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CS 433 – Operating Systems

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Assignment 3 report

Submitted files:

- Prog.cpp

How to compile/run the program:

- To compile, command: make clean, make fcfs/sjf/rr/priority/priorityrr.
- To run, command ‘./sjf schedule.txt’ ‘./fcfs schedule.txt’ ‘./rr schedule.txt’ ‘./priority schedule.txt’ ‘./priorityrr schedule.txt’

Results and run time:

The tests ran by our program match that of the desired/example output. All turn around times. Average turn around times, wait times, and average turn around times fell within parameters.

Features Implemented:

- For all schedulers, there were uses of constructors and destructors
- For cycling through the process lists, we have used simple for and while loops to go through the process lists.
- The use of String stream to help organize lists.

Choice of data structure:

For the choice of data structure, for each individual scheduler, in each of their private section’s, there was an int for number of processes (numOfProcesses) and and a vector for the list of

processes (listOfProcesses). Specifically for the priority and SJF schedulers, there was an added vector that would contain the sorted process list (sortedList), as well as two doubles, one for average wait, and one for average turn time.

Lessons Learned:

Each scheduler and their data structure are fairly similar. The biggest take away is, if the scheduler doesn't run linear and completely like FCFS, there will be needed implementation of sorters/sorting lists. Because of the nature of the desired results, there will be needed calculating time to sort and run processes.

References Used:

- Course material