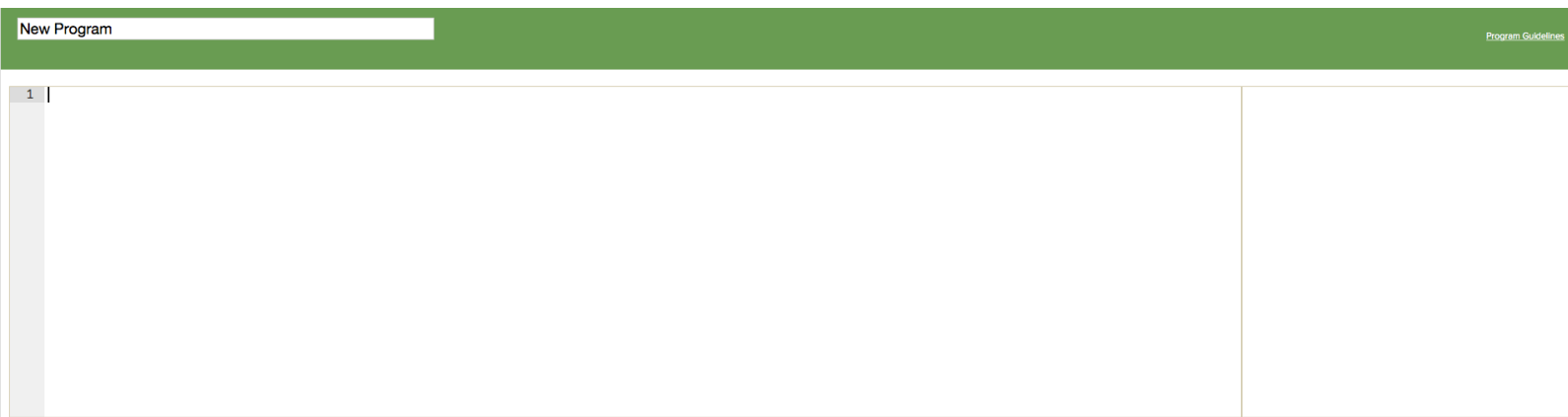


JavaScript Instructions

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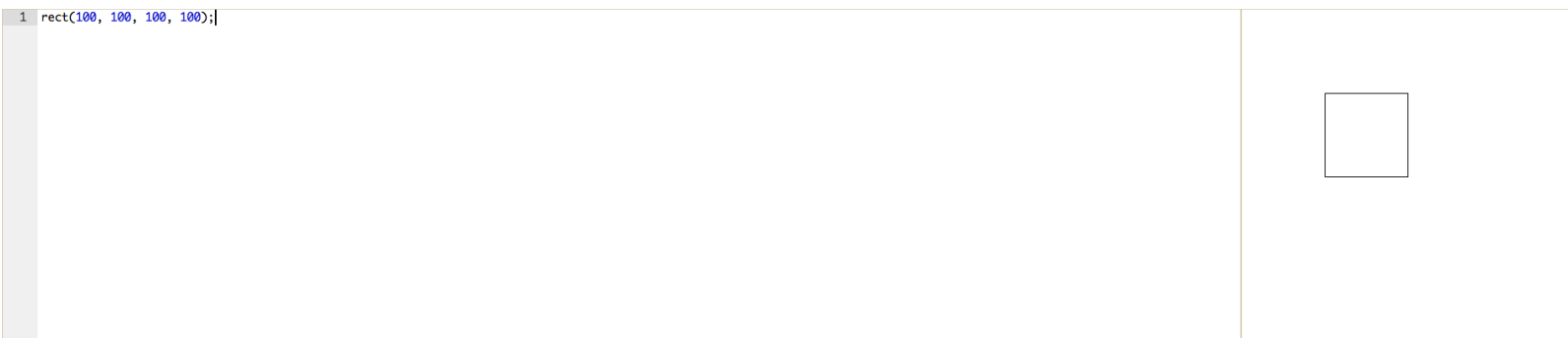
STEP 1: Drawing Different Shapes

