Ch.29 Coding Homework
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gcc (Ubuntu 13.2.0-4ubuntu3) 13.2.0
gcc -o mem_user memory-user.c

1. The timer is very accurate being able to measure down to microseconds. It calculates the correct time for what is tested plus the minor overhead that occurs from calling the functions involved which seems to vary from run to run. (gcc -o q1 q1.c)
2. There are 8 cores on my machine. This impacts the measurements because in my tests I could see that the performance got faster by adding more threads until I hit more than 8 threads. Then it started decreasing in speed since each cpu would have to share resources with another thread rather than being able to tackle a thread on its own. (gcc -o q2 q2.c)
3. The numbers do match what is explained in the chapter. With the approximate version of the counter the time does not drastically increase once we run out of cores for each thread which is to be expected. Rather it stays fairly stable in speed but as the book also describes as more threads get created the time does slow down a little bit due to more overhead caused by creation of threads and locking/unlocking frequently which is also to be expected. (gcc -o q3 q3.c)