**In the name of God**

**Multicore Programming Course**

**Lab 6 Report**

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Serial version execution time: 1150.637 seconds

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Block size | Grid size | Block size | Grid size | Block size | Grid size |
| 8\*8 | 512\*512\*1 | 16\*16 | 256\*256\*1 | 32\*32 | 128\*128\*1 |
| Elapsed time | 4722.5 ms | | 3401.0271 ms | | 3463.711426 ms | |
| Speed up | 243.65 | | 338.32 | | 332.19 | |
| Occupancy | 68.65 | | 73.28 | | 85.71 | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Block size | Grid size | Block size | Grid size | Block size | Grid size |
|  | 32\*32 | 128\*128\*1 | 32\*32 | 256\*256\*1 | 32\*32 | 1\*1\*1 |
| solution 1  matrixMulCUDA\_2\_1 | - | - | - | - | took very long time | |
| solution 2  matrixMulCUDA\_2\_2 | - | - | 27776.244 ms | | - | - |
| solution 3  matrixMulCUDA\_2\_3 | 89040.695 ms | | - | - | - | - |

TILE\_WIDTH in solution 3 = 2,

TILE\_WIDTH in solution 1 = 256,

Input Arrays Dimensions: 8192 \* 8192



