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CS 365

Lab 2 – Report

05/17/2019

**Scheduling Algorithm Chosen**

I chose to implement FCFS and SJF non preemptive because these two are the simplest ones to implement and I expected these two to have a quite different average turnaround time. However, they should perform somehow similar in terms of throughput and utilization based on the formulas.

**Result**

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I used the following formula to calculate the average turnaround time, average throughput and CPU utilization.

Turnaround time = Finish time – Arrival time;

Average Turnaround time = total Turnaround time / size

Throughput = number of process / total CPU burst time

CPU utilization = (total CPU burst)/(total CPU burst + T)

Assume the dispatch latency (for context switch) D is 10 ms. The total dispatch latency T = the number of context switches \* D

For context switches, since these two algorithms don’t not pause the process at all, I assume they will only have two context switches from start until finish.

**Observation**

According to the result I got, SJF performs better with a less average turnaround time. If we have a large amount of processes with an uneven burst time distribution, SJF is absolutely going to perform better than FCFS with a way better average turnaround time. However, if we have a list of processes that have similar burst time, the difference between using these two algorithms would not be tremendous.

**Source Code**

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