BACI Project for an OS Course

The Baker's Problem: Suppose you are the owner of a bakery that just became extremely popular. In the past, you waited on customers as soon as they came into your store. Now, however, almost every customer has to wait for service! You are thrilled with your success, but are worried about fairness.

One day, after the store has closed, you decide to install a ticket system in order to be sure to serve customers in turn. Since you are a computer expert, in addition to being a great baker, you decide to use your new computer to implement this ticket system. Should you use semaphores or monitors in your implementation? Make a decision and then do the implementation in BACI.