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Discussion and Analysis

*Testing Strategy & Possible Improvements*

Nothing new in my testing strategy. I simply used my hw4\_test.cpp as a template for my hw7\_test.cpp, and then used this file to test each function independently from the other functions. This testing strategy works well because it makes it easy to pinpoint a bug in my program. Once I had implemented all of my functions and passed all of my tests, I continued my testing strategy by calling the rand\_\*k.txt files. At first I was very concerned with the results that I was getting, because oftentimes my remove and find functions were being executed in 0 microseconds. This alarmed me at first, but hash tables are known to have essentially O(1) time complexity for these functions, so I’m pretty confident that there is nothing wrong.

*Implementation Issues/Challenges and How I Addressed Them*

For me, the most difficult function to implement was the keys function. Most of the issues I had with the keys function stemmed from not knowing where to start. Once I was able to figure out *how* I wanted to implement the function, the actual coding took just a couple minutes. I was trying to overcomplicate it by calling the sort() method and all kinds of other crazy things when all I needed to do was make a while-loop embedded in a for-loop. This assignment took significantly less time than hw6, so I didn’t really have any major implementation errors beyond struggling to write code for the keys method.