

Parallel Processing

Assignment 2

This assignment is individual assignment, every student should submit by himself.

Due: Next Section

2. If we launch a kernel in CUDA with the following statement.

```
Kernel<<<100, 25>>>(in, out)
```

- How many blocks does we have?
- How many threads does we have?
- Rewrite this command to express the blocks as a 10*10 two dimensions array.
- Rewrite this command to express the threads as a 5*5 two dimensions array.

3. The following link provide a CUDA program to output the square for an array of float elements:

[Square with CUDA](#)

Download this program and apply the following changes:

- Replace line 36 with (square <<< dim3(2,1,1),32 >>>(d_out, d_in);) and do the appropriate changes to get the same results
- Change the size of the array to 100 and handle any other required changes.
- Change the operation to get the cube of the array elements.
- Write a similar program to sum two arrays of length 100.