1. Go to <http://bit.ly/1wpueLk>
2. You should see



Rectangle

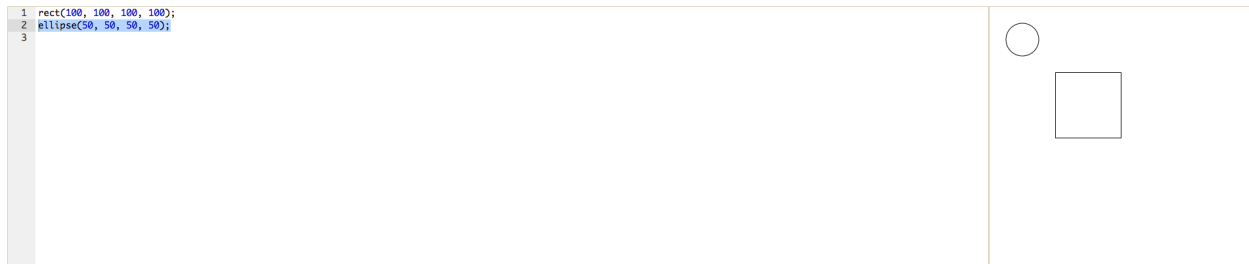
3. Now we will draw a rectangle
4. Type in the code area: `rect(100, 100, 100, 100);`
 1. The first value is the x
 2. The second is the y
 3. The third is the width
 4. The fourth is the height
5. You should see



6. Now we have made a rectangle

Circle

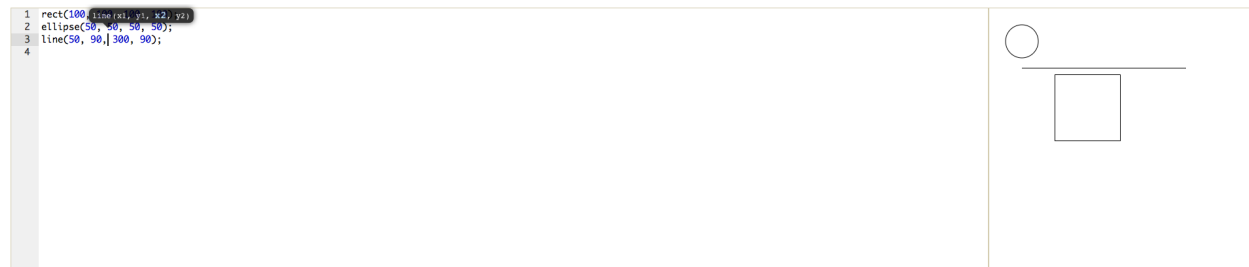
1. Now we will make a circle
2. Type: `ellipse(50, 50, 50, 50);`
 1. The values of the 4 numbers represent the same as the rectangle
3. You should see



4. Now we have made a circle

Line

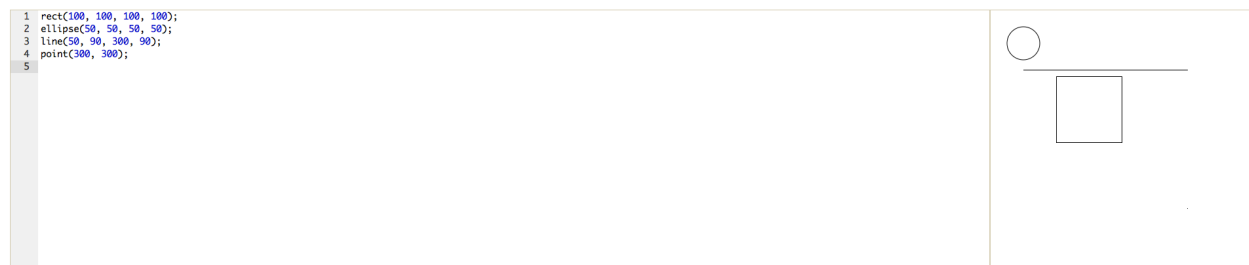
1. Now we will make a line.
2. Type: `line(50, 90, 300, 90);`
 1. The first value is the starting x point
 2. The second value is the starting y point
 3. The third value is the ending x point
 4. The fourth value is the ending x point
3. You should see



4. Now we have made a line

Point

1. Lastly, now we will make a point
2. Type: `point(300, 300);`
 1. The first value is the x point of the point
 2. The second value is the y point of the point
3. You should see



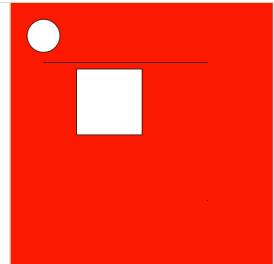
4. There is a small point near the bottom right corner of the screen.

