

Class BugPanel

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```
1  /**
2   * Class BugPanel which draws the spiral created when Bugs walk toward ea
   ch other incrementally
3   *
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6   * @period 2
7   * @version 10-2-2018
8   * @teacher Coglianese
9   */
10 import javax.swing.*;
11 import java.awt.*;
12 import java.awt.event.*;
13 import java.awt.image.*;
14 public class BugPanel extends JPanel
15 {
16     private BufferedImage myImage;
17     final int N = 1000;
18     private Bug topLeft;
19     private Bug topRight;
20     private Bug botLeft;
21     private Bug botRight;
22     final double percent = 0.1;
23     /**
24      * Constructor for class BugPanel, which draws on a canvas after init
   ializing bugs
25      */
26     public BugPanel()
27     {
28         myImage = new BufferedImage(N, N, BufferedImage.TYPE_INT_RGB);
29         Graphics buffer = myImage.getGraphics();
30         buffer.setColor(Color.BLUE);
31         buffer.fillRect(0, 0, N, N);
32         buffer.setColor(Color.YELLOW);
33         topLeft = new Bug(0,0);
34         topRight = new Bug(N,0);
35         botLeft = new Bug(0,N);
36         botRight = new Bug(N,N);
37         while((!topLeft.sameSpot(botRight)) && (!topRight.sameSpot(botLef
   t))) {
38             moveBugs(buffer);
39         }
40     }
41
42     /**
43      * method called in Driver to draw panel
44      *
45      * @param g Where it is drawn
46      */
```

```
47 public void paintComponent(Graphics g)
48 {
49     g.drawImage(myImage, 0, 0, getWidth(), getHeight(), null);
50 }
51
52 /**
53  * moveBugs moves the four bugs once, and draws the path they took
54  *
55  * @param g Graphics class where lines will be drawn
56  */
57 public void moveBugs(Graphics g)
58 {
59     int x=topLeft.getX();
60     int y=topLeft.getY();
61     Bug temp = new Bug(x,y);
62     topLeft.walkTowards(topRight,percent);
63     g.drawLine(x,y,topLeft.getX(),topLeft.getY());
64     x=topRight.getX();
65     y=topRight.getY();
66     topRight.walkTowards(botRight,percent);
67     g.drawLine(x,y,topRight.getX(),topRight.getY());
68     x=botRight.getX();
69     y=botRight.getY();
70     botRight.walkTowards(botLeft,percent);
71     g.drawLine(x,y,botRight.getX(),botRight.getY());
72     x=botLeft.getX();
73     y=botLeft.getY();
74     botLeft.walkTowards(temp,percent);
75     g.drawLine(x,y,botLeft.getX(),botLeft.getY());
76 }
77 }
```