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Group 937

# Laboratory 3 - Documentation

Specifications & configuration:

* MacBook Pro (13-inch, 2018, Four Thunderbolt 3 Ports)
* Processor 2,3 GHz Quad-Core Intel Core i5
* Memory 16 GB 2133 MHz LPDDR3 512 SSD

The objectives of this laboratory is to see the performance of different mechanisms for launching parallel operations (thread pool and *future)*.

The operations which were performed are addition and multiplication on matrix generated random of size 500x500 and the range of the values is between 100 and 900.

First of all we began with Thread Pool in both Java and C++ for each of the operation and on different Thread Pool size.

**Addition**:

Nr Threads:

2: Java: 109

C++: 224

4: Java: 286

C++: 453

8: Java:375

C++: 1136

**Multiplication:**

Nr Threads:

2: Java: 232

C++: 221

4: Java: 289

C++: 537

8: Java: 391

C++: 1066

Now, as we saw the time elapsed in order to perform those operation we can go on to future mechanism to see the differences:

|  |  |
| --- | --- |
| **Addition**:  Java: 164  C++: 185 | **Multiplication**:  Java: 2140  C++: 363 |