STEP 2: Coloring

Setting the Background Color

1. Now we will set the background color so that we can add some life to our drawing
2. Type: `background(255, 0, 0);` to get the background red
 1. The first value is red
 2. The second value is green
 3. The third value is blue
 4. These numbers go up to 255 at max
3. Now that we have set our background to red we should see

```
1 background(255, 0, 0);  
2 rect(100, 100, 100, 100);  
3 ellipse(50, 50, 50, 50);  
4 line(50, 90, 300, 90);  
5 point(300, 300);  
6 |
```

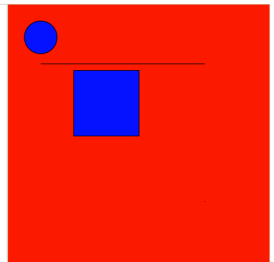


4. Now we have set the background to red, lets add some color to the shapes.

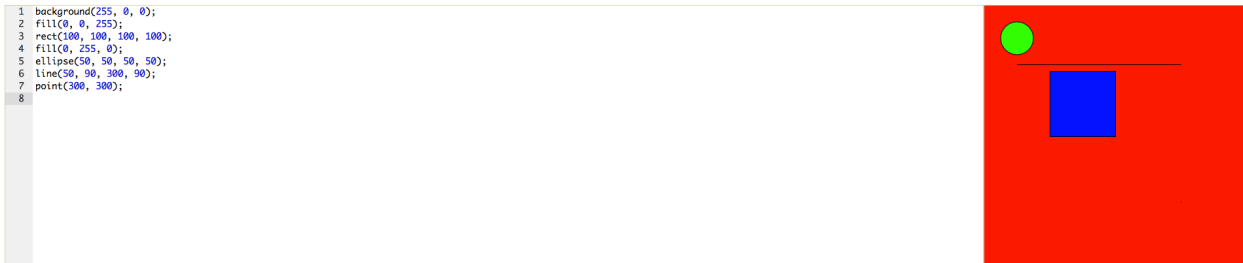
Adding a Fill Color to Shapes

1. Now we will change the fill color of the 2 shapes.
2. Type: `fill(0, 0, 255);` to make the fill color blue
 1. The values for fill are the same as background.
3. You should see

```
1 background(255, 0, 0);  
2 fill(0, 0, 255);  
3 rect(100, 100, 100, 100);  
4 ellipse(50, 50, 50, 50);  
5 line(50, 90, 300, 90);  
6 point(300, 300);  
7 |
```



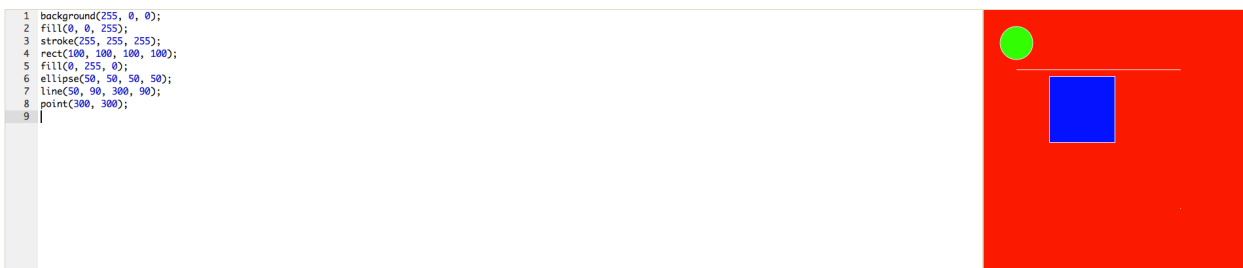
- Now both of the shapes are blue, say if we want to make the circle green, then we will add the same thing with some changes again.
- Type: `fill(0, 255, 0);` before the line that says `ellipse` to make the circle green.
- You should now see



