WELCOME TO THE REAL WORLD

I HAVE NO IDEA
WHAT I'M DOING

THE MOMENT WHEN YOUR CODE WORKS

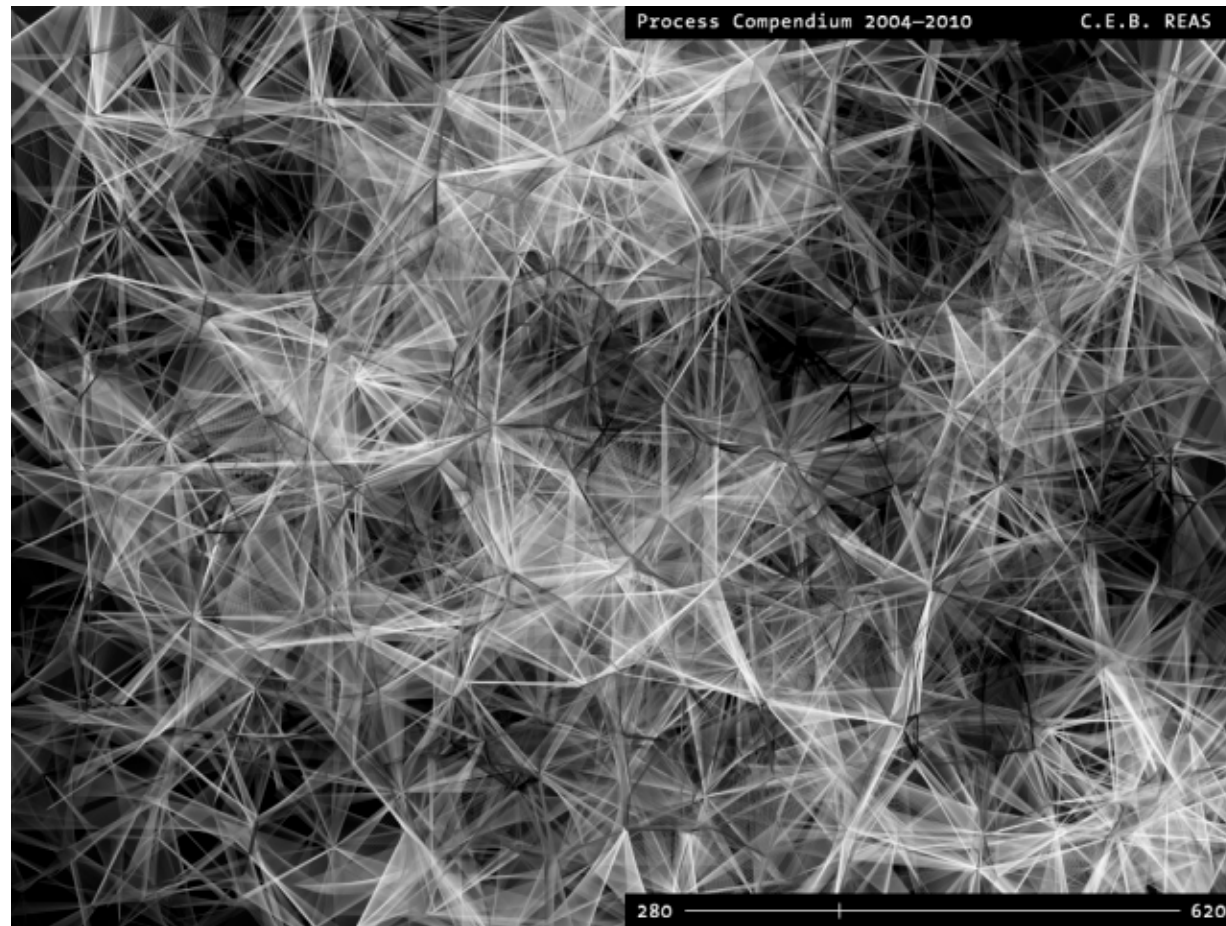FUCK YEAH

