**Lab 3 - Advanced launching of parallel tasks**

**The objectives of this laboratory is to see the performance of different mechanisms for launching parallel operations — the thread pool and the *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. (time will be measured in milliseconds due the performance of the computer)**

**Addition:**

|  |  |  |
| --- | --- | --- |
| **Nb. Threads** | **Java** | **C++** |
| **4** | **132** | **631** |
| **8** | **180** | **646** |
| **10** | **92** | **783** |

**Multiplication:**

|  |  |  |
| --- | --- | --- |
| **Nb. Threads** | **Java** | **C++** |
| **4** | **84** | **858** |
| **8** | **72** | **562** |
| **10** | **176** | **989** |

**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** | **C++** |
| **164** | **185** |

**Multiplication:**

|  |  |
| --- | --- |
| **Java** | **C++** |
| **2140** | **363** |