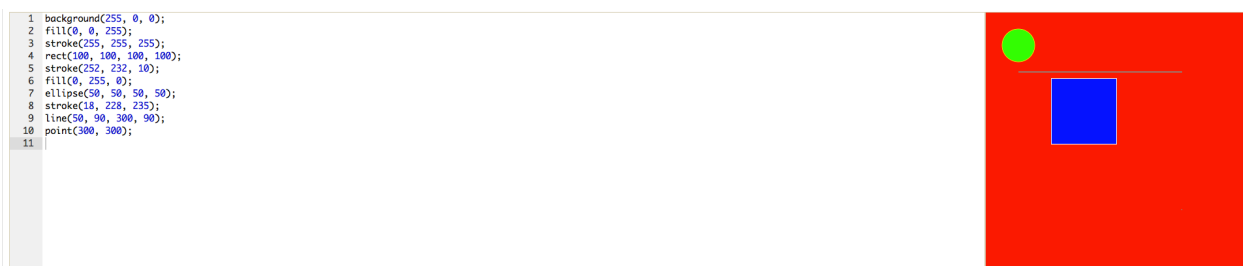
- Now both of the shapes are different colors

Changing the Stroke Color of the Shapes

- Now we will change the outline colors of the shapes
- Type: `stroke(255, 255, 255);` To make the outlines all white.
 - The values are the same as the other color things we typed
- You should see



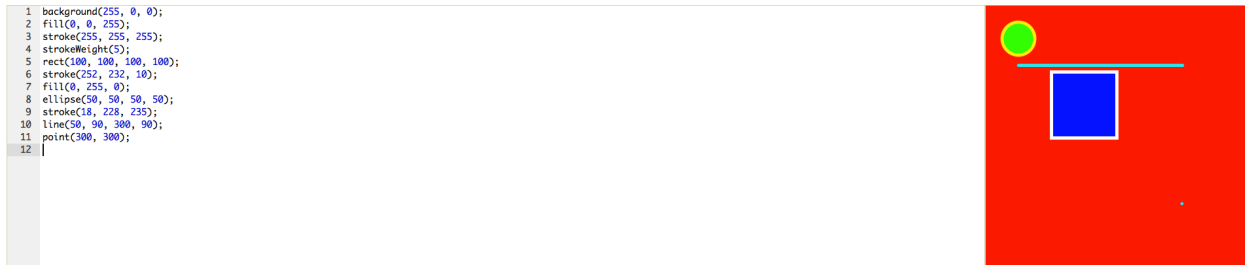
- Now everything's outline is white, to change that we can do what we did with the fill
- I changed the outline of the circle, line, and point and it looks like this; you can do it how you like it



- Now we have learned how to change the outline color of the shapes that we draw.

How to change the thickness of the brush

1. Now we will learn how to make the lines thicker or the point larger
2. Type: `strokeWeight(5);` to make the outlines thicker
3. You should see



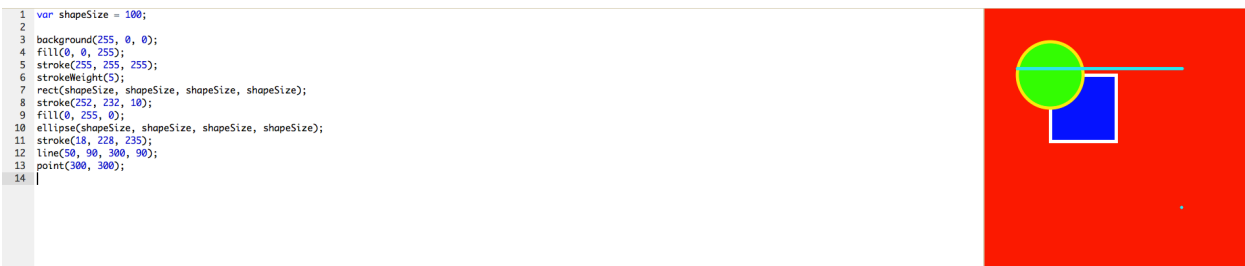
4. Now everything is thicker and this is also adjustable by the image if you want to.

