Collin Lowing
Data Structures and Algorithms II
Project 2
User's Manual

Setup and Compilation
1. Download and unzip the submission from eLearning on a Linux box in the multi-platform lab.
2. The submission includes:
    - UsersManual.pdf (this file)
    - AnalyticalModel.hpp
    - AnalyticalModel.cpp
    - Event.hpp
    - Event.cpp
    - FIFO_Queue.hpp
    - FIFO_Queue.cpp
    - FileParser.hpp
    - FileParser.cpp
    - Heap.hpp
    - Heap.cpp
    - Simulation.hpp
    - Simulation.cpp
    - main.cpp
    - test1.txt
    - test2.txt
    - Makefile
    - UML Diagram.png

3. Environment: This program has been tested in the multi-platform lab and a native Arch Linux system and will run there.

4. Compiling: This program includes a `Makefile`. At the command line in Linux, type `make`. The program produces an executable entitled `main`

5. Running the program. Be sure `test1.txt` and `test2.txt` are in the same directory as the executable. Issue the command `./main`
No command line arguments are required or checked.
Both text files must be formatted with four integers separated by different lines.

6. User input: no user interaction with the program is required.

7. Output: All output goes to the console. Output will be similar to this:
Theoretical Results:
Po = 0.5000
L = 0.7500
W = 0.3750
Lq = 0.0833
Wq = 0.0417
rho = 0.3333

Simulation Results:
Po = 0.0012
W = 0.3750
Wq = 0.0417
rho = 0.3333
probability of having to wait for service = 0.25

Theoretical Results:
Po = 0.4343
L = 0.8362
W = 0.1672
Lq = 0.0029
Wq = 0.0006
rho = 0.2083

Simulation Results:
Po = 0.4343
W = 0.1672
Wq = 0.0006
rho = 0.2083
probability of having to wait for service = 0.25