Ordering

5 min

At this point, you might have noticed that the order in which functions are called matter. Style setting functions such as `fill()`, `stroke()`, and `strokeWeight()` must be called before drawing a shape and will be active for subsequent shapes until the functions are called again to change the styles.

Additionally, the functions placed inside the `draw()` function will be executed from the top-down. When drawing shapes in the p5.js sketch, the last shape in the `draw()` function will be drawn on top of previously drawn shapes.

When the `draw()` function loops again, the last set styles will be used for the shape functions called at the beginning of the loop. Take a look at the code below:

```
function draw(){
  // After the first loop, this rectangle will have purple fill color
  rect(width / 2, height / 2, 100, 100);

  fill('purple');
  ellipse(100, 300, 50, 50);
}
```

The first time the above `draw()` loop runs, the fill color of the rectangle will be white by default and the ellipse's fill color will be set to `'purple'`. The second time the `draw()` loop runs, the rectangle's fill color will also be purple because the set styles carry over until they are explicitly changed with style functions. To make sure the rectangle has a different fill color than the ellipse, the `fill()` function will have to be called before the `rect()` function.

```
function draw(){
  // Now the rectangle will have red fill color
  fill(255, 0, 0);
  rect(width / 2, height / 2, 100, 100);

  fill('purple');
  ellipse(100, 300, 50, 50);
}
```

Instructions

1.

To the right is a p5.js sketch of a slice of Swiss cheese. Remove the stroke of all the shapes by calling `noStroke()` in the `setup()` function.
Hint
Calling the `noStroke()` function inside the `setup()` function will prevent shape functions drawn in the `draw()` function from having a border, unless the `stroke()` function is explicitly called.

In the `draw()` function, there are ellipses drawn for the holes of the cheese, but they are not visible! The yellow rectangle drawn after the ellipses are covering them up.

Move the "cheese" code block above the "holes" code block. Make sure to include the respective `fill()` functions.
Hint
Move the lines of code starting from `// Cheese` to `// End Cheese` before `// Holes`. This will result in the rectangle being drawn before the ellipses, making the cheese's holes visible.

sketch.js

```
function setup() {
  createCanvas(400, 400);
  // TODO: Remove stroke
  noStroke();
}

function draw() {
  background(220);

  //TODO: Draw Cheese before Holes
  fill('#FFFF66');
  rect(50, 50, 300, 300);
  // Holes
  fill(220);
  circle(100,100, 50);
  circle(225,140, 60);
  circle(150,275, 50);
  circle(300,250, 20);
  // Endholes

  // Cheese
```

```
    // End cheese


}
```