

# Animating your Drawings

## Basics of Animation

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Produced  
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# Topics list

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- The setup() function.
- The draw() function.
- System Variables in Processing.

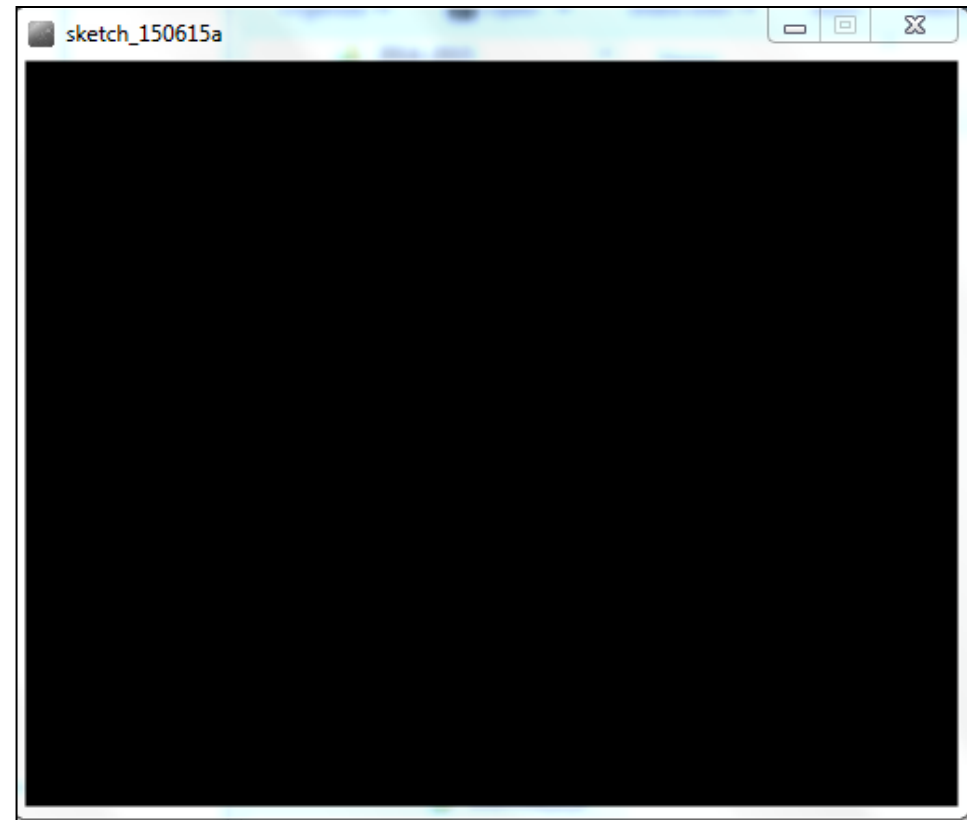
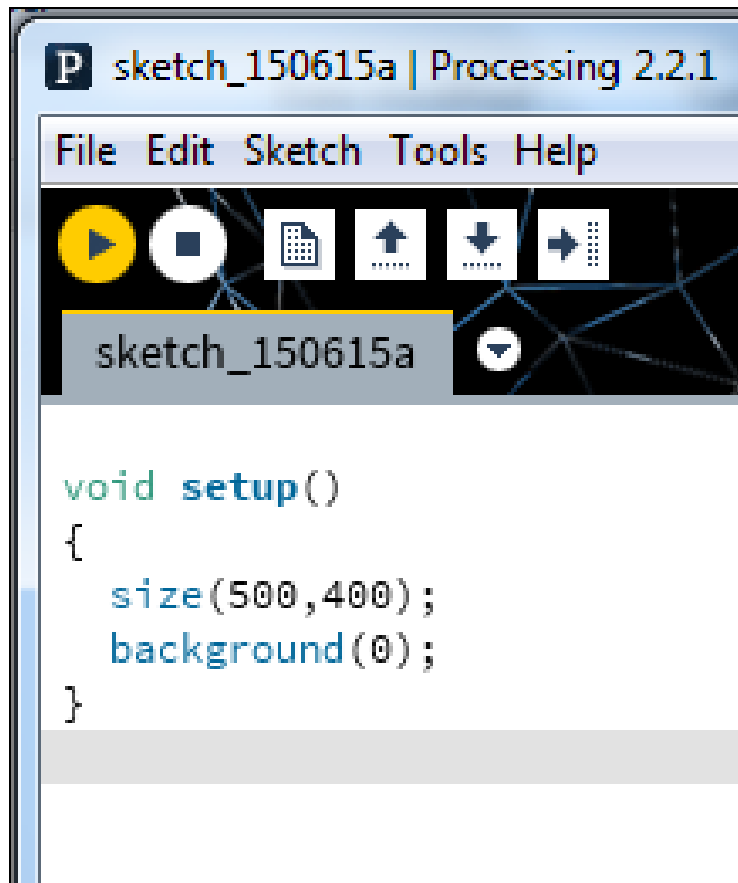
# void setup()

