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CS 421

**Assignment 5 – CPU Scheduling**

For this assignment, I chose to compare the First Come First Serve (FCFS) and the Shortest Job First (SJF) since they are both preemptive CPU scheduling algorithms. Both algorithms run at linear time and require low level of context switching.

FCFS is most beneficial when during batch processing and when the jobs are similar sizes. FCFS is considered serial processing, so the order of job arrival is how FCFS operates. This means there is less data to keep track of. However, some jobs may be larger than others and can cause sufficient wait times on jobs that are of smaller sizes. Like previously said, FCFS doesn’t require much context switching. In fact, because the jobs are just running automatically sequentially, there is really no context switching. FCFS could be more effective if the job sizes were known before running, but normally this is not the case.

SJF is most commonly seen since the size of jobs is usually unknown. This CPU scheduling algorithm requires a sort before running the jobs. It sorts by the burst size in ascending order, showing a low-level amount of context switching. When dealing with similar sized jobs, SJF may not be as efficient or as fast as FCFS. But, earlier said, since most CPU’s do not know the sizes of each job, SJF would be the best choice due to the sorting before running. This will allow for more jobs to be completed in a certain amount of time compared to FCFS.