

We decided to have a linked list for all of the threads to access. A thread locks the linked list as it searches through looking for the order. When an order is found, the node is pulled out of the list and the linked list is unlocked allowing for another thread to use it while the current thread updates the balance and customer information. The producer thread adds more orders to the queue while the consumer threads remove orders from the queue. When the producer thread is completed it sends out a signal that says there are no more orders to be added. The consumer threads will continue to run until the queue is entirely empty and the producer says there are no more orders.