PROCESSING

Processing an open source programming language built for
the electronic arts, new media art, and visual design communi-
ties with the purpose of teaching the fundamentals of computer
programming in a visual context
Created in 2001 by Casey Reas and Benjamin Fry
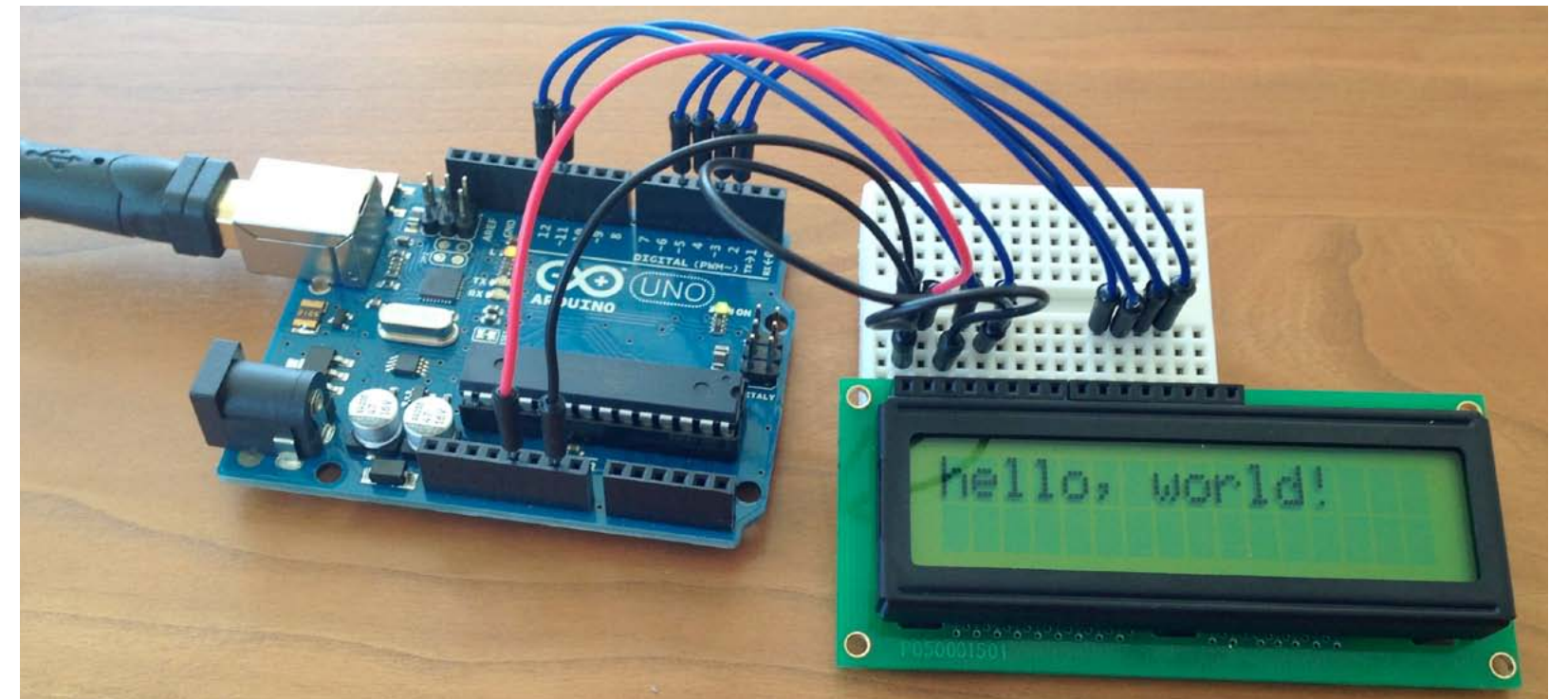