

Aesthetic Programming

Class 06- Code and Language

*** Weekly mini ex4 – Feedback loop discussion in class:**

https://github.com/AUAP/AP2017/blob/master/all_miniex/mini_ex4/mini_ex4.md

1) Read the article [Cybernetics and the Pioneers of Computer Art by Thomas Dreher](#)

2) Take a look at some projects that express the concept of feedback loop [here](#)

3) Explore different sensing technologies such as video, sound, mouse and keyboard

a. May be useful to include other library:

<https://github.com/processing/p5.js/wiki/Integrating-other-libraries>

b. Sound: <https://p5js.org/reference/#/p5.SoundFile>

c. Video with p5.dom library: <https://p5js.org/examples/dom-video-capture.html> and <https://p5js.org/examples/dom-video.html>

*The above a-c are just recommendation. Feel free to explore and experiment other functions and libraries.

4) Design a sketch that demonstrates the control of information through feedback and loop, expressing Dreher's notion of information aesthetics. Upload the final sketch to Github under a folder called "mini_ex4".

5) Create a readme file (README.md) and upload to the same mini_ex4 directory. The readme file should address the followings:

- The title of your work
- A Short description of your work and tell us how your work demonstrates the notion of "feedback" or "cybernetics"

6) Provide peer-feedback to 2 of your classmates on their works by creating "issues" in his/her github corresponding repository. Write with the issue title "Feedback on mini_ex(?) by (YOUR FULL NAME)"

Discussion / Sharing:

- <https://www.youtube.com/watch?v=KLApWruTGw> (what is cybernetics?)
- What's your reflection on cybernetics THROUGH your own work?
- Can we think of any cybernetics system design in everyday life?
- What is the relation between information aesthetics and cybernetics?

Max Bense and Abraham André Moles defined the "aesthetic measure" by exploring the best possible relation between the "complexity" of the visual "information" and the "orderliness" ("redundancy") that can be recognized in the process of perceiving the work.

Dreher, 2016

Peer-tutoring: Group 5 / Respondents: Group 6

Topic: RiTa library

- How to import and use RiTa library in your sketch? (see [ref1](#) and [ref2](#))
- Sample code
- Can you express your thoughts about your sample code in relation to the aesthetics of materiality in electronic literature

Spam Heart by David Jhave Johnston:

<http://iloveepoetry.com/?p=376>



CODE AND LANGUAGE

Text related syntax:

loadStrings()

loadFont()

split()

match()

....

Typography

Attributes

textAlign()

textLeading()

textSize()

textStyle()

textWidth()

Loading &

Displaying

text()

textFont()

Font

p5.Font

What is an array?

What is an array?

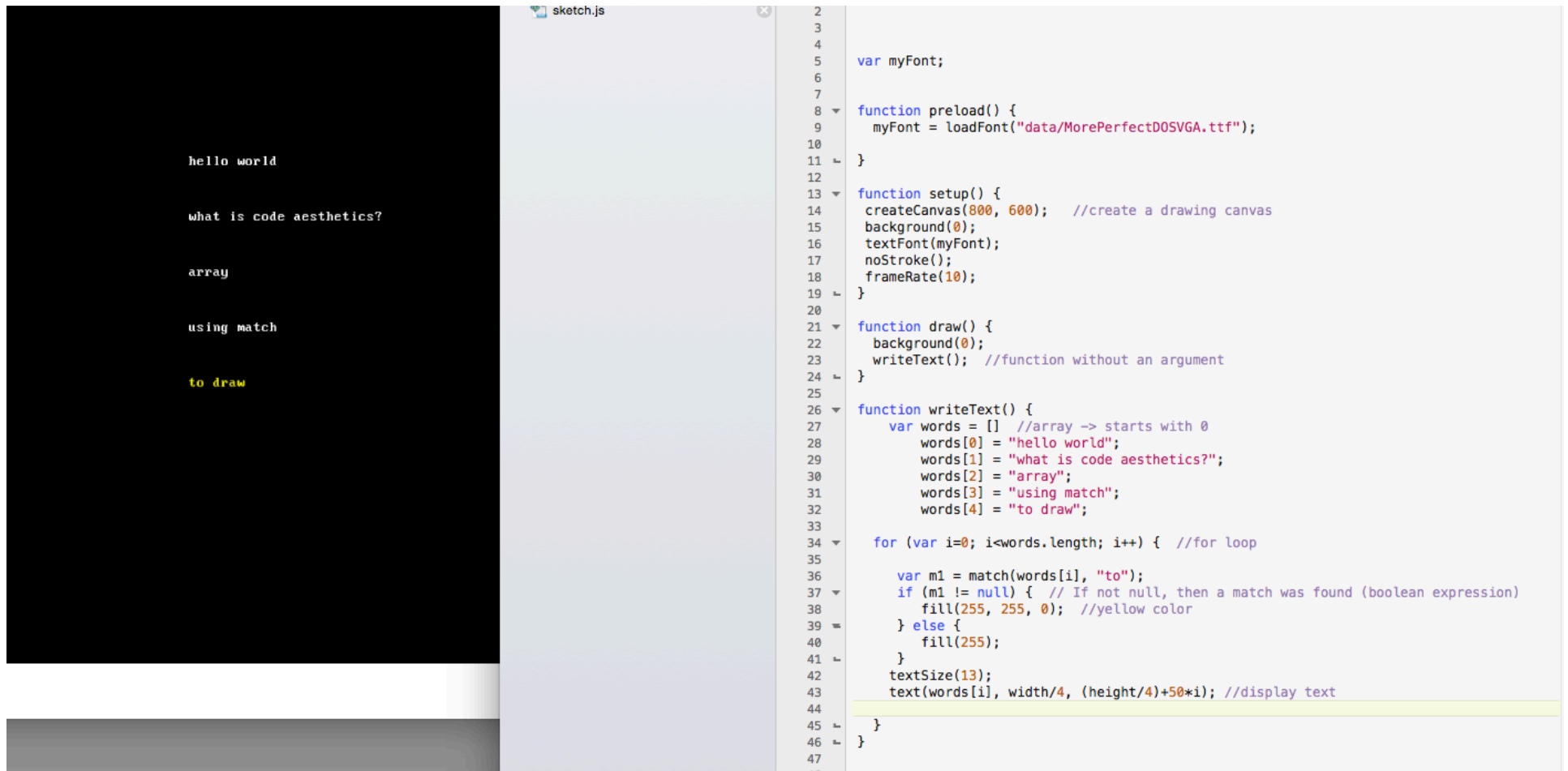
An array is a list of data. Each piece of data in an array is identified by an index number representing its position in the array.

```
var words = [] //array -> starts with 0  
words[0] = "hello world";  
words[1] = "what is code aesthetics?";  
words[2] = "array";  
words[3] = "using match";  
words[4] = "to draw";
```

