CS 1550 – Intro to OS
Dr. Mosse
Due: 02/07/2020
Dane Halle

Priority Queue Implementation Pros and Cons

There several pros and cons of implementing a priority queue for a semaphore. One pro is that that the CPU utilization should be pretty high as there will always be tasks it is attempting to do. The turnaround time for high priority items will also be small. However, a con would be that the turnaround time for low priority items would be much longer. The waiting time will follow the same idea where it is small for high priority items and large for low priority items.

As for the actual implementation, depending on how you implement a priority queue, work can be quite large. I did a linked list implementation of a priority queue as that is the simplest way for me to think about it. However, one approach I thought about doing when implementing since I was having issues with the push() functionality was to search the queue when popping for the highest priority item. Should I have done it that way, the benefits of a queue would have been lost and it would have been a mess.