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Lab 2 Report and Analysis

1. An advantage that the way I implemented the scheduling priority system in this lab is that it allows for priorities to be passed in that are outside the range. So, if anyone passes in a negative priority, the process won't crash, it'll just become a process with priority 0. Another advantage with the way I implemented the scheduling priority in this lab is that the quantum values are all different, so every process will have more time or less time to run depending on how much CPU they use, creating a fairer process for all the processes. A disadvantage that this scheduling priority system has is that there are a lot more calculations and data storage involved, which potentially makes this scheduling system a lot slower than the normal scheduling priority system that is described in chapter 5. Another disadvantage that this scheduling system has is that adding more system processes involves more interrupts and disabling masks, which could make the system slower because it has to do all these calculations and steps before everything can continue.
2. The test cases that I designed included creating new processes that have priorities that are outside the bounds of the allowed priority range [-20,20]. I also have processes that sleep for very long, and I see if any processes get disrupted or exhibit unintentional behavior because of that. Another test case that I tested was having a process that should run forever, so the prrecent should become larger over time.