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Lab 107

1. Yes, my implementation produced the correct results. I had to fix some of the spacing between words but besides that the results were the same as those given in the output files.

2. With the -O2 flag my program was about 8 seconds faster for the 250x250 grid, .4 seconds faster for the 50x50 grid, and 2 seconds faster for the 140x70 grid.

3. The runtime on my laptop for the 250x250 grid is about 26 seconds. For the 300x300 grid it is about 28 seconds.

4. big-Theta is r*c*w. The worst case scenario for the hash table is linear because, while unlikely, it's possible for all of the elements to be stored in the same bucket, making the time to search for words linear.

5. My main issue was trying to grasp the idea of what the lab was asking for. After spending some time reading through the prelab info many times I got a general idea of what was needed and tried to implement it by using the unordered_map stl just as a test run. After toying with this I moved on to implementing my own hashtable. I didn't find this too difficult after I figured out what my header file would look like.

6. The shell scripting was not very challenging. It felt pretty straight forward. I think shell scripts will turn out to be very useful in the future as it can automate the execution and manipulation of many different things.