

```
1  #define N 5
2  semaphore mutex=1;
3
4  void philosopher(int i)
5  {
6      while (TRUE) {
7          think();
8          wait(&mutex);
9          take_fork(i);
10         take_fork((i+1) % N);
11         eat();
12         put_fork(i);
13         put_fork((i+1) % N);
14         signal(&mutex);
15     }
16 }
```