

Project 2 WriteUp

Part I

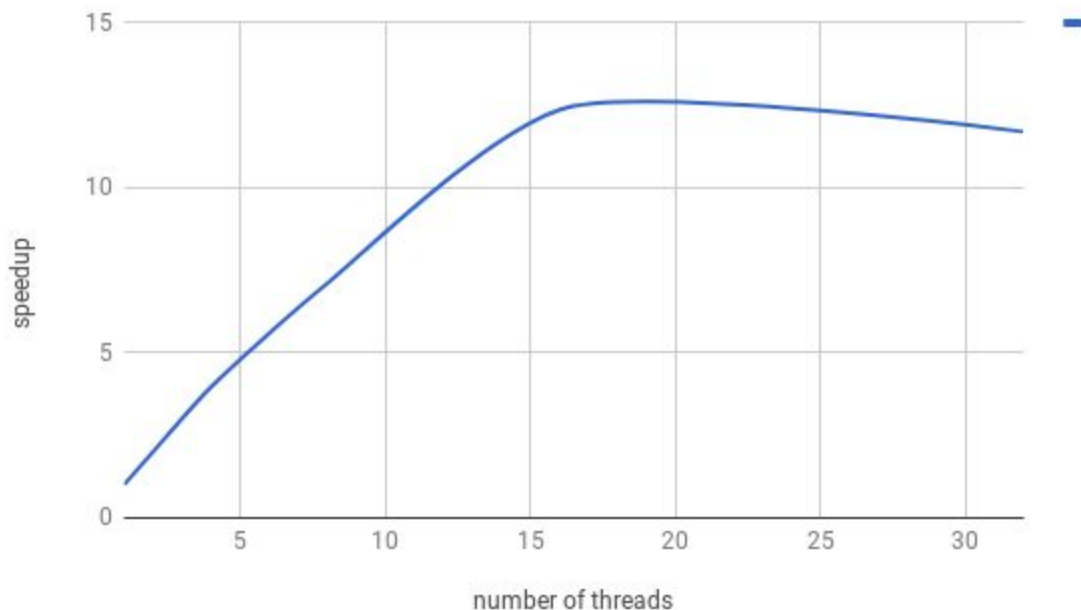
(1a). I think the time should be stuck at some value. Since random object is synchronized, the random object can not be accessed by one single thread at every time, so it makes program become serial instead of parallel. Thus, it couldn't help decrease running time very well even though we increase the number of threads.

(1b). In this case, since the random object is synchronized, so it can only be accessed by one thread at the same time. Thus, it will have race conditions, which is not helpful for our parallelism. Thus, it doesn't help to parallelize our program. Also, due to the fact that the single random object is shared by all the threads, so switching between threads to get access the random also takes a lot of time, which is not helpful in parallel program. Waiting for another thread to finish using random object, which makes the other threads waiting for get access to random object become stuck, which is really not efficient.

Part II

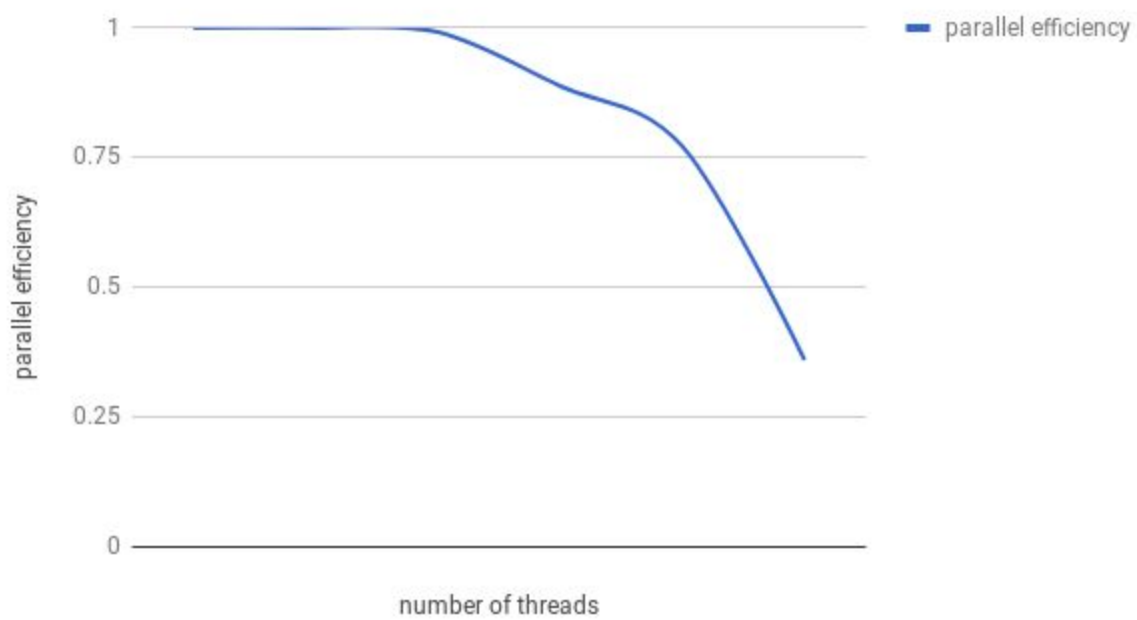
(2a)

SpeedUp Charts



(2b)

parallel efficiency



Part II: