

provide at least those listed in the interface. The interface is implemented at lines 23 to 30. Notice that we must implement the *exact method* specified in the interface. Thus these methods take `Comparable` as a parameter, instead of `MyInteger`.

A class that implements an interface can be extended if it is not final. Thus, if `MyInteger` was not final, it could be extended.

A class that implements an interface may still extend one other class. For instance, we could in principle have written

```
public class MyInteger extends Integer implements Comparable
```

This is illegal only because `Integer` is a final class and cannot be extended.

```
1 package Supporting;
2
3 final public class MyInteger implements Comparable
4 {
5     // Constructor
6     public MyInteger( int x )
7     { value = x; }
8
9     // Some methods
10    public String toString( )
11    { return Integer.toString( value ); }
12
13    public int intValue( )
14    { return value; }
15
16    public boolean equals( Object rhs )
17    {
18        return rhs instanceof MyInteger &&
19            value == ((MyInteger)rhs).value;
20    }
21
22    // Implement the interface
23    public int compares( Comparable rhs )
24    {
25        return value < ((MyInteger)rhs).value ? -1 :
26            value == ((MyInteger)rhs).value ? 0 : 1;
27    }
28
29    public boolean lessThan( Comparable rhs )
30    { return value < ((MyInteger)rhs).value; }
31
32    // Data field
33    private int value;
34 }
```

Figure 4.13 The `MyInteger` class (preliminary version), which implements the `Comparable` interface