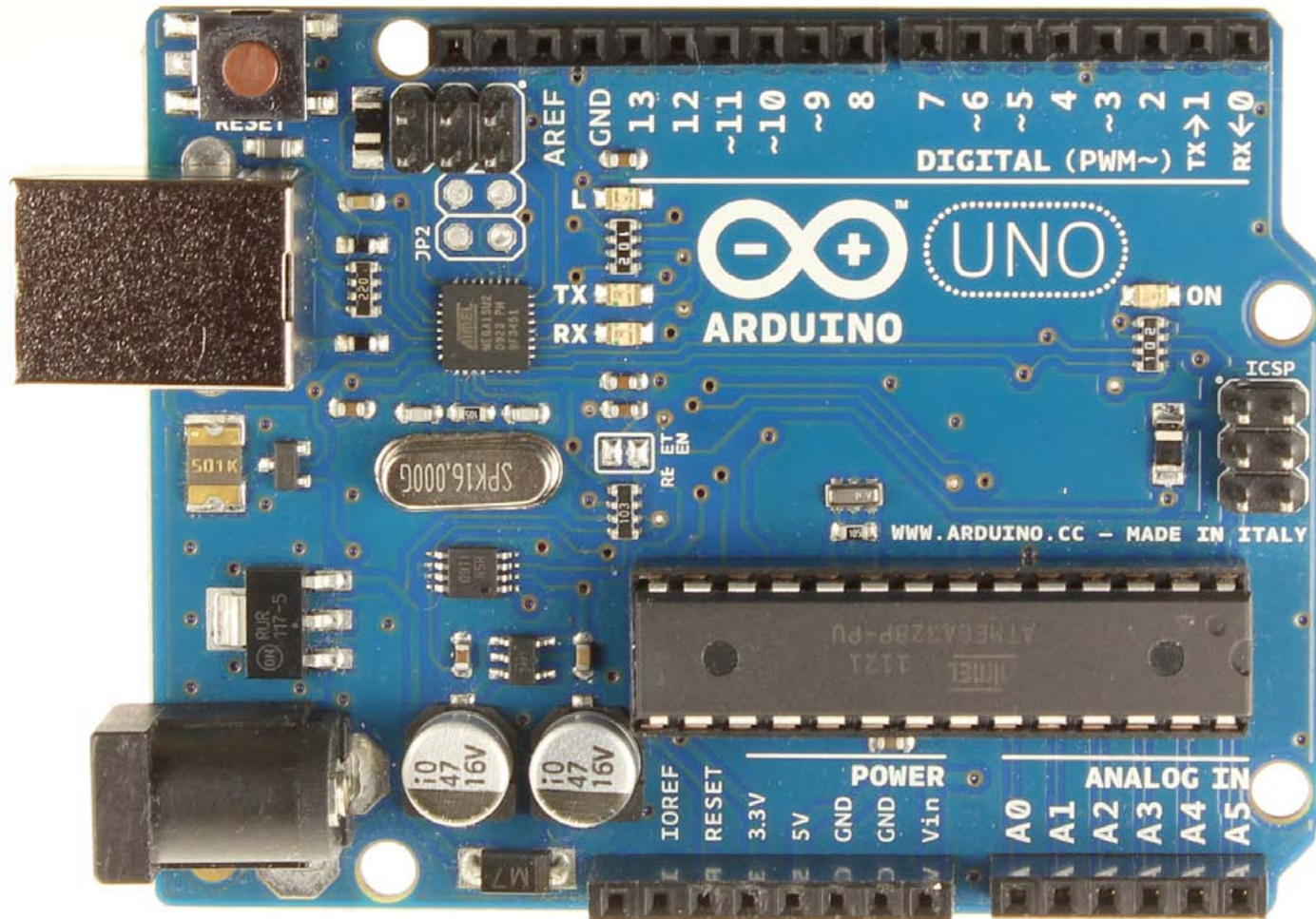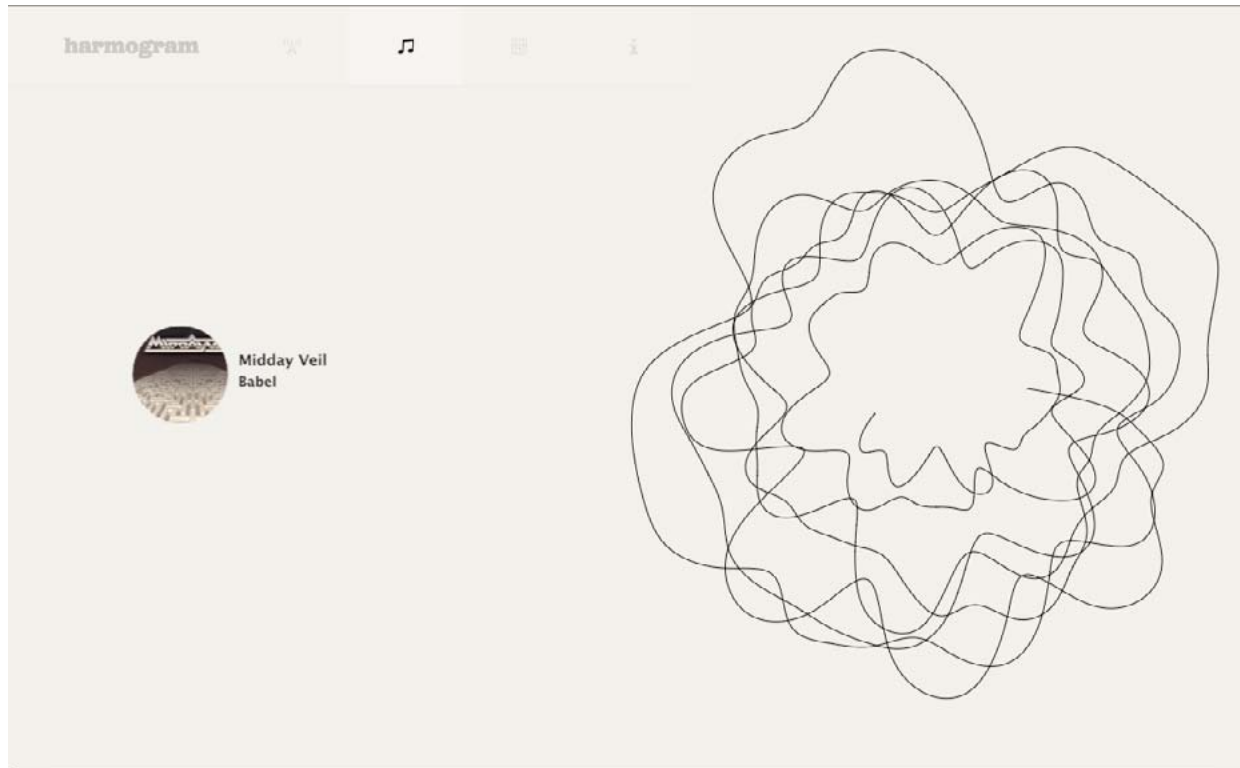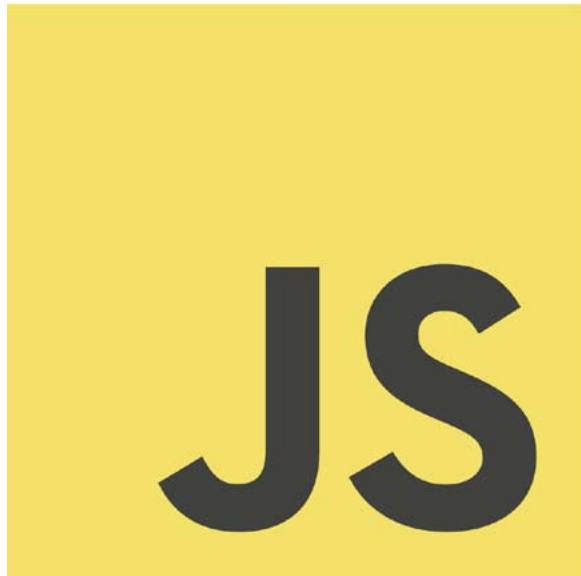Digital world

