	.6
Open hash	.0111558	.0163684	.0228642	.0293768
Quadratic closed	.0081006	.012181	.0159254	.020238
Linear closed	.0042678	.0072032	.0103236	.0148522

Observation and Conclusion

Its not exactly what I expected, I wasn't thinking linear closed hashing would be so low. It's possible I messed up somewhere. I expected Open hash to be the lowest because of not having to deal with collisions, but it seems to be the opposite, clearly I messed up somewhere, I ran it multiple times and its pretty consistently wrong.