JAVASCRIPT FOUNDATIONS

Lesson 2 Assignment

More JavaScript Basics

CORE CONCEPTS

1. Functions allow you to execute a block of code by simply calling the function's name.
2. Functions can receive data through parameters passed inside the function's parentheses. It can use this data within the function. Parameters and any variables declared inside the body of a function are local variables. They only exist inside the function. The scope of a variable is the parts of the code where it can be accessed and used.
3. Functions can return data to the line of code that called that function. Return data with the key word, "return".
4. Arrays let you store multiple values in a single variable. Array elements are accessed by indexes (integers).
5. The "for" loop lets you execute a block of code multiple times. It's especially useful for accessing every element in an array and performing some function with it.
6. Objects are composite data types. They are a single variable, but can have multiple named properties attached to them.
7. Objects can also have functions attached to them. Functions attached to objects are often called "methods". Methods can access the object that they are a part of with the key word "this" inside the method.
8. Events refer to things that happen within a program, such as mouse clicks, keyboard presses, data load, etc.
9. You listen for events by calling addEventListener on an element object and providing a function that will handle that event. An event object containing additional information about the event will be passed to the handler function.
10. Breakpoints stop execution of JavaScript, allowing you to inspect the state of the program right at that point, and step through it line by line.

ASSIGNMENT

1. Quiz
   For the following assignments, if anything goes wrong or does not work like you expect it, use the debugging techniques shown in this lesson to narrow down the problem.

2. Fill in the body of the following function:
   ```
   function containsString(mainString, searchString) {
   }
   ```

   This function should return a value of true if searchString is part of mainString, and false if it is not. Test it with these lines of code:
   ```
   console.log(containsString("independent", "depend")); // this line should log true
   ```

```
console.log(containsString("independent", "indy")); // this line should log
false
```

Hint: use the indexOf method.

3. Create an array containing the names of the 12 months of the year, "January" through "December".
   Create a function called getMonthName that takes a single number as a parameter and returns the
   name of that month. For example:
   ```
   console.log(getMonth(3)); // this should log "March"
   ```

   Remember that arrays are indexed starting with 0, but here, month 1 should be January. So you'll
   have to account for that somehow.

4. Create a JavaScript object named "user" that has properties firstName, lastName, email, and populate
   those with your own name and email.

   Write a function that takes this user object as a parameter and logs that user's info to the console.
   Something like:
   ```
   logUserInfo(user); // should log something like "John Smith:jsmith@company.
   com"
   ```

5. Write a program that listens for a keyup event. In the handler, check which key was released. If it was
   "Y", log the word "Yes". If it was "N" log the word "No". If it was any other key, log, "I don't understand."

RESOURCES

- The additional resources are mostly documentation. We've only touched on key features here. At
  least browse through the documentation for functions, arrays, objects, mouse and keyboard events
  at the following links. Check the various properties and methods, and any examples given. As you're
  reading, think of examples of how some of those properties and methods might be useful in a real
  world application. Learning to read and understand documentation is a key skill in becoming a better
  programmer.

  https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Function
  https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Array
  https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Object
  https://developer.mozilla.org/en-US/docs/Web/API/MouseEvent
  https://developer.mozilla.org/en-US/docs/Web/API/KeyboardEvent

- For a full reference on the Developer Tools in Chrome, go to this website: https://developers.google.com/chrome-developer-tools/

  There are even some great videos in there that will have you squashing bugs like a pro.