Custom People in Processing

Before you Start:
Go to the following link **http://tinyurl.com/hn9o7to** on the computer and click on "Download Processing File" link. Unzip the downloaded file, and open up drawPerson.pde on your computer.

Activity 1: Build your stick figure
(write the following code in the 'drawPerson()' function.

1. Build the head using the ellipse function.
Here is the ellipse function:

```
ellipse(x-coordinate, y-coordinate, width, height);
```

For the head of your stick figure, set the x-coordinate to 190, y-coordinate to 120, and set the height and width both to 80.

2. Build the body, legs and arms with the line function.
Here is the line function:

```
line(start x-coordinate, start y-coordinate, end x-coordinate, end y-coordinate);
```

You will need 4 different lines to finish your stick figure.

a.   Body: the line should go from the (x,y) coordinate (190,160) to the coordinate (190,250).

b.   Arms: the line should go from (150, 185) to (230, 185).

c.   Legs: one line should go from (190, 250) to (150, 300).

The second leg should go from (190, 250), to (23, 300).

Activity 2: Customize your stick figure

Use some pre-made functions to customize your stick figure

1. Put a hat on your stick figure.
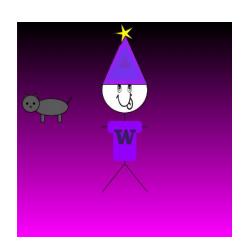Use the function:

```
drawHat(String hatName);
```

For hatName, choose either "wizard", "baseball", or "top".

2. Put a shirt on.
Use the function:

```
drawShirt(color(r,g,b));
```

For r,g,b above, choose the values for how much red, green, and blue in the shirt color. Play around with the numbers for r, g, and b to see what colors you can make. For instance try

```
drawShirt(color(r,g,b)
```

3. Draw a Face on your person.
Look through the folder labeled data from your downloads for different images of mouths and eyes, and choose your favorites. When calling the two functions below, use the filename for your favorite eyes and mouth as the parameter to each function.

```
drawEyes(String filename);
drawMouth(String filename);
```

4. Decorate your shirt.
Look through the folder labeled data from your downloads for list of pictures, and choose one to put on your shirt. Find a picture you like and use the filename as the parameter in the function below. ie drawPictureOnShirt("uw.png")
Use the function:

```
drawPictureOnShirt(String filename);
```

to put an image on your shirt.

Those with familiarity with loops can draw stars on their shirt by completing and using the function:

drawStarsOnShirtWithLoops();

5. Add a cat or stars to your picture.
Use the functions:

```
drawCat(x-coordinate, y-coordinate, size, color(r,g,b));
star(x, y, radius1, radius2, points-on-the-star);
```

To draw stars and cats around your person.

Other Activities:
Make your own animal/object (snowman, dog, etc)
Take a look at the drawCat() function to get an idea about how to make your own animals and shapes.

Make a cool colorful background.
One idea is to make a gradient background for your stick person. (If you aren't sure what a gradient is, google image search for examples).
You can make a gradient using a for loop like below

```
for(int i =0 ; i < width_of_page; i++) {
```

```
    //change color of the line (use 'stroke(color(r,g,b))' function
    //draw a line from the top to bottom of the page, with the x coordinate = i.
}
```

In the above example, there are a few challenges. First, what is the width of the page? How do you change the color while 'i' changes? What coordinates should you draw the line from and to, and how should those coordinates change with 'i'?