Lab 9 Questions
Evan Brown
EECS 560

1. What is the worst time complexity for:
    a. Adding a process to the scheduler?

        Note that a heap with n elements has t layers, where t = floor(log(n))+1.

        The process is added at the very bottom right of the tree and in the worst case is pushed all the way to the root, requiring t/2 comparisons.

        Therefore, this is O(log(n)).

    b. Delete minimum priority process from the scheduler?

        The very bottom right process replaces the minimum process at the root and in the worst case is pushed all the way to the bottom layer, requiring t/2 comparisons.

        Therefore, this is O(log(n)).

    c. Delete maximum priority process from the scheduler?

        The very bottom right process replaces the maximum process at the root and in the worst case is pushed all the way to the bottom layer, requiring t/2 comparisons.

        Therefore, this is O(log(n)).

2. Is the average case complexity equal to the worst case complexity in the above cases?

    Yes