An Introduction to Processing
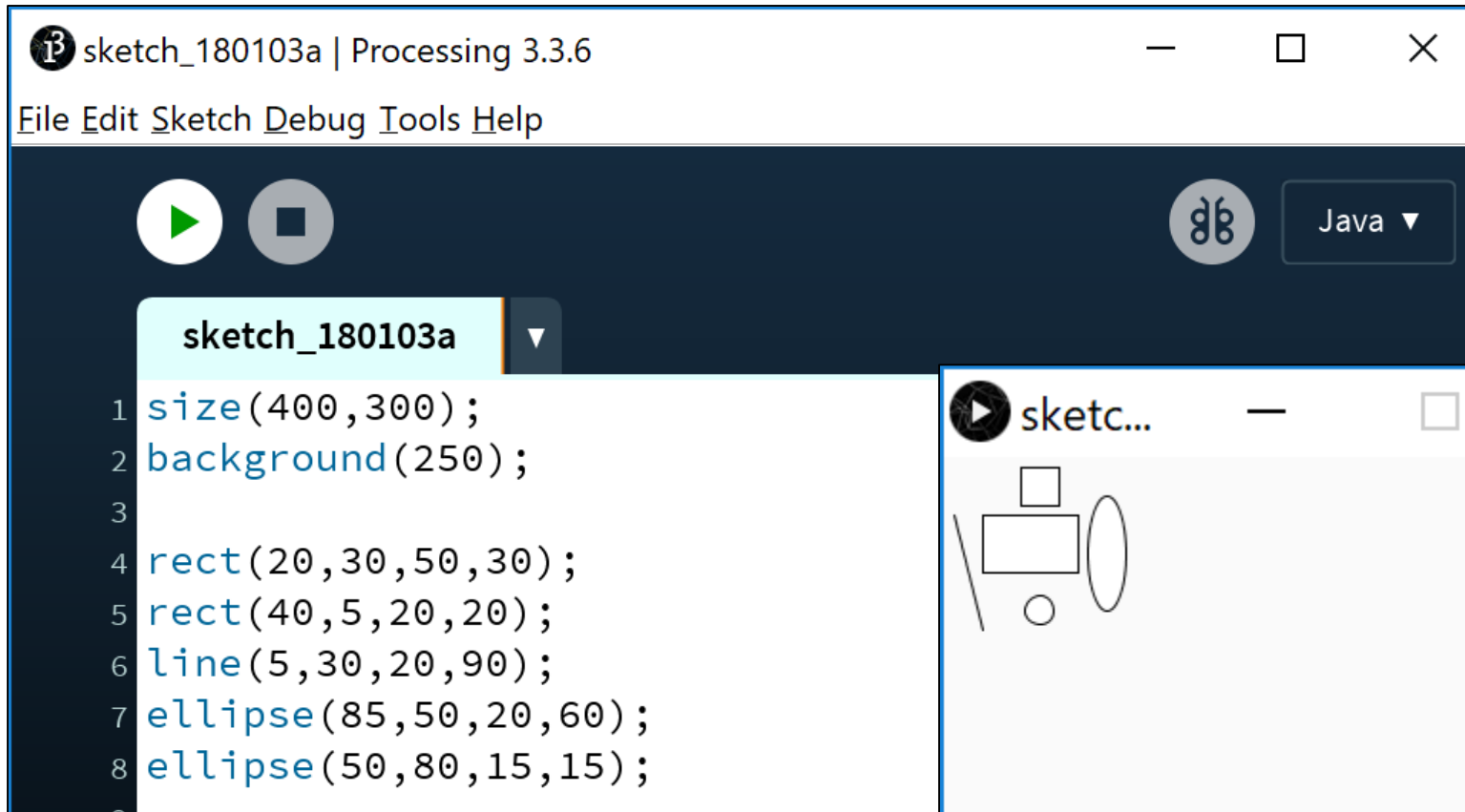
Static drawings and more