Casey Reas

Ben Fry

ARDUINO

Open source prototyping platform to built interactive
electronic objects.
Physical world.

JAVASCRIPT/JQUERY

Javascript is an Open source web dynamic programming language.
It use everywhere on the web for interactivity. Jquery is a
library for javascript, designed to simplify it. We can use
it, to make interactive, creative and generative works.
Digital world

PaperJs
http://www.harmogram.com/

Lev Manovitch
http://selfiecity.net/
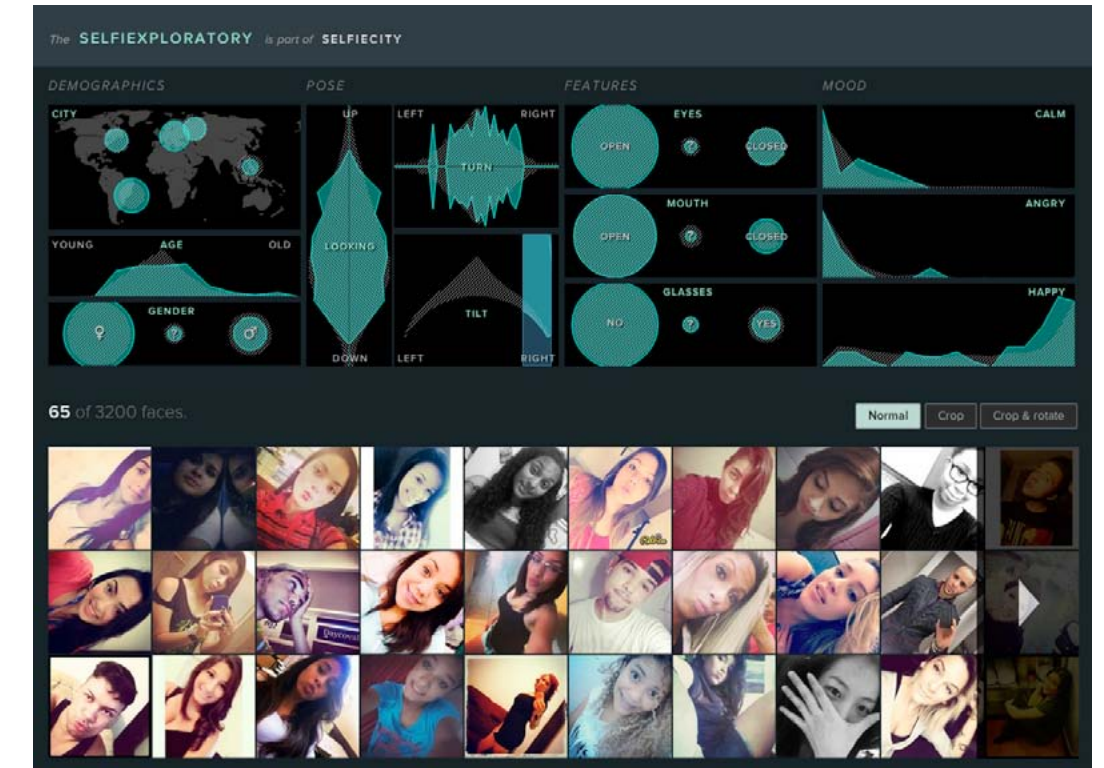
OPENFRAMEWORKS

openFrameworks is an open source toolkit designed for «creative coding». OpenFrameworks is written in C++.
Digital world.

PROGRAM

A program, is a sequence of instructions,
written to perform a specified task
on a computer.

PANCAKE RECIPE

INGREDIENTS:

2 2/3 cups sifted flour
6 tsp baking powder
1 cup of sugar
1 tsp. salt
4 eggs, beaten
2 cups of milk
4 tbs. cooking oil

DIRECTIONS

In a large bowl, whisk dry ingredients together.
In a separate smaller bowl, mix together to eggs, milk and
oil.
Add the wet ingredients to the dry ingredients and stir just
until moistened.
Don't over mix, the batter will be lumpy.
Bake on your griddle or stove top until golden brown on both
sides.

It is like a recipe. It contains a list of ingre-
dients (called variables) and a list of directions
(called statements) that tell the computer what
to do with the variables.

