

CSSE 220 Swing Warm-up Programming Assignment

Create a project called SwingWarmup. Include in your project the following three classes, each containing `main()`, and any other classes that they use. Submit your code to your SVN repository.

1. (40 points) **CircleOfCircles**

Goal: Practice with drawing and simple user input.

The Swing part should be easy for "Old 120" folks. The circleOfCircles part should be easy for "new 120" folks. So each group should have a familiar part and a part that is a new challenge.

Write a Java GUI application that asks the user for three numbers (Using `JOptionPane`, as we did in Day 7 class):

1. Radius of "big circle",
2. Radius of each individual circle,
3. Number of circles.

It then draws a "Circle of circles" pattern like the ones on the next page (also some were shown in class). The centers of the individual circles are equally spaced around the "big circle". (You may wish, at some point, to add sliders to control these three numbers.) Note that the "big circle" may, in fact, have a smaller radius than the individual circles.

A good starting place for this one might be our in-class color-viewer example.

2. (10 points) **Two Buttons**

Goal: practice with `ActionListener` and layout.

Display two buttons: the first is labeled "Toggle the other" and the second is labeled, "No, toggle the other". Clicking either button causes the **other** button's background color to change; it should toggle back and forth between two colors, as in the class example. You only need to change and add a VERY small amount of code to the class example (`oneButtonFrame2`) to make this work.

3. (40 points) **Dots**

Goal: Practice with `MouseListener` and persistent data.

Whenever you click the mouse, a small (5 pixel radius) filled circle should appear there. The next time you click, a new dot should appear, but the old ones should not disappear. Then "connect the dots" with lines (the tricky part here is drawing lines when you click the 2nd, 3rd, ... times, but not the first time you click). The main enhancement that you need to make to the class example (`FollowTheMouse`) is storing the previously clicked points in an array or `ArrayList`. Note: if you use an array, you can make it huge enough to hold more points than you'd ever need (like 500). Later in the course, I'll require `ArrayLists` for this kind of thing.

