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Programming Assignment 3

In this programming assignment I attempted to recreate the example program in the book with different scheduling algorithms. This program is designed to try and replicate modern scheduling algorithms. These algorithms are known as First Come First Serve (FCFS), Shortest Job First (SJF), Priority Queue, and Round Robin Scheduling (RR). For FCFS, the name explains most of what the algorithm is supposed to do. The program will take a text file with multiple tasks named such as; [T1], [4], [20]. The way the program is supposed to read this that T1 is the first task, the number four is the priority in the list, and the number 20 is the burst time it takes for the process to execute. So for FCFS if you pass in a text file of lists to the program it will do each processes job in order as they come in, and the job that the program does is that it finds the turn around time of each process, the waiting time of each process and finally it will calculate the average time for turn around as well as waiting time depending on how many tasks it has completed. Next would be SJF, which in the name will look at the list of tasks and find the shortest job according to the burst time. So, if T1 burst time is 20 and T2 burst time is 10, it will jump to T2 and finish that job first, then it’ll continue going down the list. At the end, it will also calculate the average turn around time and waiting time of the tasks. Next, we have the priority scheduling, in the program it’ll first find the task with the utmost priority, meaning the lower the number the higher the priority. For example, if T1 has priority 3 and T2 has priority 4 it will finish T1 first. Lastly, we have round robin scheduling which basically schedule each task or process fairly, RR is one variant of the FCFS scheduling.