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 1  // Example 2.2 joi/examples/While2Demo.java
 2  //
 3  //
 4  // Copyright 2003 Bill Campbell and Ethan Bolker
 5
 6  // A class for illustrating the while-statement.  A typical run:
 7  //
 8  // %> java While2Demo
 9  // Enter integer: 10
10  // Fibonacci numbers <= 10: 1 1 2 3 5 8
11  // Fibonacci numbers <= 10: 1 1 2 3 5 8
12  // First 10 Fibonacci numbers: 1 1 2 3 5 8 13 21 34 55
13
14  public class While2Demo
15  {
16      public static void main( String[] args )
17      {
18          Terminal terminal = new Terminal();  // for input and output
19
20          // Prompt for and read a single integer.
21          int n = terminal.readInt( "Enter integer: " );
22
23          // while tests a condition
24          terminal.print( "Fibonacci numbers <= " + n + ":" );
25          int thisOne = 1;
26          int lastOne = 1;
27          while ( lastOne <= n ) {
28              terminal.print( " " + lastOne );
29              int nextOne = thisOne + lastOne;
30              lastOne = thisOne;
31              thisOne = nextOne;
32          }
33          terminal.println();
34
35          // while tests a boolean variable
36          terminal.print( "Fibonacci numbers <= " + n + ":" );
37          thisOne = 1;
38          lastOne = 1;
39          boolean more = true;
40          while ( more ) {
41              if ( lastOne > n ) {
42                  more = false;
43              }
44              else {
45                  terminal.print( " " + lastOne );
46                  int nextOne = thisOne + lastOne;
47                  lastOne = thisOne;
48                  thisOne = nextOne;
49              }
50          }
51          terminal.println();
52
53          // while used for counting
54          terminal.print( "First " + n + " Fibonacci numbers:" );
55          thisOne = 1;
56          lastOne = 1;
```



```
57          int i = 1;
58          while ( i <= n ) {
59              terminal.print( " " + lastOne );
60              int nextOne = thisOne + lastOne;
61              lastOne = thisOne;
62              thisOne = nextOne;
63              i++;  // same as 'i = i + 1;'
64          }
65          terminal.println();
66      }
67  }
```