```
1  class Filter implements Lock {
2    int[] level;
3    int[] victim;
4    public Filter(int n) {
5      level  = new int[n];
6      victim = new int[n]; // use 1..n-1
7      for (int i = 0; i < n; i++) {
8         level[i] = 0;
9      }
10   }
11   public void lock() {
12     int me = ThreadID.get();
13     for (int i = 1; i < n; i++) { // attempt to enter level i
14       level[me] = i;
15       victim[i] = me;
16       // spin while conflicts exist
17       while ((∃k != me) (level[k] >= i && victim[i] == me)) {};
18     }
19   }
20   public void unlock() {
21     int me = ThreadID.get();
22     level[me] = 0;
23   }
24 }
```

FIGURE 2.8 Pseudocode for the Filter lock algorithm.