

GUIDED PRACTICE

Class: Art 101 Creative Code

Date assigned: Thursday September 19th, 2019

Date due: Monday (midnight) September 23rd, 2019

Time estimate to complete this assignment: 20min

Overview/Introduction

Welcome to the world of JavaScript objects! This is the essence of Object Oriented Programming (OOP) in JavaScript.

Actually... you have already created objects with classes in your Node 1 Avatars! Those class definitions resulted in “instances” of class objects!

In this before-class exercise, you will become familiarized with object syntax and create an object for YOUR name on the class roster, to be used in the randomizer assignment.

Learning Objectives

Basic objectives

(You will meet these objectives through this preparatory assignment)

Compare two online JavaScript references

Observe the syntax for creating JavaScript objects.

Build a JavaScript object using object literal notation.

Advanced objectives

(We will do this in class)

Identify the difference between an object and an array.

Compile the class roster into a data set, with individual students represented as **objects in an array**

Navigate the data tree (your array of objects) and print your name to the console

Splice the student object from the array once the student name is printed

Design the randomizer you will create as a group assignment

Preparatory Activities and Resources:

Activities

1. Look over objects definitions at websites provided
2. Observe the difference in how the two websites present information about objects. Which one makes more sense to you?
3. Create an object for YOUR information on the class roster. It should have key:value pairs for firstName, lastName, favoriteColor, animal (also fave), book, movie, game, superhero, and randomFact.

Resources:

1. W3 Schools: https://www.w3schools.com/js/js_objects.asp
2. JavaScript.info: <https://javascript.info/object>

Exercces: Please complete by 11:59pm on Monday Sept 23rd

- Submit to the text field of the Canvas assignment

Questions?

- Post to our slack channel for help from the professor and your classmates

ADVANCED PRACTICE

Class: Art 101 Creative Code

Date assigned: Tuesday September 24th

Date due: Thursday September 26th (beginning of class)

Time estimate to complete this assignment: 30min

Learning Objectives

Advanced objectives

- Compose detailed google searches to find relevant references/tutorials
- Utilize google search tools to finding up-to-date tutorials (posted within the last year)
- Judge resources/tutorials for relevance

Activities & deliverables

- Find resources/tutorials needed to complete your group's randomizer, due at the end of the next class
- Compose detailed google searches, using the search tools > time filter to find up-to-date resources (produced within last 3 years)
- Rank results for relevance / quality of tutorial

Resources:

- Google search!

Questions?

- Post to our slack channel for help from the professor and your classmates

Flipped IN-CLASS Lesson Plan - Randomizer pt 1

Topic or concept:

Making a Randomizer pt 1: Objects & arrays

Basic objectives for preparatory work:

At the conclusion of this class, students will be able to:

Recall the syntax for objects and arrays

Explain the difference in data structure of objects and arrays

Compile the class roster into a data set, with individual students represented as objects in an array

Navigate the data tree and print their student name to the console

Splice the student object from the array once the student name is printed

Design the randomizer they will create as a group assignment

Advanced objectives for classwork & after class work:

Use a JavaScript `timeOut()` function to print a single result from their class roster to the console after a delay

Compose detailed google searches for finding resources / tutorials

Evaluate search results for tutorial quality and relevance

Compose consecutive animations for their randomizer using nested `timeOut()` functions

	Time planned	Activity and rationale	Resources needed
Beginning of class period	3:00pm - 3:15pm	<p>Students form pairs for their Randomizer project.</p> <p>In pairs, students recall syntax of objects by memory</p>	<p>Downloaded submissions of their Before-class assignment and send to students via Canvas announcement</p>

		Professor shares a text file with all the submitted student info - each student should have an object storing data about their name, favorite color, book, etc	
Middle of period	3:15pm - 3:30pm	1) Students compile all the data from their classmates in a single array of objects, using the references at MDN and javascript.info as guides.	<p>Create a digital handout detailing the class activities with links provided.</p> <p>Links to provide students:</p> <p>https://javascript.info/array</p> <p>https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Array</p>
Middle of period	3:30pm - 3:45pm	2) Pull random student's data from the class data and display their name on the screen.	<p>Links to provide students:</p> <p>https://www.w3schools.com/js/js_objects.asp</p> <p>https://javascript.info/object</p> <p>https://p5js.org/reference/#/p5/text</p>
Middle of period	3:45pm - 4:00pm	3) After they are called and printed to screen, delete that student object from array.	<p>Links to provide students:</p> <p>Additional detail about pop and push methods:</p> <p>https://www.w3schools.com/js/js_array_methods.asp</p>

middle of period	4:00pm - 4:20pm	<p>4) Make a plan for your group's randomizer.</p> <ul style="list-style-type: none"> a) What data will it show? b) What will it look like? c) Will there be animation? 	
middle of period	4:20pm - 4:35pm	Break	
middle of period	4:35pm - 5:50pm	<p>Lab:</p> <p>pt 1: Work on their randomizers. Individually, follow video tutorials for adding timers and animation.</p> <p>pt 2: After having each completed tutorials on their own, they will review each other's code and set up a repository in GitHub to host their randomizer project.</p> <ul style="list-style-type: none"> - Select whose code you will want to start with - You can either work on the same file (with one person typing) or edit DIFFERENT parts of the code at the same time, then submit a pull request to gitHub to merge your work. 	<p>Links to video tutorials (TBA)</p> <p>Link to reference for nested JavaScript timeOuts(): https://javascript.info/settimeout-setinterval</p> <p>Resources for collaborating with GitHub desktop: https://help.github.com/en/desktop/contributing-to-projects</p>
End of period		<p>Congratulate them on their hard work! Assign them</p> <p>After Class activity: finding resources/tutorials needed to complete their randomizer, due at the end of the next class)</p>	

Flipped BEFORE CLASS Work Plan Template

Basic learning objectives	Activity and rationale	Instructions to students
<p>Compare two online JavaScript references</p> <p>Observe the syntax for creating JavaScript objects.</p> <p>Build a JavaScript object using object literal notation.</p>	<p>Read two online JavaScript references for objects.</p> <ul style="list-style-type: none"> - By comparing the two different sources, the students will learn to navigate finding information online, and become familiarized with two useful resource websites. <p>Build an object with their own data for a class roster.</p> <ul style="list-style-type: none"> - This will provide them with the opportunity to share some info about themselves for a fun group activity. 	<p>Look over objects definitions at W3 Schools & JavaScript info sites: https://www.w3schools.com/js/js_objeets.asp https://javascript.info/object</p> <p>Observe the difference in how the two websites present information about objects. Which one makes more sense to you?</p> <p>Create an object for YOU. It should have key: value pairs for firstName, lastName, favoriteColor, animal (also fave), book, movie, game, superhero, and randomFact</p>

Flipped AFTER CLASS Work Plan Template

Advanced learning objective	Activity and rationale	Instructions to students
<p>Compose detailed google searches to find relevant references/tutorials</p>	<p>Students will search the internet for tutorials/references needed to execute their vision for their randomizer.</p>	<p>Find resources/tutorials needed to complete your group's randomizer, due at the end of the next class</p> <ul style="list-style-type: none"> ● Compose detailed google searches, using the search tools > time filter to

<p>Utilize google search tools to finding up-to-date tutorials (posted within the last year)</p> <p>Judge resources/tutorials for relevance</p>	<p>This will teach them to write detailed searches and practice distinguishing which tutorials are relevant and useful, v. outdated/poorly made.</p>	<p>find up-to-date resources (produced within last 3 years)</p> <ul style="list-style-type: none">● Rank results for relevance / quality of tutorial
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