PROGRAM

Example of a program

- Create a blank space of 300px x 300px
- Draw a circle of 100px of diameter
- Put the circle 20px from the top and 20px from the left
- Color the circle in red
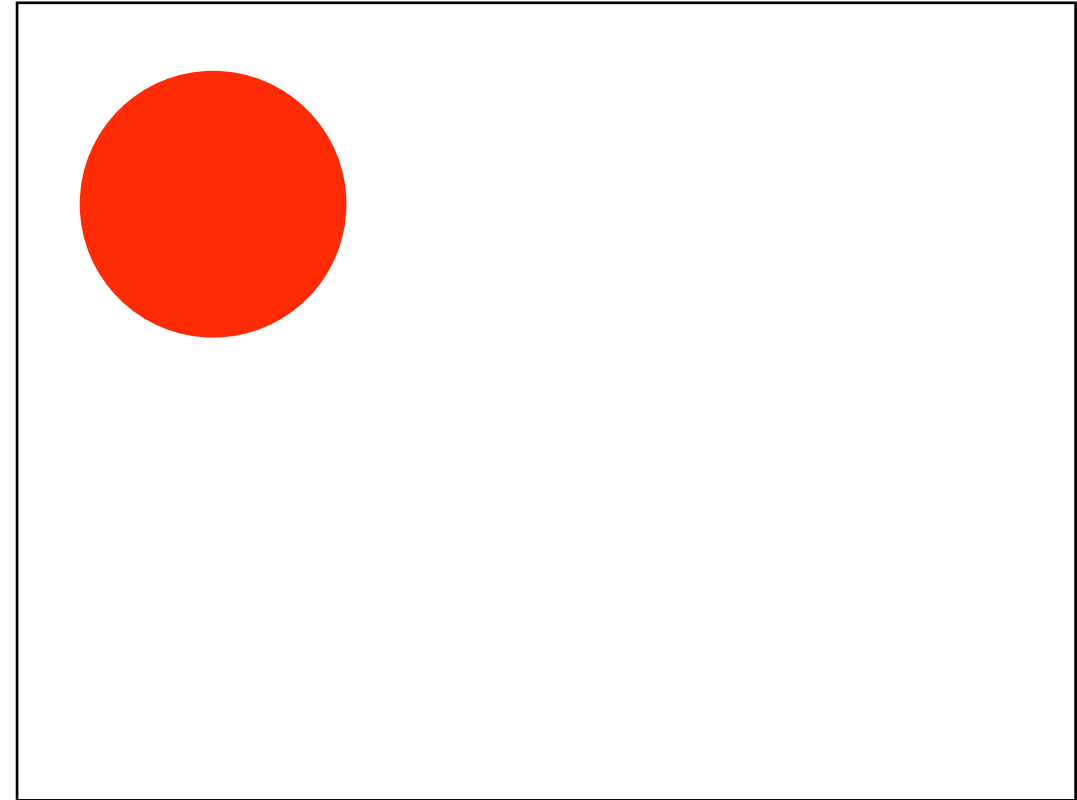
VARIABLES

Variables are sort of symbols which associate a name (an id) to a value. This value can be any type of data (numeric, text, image, boolean). The name you give to your variable is unique. In dynamic languages, the value of the variable can change during the execution of the program.

```
width = 300px
height = 300px
diameter = 100px

- Create a blank space of width x height
- Draw a circle of diameter of diameter
- Put the circle 20px from the top and 20px from
the left
- Color the circle in red
```
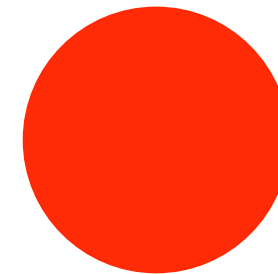
LOOPS

