

## Rebound.java

```
1    import java.applet.Applet;
2    import java.awt.*;
3    import java.awt.event.*;
4    import javax.swing.Timer;

5    public class Rebound extends Applet {

6        public void init() {
7            addMouseListener(new ReboundMouseListener());

8            timer = new Timer(DELAY, new ReboundActionListener());
9            timer.start();

10           x = 0;
11           y = 40;
12           moveX = moveY = 3;

13           image = getImage(getCodeBase(), "happyFace.gif");

14           setBackground(Color.black);
15           setSize(APPLET_WIDTH, APPLET_HEIGHT);
16       }

17       public void paint(Graphics page) {
18           page.drawImage(image, x, y, this);
19       }

20       private final int APPLET_WIDTH  = 200;
21       private final int APPLET_HEIGHT = 100;

22       private final int IMAGE_SIZE = 35;
23       private final int DELAY = 20;

24       private Timer timer;
25       private Image image;
26       private int x, y, moveX, moveY;

27       private class ReboundMouseListener implements MouseListener {

28           public void mouseClicked(MouseEvent event) {
29               if (timer.isRunning())
30                   timer.stop();
31               else
32                   timer.start();
33           }

34           public void mouseEntered(MouseEvent event) {}
35           public void mouseExited(MouseEvent event) {}
36           public void mousePressed(MouseEvent event) {}
37           public void mouseReleased(MouseEvent event) {}
38       }
```

## Rebound.java

```
39     private class ReboundActionListener implements ActionListener {
40         public void actionPerformed(ActionEvent event) {
41             x += moveX;
42             y += moveY;
43
44             if (x <= 0 || x >= APPLET_WIDTH - IMAGE_SIZE)
45                 moveX = -moveX;
46
47             if (y <= 0 || y >= APPLET_HEIGHT - IMAGE_SIZE)
48                 moveY = -moveY;
49
50             repaint();
51         }
52     }
53 }
```

