

Intro to Web Design and Development, Class 14

JavaScript

Schedule

Part 1

1. Intro to JavaScript
 - a. Invented in 1995 by Brendan Eich
 - b. An implementation of ECMAScript
 - c. Very powerful - but also very messy - focus on the “good parts”
2. JavaScript Syntax
 - a. Variables are containers for values
 - i. `var x = 5;`
 - ii. `var y = “Jonathan”;`
 - iii. `var q = x + r;`
 - b. There are many types
 - i. undefined
 - ii. Null
 - iii. String
 - iv. Number
 - v. Boolean
 - vi. Array
 - vii. Object
 - viii. Function
 - c. Conditions
 - i.

```
if(something) {  
    //do something  
}  
else {  
    // do something else  
}
```
 - d. Loops
 - i. Repetitive conditions where one variable in the loop changes
 - e. Functions

```
function nameOfMyFunction(arguments) {  
    // do something  
}
```
3. Let's write some code!
 1. Create the following methods:

- a. Adds five to argument given
function addFive(n)
 - b. Multiplies argument given by 15
function mult15(n)
 - c. Performs a mathematical operation using four arguments
function mathOp(a,b,x,y)
 - d. Prints the argument given four times
function printArg(myAwesomeString)
2. Use comments (denoted with a `//`) in your file to specify the different methods and what they should do.
 - a. Comments are denoted using the `//` sign.
4. Challenges
 - a. Find the maximum in a list of numbers
 - b. Pull all of the vowels out of a string
 - c. Any time a letter is repeated in a string, pull it out. Scotty becomes Scoy.

Part 2

1. Objects
 - a. Can be a representation of something in the real world
 - b. Basically just a collection of stuff (has properties and methods)
 - c. Everything is an object
2. Object Syntax
 - a. `person={firstname:"John",lastname:"Doe",age:50,eyecolor:"blue"};`
3. Try It Now
 - a. Create your own object with two attributes and two methods.

Homework

Goals

1. Become comfortable writing basic functions in JavaScript

Assignment

1. Start the Codecademy “Introduction to JavaScript” track:
<http://www.codecademy.com/tracks/javascript> - complete section 1: “Getting started with programming” and “Choose Your Own Adventure”

Recommended Activity

Complete as much of the “Introduction to JavaScript” track on Codecademy as you can.

<http://www.codecademy.com/tracks/javascript>

In-Class Assignment (Borrowed from Wellesley's CS110)

Many of us played with *Mad Libs* as kids. The idea is to ask someone — a friend, a victim — for some words, such as (1) a name, (2) a vehicle, (3) a restaurant, etc. Then, when you insert the words into a story, it yields a crazy result, because the choices were made without any idea of what the story would be:

Michael Phelps was cruising about town on his new **tricycle**. He stopped at **McDonalds** and ordered **18lemon** milkshakes. "Yummmmy", said **Michael Phelps**, after he finished the last one.

Create a web page that serves as an interactive Mad Lib program. More specifically, your program should do the following:

1. Use **prompt()** statements to ask the user to enter four missing words: a noun for a name, a noun for an object, an adjective, and an adverb. You should only prompt **once** for each of these words.
2. Store the user's replies in JavaScript variables.
3. Display the resulting story on the web page (not in a pop-up window!).

The story will be dynamically produced, and it will incorporate the user's input. So, every time the page is reloaded, the user will have the chance to enter new words, and therefore the resulting story will be different, depending on those words.

The requirements for the story are:

1. Define a CSS class to be used to style the user-supplied words, so that you can see which words were chosen when the story is displayed. Define your class in a document-level stylesheet. You may use whatever color, font, etc. you wish - just make sure the inserted words are distinguishable from the rest of the story.
2. It must be at least 4, but not more than 6, sentences long (no longer!).
3. At least one of the missing words must appear at least 3 times in the story. For example, the person's name was used twice in the sample story above. (Note that duplicated words are entered only once by the user!)
4. A title for the story should appear at the top of the produced page. This story title should include your own name (if you are Wendy, something like "Wendy's Crazy Mad Lib Story!"). Use your story title as the title for your HTML page as well.

The content of the story can be anything that you like — be creative!

(For more exercises like these, check out

<http://cs.wellesley.edu/~cs110/assignments/assignment4/>)