Operating systems Lab 2 Testing

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# Testing

To test our code we compared the list that our algorithm produced to the list generated by the *“ps –Ao pid,uid,nice”* command. When we first ran our code, the list that we generated was smaller than that of the built in system command. This helped us to identify that there was an error in our code, and we saw that we were skipping every second process in the list. From this we found that the pointer was being advanced twice for every loop iteration, fixing this issue provided us the correct output.

Our results can be seen below: A screenshot of a cell phone

Description generated with very high confidence

After obtaining these results we utilized the ps -Ao pid,uid,nice command to call up the same list of processes running with their priorities and ids. The list called up can be seen below.

A close up of a logo

Description generated with very high confidence

It is clear that the two lists are the same, with a different process running to account for the student and the root processes.

The command ps -eaFm was also called upon to see a more detailed list of the processes in action in the kernel and this list was also comparable to our results.

A screenshot of a cell phone

Description generated with very high confidence

When checking the values of the threads running, there was a noted difference. While our program output that there were approximately 114 threads, the command call seen below stated that only 24 threads were running. After looking into this, it is clear that each thread being counted only accounts for the nlwp thread for each process. There are 24 processes running, and therefore only 24 threads.

A screenshot of a cell phone

Description generated with very high confidence

Overall the testing showed that our code was able to execute exactly what we asked it to do for each process that was currently running in the kernel.