A loop is a sequence of statements which is specified once but which may be carried out several times in succession. The code «inside» the loop is obeyed a specified number of times, or once for each of a collection of items, or until some condition is met, or indefinitely.

```
width = 300px
height = 300px
diameter = 100px
xPosition = 20px
yPosition = 20px

- Create a blank space of width x height
- Repeat the code below 3 times
    - Draw a circle of diameter of diameter
    - Put the circle xPosition from the top and
    yPosition from the left
    - Color the circle in red
    - xPosition = xPosition + diameter + 20px
```
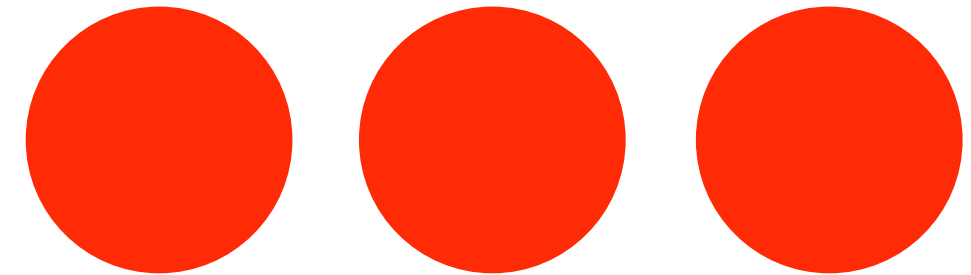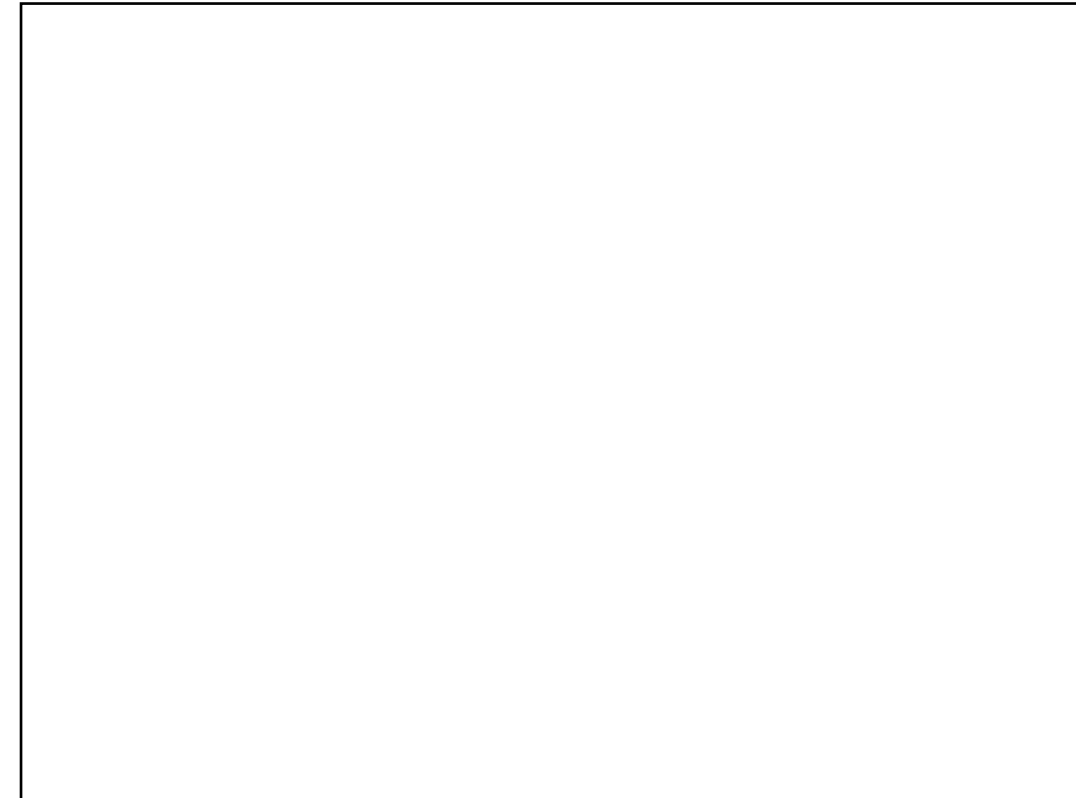
EVENTS

An event is an action detected by the program that may be handled by the program. Typical sources of events include the user (who presses a key on the keyboard, or move the mouse).
With events your program become interactive.

```
width = 300px
height = 300px
diameter = 100px
xPosition = 20px
yPosition = 20px

- Create a blank space of width x height
- If the user click in the blank space, execute
the code below (else do nothing)
   - Draw a circle of diameter of diameter
   - Put the circle xPosition from the top and
   yPosition from the left
   - Color the circle in red
```

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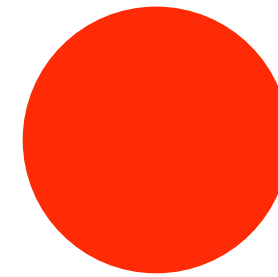
PROCESSING - INTRODUCTION

Processing is a software dedicated to creative programming. With Processing, you can create images, animations, interactive stuffs, handled text, vector, and sound. Processing can do a lot of things thanks to its extensions.

