**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