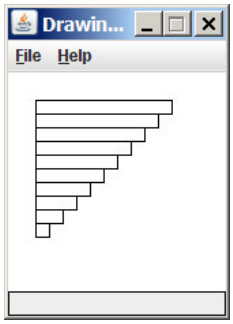
# CS 157 Lab 7 October 20, 2009
# Introduction to Graphics

1. Start a new Java project called Graphics that has a main class. Create a new class called DrawingPanel. Note what package it belongs to. From the textbook website, under Supplements, you will find a link for the file DrawingPanel.java. Here is a direct link to the supplements page: http://www.buildingjavaprograms.com/supplements.shtml

   Right-click on the file name and save it in the directory that contains your current DrawingPanel.java file. You should be asked if you want to overwrite the file. Respond yes. Netbeans should now have the author's DrawingPanel class as part of this project.

2. Here is a warm-up exercise that is done for you. The problem is to draw ten stacked rectangles starting at (20, 20) each with height 10 and width starting at 100 and decreasing by 10 each time. The result should look like this:



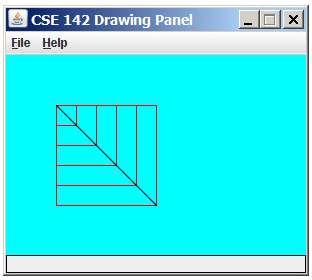

   Here is the code that produces those rectangles:

```
DrawingPanel panel = new DrawingPanel(160, 160);
Graphics g = panel.getGraphics();
   for (int i = 0; i < 10; i++) {
       g.drawRect(20, 20 + 10 * i, 100 - 10 * i, 10);
   }
```

   Notice how the x-coordinate of the upper left corner of the rectangles is constantly 20, and the y-coordinate changes as ***i*** goes from 0 to 9. Notice also how the height of each rectangle is constant at 10, but the widths start at 100 and decrease as ***i*** increases.

2. Write a static and void method called drawRectangles that takes a Graphics object as a parameter. Inside this method put the ***for*** loop in part 1. Then call that method from your main method (remove the loop from the main method first). You should get exactly the same output.

3. Write a method called `drawWeb` that produces the figure below. Your method should have no parameters, but instead should create its own drawing panel and graphics object.




The drawing panel is 300 pixels wide by 200 pixels high. Its background is cyan. The horizontal and vertical lines are drawn in red and the diagonal line is drawn in black. The diagonal line has upper-left corner (50, 50). Successive horizontal and vertical lines are spaced 20 pixels apart.

4. Write another method called `drawWebs` to produce the following figure, a 400x300 panel that contains three similar figures, each with its own unique location and size: (50, 50) size 100, (250, 10) size 50, (180, 115) size 180. You should change the method `drawWeb` so that it no longer creates its own drawing panel and graphics object, but receives the graphics object as an argument. The method `drawWeb` should also take as arguments the x and y coordinates of the web's upper left corner and the size of the web. Then the method `drawWebs` can simply create the drawing panel and graphics object, and call `drawWeb` three times.