



## 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.
  - 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.



# PROMINEO TECH

- 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?
4. How do you access the first element of any array?
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.
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:



# PROMINEO TECH

C: > Users > austi > Desktop > JS week3.js > subtractAgeAgain

```
1  //1
2  let ages = [3, 9, 23, 64, 2, 8, 28, 93];
3  //1a
4
5  console.log(ages[ages.length-1] - ages[0]);
6
7  //1b
8  ages.push(16);
9  console.log(ages);
10 console.log(ages[ages.length-1] - ages[0]);
11
12 function subtractAgeAgain(ages) {
13 |   alert("run subtractAge again")
14 | }
15
16 //1c
17 var sum = 0;
18
19 for(let i=0; i < ages.length; i++){
20 |   sum += ages[i];
21 | }
22 var avg = sum / ages.length;
23 console.log(avg);
24
25 //2
26 let names = ["Sam", "Tommy", "Tim", "Sally", "Buck", "Bob"];
27
28 //2a
29
30 let total = 0;
31 for (let i=0; i < names.length; i++) {
32 |   total += names[i].length;
33 | }
34 var average = total/names.length;
35
36 console.log(average);
```



# PROMINEO TECH

```
37
38 //2b
39 let result = ''
40 for (let i = 0; i < names.length; i++) {
41 |   result = result.concat(names[i] + " ");
42 | }
43 console.log(result);
44
45 //3
46 let lastElement = names[names.length - 1];
47 console.log(lastElement);
48
49 //4
50 let firstElement = names[0];
51 console.log(firstElement);
52
53 //5
54 let namesArray = ["Kelly", "Sam", "Kate"];
55 let nameLengths = [];
56 for (var i = 0; i < namesArray.length; i++) {
57 |   nameLengths.push(namesArray[i].length);
58 | } console.log(nameLengths);
59
60 //6
61 var totalElements = 0
62 for (let i=0; i < nameLengths.length; i++) {
63 |   totalElements += nameLengths[i];
64 | }
65 console.log(totalElements);
66
```



# PROMINEO TECH

```
67 //7
68 function concatWord(word, n) {
69     var con = word;
70     for(i=1; i<n; i++) {
71         con = con.concat(word);
72     } return con;
73 }
74 console.log(concatWord("hello",3));
75
76
77 //8
78 function fullName(firstName, lastName) {
79     console.log(firstName + ' ' + lastName);
80 }
81 fullName("June","Carey");
82
83 //9
84 let array1 = [50, 60, 70];
85
86 function lessThan100(array1){
87     sum1 = 0;
88     for(i=0; i<array1.length; i++){
89         sum1 = sum1 + array1[i];
90     } if(sum1 > 100) {
91         return true;
92     } else {
93         return false;
94     }
95 }
96 console.log(lessThan100(array1));
97
```



# PROMINEO TECH

```
98 //10
99 let array2 = [1, 2, 3, 4, 5, 6];
100 let sum2 = 0;
101
102 function arrayAverage(array2) {
103   for(let i=0; i < array2.length; i++){
104     sum2 += array2[i];
105   }
106   return (sum2 / array2.length);
107 }
108
109 console.log(arrayAverage(array2));
110
111 //11
112 let array3 = [10, 20, 30];
113
114 function compareAverage(array2, array3){
115   if(arrayAverage(array2) > arrayAverage(array3)){
116     return true;
117   } else {
118     return false;
119   }
120 }
121 console.log(compareAverage(array2, array3));
122
123 //12
124 let isHotOutside = Boolean;
125 let moneyInPocket;
126
127 function willBuyDrink(isHotOutside, moneyInPocket){
128   if(isHotOutside == true && moneyInPocket > 10.5) {
129     console.log(true);
130   }else {console.log(false);
131   }
132 }
133 willBuyDrink(true, 11);
```



# PROMINEO TECH

```
//13
let income;
let expenses;

function eatingOut(income, expenses){
  if(income > expenses) {
    console.log("eat out!");
  }else {console.log("eat at home!");}
}
eatingOut(200, 100);

//this function will help you decide if you have enough money to eat out.
//if your income exceeds your expenses, it will say "eat out!", if not, "eat at home!".
```

## Screenshots of Running Application:

```
3 //1a
PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE
27.33333333333332
3.833333333333335
Sam Tommy Tim Sally Buck Bob
Bob
Sam
[ 5, 3, 4 ]
12
hellohellohello
June Carey
true
3.5
false
true
eat out!
PS C:\Users\austi\Desktop> 
```

## URL to GitHub Repository:

<https://github.com/alexlaurencarey/week-3-assignment.git>