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Summary of Project 3

There were 4 major challenges that we encountered during this project.

1. Assuring atomicity. To overcome this challenge we went through numerous seg faults. To handle mutual exclusion among different race conditions we used a lock for each shared queue and process. This provided atomicity for whenever a queue's size was accessed to ensure the right values were accessed at that time. There was also a lock for the cpu process because this is handling what is going on around the other two processes as well to ensure atomicity. The rule we used was whenever something was shared or could have the potential to mess up shared resource numbers we locked it.
2. Making sure heap was allocated and deallocated correctly.
3. Ensuring the Queue works right. Often times we ran into seg faults from an improper link or free. We used three different enqueues and dequeues for the queue when we made the structures globally. But we finally wrote a decent linked system to construct a queue. So three enqueues and dequeues were not necessary.
4. Figuring out what different seg. faults meant. The program runs forever because we actually couldn't figure out one seg fault. Ctrl C is a quick fix for that and it was giving us a headache.