

COMP5112 - Assignment 1

Package list

- `mpi_bellman_ford.cpp`: code skeleton for assignment 1
- `serial_bellman_ford.cpp`: a serial version of bellman-ford algorithm (just for your reference)
- two sets of sample input/output files
- `README.pdf`: the readme file

Check your MPI environment

Use command `which mpicc` to check your environment.

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

- add `setenv PATH "${PATH}:/usr/local/software/openmpi/bin"` to the end of your `~/.cshrc_user` file.
- re-login (logout and login) to active your new environment
- run `which mpicc` to check your environment again

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`

`mpi_bellman_ford`

Compile:

```
$ mpic++ -std=c++11 -o mpi_bellman_ford mpi_bellman_ford.cpp
```

Run:

```
$ mpiexec -n <number of processes> ./mpi_bellman_ford <input file>
```

The output file is `output.txt`