

Colton Lipchak

Sheriff Khattab

CS1550 Operating Systems

25 September 2020

Project 1 Writeup: Semaphore FIFO Queue vs. Priority Queue

There are a couple reasons to use the First In First Out (FIFO) queue as opposed to a priority queue. First, the FIFO queue is much simpler to implement and it has less overhead. FIFO allows the running task to complete meaning that there is no reason to take the processor away and context-switch. In FIFO, you don't have to calculate or decide the priority of a task and find which tasks to put where.

One con of FIFO is that it is nonpreemptive. This means that a large task can be the first to grab the processor and each task that enters afterwards has to wait for the large task to finish. Short tasks that could have otherwise been completed might be left stuck waiting for a long time. This reduces the task throughput.