

```
1 package ticTacToe.component;
2
3 import java.awt.Dimension;
4 import java.awt.Point;
5 import java.awt.event.MouseEvent;
6 import java.awt.event.MouseListener;
7 import java.awt.event.MouseMotionAdapter;
8 import java.awt.event.MouseMotionListener;
9
10 import ticTacToe.gui.Paintable;
11 import ticTacToe.gui.util.MouseListenerAdapter;
12
13 public abstract class AbstractComponent implements Paintable {
14
15     protected Point position;
16     protected Dimension dimension;
17     protected boolean mouseOver = false;
18
19     public AbstractComponent() {
20         this.position = new Point(0, 0);
21         this.dimension = new Dimension(10, 10);
22     }
23
24     public AbstractComponent(int x, int y) {
25         this();
26         setPosition(x, y);
27     }
28
29     public void setPosition(int x, int y) {
30         this.position = new Point(x, y);
31     }
32
33     public Point getPosition() {
34         return new Point(this.position);
35     }
36
37     public AbstractComponent(int x, int y, int width, int height) {
38         this(x, y);
39         setSize(width, height);
40     }
41
42     public void setSize(int width, int height) {
43         this.dimension = new Dimension(width, height);
44     }
45
46     public Dimension getSize() {
47         return new Dimension(this.dimension);
48     }
49
50     public int width() {
51         return this.dimension.width;
52     }
53
54     public int height() {
55         return this.dimension.height;
56     }
57
58     public boolean isOver(Point point) {
59         int xLeft = this.position.x;
60         int yTop = this.position.y;
61         int xRight = xLeft + this.width();
62         int yBottom = yTop + this.height();
```

```
63
64     return ((point.x > xLeft && point.x < xRight) && (point.y > yTop && point.y <
65         yBottom));
66 }
67 public MouseListener mouseListener() {
68
69     return new MouseListenerAdapter() {
70
71         @Override
72         public void mouseClicked(MouseEvent me) {
73
74             if (!isOver(me.getPoint()))
75                 return;
76
77             System.out.println("oiieee!");
78         }
79     };
80 }
81
82
83 public MouseMotionListener mouseMotionListener() {
84
85     return new MouseMotionAdapter() {
86
87         @Override
88         public void mouseMoved(MouseEvent me) {
89             mouseOver = isOver(me.getPoint());
90         }
91     };
92 }
93
94 }
95
```