Week 8:

This week we have learned about Arrays and objects. Let’s start off with talking about the Arrays. Arrays are essentially list of variables. An array can hold multiple types of variables along with multiple variables In general. For example;

var randomVars = [“Neo”, 15, “Nicholas”, true];

This list I have made contains my name, age, friend’s name, along with a variable asking if he is my friend or not. You can’t really tell what all of these are supposed to be just by reading this though. So… I might want to print it out on the screen?  
  
text(“My name is ” + randomVars[0]);

text(“I am ” + randomVars[1] + “ years old!”);

text(“I know someone called ” randomVars[2]);

text(“Is he my friend? ” + randomVars[3]);

Just imagine I provided the x and y , it should display this…  
  
My name is Neo  
I am 15 years old!  
I know someone called Nicholas  
Is he my friend? true

Hmmmmm… You might be wondering what the square braces with numbers in are for? Simple, they are how you choose what variable you want to display. The square brackets are essentially saying, “Hmmm, could you search for the …th element in this list please?”. An array has a weird quirk though, the 1st element is actually element 0, so what you can do is count whatever element you want to display and just remove 1 and you’ll display that variable. Arrays can be very useful in some specific cases. For example, you could use one to have count the amount of words in a sentence.  
  
Arrays do have another cool feature to them. You can get the amount of elements in an Array.   
  
println(randomVars.length);

This above should be printing the number 4 since there are 4 variables in the array!  
  
Next up! Objects!

Objects are similar to Arrays. An object can store multiple variables of multiple types. The only difference is that each variable knows every variable inside the object. Let’s give an example.  
  
var aboutMe = {

name: “Neo”,

age: 15,  
 hobbies: [“programming”, “playing games”, “play lego’s”]

};

This above, created an object with my name, age and hobbies. This is great and all having an object but how would I get those variables. It is quite simple, let’s print out my age!  
  
text(aboutMe.age, 10, 10);

There we go, we can now see “15” displayed on the screen! Sweet! You can do the same with the array.

text(aboutMe.hobbies[0], 10, 10);

Now it shows “programming” on the screen. Another thing you can do with objects is nest them in one another, for example.  
  
var aboutMe = {

name: “Neo”,

age: 15,  
 hobbies: [“programming”, “playing games”, “play lego’s”],

birthplace: {

city: “Bordeaux”,

country: “France”

}

};

To display the city, you can do the same as before.  
  
text(aboutMe.birthplace.city, 10, 10);

This will now print out “Bordeaux” on the screen :D  
  
So, I showed how to make them but I should also explain how, not simply show. First of all simply create a variable but instead of giving it a value, give it curly braces “{}”. In those curly braces, precise a name for your actual variables, in other words, the key used to identify which value you want to display. Give it the colon along with a value of your choice which can be any type of variable(including a string). You need to separate each of the “sub variables” with a comma, the last variable does not have a comma though. There you go, you made an object! Now you can use it for whatever you want! :D  
  
Another thing you can do is have an array of objects, here is an example.  
  
var myArray = [

{name: “Neo”, profession: “student”},

{name: “Nicholas”, profession: “student”},

{name: “Mr. Chartrand”, profession: “teacher”}

];

Here, lets print out every name in this Array!

for(var I = 0; I < myArray.length; I++){

text(“Name: ” myArray[i].name, 10, I \* 10);

}

Name: Neo

Name: Nicholas

Name: Mr. Chartrand

There we go, we can now see every name in that array! Of course, we can change what we want to see but ill leave that up to you.

In recap, today I have learned what arrays are and how to use them. I have also learned about objects, how to make them and how to use them. The last thing we have learned this week is storing Objects in arrays.