Assignment Five

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5.5 b. and d.
In shortest-job-first algorithm, when a process is executing, if there always appears a shorter process coming to queue, the algorithm will always choose the shorter one, which makes the original process suffer from starvation.
In priority algorithm, if there is a process with the lowest priority, the chances are that it will suffer from starvation because every new process can make the algorithm suspend it and execute the new process.

5.6

a. This process will be assigned twice the CPU time than the others.

b. Advantages: First, it won't suffer from starvation, every process can be executed. Second, it provides a better responsibility for processes.
Disadvantages: First, the average waiting is usually longer. Second, the context switch can waste a lot of time.

5.9

a. In this algorithm, we can see if a process enters the ready queue later than another, its priority is always smaller. And the running process always has a higher priority. When a new process enters the queue, it has the lowest priority. These three features make the algorithm actually becomes a FCFS algorithm.

b. In this algorithm, a later process has higher priority; the priority of a running process is higher than a waiting one; a new process has the highest priority. These features make the preemptive algorithm always execute the newest process. It becomes a last-come-first-served(LCFS) algorithm.