Zeal Patel

CSC 33200

Dec 4, 2020

**Lab 6 Report**

I used two different way to implement the task. The first one uses the Pthreads library and the second one uses semaphores to synchronize the four processes. The implementation using semaphores is a multiprocessing approach while the Pthread library implementation is a multithreading approach. In both methods, I used some form of lock to lock the critical section. In the Pthreads approach I used mutex locks, so whenever a smoker process is woken by up it locks the critical sections and then smokes the cigarette. Similarly, in the semaphores approach, I used semaphores to lock the critical section. In both cases, after a smoker is done smoking the cigarette, I unlocked the critical section to let the agent the process know that he is ready to give out the ingredients again. For now, I have it setup such that the agent process will give out the ingredients 20 times, but that can be easily changed by changing how long the for loop runs.