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- setup() is called once when the program starts and should not be called again.
- setup() can set the screen size and background colour.
- There can only be one setup() function for each sketch.

# void setup()

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# Topics list

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- The setup() function.
- The draw() function.
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# void draw()

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- You should never call the draw() function.
- Processing automatically calls the draw() function straight after the setup() call.
- draw() continuously executes the code contained inside it.
- There can only be one draw() function for each sketch.

# void draw()

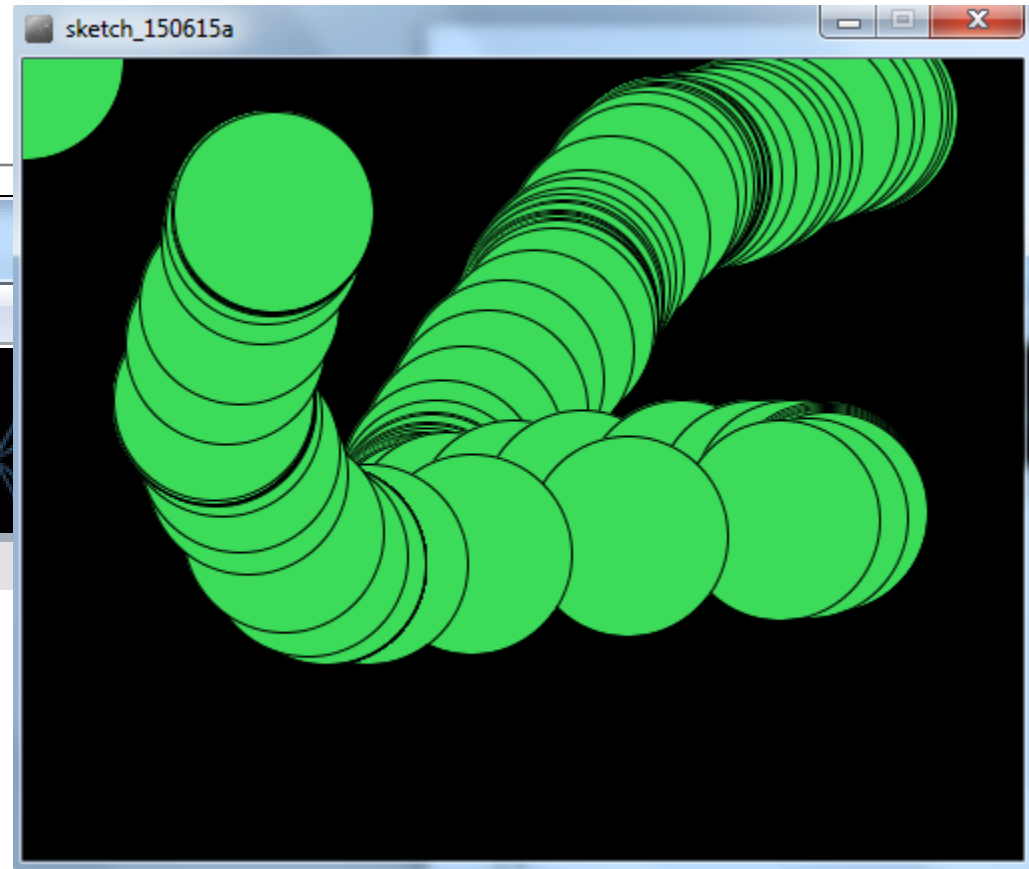
```
P sketch_150615a | Processing 2.2.1
File Edit Sketch Tools Help

[Icons: Run, Stop, Open, Save, Load, Export, Print]

sketch_150615a ▼

void setup()
{
  size(500,400);
  background(0);
}

void draw()
{
  stroke(0, 0, 0);
  fill(60, 220, 90);
  ellipse(mouseX, mouseY, 100, 100);
}
```



