Savvy Coders Week 3 Quiz – April 2019

Congrats on making it through week 3! JavaScript will be tough if you haven’t used a programming language before, but you can do it! If you are having trouble with any of these areas, even after our review discussion, please seek an instructor or TA for help. Several concepts you will not understand until you have a lot of practice writing code and working on the command line.

1. A language is \_\_\_\_\_\_\_\_\_ **statically** typed if the type of a variable is declared before they are used. A language is \_\_\_\_\_\_\_\_ **dynamically** typed if the variable type is checked at run-time and will compile even if there are errors.
2. The keywords const, let, else, if, import, while, this, and function (among many others) are protected \_\_\_\_\_\_\_\_\_\_\_ **reserved** keywords, which mean they have specific meanings in JavaScript and cannot be used as identifiers/variables.
3. The \_\_\_\_\_\_\_\_\_\_\_ **assignment** operator assigns a value to its left operand based on the value of its right operand. ( = )

1. The \_\_\_\_\_\_\_\_\_\_\_ **comparison** operator compares its operands and returns a logical value based on whether the comparison is true. ( == , != , ===, > , < )
2. The \_\_\_\_\_\_\_\_\_\_\_ **logical** operators are used with Boolean values and return Boolean values. OR they can return non-Boolean when used with non-Boolean values. (&&, || )
3. Properties and methods inside JavaScript objects are accessed with \_\_\_\_\_\_\_\_\_\_ **dot** notation.
4. In JavaScript, objects can be seen as a collection of \_\_\_\_\_\_\_\_\_\_\_ . **properties**
5. A JavaScript object is mapping between \_\_\_\_\_\_ **keys** and \_\_\_\_\_\_\_  **values.** Keys are \_\_\_\_\_\_\_ **strings** and values are \_\_\_\_\_\_\_\_**anything**.
6. The hierarchy of browser objects that are used to manipulate methods and properties associated with the web browser is the \_\_\_\_\_\_\_\_\_  **browser** object model, which is also known as the \_\_\_\_\_\_\_\_\_\_ **BOM**.
7. The browser object located at the top of the BOM is \_\_\_\_\_\_\_\_\_\_\_\_ **window.**
8. The \_\_\_\_\_\_\_\_\_\_ **document** object model is an API that treats an HTML document as a tree structure wherein each node is an object representing a part of the document.
9. What is the “document” in the document object model (DOM)? \_\_\_\_\_\_\_\_\_\_\_\_\_ **HTML file. It’s converted by the browser to the DOM, an OO representation that acts as an API between the JS and the document itself, allowing the creation of dynamic web pages.**
10. True/False: JavaScript can add, change, and remove all the HTML elements and attributes on a page. **True**
11. What does API stand for? **Application Programming Interface.**
12. The keyword that initializes a variable is \_\_\_\_\_\_\_\_\_\_. **let**
13. What is the name for the interface that allows software applications to communicate with each other? **API**
14. What commands can we use to access the DOM? **document.whatever**
15. True/False: window.document.getElementBy(“id”) = document.getElementBy(“id”) **True**
16. What is a REPL? What are we using in class for a REPL? **Read, Evaluate, Print, Loop. In class we use either the console in Chrome dev tools OR repl.it**
17. What is the advantage of using a REPL? **Lets you program in your browser**
18. Name the 6 JavaScript primitive data types: **String, number, Boolean, null, undefined, and symbol**
19. What values do Boolean types evaluate to? **True or False**
20. Keywords that allocate a place in memory to store information are \_\_\_\_\_\_\_\_\_\_ **variables.**
21. A variable that has not been assigned a value is of type \_\_\_\_\_\_\_\_. **Undefined**
22. The value \_\_\_\_\_\_ represents nothing. **Null**
23. True/False: 2 == “2” (loose equality) **True**
24. True/False: 2 === “2” (strict equality) **False**
25. The process of converting value from one type to another is \_\_\_\_\_\_\_ **type coercion.**
26. The \_\_\_\_\_\_\_\_\_\_\_\_\_ is the order in which the computer executes statements in a script. **Control flow**
27. True/False: A JavaScript function is a block of code that can be used over and over again. **True**
28. What type of function is an alert, prompt, or confirm? **Dialog boxes**
29. What kind of data does a prompt use? **String**
30. Name two ways to put JavaScript in our HTML:  **<script></script> tags at the bottom of the HTML doc before </body>, or a link to the js doc in the <head>**
31. True/False: It is a good idea to place JavaScript files at the bottom of the <body> element because it improves page load (HTML display is not blocked by loading scripts). **True**
32. Ture/False: HTML is read and parsed before JavaScript is read and parsed. **True. JS is executed on page load, and HTML renders after the JS happens.**
33. A \_\_\_\_\_\_\_\_\_\_ function is a function that calls itself until a base condition is met, and execution stops. **Recursive**
34. Name a couple of reasons why placing JavaScript in an external file is a good idea. **It separates HTML and code. It makes HTML and JS easier to read and maintain. Cached JS files can speed up page loads.**
35. Throwback questions: What is DRY? What is separation of concerns?
36. What file extension does a JavaScript file have? **.js**
37. How do we make single line comments in JavaScript? Multiline comments? **// or /\* \*/**
38. Two complex data types in JavaScript are \_\_\_\_\_\_\_\_\_ **objects** and ­­­­\_\_\_\_\_\_\_\_\_\_ **arrays**.
39. True/False: A JavaScript array is an object. **True**
40. A variable that holds more than one value at a time is an \_\_\_\_\_\_\_\_\_\_. **Array**
41. True/False: Arrays can hold many different data types. **true**
42. The position of a value in an array is called its \_\_\_\_\_\_\_\_. **Index**
43. True/False: Positions inside arrays are numbered beginning with zero. **True**
44. What is the above concept called? **Zero-indexing**
45. Consider the following array: let spectrum = [“red”, “yellow”, “orange”, “green”, “blue”]; How do we access each color? **spectrum[indexNum]**
46. A \_\_\_\_\_\_\_\_\_\_\_\_\_ **multidimensional array** is an array of arrays.
47. Consider the following array: let multiDimensionalArray = [[1, 2, 3], [true, false], [‘hello’, ‘bye’]], how do we access the number 3? **multiDimensionalArray[0][2]?**
48. How do we reassign values in an array? (can use above array as example.) **multiDimensionalArray[1]=[2, 3, 4]**
49. What does document.querySelectorAll(“img”)[0] return? **First image**
50. Bonus question: What operand returns a remainder?  **Modulo, % (demonstrate)**