

Report 2 Device Info

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1 Introduction

In this lab work, we wanted to extract informations about our GPU. The informations we needed was :

Core info: clock rate, core counts, multiprocessor count, wrap size

Memory info: clock rate, bus width

2 Code

In order to do that, we used the "cudaDeviceProp" structure which gave us the properties of our NVIDIA GPUs. But to have the properties we needed to execute "cudaGetDeviceProperties(*cudaDeviceProp propOut, int deviceId)" fonction before. Then by analysing the structure of "cudaDeviceProp", we could extract the information we needed. After the execution we had this result:

```
There is 2 cores in our machine
- For the device 0 that is called GeForce GTX 1080
  The clockrate is of 1835000 kHz
  The warp size in threads is of 32
  This device has 20 multiprocessors
  The memory clockrate is of 5005000 kHz
  The memory bus width is of 256 bits
- For the device 1 that is called GeForce GTX TITAN Black
  The clockrate is of 980000 kHz
  The warp size in threads is of 32
  This device has 15 multiprocessors
  The memory clockrate is of 3500000 kHz
  The memory bus width is of 384 bits
```

Figure 1: Capture of the results

3 Conclusion

We can see that in this machine we have 2 GPUs, a GeForce GTX 1080 and a Geforce GTX TITAN Black. We can compare their properties thanks to our

code. It seems that the GTX 1080 is better than the TITAN in almost all properties except for the memory bus width.