TRAB 1 – CPD

\*\* configuração do computador é esta e valores são estes

\*\* Explorar outros contadores

**Pergunta 1**

[Mult Normal :: C++ Vs JAVA]

|  |  |  |  |
| --- | --- | --- | --- |
|  | C++ (Patricia) - Ryzen | Python (FEUP) | Java (FEUP) |
| 600x600 | 0.198 | 14.69559 | 0.202 |
| 1000x1000 | 0.929 | 89.13750 | 1.383 |
| 1400x1400 | 3.515 |  | 4.329 |
| 1800x1800 | 7.550 |  | 18.563 |
| 2200x2200 | 13.194 |  | 38.307 |
| 2600x2600 | 20.714 |  | 68.525 |
| 3000x3000 | 37.512 |  | 114.687 |

|  |  |  |  |
| --- | --- | --- | --- |
|  | C++ (FEUP) -> Mult Normal | | |
|  | Time | L1 DCM | L2 DCM |
| 600x600 | 0.183 | 244759465 | 38494069 |
| 1000x1000 | 1.119 | 1226795057 | 211618780 |
| 1400x1400 | 3.082 | 3429566887 | 562740307 |
| 1800x1800 | 17.223 | 9080606156 | 5935517740 |
| 2200x2200 | 37.374 | 17630007250 | 18077539771 |
| 2600x2600 | 67.915 | 30914604102 | 50605755659 |
| 3000x3000 | 115.362 | 50297511012 | 98202016175 |

**Pergunta 2**

[Mult Line :: C++ Vs JAVA]

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | C++ (FEUP) -> Mult Line | | | Java (FEUP) |
|  | Time | L1 DCM | L2 DCM |
| 600x600 | 0.099 | 27108363 | 56961956 | 0.135 |
| 1000x1000 | 0.468 | 125733578 | 261487852 | 0.666 |
| 1400x1400 | 1.528 | 346078986 | 707346004 | 2.414 |
| 1800x1800 | 3.326 | 745249413 | 1464751849 | 5.210 |
| 2200x2200 | 6.224 | 2073872902 | 2573025618 | 9.594 |
| 2600x2600 | 10.417 | 4412880032 | 4216767057 | 15.906 |
| 3000x3000 | 15.957 | 6780430832 | 6394366581 | 19.056 |
| ---- | ---- | ---- | ---- | ---- |
| 4096x4096 |  |  |  | ---- |
| 6144x6144 |  |  |  | ---- |
| 8192x8192 |  |  |  | ---- |
| 10240x10240 |  |  |  | ---- |

**Pergunta 3**

[Mult Block :: C++] -> em bloco, mas destro do bloco multiplicações iguais às da pergunta 2 -> em linha

|  |  |  |  |
| --- | --- | --- | --- |
| C++ (FEUP) -> Mult Bloco | | | |
| ----------- Block\_size = 128------------ | | | |
|  | Time | L1 DCM | L2 DCM |
| 4096x4096 |  |  |  |
| 6144x6144 |  |  |  |
| 8192x8192 |  |  |  |
| 10240x10240 |  |  |  |
| ------------ Block\_size = 256 ----------- | | | |
|  | Time | L1 DCM | L2 DCM |
| 4096x4096 |  |  |  |
| 6144x6144 |  |  |  |
| 8192x8192 |  |  |  |
| 10240x10240 |  |  |  |
| ------------ Block\_size = 512 ----------- | | | |
|  | Time | L1 DCM | L2 DCM |
| 4096x4096 |  |  |  |
| 6144x6144 |  |  |  |
| 8192x8192 |  |  |  |
| 10240x10240 |  |  |  |
| ------------ Block\_size = 1028 ----------- | | | |
|  | Time | L1 DCM | L2 DCM |
| 4096x4096 |  |  |  |
| 6144x6144 |  |  |  |
| 8192x8192 |  |  |  |
| 10240x10240 |  |  |  |

**Caracteristicas do PC da FEUP de Teste**

