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20/3/19
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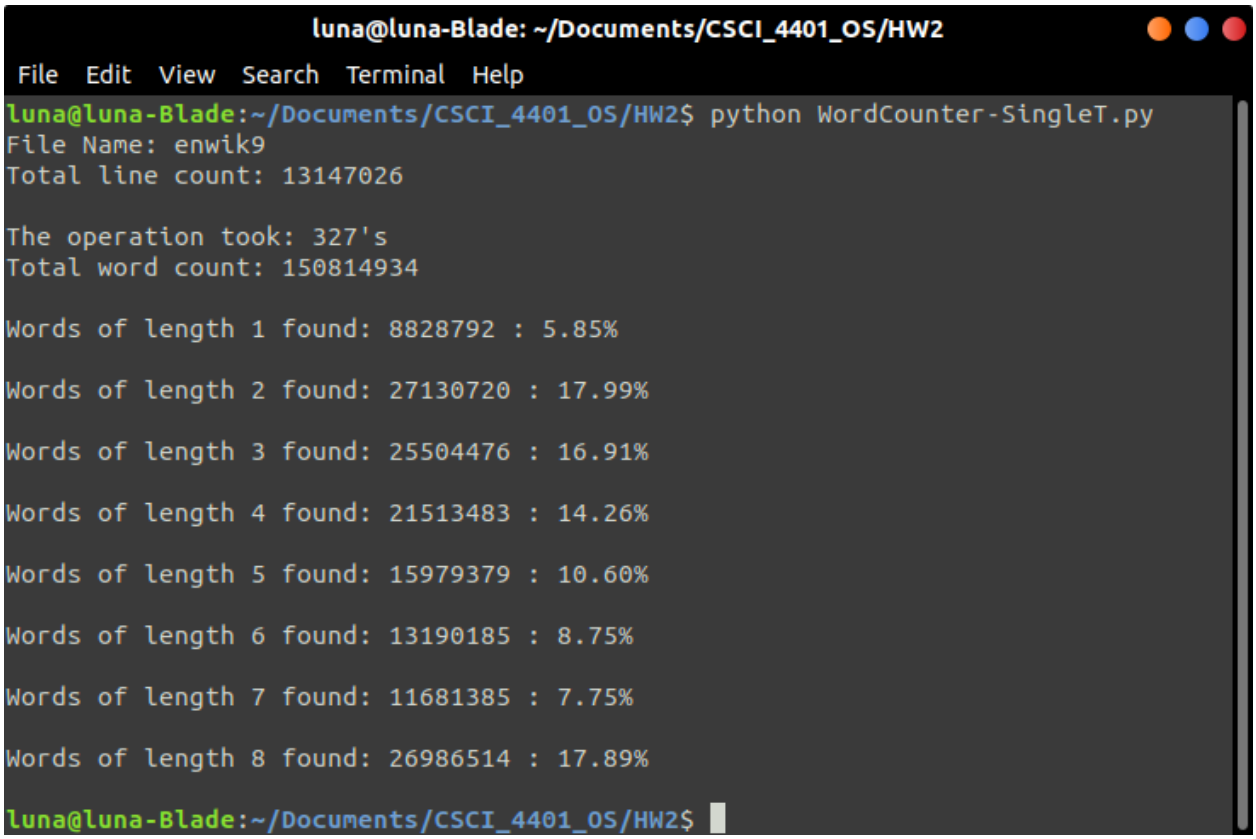
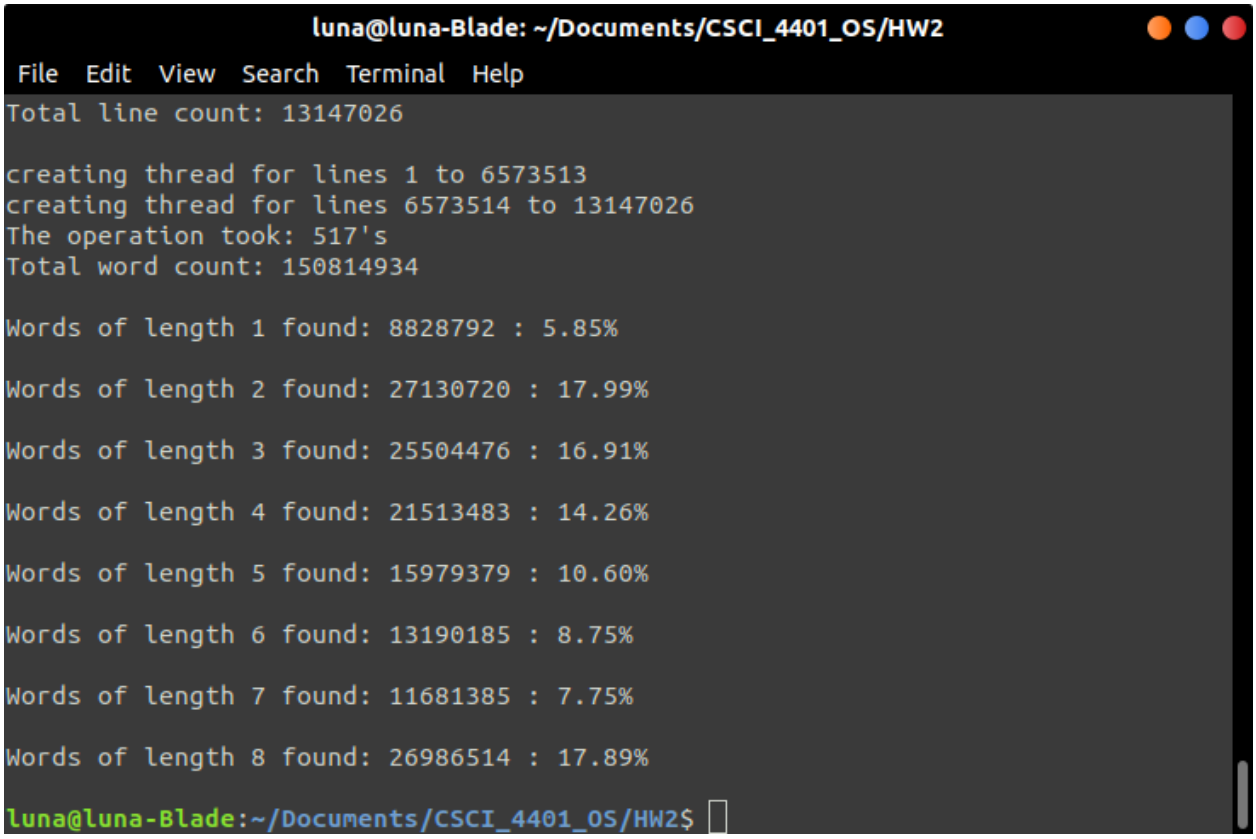
Assignment 2