**mouseX** = x co-ordinate of mouse pointer  
**mouseY** = y co-ordinate of mouse pointer

*Q: Why many circles?*

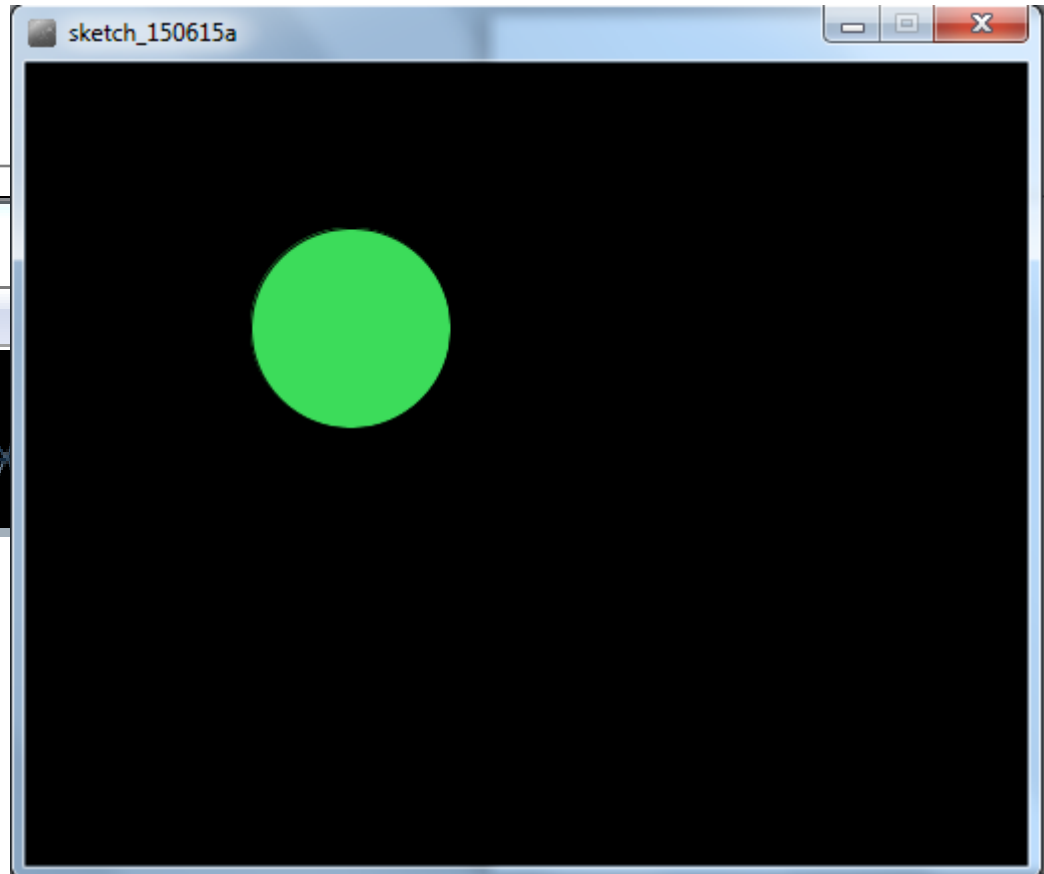
*A: background(0) is in the setup function.*

