

Solution

```
1  #define CHAIRS 5
2  semaphore customers = 0; // any customers or not?
3  semaphore bber = 0;     // barber is busy
4  semaphore mutex = 1;
5  int waiting = 0;        // queueing customers
```

```
1  void barber(void)
2  {
3      while (TRUE) {
4          wait(&customers);
5          wait(&mutex);
6          waiting--;
7          signal(&mutex);
8          cutHair();
9          signal(&bber);
10 }
11 }
```

```
1  void customer(void)
2  {
3      if(waiting == CHAIRS)
4          goHome();
5      else {
6          wait(&mutex);
7          waiting++;
8          signal(&mutex);
9          signal(&customers);
10         wait(&bber);
11         getHairCut();
12     }
13 }
```