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http://www.wit.ie/

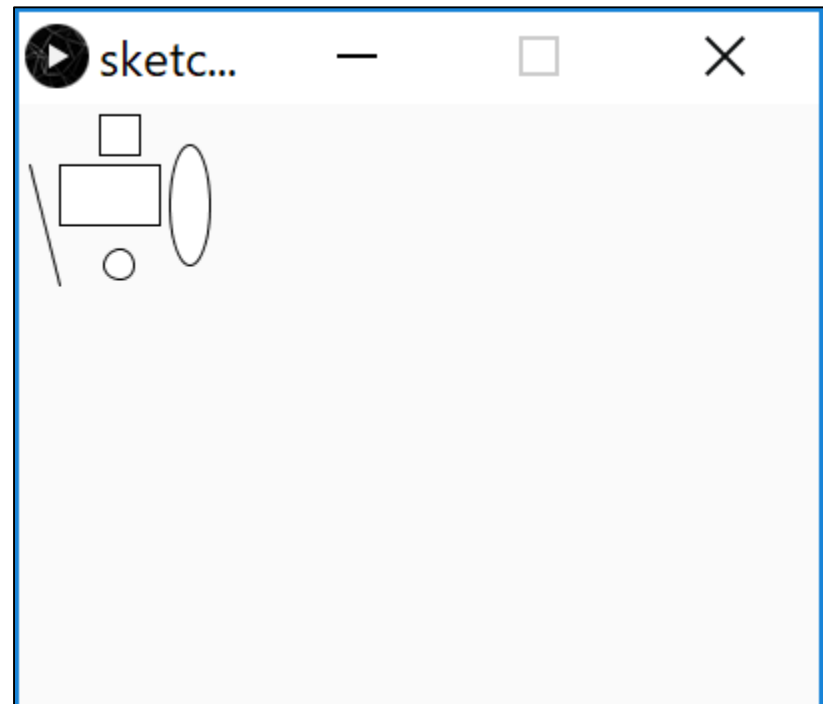# Static drawing – an example

Static drawing – an example

- Static drawings are those that don't change over time:

    - Once they are drawn, they don't change.

