Cuda Programming

Prac 5

**Name: Thulani Tshabalala Marks: 20**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Kernel executed** | **GPU execu-tion time**  **[ µs ]** | **Load bank conflicts [Y/N]** | **Store bank conflicts [Y/N]** | **Reason for conflicts** | **Output for 4x4 block size** |
| setColReadCol | 4.128 | Y | Y | conflicts due to bank data access being column by column making 32 transactions | 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 |
| setRowReadRow | 1.504 | N | N | This faster relative to the setColReadCol because these can be accessed in a single transaction | 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 |
| setRowReadCol | 2.272 | Y | N | The data will be stored in one transaction, but if the data is not a multiple of 32 some data requested by a wasp will be in the same bank | 0 4 8 12 1 5 9 13 2 6 10 14 3 7 11 15 |
| setRowReadColPad | 1.504 | N | N | Dummy values a added into the data structure on the shared memory, to ensure that each wasp does a single transaction. | 0 4 8 12 1 5 9 13 2 6 10 14 3 7 11 15 |

**Profile information for Tasks 1-3:**