

CMPS 5J – Lab 6

Winter 2018

Due: Sunday February 25 @ 11:59pm

Complete exercise 7-8 in Learning Processing, attached here on page 2.

What to turn in

Turn in your program created from exercise 7-8 in a file called lab6.pde to Canvas.

Exercise 7-8: Write a function that takes one argument — F for Fahrenheit — and computes the result of the following equation (converting the temperature to Celsius). Hint: in Processing if you divide an integer by an integer you will get an integer, same with floating point! In other words, $1/2$ evaluates to 0 while $1.0/2.0$ evaluates to 0.5.



```
// Formula: C = (F - 32) * (5/9)

_____ convertToCelsius(float _____) {

    _____ = _____

    _____

}
```

7-8 Zoog reorganization

Zoog is now ready for a fairly major overhaul.

- Reorganize Zoog with two functions: `drawZoog()` and `jiggleZoog()`. Just for variety, I am going to have Zoog jiggle (move randomly in both the x and y directions) instead of bouncing back and forth.
- Incorporate parameters so that Zoog's jiggliness is determined by the `mouseX` position and Zoog's eye color is determined by Zoog's distance to the mouse.

Example 7-6. Zoog with functions

```
float x = 100;
float y = 100;
float w = 60;
float h = 60;
float eyeSize = 16;

void setup() {
  size(200, 200);
}

void draw() {
  background(255); // Draw a white background

  // A color based on distance from the mouse
  float d = dist(x, y, mouseX, mouseY);
  color c = color(d);

  // mouseX position determines speed factor for moveZoog function
  float factor = constrain(mouseX/10, 0, 5);

  jiggleZoog(factor);
  drawZoog(c);
```

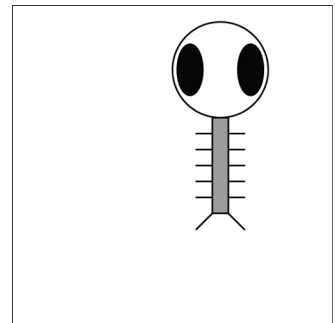


Figure 7-8

The code for changing the variables associated with Zoog and displaying Zoog is moved outside of `draw()` and into functions called here. The functions are given arguments, such as “jiggle Zoog by the following factor” and “draw Zoog with the following eye color.”