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CSCD 340

HW3

I ran a set of data containing 50 processes through both the non-preemptive shortest job first and the non-preemptive priority algorithms and had the following data: the throughput, considering that both had the same processes, was the same. SJF outperformed priority on both average wait time and average turnaround time.

The average wait time for SJF was 4 seconds slower than priority (9.4 seconds vs 13.7 seconds). Because wait times and priorities were arbitrary, however, these results could be skewed. Additionally, while SJF does come out superior, real times systems may yet prefer the priority algorithm if certain processes must complete in a certain amount of time.

On a final note, pre-emption could greatly change these results. In a non-preemptive algorithm, SJF will nearly always have very high if not the best results for AWT and ATT by nature of completing the shortest jobs first. Preemption would not allow priority to beat SJF in these categories, but it would improve its performance greatly and still provide other benefits SJF does not have (i.e. allowing more important jobs to finish faster).