

Java2D – Drawing Circles – Three Traces Use Concept Trace Slicing

Supporting Applications : [TerpPaint, Scribble, JHotDraw]

```
import java.awt.Component;
import java.awt.LayoutManager;
import java.awt.event.MouseEvent;
import java.awt.Color;
import java.awt.PopupMenu;
import java.awt.Graphics;
import java.awt.Container;

public class SomeClass {

    public void someMethod() {
        Graphics.fillRect(int,int,int,int); // REPEATED!
        Component.add(PopupMenu); // MAY REPEAT!
        Graphics.setColor(Color); // REPEATED!
        Component.addMouseListener(MouseListener);
        Component.addMouseMotionListener(MouseMotionListener);
        int app_int = MouseEvent.getX(); // REPEATED!
        int app_int1 = MouseEvent.getY(); // REPEATED!
    }
}
```

Description of False Negatives:

Since different sample applications have used different instructions to draw the circle, the main instruction for drawing the circle is missing. This instruction could be any of the followings:

- `Graphics.drawOval(int,int,int,int);`
- `Graphics.draw(Ellipse2D.Double(x, y, diameter, diameter));`
- `Graphics.draw(Ellipse2D.Float(x, y, diameter, diameter));`

So, we have one false negative if the first instruction is used, or two false negatives if the other two instructions are used.