It has been created by two artists Casey Reas and Ben Fry for artists. It works on the Java language, allowing it to run on three platforms: Windows, MacOS X and Linux.
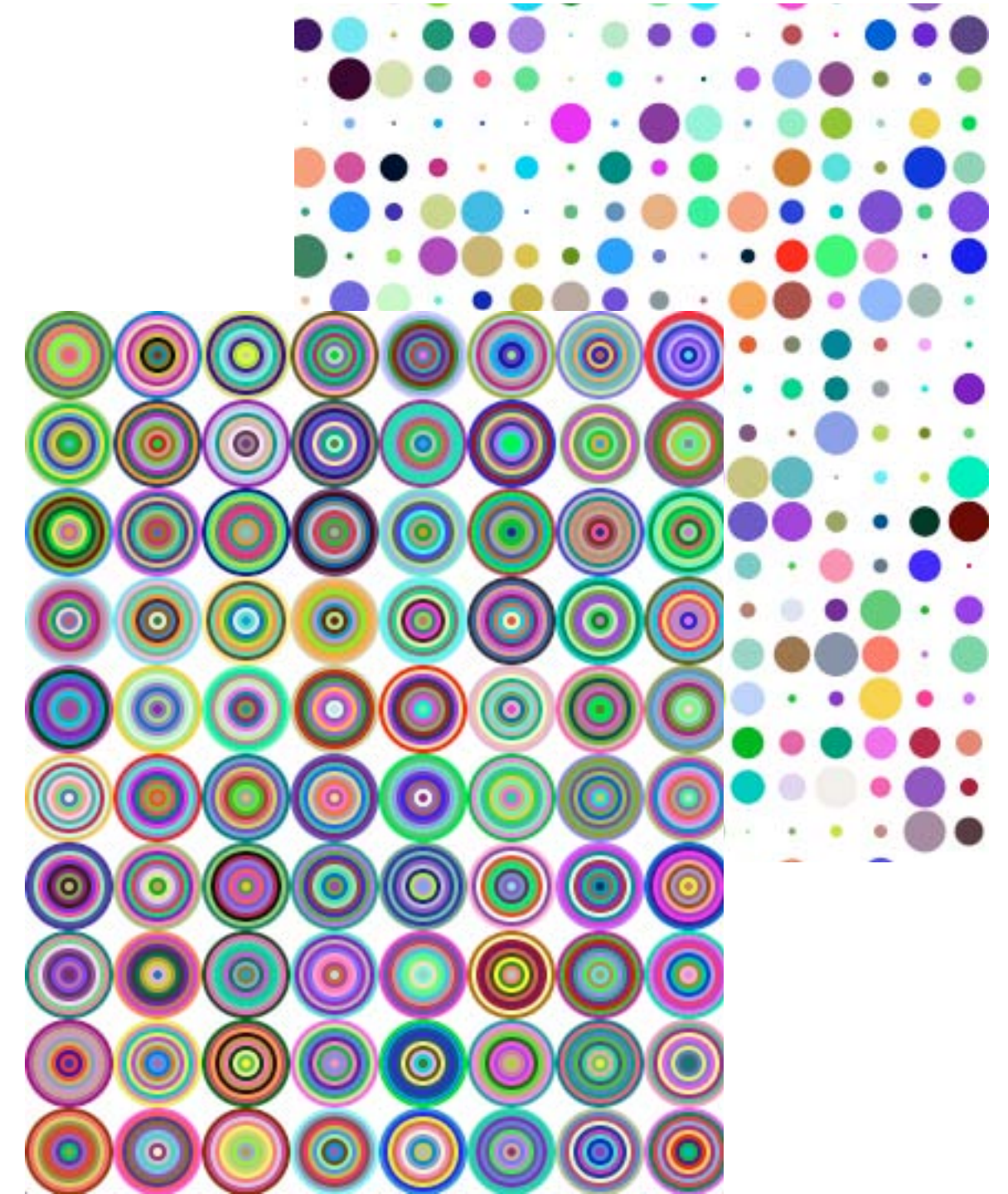
Official website: https://processing.org/
Some sketches and their source code:
http://www.openprocessing.org/

First step: download Processing:
https://processing.org/download/?processing

Now you can launch the software and we can begin to code.

READINGS / LINKS

Tools for conviviality, Ivan Illich

https://processing.org/
http://www.openprocessing.org/
Ben Fry (http://benfry.com/projects/)
Casey Reas (http://reas.com/)
Ryoji Ikeda (http://www.ryojiikeda.com/)
Daniel Shiffman (http://natureofcode.com/)
Lev Manovitch (http://manovich.net/index.php/exhibitions)