Laboratory 2

Problem: 1

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.

Matrix: 500 x 500  
  
  
Threads:

4 threads:

End work multiplication: 4.016 seconds

End work addition: 0.104 seconds

8 threads:

End work multiplication: 2.792 seconds

End work addition: 0.048 seconds

16 threads:

End work multiplication: 1.68 seconds

End work addition: 0.024 seconds