

```
1 public class LockFreeStack<T> {
2     AtomicReference<Node> top = new AtomicReference<Node>(null);
3     static final int MIN_DELAY = ...;
4     static final int MAX_DELAY = ...;
5     Backoff backoff = new Backoff(MIN_DELAY, MAX_DELAY);
6
7     protected boolean tryPush(Node node) {
8         Node oldTop = top.get();
9         node.next = oldTop;
10        return top.compareAndSet(oldTop, node));
11    }
12    public void push(T value) {
13        Node node = new Node(value);
14        while (true) {
15            if (tryPush(node)) {
16                return;
17            } else {
18                backoff.backoff();
19            }
20        }
21    }
22    ...
23 }
```

**FIGURE 11.2** The LockFreeStack<T> class: In the push() method, threads alternate between trying to alter the top reference by calling tryPush(), and backing off using the Backoff class from Fig. 7.5.