    - They don't respond to events e.g. a mouse moving over the sketch, a key being pressed, etc.
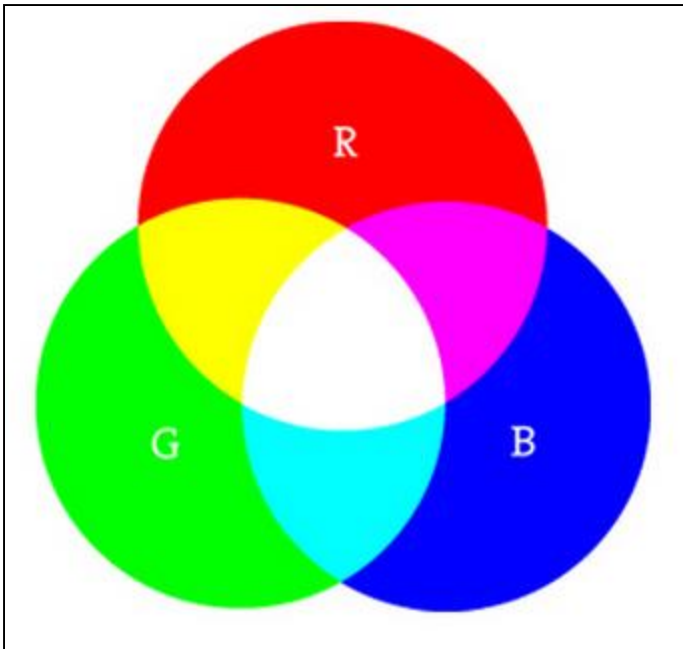
We looked at the Grayscale palette
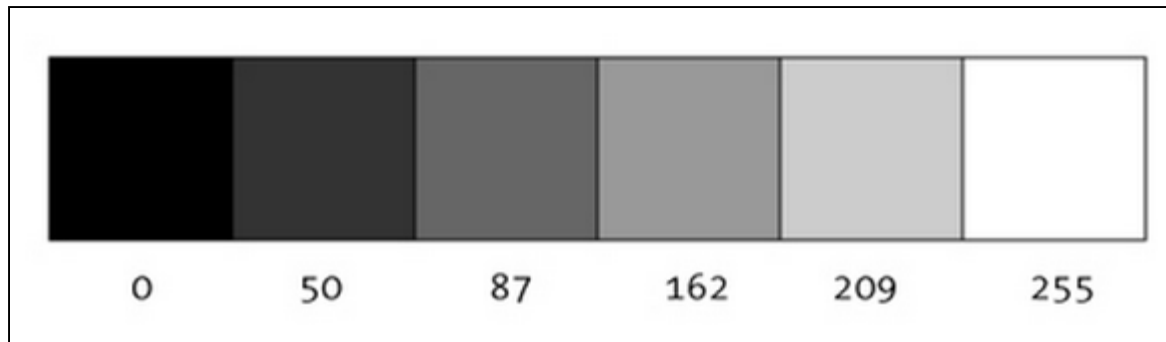
"0 means black, 255 means white. In between, every other number - 50, 87, 162, 209, and so on - is a shade of gray ranging from black to white."
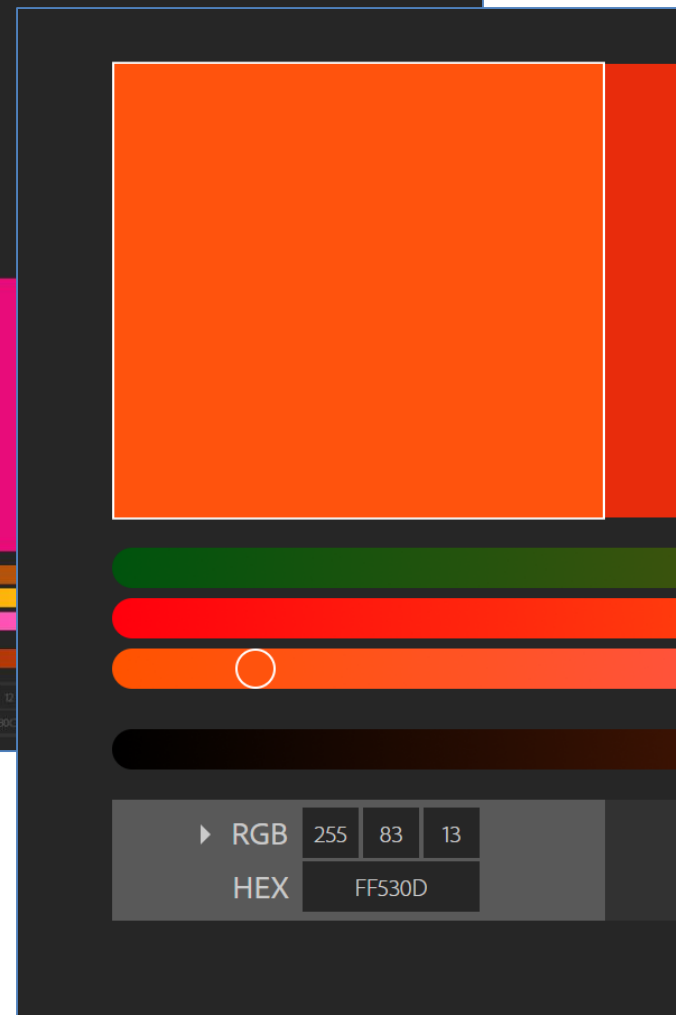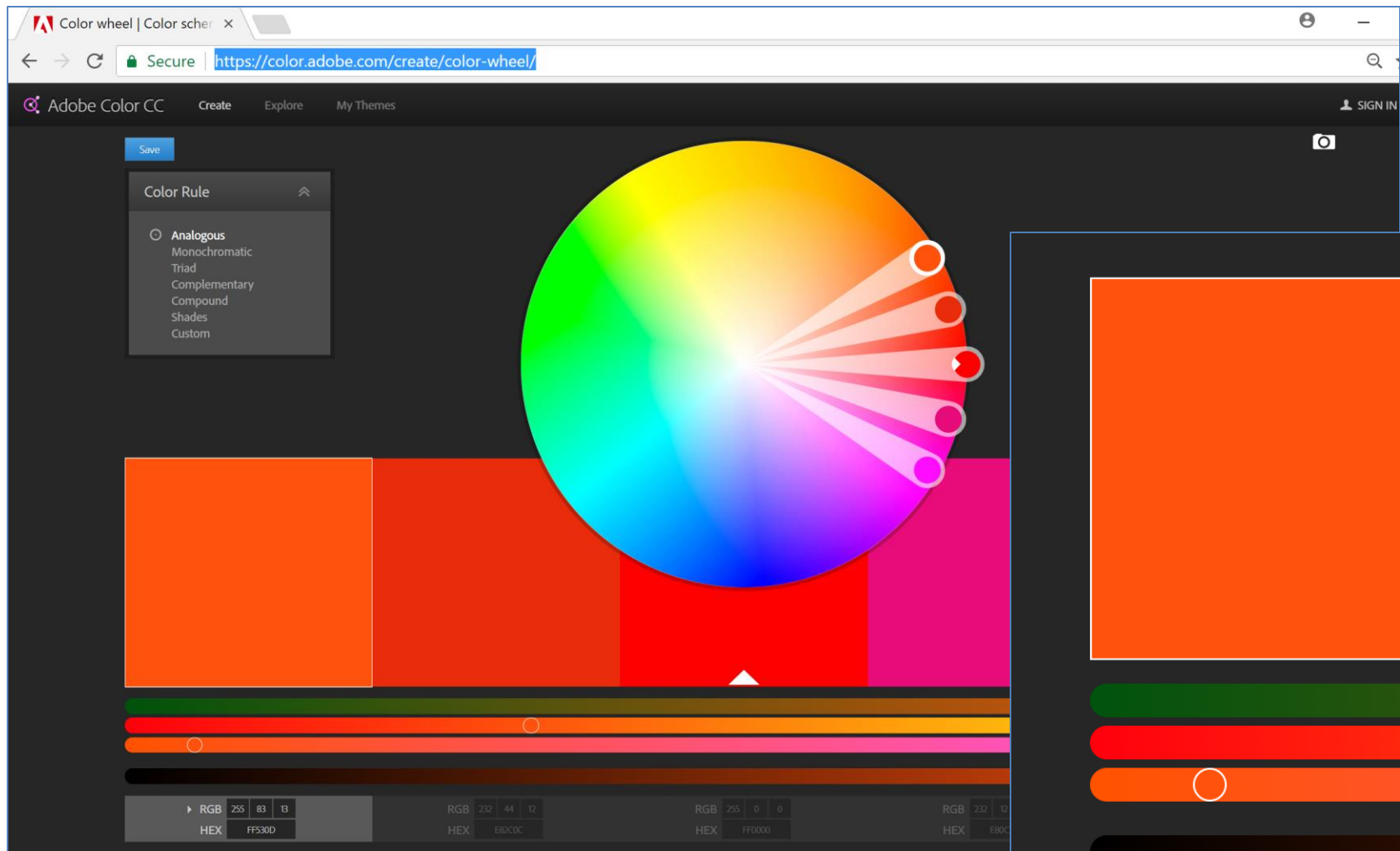
https://www.processing.org/tutorials/color/

