

```

1  public class SimpleReentrantLock implements Lock{
2      Lock lock;
3      Condition condition;
4      int owner, holdCount;
5      public SimpleReentrantLock() {
6          lock = new SimpleLock();
7          condition = lock.newCondition();
8          owner = 0;
9          holdCount = 0;
10     }
11     public void lock() {
12         int me = ThreadID.get();
13         lock.lock();
14         try {
15             if (owner == me) {
16                 holdCount++;
17                 return;
18             }
19             while (holdCount != 0) {
20                 condition.await();
21             }
22             owner = me;
23             holdCount = 1;
24         } finally {
25             lock.unlock();
26         }
27     }
28     public void unlock() {
29         lock.lock();
30         try {
31             if (holdCount == 0 || owner != ThreadID.get())
32                 throw new IllegalMonitorStateException();
33             holdCount--;
34             if (holdCount == 0) {
35                 condition.signal();
36             }
37         } finally {
38             lock.unlock();
39         }
40     }
41     ...
42 }

```

**FIGURE 8.11** The SimpleReentrantLock class: lock() and unlock() methods.