Question One



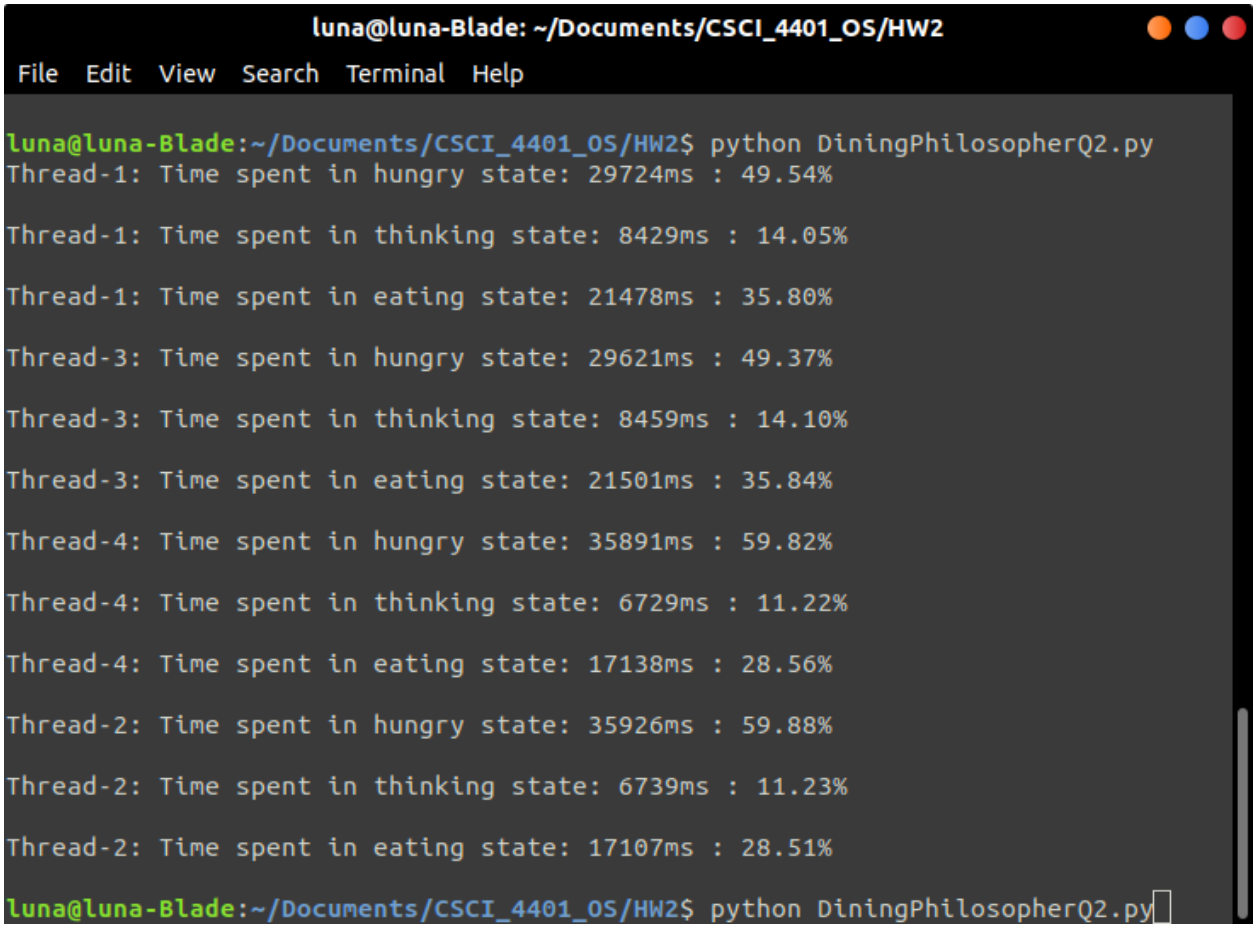
This is the output of my single threaded code titled: WordCounter-SingleT.py



