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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:
    - AnalyticalModel.hpp
    - AnalyticalModel.cpp
    - Node.hpp
    - PriorityQueue.hpp
    - PriorityQueue.cpp
    - Fifo.hpp
    - Fifo.cpp
    - Simulator.hpp
    - Simulator.cpp
    - main.cpp
    - Makefile
    - UsersManual.pdf (this file)
    - test1.txt
    - test2.txt
3. Environment: This program has been tested on the UWF SSH Server and will run there.
4. Compiling. This program includes a `Makefile`. At the command line, navigate into the `src` directory. Once inside the src directory, type `make`. The program produces an executable entitled `proj2`

Running the program: Be sure that `test1.txt` and `test2.txt` are located in the root directory of the project (directory above the `src` directory; same folder that this file is in). Navigate back into the `src` directory. Issue the command `./proj2`. No command line arguments are required or checked.

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

Output: All output goes to the console. Output will be similar to this:

Analytical Model Results from test1.txt...
Value of p0 = 0.5
Value of L = 0.75
Value of W = 0.375
Value of Lq = 0.0833333
Value of Wq = 0.0416667
Value of Utilization Factor = 0.333333

Simulation Results from test1.txt...
Simulation value of p0 = 1
Simulation value of W = 0.508313
Simulation value for Wq = 0.348918
Simulation value of utilization factor (rho) = 0.500004
Simulation value for the probability of waiting = 64.48%

Analytical Model Results from test2.txt...
Value of p0 = 0.538006
Value of L = 0.836927
Value of W = 0.167385
Value of Lq = 0.00359356
Value of Wq = 0.000718712
Value of Utilization Factor = 0.208333

Simulation Results from test2.txt...
Simulation value of p0 = 0
Simulation value of W = 0.167936
Simulation value for Wq = 0
Simulation value of utilization factor (rho) = 0.223643
Simulation value for the probability of waiting = 0%