

```

//
*****
*****
//  ReboundPanel.java          Author: Lewis/Loftus
//
//  Represents the primary panel for the Rebound
program.
//
*****
*****

import java.awt.*;
import java.awt.event.*;
import javax.swing.*;

public class ReboundPanel extends JPanel
{
    private final int WIDTH = 300, HEIGHT = 100;
    private final int DELAY = 20, IMAGE_SIZE =
35;

    private ImageIcon image;
    private Timer timer;
    private int x, y, moveX, moveY;

//-----
//  Sets up the panel, including the timer
for the animation.

//-----

    public ReboundPanel()
    {

```

```

    timer = new Timer(Delay, new
ReboundListener());

    image = new ImageIcon ("happyFace.gif");

    x = 0;
    y = 40;
    moveX = moveY = 3;

    setPreferredSize (new Dimension(WIDTH,
HEIGHT));
    setBackground (Color.black);
    timer.start();
}

//-----
// Draws the image in the current location.
//-----

public void paintComponent (Graphics page)
{
    super.paintComponent (page);
    image.paintIcon (this, page, x, y);
}

//
*****
*****

// Represents the action listener for the
timer.
//
*****

```

```
private class ReboundListener implements  
ActionListener
```

```
{
```

```
//-----  
-----
```

```
    // Updates the position of the image and  
possibly the direction
```

```
    // of movement whenever the timer fires  
an action event.
```

```
//-----  
-----
```

```
    public void actionPerformed (ActionEvent  
event)
```

```
{
```

```
    x += moveX;
```

```
    y += moveY;
```

```
    if (x <= 0 || x >= WIDTH-IMAGE_SIZE)  
        moveX = moveX * -1;
```

```
    if (y <= 0 || y >= HEIGHT-IMAGE_SIZE)  
        moveY = moveY * -1;
```

```
    repaint();
```

```
}
```

```
}
```

```
}
```