COMP5112 - Assignment 3

Package list

- `cuda_bellman_ford.cu`: code skeleton for assignment 3
- `serial_bellman_ford.cpp`: a serial version of bellman-ford algorithm (just for your reference)
- `cuda_dijkstra_solution.cu`: a simple solution code for last year's cuda assignment
- two sets of sample `input/output` files
- `README.pdf`: the readme file

Check your CUDA environment

User command `nvcc --version` to check your CUDA environment.

We use **CUDA 8.0** as our test environment.

If you cannot find `nvcc` command, please add the CUDA installation path to your shell environment:

- add `setenv PATH "${PATH}:/usr/local/cuda-8.0/bin"` to the end of your `~/.cshrc_user`
- re-login (logout and login) to active your new environment
- run `nvcc --version` again to check your environment

Compile and run:

serial_bellman_ford

Compile:

```
$ g++ -std=c++11 -o serial_bellman_ford serial_bellman_ford.cpp
```

Run:

```
$ ./serial_bellman_ford <input file>
```

e.g. `./serial_bellman_ford input1.txt`

The output is file `output.txt`

cuda_bellman_ford

Compile:

```
$ nvcc -std=c++11 -arch=sm_52 -o cuda_bellman_ford cuda_bellman_ford.cu
```

Run:

```
$ ./cuda_bellman_ford <intput file> <number of blocks per grid> <number of threads
per block>
```

The output file is `output.txt`