**Procesarea de text (en. Text Processing)**

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**Introduction**

Counting the frequency of words in a large text file can be parallelized by processing different parts of the file on separate threads or processors.

**Programming language**

\* C++

**Framework**

\* MPI + STL

**Machine specs**

\* OS: Windows 11 Pro;

\* CPU: AMD Ryzen 7 4800H;

\* RAM: 16.0 GB ;

\* Storage: SSD 1TB;

\* Compiler: Visual Studio 2022

**Sequential execution times**

-10k words: 8824 microseconds

-50k words: 24353 microseconds

-100k words: 43662 microseconds

-500k words: 209091 microseconds

-1M words: 419079 microseconds

**Parallel execution times**

-10k words: 49576 microseconds

-50k words: 147470 microseconds

-100k words: 253992 microseconds

-500k words: 1219797 microseconds

-1M words: 2217882 microseconds

**Parallel#2 execution times**

-10k words: 185962 microseconds

-50k words: 461050 microseconds

-100k words: 795135 microseconds

-500k words: 3185610 microseconds

-1M words: 6268084 microseconds