COMP5112 - Assignment 4

Package list

- `cuda_dijkstra_skeleton.cu`: code skeleton for assignment 4
- `serial_dijkstra.cpp`: a serial version of dijkstra algorithm (just for your reference)
- two sets of sample `input/output` files
- `README.pdf`: the readme file

Check your CUDA environment

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

We use **CUDA8.0** 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` file.
- re-login (logout and login) to active your new environment.
- run `nvcc --version` to check your environment again.

Compile and run:

serial_dijkstra

Compile:

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

Run:

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

e.g. `./serial_dijkstra input1.txt`

The output is in the file `output.txt`

cuda_dijkstra_skeleton

Compile:

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

Run:

```
$ ./cuda_dijkstra -n <number of threads> -i <input file>
```

e.g. `./cuda_dijkstra -n 512 -i input1.txt`

The output file is `output.txt`