

Blaj Andrei-Sorin
Grupa 931/2

Lab 2

Divide a simple task between threads. The task can easily be divided in sub-tasks requiring no cooperation at all. See the effects of false sharing, and the costs of creating threads and of switching between threads.

Requirement: write two problems: one for computing the sum of two matrices, the other for computing the product of two matrices.

Divide the task between a configured number of threads (going from 1 to the number of elements in the resulting matrix). See the effects on the execution time.

Computer specifications:

Processor: 2,9 GHz Quad Core i7

Memory: 16GB 2133 MHz LPDDR3

OS: macOS Mojave, Version 19.14.1 Beta

OS type: 64 bit

Data

Data Amount	Number of threads	Execution time per test MULTIPLICATION	Execution time per test ADDITION
2 x 2	2	16.272	1.705
4 x 4	4	17.748	1.374
10 x 10	10	16.612	1.893
100 x 100	30	22.884	8.22