The RGB palette

"As with grayscale, the individual color elements are expressed as ranges from 0 (none of that color) to 255 (as much as possible), and they are listed in the order R, G, and B."

Digital colours are made by mixing the three primary colours of light (red, green, and blue).

https://www.processing.org/tutorials/color/

https://color.adobe.com/create/color-wheel/

background() - syntax

background(grayscale)

grayscale = grayscale colour (a number between
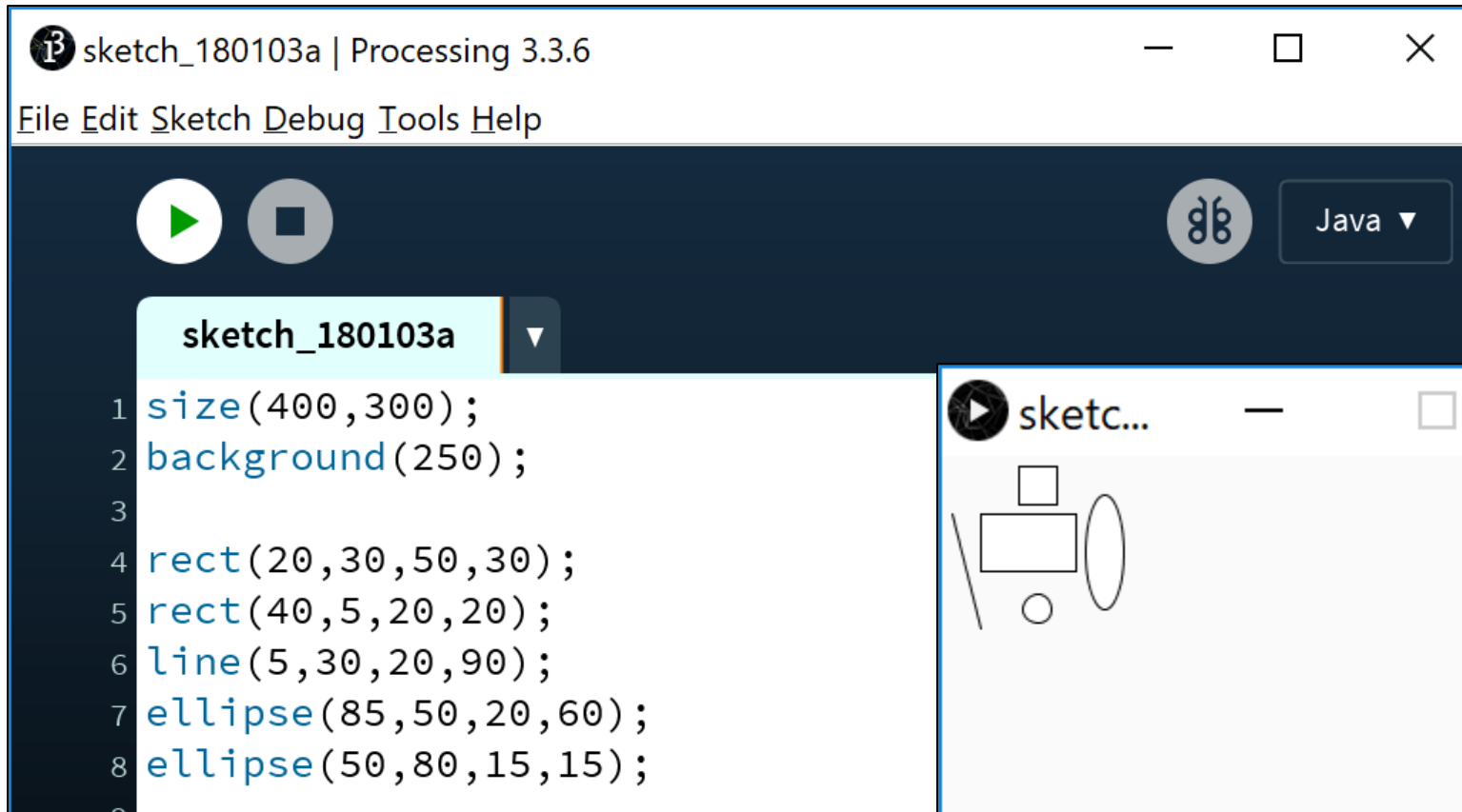0 [black] and 255 [white] inclusive)

background(r, g, b)

r = red colour (a number between 0 and 255 inclusive)

g = green colour (a number between 0 and 255 inclusive)