Array

What is an array?

An array is a list of data. Each piece of data in an array is identified by an index number representing its position in the array.



The image shows a p5.js sketch editor with a dark canvas on the left and a code editor on the right. The canvas displays the text "hello world", "what is code aesthetics?", "array", "using match", and "to draw" in a light green font. The code editor shows the following JavaScript code:

```
2
3
4
5 var myFont;
6
7
8 function preload() {
9   myFont = loadFont("data/MorePerfectDOSVGA.ttf");
10 }
11
12
13 function setup() {
14   createCanvas(800, 600); //create a drawing canvas
15   background(0);
16   textFont(myFont);
17   noStroke();
18   frameRate(10);
19 }
20
21 function draw() {
22   background(0);
23   writeText(); //function without an argument
24 }
25
26 function writeText() {
27   var words = [] //array -> starts with 0
28   words[0] = "hello world";
29   words[1] = "what is code aesthetics?";
30   words[2] = "array";
31   words[3] = "using match";
32   words[4] = "to draw";
33
34   for (var i=0; i<words.length; i++) { //for loop
35
36     var m1 = match(words[i], "to");
37     if (m1 != null) { // If not null, then a match was found (boolean expression)
38       fill(255, 255, 0); //yellow color
39     } else {
40       fill(255);
41     }
42     textSize(13);
43     text(words[i], width/4, (height/4)+50*i); //display text
44
45   }
46 }
47
48
```

Task:

- Create an array list of 5 different text
- Using a “for loop” to display the text on a screen

Array

What is an array?

An array is a list of data. Each piece of data in an array is identified by an index number representing its position in the array.

hello world

what is code aesthetics?

array

using match

to draw

```
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37     if (m1 != null) { // If not null, then a match was found (boolean expression)
38       fill(255, 255, 0); //yellow color
39     } else {
40       fill(255);
41     }
42     textSize(13);
43     text(words[i], width/4, (height/4)+50*i); //display text
44     var size = words[i].length; //include space character counting
45     drawRect(size, i); //invoke a function with an argument
46   }
47 }
48
49 function drawRect(getSize, geti) {
50   rect(width/4, (height/4)+50*geti, getSize*5, 10); //rect visualization underneath the
51 }
52 }
```

Importing external data

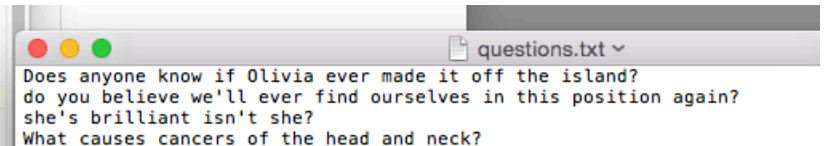
Work in group to discuss code together:

<https://cdn.rawgit.com/AUAP/AP2017/ab7c34f8/class06/sketch06/index.html>

<https://github.com/AUAP/AP2017/blob/master/class06/sketch06/sketch.js>

```
function preload() {  
  longstring = loadStrings("data/questions.txt");  
}
```

```
58 function loadlongstring() {  
59  
60   for (var i = 0; i < longstring.length; i++) {  
61     getlongstring = getlongstring + longstring[i];  
62   }  
63 }  
64  
65 function displaychar() {  
66   var lengthcount = getlongstring.length;  
67   var one = getlongstring.charAt(getindex);  
68   getindex++;  
69   if (getindex == lengthcount) { //restart the text when it reaches the max //i didn't  
70     getindex = 0;  
71   }  
72   fill(255);  
73   textSize(16);  
74   text(">>> " + one, width/2, height/1.2); //you can see text can be added. a text add  
75 }  
76
```



questions.txt

Does anyone know if Olivia ever made it off the island?
do you believe we'll ever find ourselves in this position again?
she's brilliant isn't she?
What causes cancers of the head and neck?

<https://p5js.org/reference/#/p5/loadStrings>

Mini exercise5 walkthrough: electronic literature