Lab 1

Goals

The goals for this lab are:

1. Practicing using P5.js (note I may refer to "P5.js" and "Processing" interchangeably)

2. Practice creating shapes using P5.js

3. Understand draw order and command ordering

4. Understand the Processing/P5.js 2D coordinate systems

5. Learn about expressionism

6. Make a picture of a creature in an expressionist style

Modality

This is an individual lab. Please get help and feedback from your peers.

Overview

Expressionism: "A term used to denote the use of distortion and exaggeration for emotional effect, which first surfaced in the art literature of the early twentieth century. When applied in a stylistic sense, with reference in particular to the use of intense colour, agitated brushstrokes, and disjointed space. Rather than a single style, it was a climate that affected not only the fine arts but also dance, cinema, literature and the theatre." [1]

Expressionist art typically includes exaggeration to express the artist's impression and sentiment about the world. Intense colors and contrasting shapes allows the artist to include bold emotional tones in response to their subject.

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[1] http://www.artmovements.co.uk/expressionism.htm

We will be creating a representation of a creature (real animal or fictitious but something that has bi-lateral symmetry and a face) in an expressionist style. For example, consider 'Happy Yellow Cow' by Franz Marc.

Figure 1: Example of an expressionist animal painting "Happy Yellow Cow" by Franz Marc.

Details

Task: You must create an image using P5.js of a creature. Your 'sketch' of the creature must:

- *be in a file named lab1.js*
- be created using at least 4 different shape types (see the list below).
- have at least 5 appendages. Examples of an appendage include: ears, legs, arms, wings, teeth, antennae, etc.
- be of size 400 by 400 pixels.
- be in color.
- be expressive! Your creature must show some kind of emotion. How does your creature feel today?
- your background coloring and shapes must also be expressive (background must include at least 2 different colored components).

First: Please start by identifying what kind of animal you would like to model. *Find a reference image.* It can be an actual photograph of the animal you are interested in or an expressionist painting.

Next: Next, actually sketch your creature on paper (include coordinate labels to help you stay oriented). This is to help you in your reasoning about the coordinate system. You can also use digital graph paper, see the reference at the end of this assignment. For example see Figure 2.
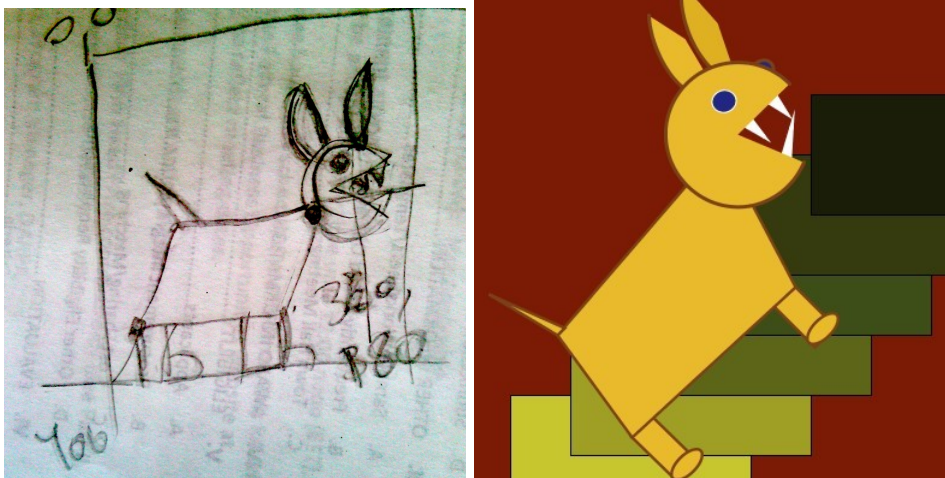
Figure 2: On the left is the initial sketch of an angry bunny. On the right is the final expressionist sketch.

Next: Write code to create the creature you have designed!

In order to do this, on your own machine, you may first need to download a text editor (that you will use to write your code with). This quarter we will all be using Sublime text http://www.sublimetext.com/.

Once you have downloaded (or found out how to run sublime on the lab machines). Create a sketch using P5.js of your creature. Do this by editing the code in lab1.js. Edit only within the draw function - that is:

```
function draw()
{
    background(128);

    fill(128, 34, 56);
    ellipse(310, 310, 50, 70);
}
```

Have fun!

Feedback: Show your sketch to other students and get feedback. Get more feedback! You may get help from other students if you don't know how to do something in Processing. They may not type for you.

Demo:

In order to receive credit for this lab, you must demo your sketch to your instructor or TA. For every lab, your score will be broken down 75% for meeting the technical requirements and 25% for aesthetics. This means that

your sketch will be graded on how it looks - this grade is predominantly decided based on effort - i.e. did you attempt to make a visually pleasing sketch that fits the specifications or did you do the bare minimum?

Rubric for Grading

Your sketch will be graded based on:

- 25 points: creature has 4 different shapes
- 25 points: creature has at least 5 appendages
- 10 points: background is colorful and has shapes
- 15 points: color and shape is used to convey an emotion (can I tell which one?)
- 25 points: Sketch is expressive, interesting and appealing

Submitting your sketch

Post your finished sketch to your web page (you will learn how to do this in lab). You must also post at least one reference art/image that you used. To do so, copy your reference image into the same folder as your lab1.js file. Edit the provided link in your lab1.html to refer to your saved image. *For full credit for any lab, I expect to see reference image(s).*

1   Resources

You can use various tools to select the colors for your sketch (consider sampling from a real painting). For example on an Apple computer you can use the 'DigitalColor Meter'. And you might find using digital graph paper helpful. One online resource for this is:
http://tommaitland.net/graphpaper/

Please explore P5.js at: https://p5js.org/

To create shapes in Processing, you have various choices. Some of them are:

1. `line(x1, y1, x2, y2)`

2. `triangle(x1, y1, x2, y2, x3, y3)`

3. `quad(x1, y1, x2, y2, x3, y3, x4, y4)`

4. `rect(x, y, width, height)`

5. `ellipse(x, y, width, height)`

6. `arc(x, y, width, height, start, stop)`

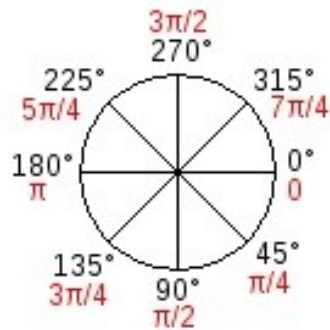**Note clockwise ordering and remember about degrees and radians!**

Figure 3: Conversion of degrees to radians - and the 'rotation' convention in Processing.

Note that when drawing a shape you can control some of its properties. Commands that are useful are:

- `smooth();`

- `stroke(r, g, b); or stroke(grey); or stroke(hexadecimal);`

- `strokeWeight(pixels);`

- `noStroke();`

- `fill(r, g, b); or fill(grey); or fill(hexadecimal)`