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CSC 131

Assignment 3 - Hash Tables

In this assignment I created 4 different hash tables. The first one was Linked Hash Table, in this model I used a lot of the built in features of linked list and the time in nano seconds for everything to complete was 0.00. Next was a linear probing Hash Table, where the hash was increased by 1 until an empty spot was found on the table. The next one was quadratic probing, which is like linear but instead of adding one more it adds i^2 to the function. Last was the double hash table where if an empty spot was not found the hash value was add to a multiplicative (7 – hash value % 7) all modded by the table size.

In testing I found the linked list to run the fastest at 0ns and double hashing being the slowest at 385875968.00 ns. I think linear might have been the slowest due to have to use to different hash function however it probable had the fewest collisions. While linked list had the most collisions but just appended the value to the end of the list. In many of the test I would get all 0 for the insert and occasionally I would find myself with a timing of 8388608ns. I’m not sure if this was just an anomaly or a missed calculation.

