

# README

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## Software Development Environment

CLion 2019.3.5 Build #CL-193.6911.21, built on March 17, 2020 Runtime version: 11.0.6+8-b520.43 amd64

## Compiler

gcc (x86\_64-posix-sjlj-rev0, Built by MinGW-W64 project) 8.1.0

## Before Running

1. Modify the code at **line 661** to select your test graph. Note that the format must be paired.
2. Modify the code at **line 5** to adjust with your specific graph. Note that the number of total nodes that in the *#define* part **must be greater than** that of your input graph.
3. If total nodes are more than  $2^{50} - 1$ , then you should modify the code at **line 6**

## When Running

1. The program will read your input and print the time that it costs.
2. Then you should **enter two valid positive integers** to start two test.
3. The running time will then display, with the accuracy of  $0.001s$ .

## Note

- Default load file is *USA – road – d. NY. gr*, which is **not included** in the project. Relative links can be found in */document/pro1\_anonymous.pdf*
- Besides Binomial Heap and Fibonacci Heap, we also implement Dijkstra in the method of **adjacent list**. Relative code is provided in the source code, while we comment the entrance in the *main()* function because of the unbearable long running time that it takes (1000 times slower than that of the other two structures).