



## Intro to JavaScript Week 3 Coding Assignment

**Points possible:** 70

Category	Criteria	% of Grade
Functionality	Does the code work?	25
Organization	Is the code clean and organized? Proper use of white space, syntax, and consistency are utilized. Names and comments are concise and clear.	25
Creativity	Student solved the problems presented in the assignment using creativity and out of the box thinking.	25
Completeness	All requirements of the assignment are complete.	25

**Instructions:** In VS Code, or an IDE of your choice, write the code that accomplishes the objectives listed below. Ensure that the code compiles and runs as directed. Take screenshots of the code and of the running program (make sure to get screenshots of all required functionality) and paste them in this document where instructed below. Create a new repository on GitHub for this week's assignments and push this document, with your JavaScript project code, to the repository. Add the URL for this week's repository to this document where instructed and submit this document to your instructor when complete.

### Coding Steps:

1. Create an array called `ages` that contains the following values: 3, 9, 23, 64, 2, 8, 28, 93.
  - a. Programmatically subtract the value of the first element in the array from the value in the last element of the array (do not use numbers to reference the last element, find it programmatically, `ages[7] - ages[0]` is not allowed). Print the result to the console.



# PROMINEO TECH

- b. Add a new age to your array and repeat the step above to ensure it is dynamic (works for arrays of different lengths).
  - c. Use a loop to iterate through the array and calculate the average age. Print the result to the console.
2. Create an array called names that contains the following values: 'Sam', 'Tommy', 'Tim', 'Sally', 'Buck', 'Bob'.
  - a. Use a loop to iterate through the array and calculate the average number of letters per name. Print the result to the console.
  - b. Use a loop to iterate through the array again and concatenate all the names together, separated by spaces, and print the result to the console.
3. How do you access the last element of any array? `names[names.length - 1]`
4. How do you access the first element of any array? `names[0]`
5. Create a new array called nameLengths. Write a loop to iterate over the previously created names array and add the length of each name to the nameLengths array.  
For example:

```
namesArray = ["Kelly", "Sam", "Kate"] //given this array
```

```
nameLengths = [5, 3, 4] //create this new array
```

6. Write a loop to iterate over the nameLengths array and calculate the sum of all the elements in the array. Print the result to the console.
7. Write a function that takes two parameters, word and n, as arguments and returns the word concatenated to itself n number of times. (i.e. if I pass in 'Hello' and 3, I would expect the function to return 'HelloHelloHello').
8. Write a function that takes two parameters, firstName and lastName, and returns a full name (the full name should be the first and the last name separated by a space).
9. Write a function that takes an array of numbers and returns true if the sum of all the numbers in the array is greater than 100.

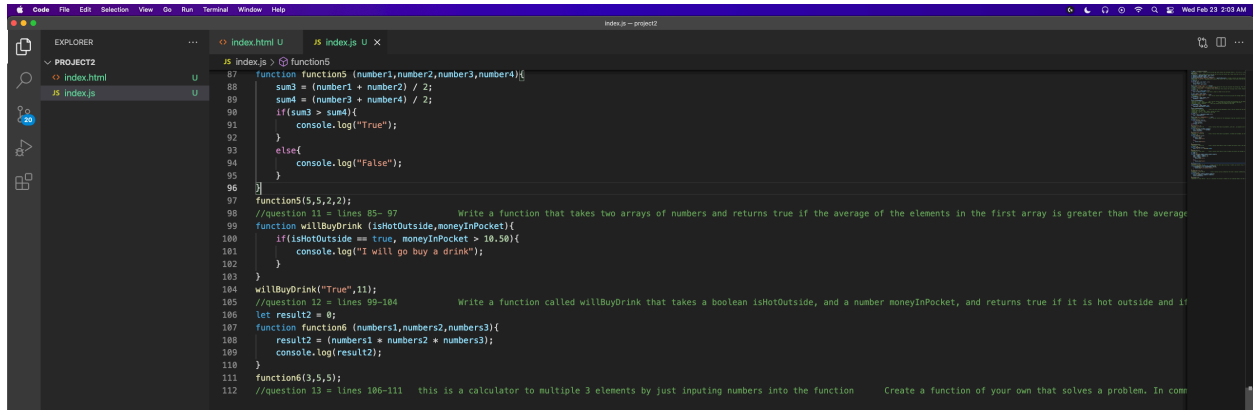


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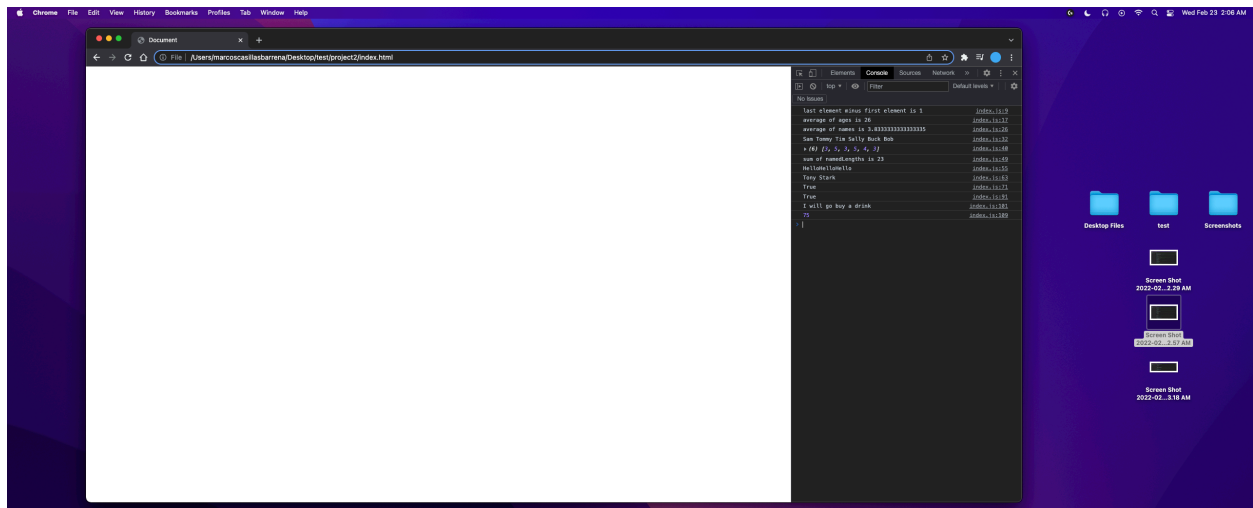
10. Write a function that takes an array of numbers and returns the average of all the elements in the array.
11. Write a function that takes two arrays of numbers and returns true if the average of the elements in the first array is greater than the average of the elements in the second array.
12. Write a function called willBuyDrink that takes a boolean isHotOutside, and a number moneyInPocket, and returns true if it is hot outside and if moneyInPocket is greater than 10.50.
13. Create a function of your own that solves a problem. In comments, write what the function does and why you created it.

