COMP5112/MSBD5009 - Assignment 2

Package list

folder tree:

```
assignment2-package
├── assignment2.pdf
├── datasets
│   ├── input1.txt
│   └── input2.txt
├── main.cpp
├── pthread_push_relabel.h
├── pthread_push_relabel_skeleton.cpp
├── README.pdf
└── serial
    ├── main.cpp
    ├── push_relabel.h
    └── serial_push_relabel.cpp

2 directories, 10 files
```

- assignment2.pdf: assignment2 description
- datasets: sample input files
- main.cpp: utility functions and the main function
- pthread_push_relabel.h: header file of assignment
- pthread_push_relabel_skeleton.cpp: code skeleton, you need to fill up the function body
- README.pdf: the readme file
- serial: a serial implementation of the push-relabel algorithm (for your reference)

Please only modify **pthread_push_relabel_skeleton.cpp** file

Please only submit **pthread_push_relabel_skeleton.cpp** file to the Canvas

Compile and run:

serial_push_relabel

Compile:

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

Run:

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

e.g. ./serial_push_relabel input1.txt

You will find the output on the screen.

pthread_push_relabel

Compile:

```
$ g++ -std=c++11 -lpthread main.cpp pthread_push_relabel_skeleton.cpp -o pthread_push_relabel
```

Run:

```
$ pthread_push_relabel <input file> <number of threads>
```

e.g. ./pthread_push_relabel input1.txt 4

You will find the output on the screen.