Other Color Functions

1. There are also some other functions for color that we will learn now.
2. Type: `noFill();` to get rid of the fill inside the shapes.
 1. No number will be inside the () because no value needs to be passed
3. The last color function that we will learn is to get rid of the stroke/outline
4. Type: `noStroke();` to get rid of the stroke
 1. No number will be inside the () because no value needs to be passed
5. There are all of the color functions and we will now get into more interesting topics.

Variables

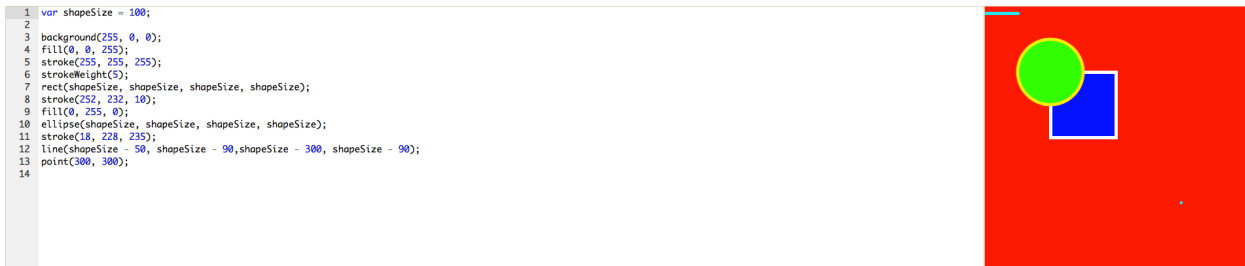
1. Now we will learn about variables and how to use them
2. Type: `var shapeSize = 100;`
 1. The number after the = is the value that we are assigning to it.
3. If we set the variable to all of the shape values, then we can control the size with one number change
4. You should see



5. No we have learned about variables, but lets do more interesting things with variables now.

Variable Expressions

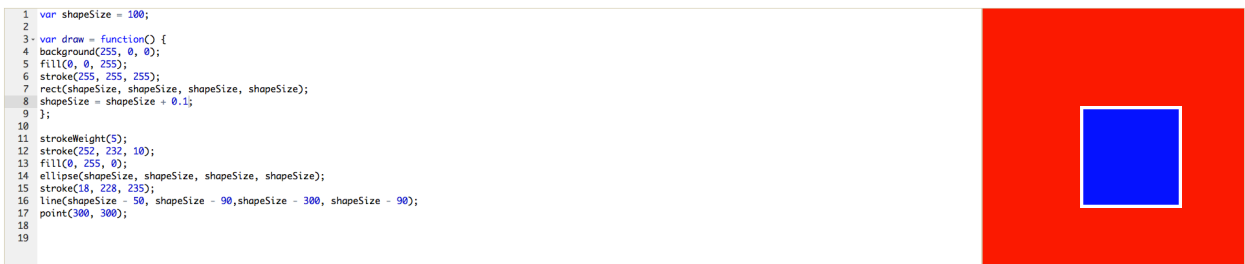
1. Say we want to change the size of the line alongside with the circle and square, but still with only 1 number change
2. Type: shapeSize - before each value in the line.
3. Now when we change shapeSize, everything changes with it.
4. You should see



5. Now that we have learned about Variables, lets do some animations

Animations

1. Now we will learn how to animate something
2. For this purpose, we will make the square move from it's current position
3. Type: var draw = function() { }; and inside the 2 braces type the background line and the set of lines for the square



4. Now you should see only the square and it should become larger and move.

If Commands

1. Now we will learn how to add if commands
2. Type: if(shapeSize>50) {}
3. Whatever we put in the braces will happen when our variable gets larger than 50.

Key Presses

1. Now we will learn how to check if a key is pressed.
2. Type: `if (keyIsPressed && keyCode === UP) {}`
3. Whatever we put in the braces will happen when up key is pressed.