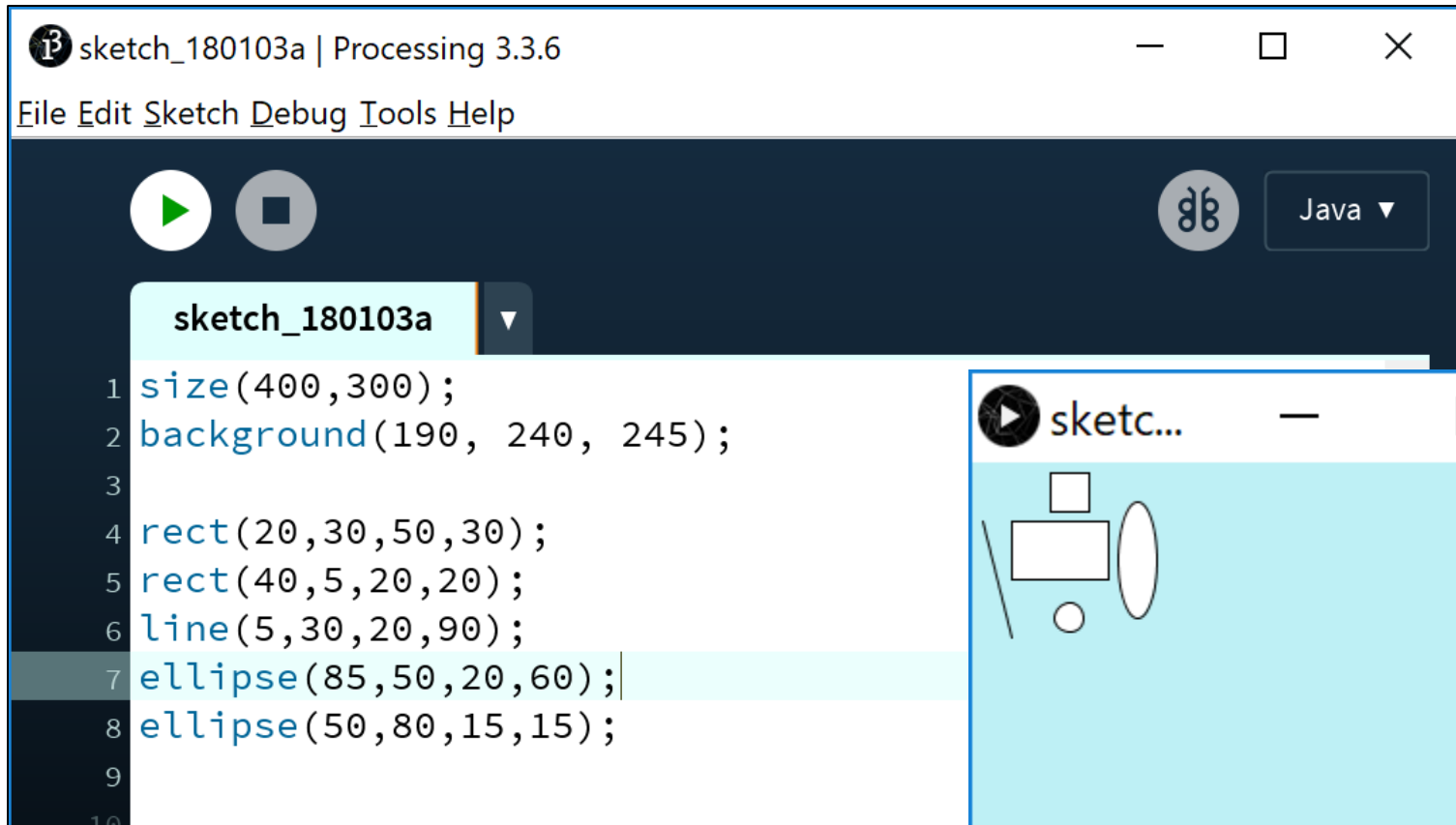b = blue colour (a number between 0 and 255 inclusive)

background() - grayscale

background() - RGB

Syntax and Logic Errors

Syntax and Syntax Errors

- You will have seen the term Syntax mentioned above.

- Syntax are the rules you must follow when writing well-formed statements in a programming language.

- When you don't follow the rules, Processing will not run your code; instead you will get an error.

- Some syntax error examples are on the upcoming slides.

