

[06] Write a new multithreaded program, where each of the M threads

1. generates N (possibly random) numbers, and then
2. adds those N numbers to a global variable (initial value 0)

Addition to the global variable is performed either

1. using a lock (as in previous classes), or
2. using alternating barrier calls, so that threads enter the critical section in round-robin fashion (T1, T2, ... TM, T1, T2 ... TM, ...). Each time a thread enters the critical section, it adds its next X numbers

To validate correctness, each thread prints the value of the global variable before exiting the critical section. Remember to flush the buffer after each print using `fflush(stdout)`.

Time your implementations using `clock_gettime`, as in previous Labs, and include your comparisons (lock vs barrier for various values of M, and X) as comments in your program.

Collaborate with others, but then sit down & write your solution alone!

ΠΡΟΣΟΧΗ

Ανεβάστε την λύση στο φάκελο Εργασίες/Εργασίες 6 στο ECLASS, π.χ. 06_xxxx.c αν ο Αριθμός Μητρώου σας είναι xxxx.

Η προθεσμία είναι η Δευτέρα 30/11/2020 και ώρα 18:00. Γενικά δεν γίνονται δεκτές εκπρόθεσμες υποβολές.