

```

1  public class AtomicMRMWRegister<T> implements Register<T>{
2      private StampedValue<T>[] a_table; // array of atomic MRSW registers
3      public AtomicMRMWRegister(int capacity, T init) {
4          a_table = (StampedValue<T>[]) new StampedValue[capacity];
5          StampedValue<T> value = new StampedValue<T>(init);
6          for (int j = 0; j < a_table.length; j++) {
7              a_table[j] = value;
8          }
9      }
10     public void write(T value) {
11         int me = ThreadID.get();
12         StampedValue<T> max = StampedValue.MIN_VALUE;
13         for (int i = 0; i < a_table.length; i++) {
14             max = StampedValue.max(max, a_table[i]);
15         }
16         a_table[me] = new StampedValue(max.stamp + 1, value);
17     }
18     public T read() {
19         StampedValue<T> max = StampedValue.MIN_VALUE;
20         for (int i = 0; i < a_table.length; i++) {
21             max = StampedValue.max(max, a_table[i]);
22         }
23         return max.value;
24     }
25 }

```

**FIGURE 4.14** Atomic MRMW register.