Syntax Errors

The spelling of the background function must be identical to the spelling below (case sensitive!).


```
1 size(400,300);
2 BackGround(190, 240, 245);
3
4 rect(20,30,50,30);
5 rect(40,5,20,20);
6 line(5,30,20,90);
7 ellipse(85,50,20,60);
8 ellipse(50,80,15,15);
```

The function "BackGround(int, int, int)" does not exist

background(r, g, b)

    r = red colour (a number between 0 and 255 inclusive)

    g = green colour (a number between 0 and 255 inclusive)

    b = blue colour (a number between 0 and 255 inclusive)

Syntax Errors

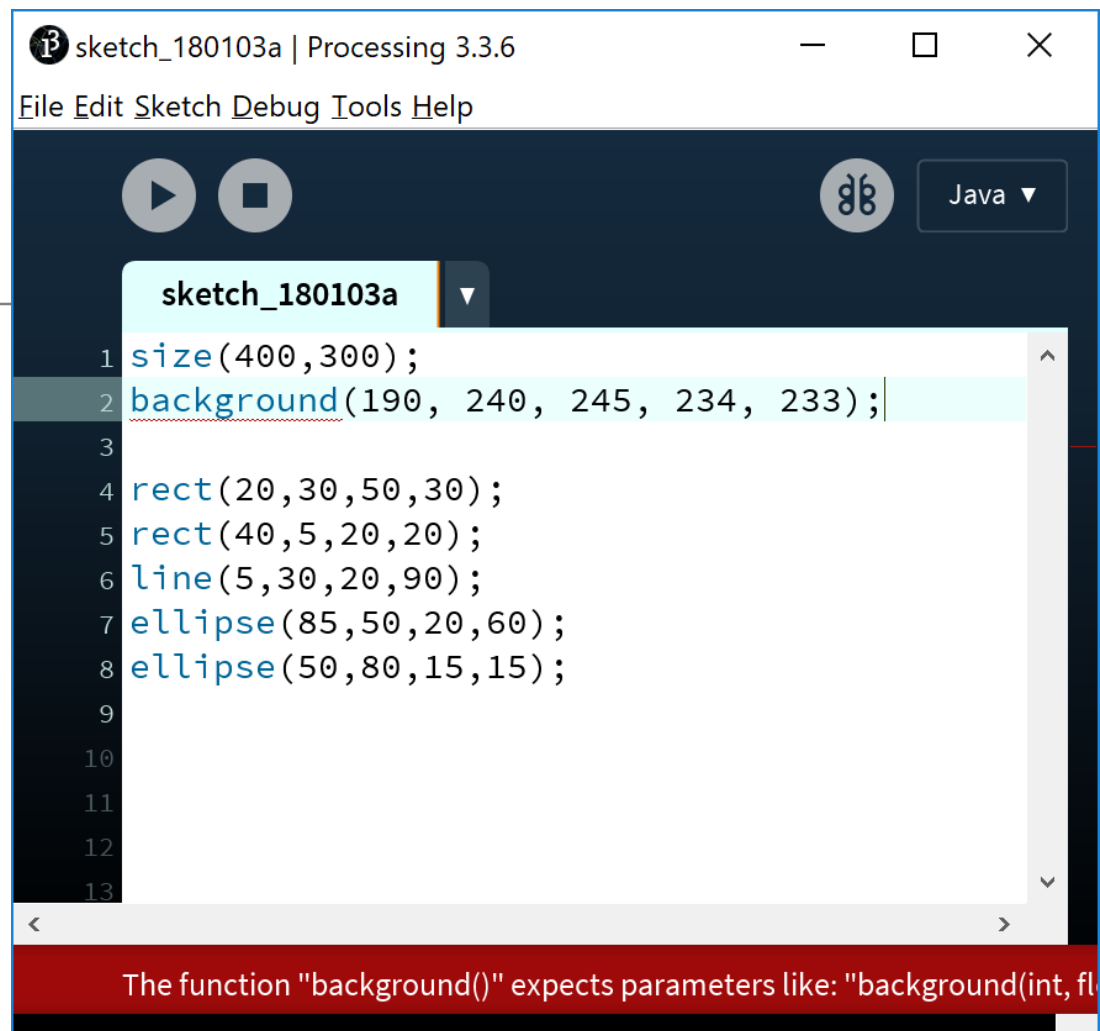*The background function has too many arguments passed to it i.e.*

