

Java Graphics Quick Guide

Java has a fantastic graphics package, but you usually need to know more Java to use it. We will be using a simple DrawingPanel written by Marty Stepp & Stuart Reges that allows us to start using Java's graphics package now.

Setup

Copy the file **DrawingPanel.java** into the project folder of your program. You can find this file on Prof. Boothe's home page at: www.cs.usm.maine.edu/~boothe/ It should appear in Eclipse in the default package, the same place where your own files are.

Creating a drawing panel

At the very start of your program add:

```
import java.awt.*;
```

Inside main(...) { add:

```
DrawingPanel panel = new DrawingPanel(400,400);           // size 400 X 400
Graphics2D g = panel.getGraphics();                       // use g to draw stuff
```

Drawing Shapes (use integer values, variables or expressions for all parameters)

```
g.drawLine(x1, y1, x2, y2)
g.drawRect(x, y, width, height)
g.drawOval(x, y, width, height)
g.drawRoundRect(x, y, width, height, arcWidth, arcHeight)

g.fillRect(x, y, width, height)
g.fillOval(x, y, width, height)
g.fillRoundRect(x, y, width, height, arcWidth, arcHeight)
```

```
g.setStroke(new BasicStroke(width)); // set line width for draw... methods above
```

Colors

```
g.setColor(Color.RED); // ORANGE, YELLOW, GREEN, BLUE, BLACK, GRAY, WHITE ...
g.setColor(new Color(red, green, blue)); // you can make any color, e.g. purple is (128,0,128)
// range of values is 0 to 255
// search the web for RGB colors
```

You can also set a background color with:

```
panel.setBackground(Color.GRAY); // you can use any color as above
```

Text & Fonts

```
g.drawString(string, x, y); // (x,y) is the left side baseline

g.setFont(new Font(name, style, size)); // select a new font to use
```

To specify a new font use choices from these values for name, style, and size:

Font name	Font style	Font size in points
"SanSerif" like Arial	Font.BOLD	any size is allowed
"Serif" like Times	Font.ITALIC	12 is default
"Monospaced" like Courier	Font.BOLD + Font.ITALIC	sizes are 72 points/inch
or any font on your computer	Font.PLAIN	