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/**
 * A horizontal line has a length and a paintChar used
 * used to paint the line on a Screen.
 *
 * @version 3
 */

public class HLine
{
private int length;      // length in (character) pixels.
private char paintChar;   // character used for painting.

/**
 * Construct an HLine.
 *
 * @param length length in (character) pixels.
 * @param paintChar character used for painting this Line.
 */

public HLine( int length, char paintChar )
{
this.length = length;
this.paintChar = paintChar;
}

/**
 * Paint this HLine on Screen s at position (x,y).
 *
 * @param s the Screen on which this line is to be painted.
 * @param x the x position for the line.
 * @param y the y position for the line.
 */

public void paintOn( Screen s, int x, int y )
{
for ( int i = 0; i < length; i = i+1 ) {
    s.paintAt( paintChar, x+i , y );
}
}

/**
 * Paint this HLine on Screen s at position (0,0).
 *
 * @param s the Screen on which this line is to be painted.
 */

public void paintOn( Screen s )
{
paintOn( s, 0, 0 );
}

/**
 * Get the length of this line.
 *
 * @return the length in (character) pixels.
 */

public int getLength()
{
return length;
}

/**
 * Set the length of this line.
 *
 * @param length the new length in (character) pixels.
 */

public void setLength( int length )
{
this.length = length;
}

/**
 * Unit test for class HLine,
 * assuming Screen and Terminal work.
 */

public static void main( String[] args )
{
    Terminal terminal = new Terminal();

    terminal.println( "Unit test of HLine.");
    terminal.println( "You should see this Screen twice: ");
    terminal.println( "++++++++++++++++++++++");
    terminal.println( "+xxxxxxxxxx          +");
    terminal.println( "+xxxxx               +");
    terminal.println( "+                    +");
    terminal.println( "+   *****            +");
    terminal.println( "+    1               +");
    terminal.println( "+                    +");
    terminal.println( "++++++++++++++++++++++");

    Screen   screen   = new Screen( 20, 6 );
    HLine hline1 = new HLine( 10, 'x' );
    HLine hline2 = new HLine(  5, '*' );
    HLine hline3 = new HLine(  1, '1' );

    hline1.paintOn( screen );
hline1.setLength(5);
hline1.paintOn( screen, 0, 1 );
hline2.paintOn( screen, 3, 3 );
hline3.paintOn( screen, 4, 4 );
    screen.draw( terminal );
Listing 3.3 HLine.java

```java
113 }
114 }
```