- *RGB version is defined with 3 parameters.*
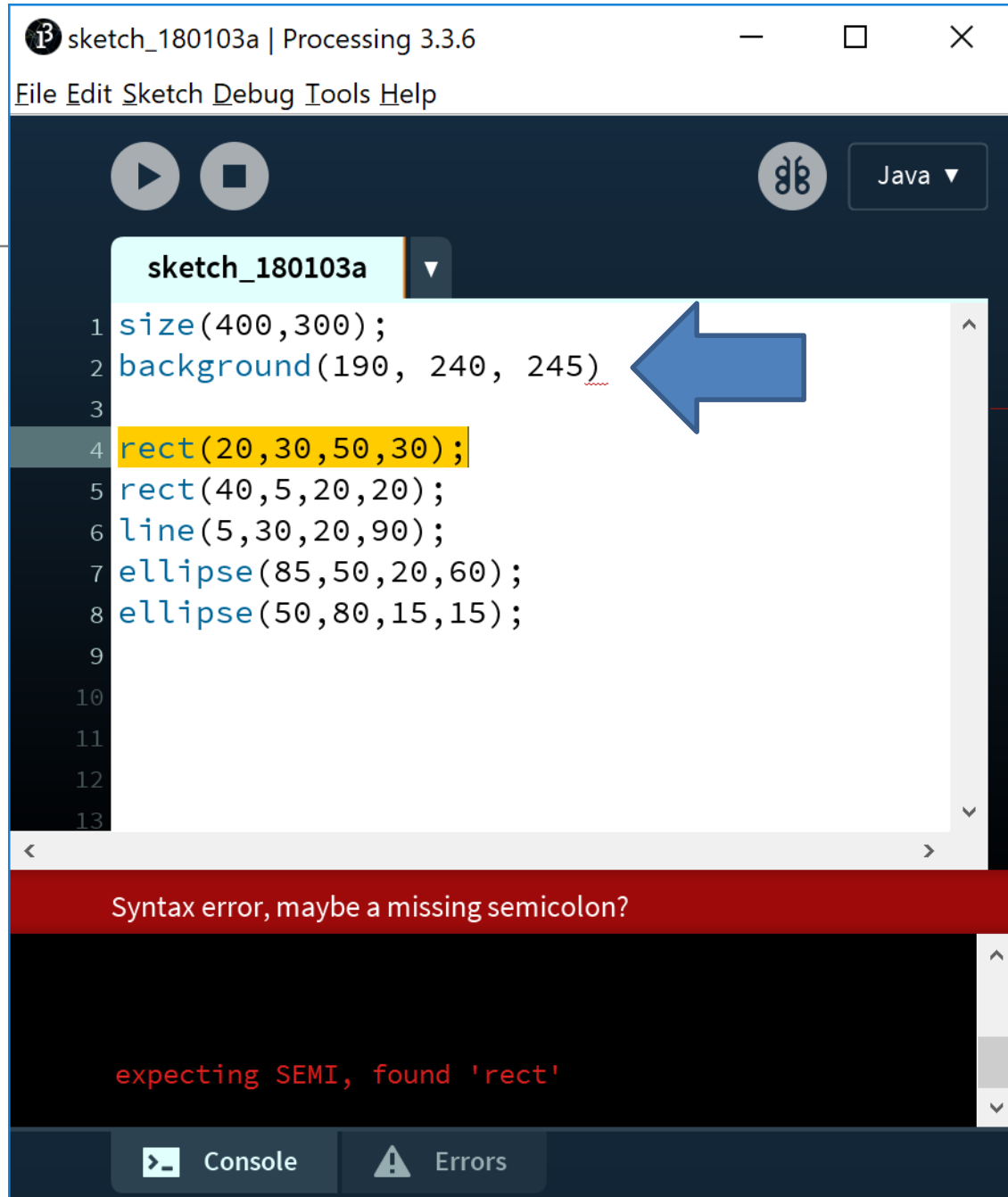- *Grayscale version is defined with 1 parameter.*


```
1 size(400,300);
2 background(190, 240, 245, 234, 233);
3
4 rect(20,30,50,30);
5 rect(40,5,20,20);
6 line(5,30,20,90);
7 ellipse(85,50,20,60);
8 ellipse(50,80,15,15);
9
10
11
12
13
```

The function "background()" expects parameters like: "background(int, fl

background(r, g, b)

r = red colour (a number between 0 and 255 inclusive)

g = green colour (a number between 0 and 255 inclusive)

b = blue colour (a number between 0 and 255 inclusive)

Syntax Errors

The semi-colon (;) is missing at the end of the statement.

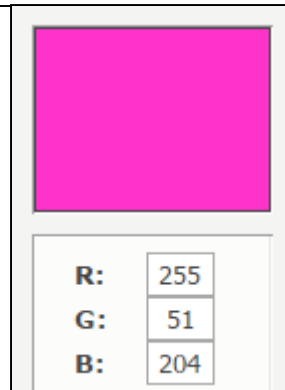*Java needs a statement terminator for each line!*

Logic Errors

In computer programming, a **logic error** is a bug in a program that causes it to operate incorrectly, but not to terminate abnormally (or crash). A **logic error** produces unintended or undesired output or other behaviour, although it may not immediately be recognised as such.

