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Project 1 Report: Pros and Cons of a Priority Queue

Pros:

Priority queues provide more control over the order of processes that are run by allowing the OS to give processes that should run first a higher priority. The reasons a process needs to run before any other process can vary but a priority queue allows for more customizability in this matter. For example, priority queues can ensure that processes that have short deadlines will be run/completed on time by giving a process a priority value based on a shortest deadline first heuristic.

Cons:

Simple implementations, like the ones we implemented in this project, can lead to starvation for low priority processes. Starvation can happen if priority processes are continuously added in front of a lower priority process. If there is no way to dynamically change a processes priority (based on wait time for example), the lower priority processes will never run.