## Screenshots of Code:

```
1 let ages = [3,9,23,64,2,8,28,93];
2 //Question 1 = lines 2 Create an array called ages that contains the following values: 3, 9, 23, 64, 2, 8, 28, 93
3 ages.push(4);
4 //Question 1b = lines 3 added onto or else wont add to array when console log is done later down in the lines. Add a new age to your array and repeat the step above to ensure it is
5 let agesFirst = ages[ages.length - ages.length];
6 let agesLast = ages[ages.length - 1];
7 let agesFirstMinusLast = (agesLast - agesFirst);
8 console.log("Last element minus first element is " + agesFirstMinusLast); // messed up earlier and read question wrong thinking age8 - age7. Flipped line 8 to fix so age7 - age8.
9 //Question 1a = lines 5-8 programmatically subtract the value of the first element in the array from the value in the last element of the array (do not use numbers to reference the 1
10 let sum = 0;
11 let average = 0;
12 for(let i = 0; i < ages.length; i++){
13     sum += ages[i];
14     average = sum / ages.length;
15 }
16 console.log("average of ages is " + average);
17 //Question 1c = lines 11-18 Use a loop to iterate through the array and calculate the average age. Print the result to the console.
18 let names = ["Sam","Tommy","Tim","Sally","Buck","Bob"];
19 //Question 2 = lines 20 Create an array called names that contains the following values: 'Sam', 'Tommy', 'Tim', 'Sally', 'Buck', 'Bob'.
20 let total = 0;
21 for(let i = 0; i < names.length; i++){
22     total += names[i].length; // some reason .length is needed or else wont work.
23 }
24 let avg = total / names.length;
25 console.log("average of names is " + avg);
26 //Question 2a = lines 21-28 Use a loop to iterate through the array and calculate the average number of letters per name. Print the result to the console.
27 let addedNames = "";
28 for(let i = 0; i < names.length; i++){
29     addedNames += names[i] + " ";
30 }
31 console.log(addedNames);
32 //Question 2b = lines 28-32 Use a loop to iterate through the array again and concatenate all the names together, separated by spaces, and print the result to the console.
33 //Question 3 Answer = names[names.length - 1] How do you access the last element of any array
34 let nameLengths = [];
35 //Question 4 Answer = names[0] How do you access the first element of any array
36 for(let i = 0; i < names.length; i++){
37     nameLengths.push(names[i].length);
38 }
39 console.log(nameLengths);
40 //Question 5 = lines 36-48 Create a new array called nameLengths. Write a loop to iterate over the previously created names array and add the length of each name to the nameL
41 //example below for question
42
43
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46
47
48
49 console.log("sum of nameLengths is " + sum2);
50 //Question 6 = lines 45-49 Write a loop to iterate over the nameLengths array and calculate the sum of all the elements in the array. Print the result to the console.
51 let func1 = "";
52 function func1(word,n){
53     for(let i = 0; i < n; i++){
54         func1 += word;
55     }
56     console.log(func1);
57 }
58 func1("Hello",3);
59 //Question 7 = lines 51-58 Write a function that takes two parameters, word and n, as arguments and returns the word concatenated to itself n number of times. (i.e. if I pass
60 let func2 = "";
61 function func2 (firstName,lastName){
62     func2 = firstName + " " + lastName;
63     console.log(func2);
64 }
65 func2("Tony","Stark");
66 //Question 8 = lines 60-64 Write a function that takes two parameters, firstName and lastName, and returns a full name (the full name should be the first and the last name se;
67 let func3 = 0;
68 function func3(a,b,c){
69     func3 = a + b + c;
70     if (func3 > 100){
71         console.log("True");
72     }
73     else{
74         console.log("False");
75     }
76 }
77 func3(12,90,3);
78 //Question 9 = lines 67-77 Write a function that takes an array of numbers and returns true if the sum of all the numbers in the array is greater than 100
79 let func4 = 0;
80 function func4(j,k,v){
81     func4 = (j + k + v) / func4.length;
82 }
83 func4(3,3,3);
84 //Question 10 = lines 79-83 Write a function that takes an array of numbers and returns the average of all the elements in the array.
85 let sum3 = 0;
86 let sum4 = 0;
87 function func5 (number1,number2,number3,number4){
88     sum3 = (number1 + number2) / 2;
89     sum4 = (number3 + number4) / 2;
90     if(sum3 > sum4){
```



### Screenshots of Running Application:



**URL to GitHub Repository:** [https://github.com/Marcos-Casillas/homework\\_1.git](https://github.com/Marcos-Casillas/homework_1.git)