CSCE 145: Lab 5

Objectives:

- **Understand how to pass parameters to methods.**
- **Understand how to draw movable graphics.**
- **Understand how to display images.**

First, enter and run the following code to display a stick figure in a window. Note that you will have to include *DrawingKit* in your project, like you did for Lab 3.

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

public class StickFigure1 {
  public static void main(String[] args)
    { DrawingKit dk = new DrawingKit("Stick
    Figure");int x = 100;
        int y = 100;
        BasicStroke stroke = new BasicStroke(5);
        dk.setStroke(stroke);
        Font f = new Font("Arial", Font.ITALIC, 50);
        dk.setFont(f);
        // Watch the dot.  The stick figure moves with it.
        dk.drawString(".",  x, y);

        // draw the head
        Ellipse2D.Float head = new Ellipse2D.Float(x,  y, 80, 80);
        dk.draw(head);

        // draw the body
        Line2D.Float body = new Line2D.Float(x+40, y+80, x+40, y+200);
        dk.draw(body);

        // draw the arms
        Line2D.Float arm1 = new Line2D.Float(x+40, y+110, x-20, y+160);
        dk.draw(arm1);
        Line2D.Float arm2 = new Line2D.Float(x+40, y+110, x+100, y+160);
        dk.draw(arm2);

        //draw the legs
        Line2D.Float leg1 = new Line2D.Float(x+40, y+200, x+20, y+300);
        dk.draw(leg1);
        Line2D.Float leg2 = new Line2D.Float(x+40, y+200, x+70, y+300);
        dk.draw(leg2);
    }
}
```

Second, modify the StickFigure program (call it StickFigure2) to include two eyes, a nose, and a

mouth.

Third, modify the StickFigure program (call it StickFigure3) to include a skirt, so that the figure looks like a female (or a Scottish guy in a kilt).

Fourth, browse the Web to find a .jpg picture of a human face (FaceBook is a good place to look for http://www.cse.sc.edu/~carrollh/CSCE145/lib/PixelColorDemo.java into your project. This has examples of getting the color of a pixel, showing a location on an image, changing the color of a pixel, and drawing objects on an image. Modify this program to display the picture you found and draw a black ellipse around the face of the person in your picture.

Upload your solution to the dropbox at https://dropbox.cse.sc.edu.