The Dining Philosophers Problem

```
1  #define N 5                /* number of philosophers */
2
3  void philosopher(int i)    /* i: philosopher number, from 0 to 4 */
4  {
5    while (TRUE) {
6      think();               /* philosopher is thinking */
7      take_fork(i);          /* take left fork */
8      take_fork((i+1) % N);  /* take right fork; % is modulo operator */
9      eat();                 /* yum-yum, spaghetti */
10     put_fork(i);           /* put left fork back on the table */
11     put_fork((i+1) % N);   /* put right fork back on the table */
12   }
13 }
```

Deadlock!

? Put down the left fork and wait for a while if the right one is not available? Similar to CSMA/CD — Starvation