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/*
 * TimeLabelCanvas.java
 * ------------------
 * Separated and modified by David Wong
 */
import java.awt.*;
import java.awt.Image;
import java.awt.image.ImageObserver;

class TimeLabelCanvas extends Canvas {
    private Dimension offDimension;
    private Image offImage;
    private Graphics offGraphics;
    private Font font;
    private FontMetrics fm;

    private IsingLattice lattice;        // actual grid, here is where all the physics happen
+ s

    public TimeLabelCanvas (IsingLattice lattice, Font f) {
        this.lattice = lattice;
        font = f;
    }

    /**
     * Paint the time on the canvas
     */
    public void paint  (Graphics g) {
        update (g);
    }
    /**
     * Set the preferred size of this canvas
     */
    public Dimension getPreferredSize  () {
        return new Dimension (180, 20);
    }
    /**
     *
     */
    public Dimension getMinimumSize  () {
        return getPreferredSize ();
    }
    /**
     * Print out the graph
     */
    public void update  (Graphics g) {
        String s = "t="+lattice.getTotalTime ();
        Dimension d = getSize ();
        if ((offGraphics == null)
            || (d.width != offDimension.width)
            || (d.height != offDimension.height)) {
          offDimension = d;
          offImage = createImage (d.width, d.height);
          offGraphics = offImage.getGraphics ();
          offGraphics.setFont (font);
          fm = offGraphics.getFontMetrics ();
        }
        offGraphics.setColor (getBackground ());
        offGraphics.fillRect (0, 0, d.width, d.height);
        offGraphics.setColor (Color.black);
        int x = (d.width - fm.stringWidth (s))/2;
        offGraphics.drawString (s, x, d.height);
        g.drawImage (offImage, 0, 0, this);
    }
```

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}
```