OS LAB 7
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use "g++ -pthread" to compile the programs or use makefile.

Part A.

1. avg count = 88785.67   avg time = 0.93 ms
2. No, the count is not matching N*K(100000).
   At any time, more than one threads are concurrently executing "count++;" instruction, which is not atomic hence causing race conditions. (line no. 22)

Part B.

1. avg count = 77694   avg time = 1.082 ms
2. No, the count is not matching N*K(100000).
   Race condition occurs while updating the lock variable. Therefore, lock variable fails to provide Mutual Exclusion. Hence, there is also a race condition at "count++" instruction.
(line no. 23-25)

Part C.

1. avg count = 10000   avg time = **26.601** ms
2. Yes, the count is matching N*K(100000). There are no race conditions here.