# void draw()

```
sketch_150615a | Processing 2.2.1
File Edit Sketch Tools Help
[Icons] Run
sketch_150615a

void setup()
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```



**mouseX** = x co-ordinate of mouse pointer  
**mouseY** = y co-ordinate of mouse pointer

*Q. Why only one circle?*

*A. background(0) is in the draw function.*



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# System Variables in Processing

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Some examples of system variables in Processing:

**mouseX** (x co-ordinate of the mouse pointer on the display window)

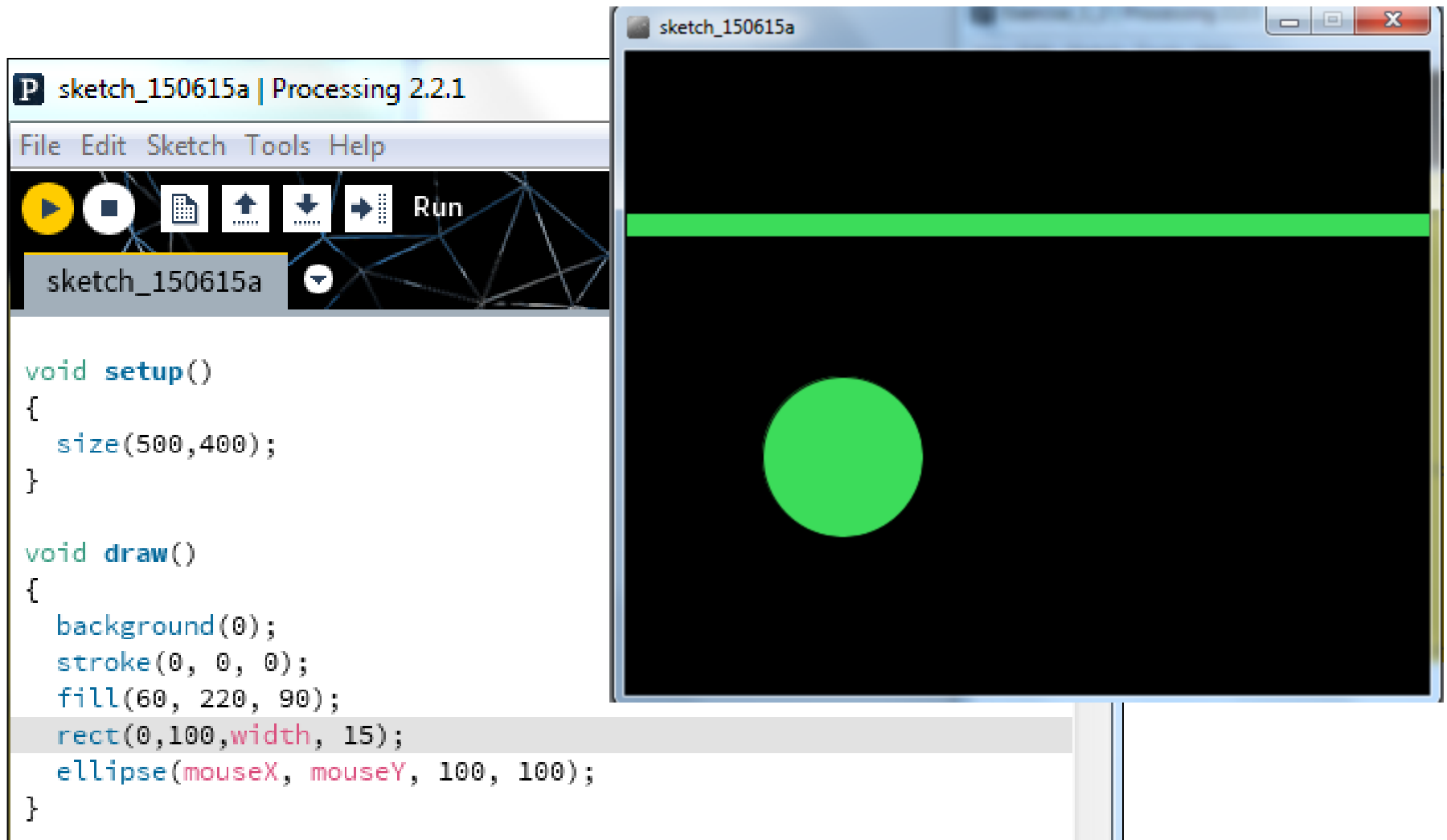
**mouseY** (y co-ordinate of the mouse pointer on the display window)

**width** (width of the display window)

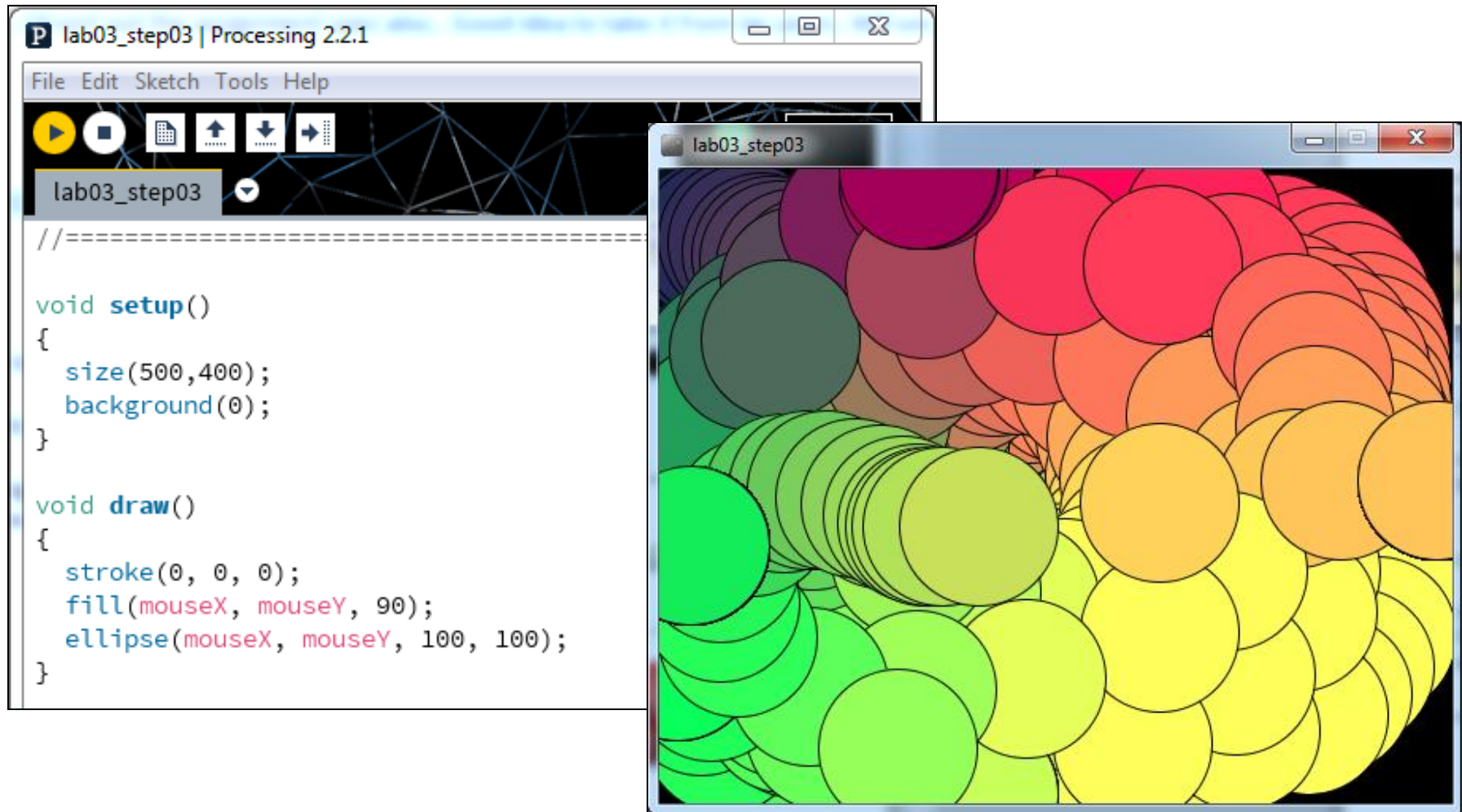
**height** (height of the display window)

We don't have to define/create these; we just use them.

# System Variables in Processing



# Using System Variables to vary the circles' colour



# Questions?

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