CMSC-312 Operating System Simulator
User Guide

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Running the Simulator

Select a scheduler for the simulator by clicking on the “Select a scheduler” drop down and choose between Round Robin, FCFS, and Priority Scheduling.

Virtual Memory – To use virtual memory, click the box and enter a value for VM size and MM size. Otherwise do not click the “Use Virtual Memory” box.

To start the simulation, click the “Start” button beneath the Waiting Queue.

To stop the simulation, click the “Stop” button beneath the Waiting Queue.

To run a command, type one of the commands listed under the Commands section, in the empty box on the bottom left, directly above the “Execution Speed” slider. Then click the “Enter” button.

To generate random processes, type the desired number of processes in the box labeled “Number:” and then click the “Generate Random Process” button.

To step through the code, type the number of steps desired in the “0000” box to the right of the “Execution Speed” slider and click the “Step” button.

Commands

- PROC - shows all unfinished processes in the system and their information. The process information should include: current process state, amount of CPU time needed to complete, amount of CPU time already used, priority (if relevant), number of I/O requests performed.

- MEM - shows the current usage of memory space.

- LOAD - loads a program or job file into the simulator, and will also include the allocation of the program's PCB and memory space.

- EXE - lets the simulation run on its own. The user can also specify the number of cycles to run before pausing. If there are no processes in the ready queue that are waiting to be scheduled, EXE will return to the command interface.

- RESET – allows the user to manually reset the simulator. All unfinished processes are terminated, and the simulator clock returns to zero.

- EXIT – allows the user to end and exit the simulator.