**Extra Lab Exercise 1 – C++ CUDA Program to Query Maximum Threads per Block**

#include <stdio.h>

#include <cuda\_runtime.h>

int main() {

int device;

cudaDeviceProp prop;

// Get the currently active device

cudaGetDevice(&device);

// Get device properties

cudaGetDeviceProperties(&prop, device);

printf("Device Name: %s\n", prop.name);

printf("Maximum Threads per Block: %d\n", prop.maxThreadsPerBlock);

printf("Maximum Threads Dimensions (blockDim): x=%d, y=%d, z=%d\n",

prop.maxThreadsDim[0], prop.maxThreadsDim[1], prop.maxThreadsDim[2]);

printf("Maximum Grid Dimensions (gridDim): x=%d, y=%d, z=%d\n",

prop.maxGridSize[0], prop.maxGridSize[1], prop.maxGridSize[2]);

return 0;

}

**How to Compile and Run**

nvcc device\_info.cu -o device\_info

./device\_info

**Example Output**

Device Name: NVIDIA GeForce GTX 1660

Maximum Threads per Block: 1024

Maximum Threads Dimensions (blockDim): x=1024, y=1024, z=64

Maximum Grid Dimensions (gridDim): x=2147483647, y=65535, z=65535