Logic error - Wikipedia, the free encyclopedia
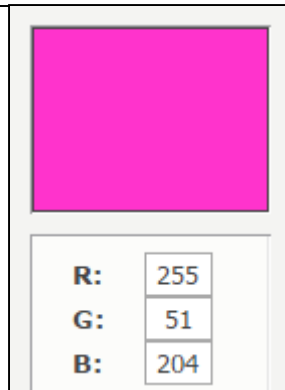en.wikipedia.org/wiki/**Logic_error**

Logic Errors

Say we
wanted a
pink
background
for our
display
window.

R: 255
G: 51
B: 204

Logic Errors

Say we wanted a pink background for our display window.

R:	255
G:	51
B:	204

```
1 size(400,300);
2 background(255, 551, 204);
3
4 rect(20,30,50,30);
5 rect(40,5,20,20);
6 line(5,30,20,90);
7 ellipse(85,50,20,60);
8 ellipse(50,80,15,15);
9
```
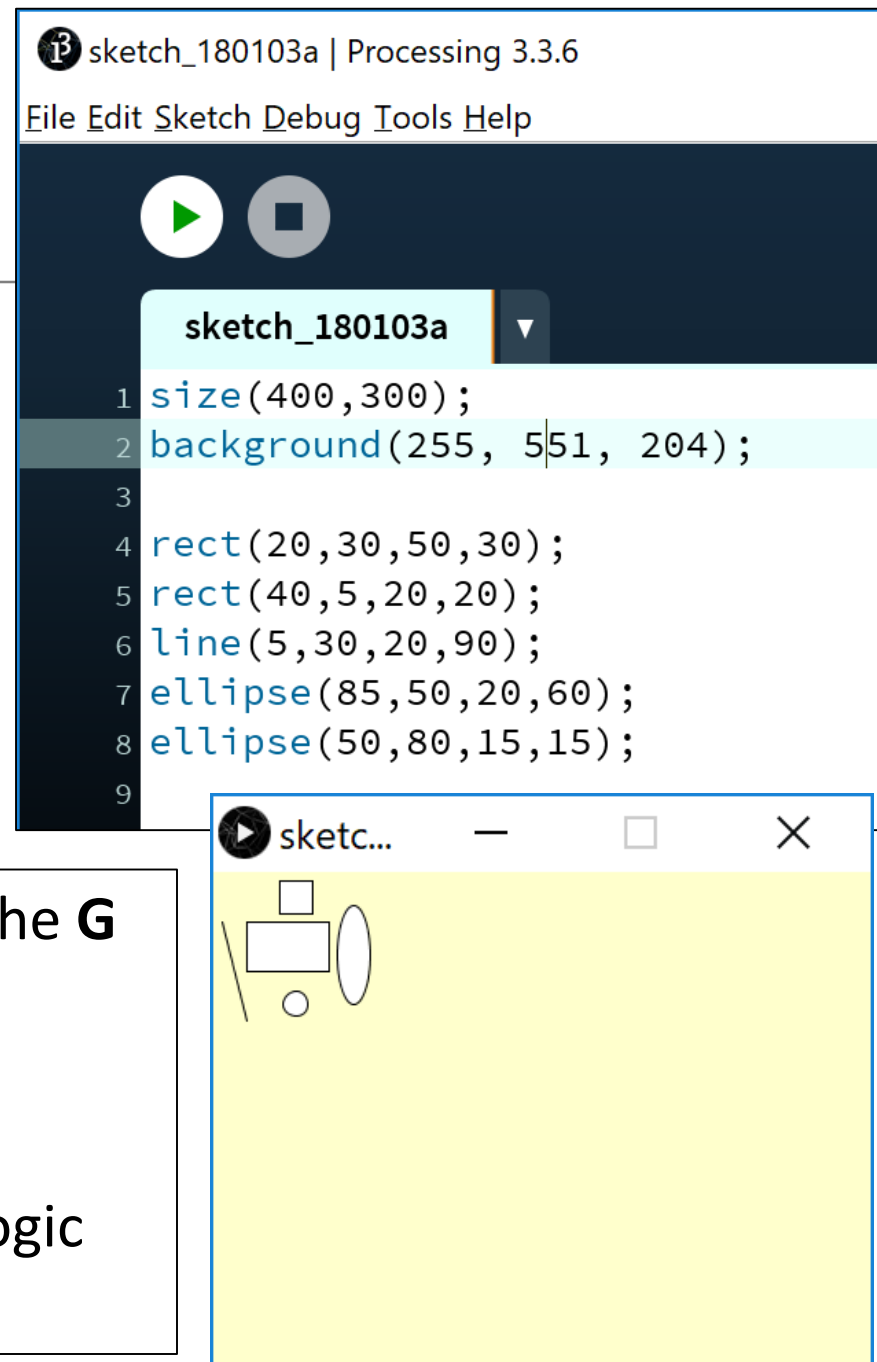
sketc...

- However, we incorrectly enter the **G** colour as 551 instead of 51.
- We now have a yellowish background.
- This is an example of a simple logic error.

Questions?