```
 1  // joi/5/shapes/VLine.java
 2  //
 3  //
 4  // Copyright 2003 Bill Campbell and Ethan Bolker
 5
 6  /**
 7   * A VLine is a vertical Line.
 8   */
 9
10  public class VLine extends Line
11  {
12      /**
13       * Construct a VLine having a paintChar and a length.
14       *
15       * @param length length in (character) pixels.
16       * @param paintChar character used for painting this Line.
17       */
18
19      public VLine( int length, char paintChar )
20      {
21          super( length, paintChar );
22      }
23
24      /**
25       * Paint this Line on Screen s at position (x,y).
26       *
27       * @param screen the Screen on which this Line is to be painted.
28       * @param x      the x position for the line.
29       * @param y      the y position for the line.
30       */
31
32      public void paintOn( Screen screen, int x, int y )
33      {
34          for ( int i = 0; i < length; i++ )
35              screen.paintAt( paintChar, x, y+i );
36      }
37
38      /**
39       * Unit test for class VLine.
40       */
41
42      public static void main( String[] argv )
43      {
44          Terminal terminal = new Terminal();
45
46          terminal.println( "Self documenting unit test of VLine.");
47          terminal.println( "The two Screens that follow should match.");
48          terminal.println();
49          terminal.println( "Hard coded picture:");
50          terminal.println( "+++++++++");
51          terminal.println( "+xx     +");
52          terminal.println( "+xx     +");
53          terminal.println( "+xx     +");
54          terminal.println( "+xx *   +");
55          terminal.println( "+xx *1  +");
56          terminal.println( "+x  *   +");
```



```
57          terminal.println( "+x  *   +");
58          terminal.println( "+   *   +");
59          terminal.println( "+       +");
60          terminal.println( "+++++++++");
61          terminal.println();
62
63          terminal.println( "Picture drawn using VLine methods:");
64          Screen screen = new Screen( 7,  9 );
65
66          Line vLine = new VLine(  7, 'x' );
67          vLine.paintOn( screen );
68
69          vLine.setLength(5);
70          vLine.paintOn( screen, 1, 0 );
71
72          vLine.setPaintChar('*');
73          vLine.paintOn( screen, 3, 3 );
74
75          vLine.setLength(1);
76          vLine.setPaintChar('1');
77          vLine.paintOn( screen, 4, 4 );
78
79          screen.draw( terminal );
80      }
81
82  }
```