This is the output of my multi threaded code titled: WordCounter-MultiT.py

The results of the multi threaded test were not as expected. I believe this can be attributed to the overhead of having multiple threads requiring access to the IO bus as well as the single cored nature of python and the rapid passing around of it's GIL lock.

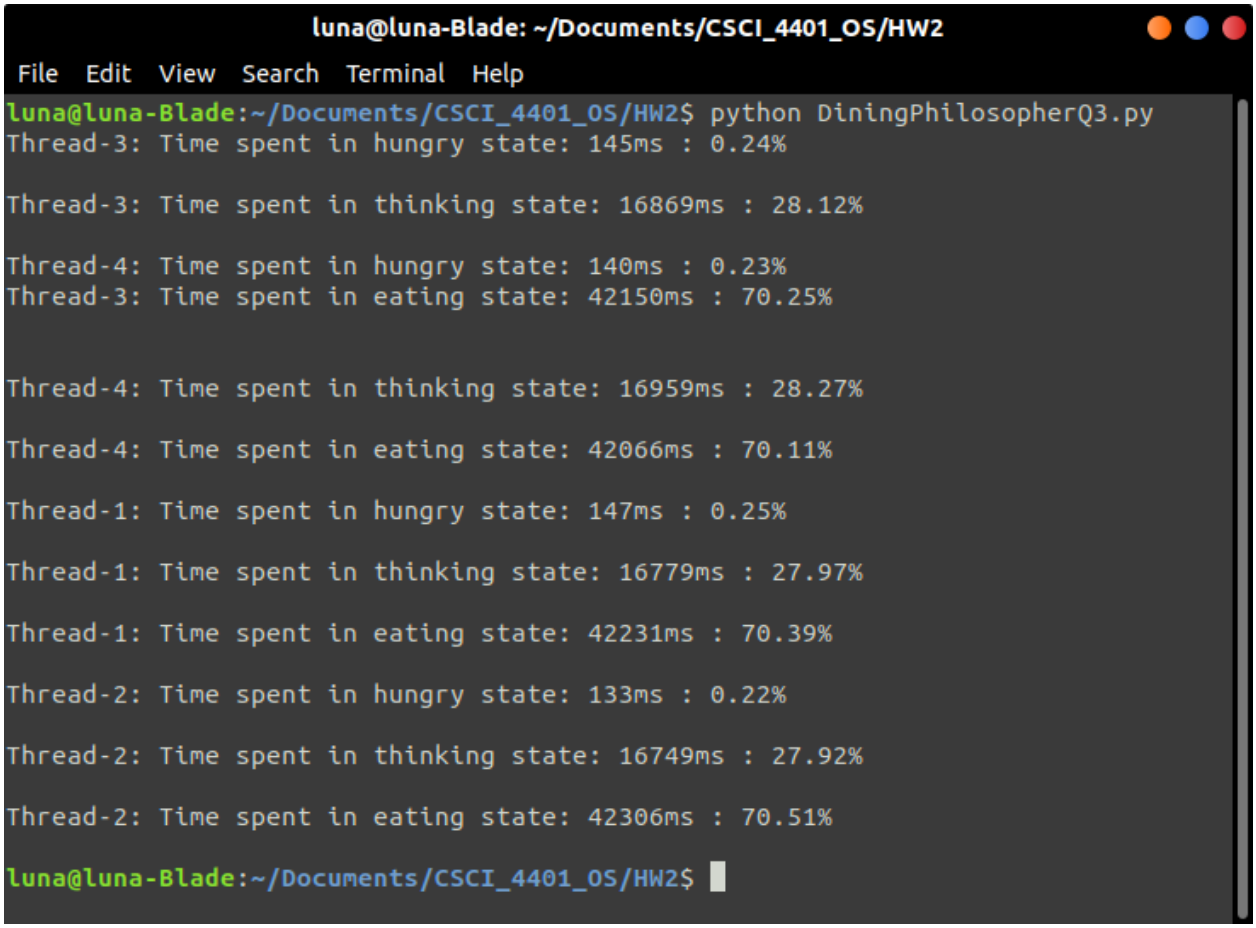
Question Two



This is the time data output by my dining philosophers code titled: DiningPhilosopherQ2.py

This code also produces another file following each step of the iteration called: q2output

Question 3



This is the output of my optimized dining philosophers code titled: DiningPhilosopherQ3.py

It has an extra output called: q3output which is a step by step iteration of the code

If we take a look at the tread times in q2 vs q3 it's fairly clear that a significant amount of hungry time has shifted to eating and thinking due to q3 using semaphores to optimize eating time instead of just using random waits like in q2.