**Restaurant Strategy**

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Customer:

1. When there is no available table in the coffee shop, the thread of this customer should wait until it is notified.
2. When CustomerLeavingCoffeeShop, notifyAll() other customer threads which are waiting for the lock.
3. When customers place their order, the thread should wait.
4. When the food is ready, the thread of the customer is notified.

Cook:

1. The cook thread waits for new customer coming in the coffee shop.
2. Cooks place orders to machines and wait for foods.
3. When the food is ready, the cook thread is notified, and it notifies the specific customer thread.

Machine:

1. The machine thread waits for food orders.
2. When a food order is submitted, the machine thread create CookAnItem threads to cook food.
3. If a food order has higher priority than the food order in the machine and the machine is full, the food order thread will be interrupted and create a food order thread which has a higher priority.
4. When the food is perfectly cooked, notify() the cook to serve and notifyAll() cooks who are waiting for space to cook.

Simulation:

1. Create customers, cooks and machines.
2. Be a receptionist, and serve customers to table.
3. Maintain events.