```
 1  // joi/3/shapes/HLine.java
 2  //
 3  //
 4  // Copyright 2003 Bill Campbell and Ethan Bolker
 5
 6  /**
 7   * A horizontal line has a length and a paintChar used
 8   * used to paint the line on a Screen.
 9   *
10   * @version 3
11   */
12
13  public class HLine
14  {
15      private int  length;      // length in (character) pixels.
16      private char paintChar;   // character used for painting.
17
18      /**
19       * Construct an HLine.
20       *
21       * @param length length in (character) pixels.
22       * @param paintChar character used for painting this Line.
23       */
24
25      public HLine( int length, char paintChar )
26      {
27          this.length = length;
28          this.paintChar = paintChar;
29      }
30
31      /**
32       * Paint this HLine on Screen s at position (x,y).
33       *
34       * @param s the Screen on which this line is to be painted.
35       * @param x the x position for the line.
36       * @param y the y position for the line.
37       */
38
39      public void paintOn( Screen s, int x, int y )
40      {
41          for ( int i = 0; i < length; i = i+1 ) {
42              s.paintAt( paintChar, x+i , y );
43          }
44      }
45
46      /**
47       * Paint this HLine on Screen s at position (0,0).
48       *
49       * @param s the Screen on which this line is to be painted.
50       */
51
52      public void paintOn( Screen s )
53      {
54          paintOn( s, 0, 0 );
55      }
56
```



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57      /**
58       * Get the length of this line.
59       *
60       * @return the length in (character) pixels.
61       */
62
63      public int getLength()
64      {
65          return length;
66      }
67
68      /**
69       * Set the length of this line.
70       *
71       * @param length the new length in (character) pixels.
72       */
73
74      public void setLength( int length )
75      {
76          this.length = length;
77      }
78
79      /**
80       * Unit test for class HLine,
81       * assuming Screen and Terminal work.
82       */
83
84      public static void main( String[] args )
85      {
86          Terminal terminal = new Terminal();
87
88          terminal.println( "Unit test of HLine.");
89          terminal.println( "You should see this Screen twice: " );
90          terminal.println( "++++++++++++++++++++++");
91          terminal.println( "+xxxxxxxxxx          +");
92          terminal.println( "+xxxxx               +");
93          terminal.println( "+                    +");
94          terminal.println( "+   *****            +");
95          terminal.println( "+    1               +");
96          terminal.println( "+                    +");
97          terminal.println( "++++++++++++++++++++++");
98          terminal.println( "");
99
100         Screen   screen   = new Screen( 20, 6 );
101
102         HLine hline1 = new HLine( 10, 'x' );
103         HLine hline2 = new HLine(  5, '*' );
104         HLine hline3 = new HLine(  1, '1' );
105
106         hline1.paintOn( screen );
107         hline1.setLength(5);
108         hline1.paintOn( screen, 0, 1 );
109         hline2.paintOn( screen, 3, 3 );
110         hline3.paintOn( screen, 4, 4 );
111
112         screen.draw( terminal );
```

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   113      }
   114  }
```