



## 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.
  - 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?

**It would be the array name[last number of the parts of the array minus 1]**

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

**Array's always start with a 0 so it would be array name[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.
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

```
JS index.js  index.html  JS Week 3 coding assignment.js X  JS Array video notes.js  JS Objects vid notes.js  JS More Array methods notes.js  JS P...
C:\> Users > trepv > OneDrive > Desktop > Week 2 > JS Week 3 coding assignment.js > ...
1 // //1. Create an array called ages that contains the following values: 3, 9, 23, 64, 2, 8, 28, 93.
2 // var ages = [3, 9, 23, 64, 2, 8, 28, 93];
3 var ages = [];
4 ages.push(3);
5 ages.push(9);
6 ages.push(23);
7 ages.push(64);
8 ages.push(2);
9 ages.push(8);
10 ages.push(28);
11 ages.push(93);
12 console.log(ages);
13
14
15 // //1a. Programmatically subtract the value of the first element in the array from the value in the last element of
16 // // the array (do not use numbers to reference the last element, find it programmatically, ages[7] - ages[0] is not
17 // // allowed). Print the result to the console.
18 let lastIndex = ages.length-1;
19 let firstIndex = 0;
20
21 console.log(ages[lastIndex] - ages[firstIndex]);
22 // equals 90
23
24
25 // //1b. Add a new age to your array and repeat the step above to ensure it is dynamic (works for arrays of
26 // // different lengths).
27 var ages = [3, 9, 23, 64, 2, 8, 28, 93];
28 ages.push(17);
29 console.log(ages);
30
31 let lastIndex = ages.length - 1;
32 let firstIndex = 0;
33
34 console.log(ages[lastIndex] - ages[firstIndex]);
35 //now = 14
36
```

```
JS index.js  index.html  JS Week 3 coding assignment.js X  JS Array video notes.js  JS Objects vid notes.js  JS More Array methods notes.js
C:\> Users > trepv > OneDrive > Desktop > Week 2 > JS Week 3 coding assignment.js > ...
38 // //1c. Use a loop to iterate through the array and calculate the average age. Print the result to the console.
39 // var average = ages.reduce((x, y) => x + y, 0) / ages.length;
40 // console.log(average);
41 var sum = 0;
42 var count = ages.length;
43
44 for (i = 0; i < count; i++) {
45     sum += ages[i];
46     console.log(sum);
47 }
48 var avg = sum/ages.length;
49 console.log(avg);
50
51
52 // //2. Create an array called names that contains the following values: 'Sam', 'Tommy', 'Tim', 'Sally', 'Buck', 'Bob'.
53 var names = ["Sam", "Tommy", "Tim", "Sally", "Buck", "Bob"];
54
55
56 // //2a. Use a loop to iterate through the array and calculate the average number of letters per name. Print the
57 // // result to the console.
58 var sum = 0;
59 for (i = 0; i < names.length; i++) {
60     sum += names[i].length;
61     console.log(sum);
62 }
63
64 // //2b. Use a loop to iterate through the array again and concatenate all the names together, separated by spaces,
65 // // and print the result to the console.
66 var sum = " ";
67 for (i = 0; i < names.length; i++) {
68     var collection = sum += (names[i] + " ");
69 }
70 console.log(collection);
71
72 // //5. Create a new array called nameLengths. Write a loop to iterate over the previously created names array and
73 // // add the length of each name to the nameLengths array.
74 let nameLengths = names.map(function(element) {
```



# PROMINEO TECH

```
C:\Users> trep > OneDrive > Desktop > Week 2 > JS Week 3 coding assignment.js > ...
74 let nameLengths = names.map(function(element) {
75     return element.length;
76 });
77 console.log(nameLengths);
78
79
80 // //6. Write a loop to iterate over the nameLengths array and calculate the sum of all the elements in the array.
81 // // Print the result to the console.
82 var sum = 0;
83 var count = nameLengths.length;
84
85 for (i = 0; i < count; i++) {
86     sum += nameLengths[i];
87 }
88 console.log(sum);
89
90
91 // //7. Write a function that takes two parameters, word and n, as arguments and returns the word concatenated to
92 // // itself n number of times. (i.e. if I pass in 'Hello' and 3, I would expect the function to
93 // // return 'HelloHelloHello').
94 function conCartening(word, n) {
95     return word.repeat(n);
96 }
97 console.log(conCartening);
98
99
100 // //8. Write a function that takes two parameters, firstName and lastName, and returns a full name (the full name
101 // // should be the first and the last name separated by a space).
102 function fullName(firstName, lastName) {
103     return (firstName + " " + lastName)
104 }
105
106 // //9. Write a function that takes an array of numbers and returns true if the sum of all the numbers in the array
107 // // is greater than 100.
108 function arr () {
109     for (let i = 0; i < arr.length; i++) {
110         sum += arr[i];
111         if (sum > 100) {
```

Ln 165, Col 33 Sp

```
JS Index.js Index.html JS Week 3 coding assignment.js X JS Array video notes.js JS Objects vid notes.js JS More Array methods notes.js
C:\Users> trep > OneDrive > Desktop > Week 2 > JS Week 3 coding assignment.js > ...
110 sum += arr[i];
111 if (sum > 100) {
112     return true;
113 }
114 else {
115     return false;
116 }
117 }
118 }
119
120 // //10. Write a function that takes an array of numbers and returns the average of all the elements in the array.
121 function arrAve () {
122     sum1 = 0;
123     for (let i = 0; i < arrAve.length; i++) {
124         sum1 += arrAve[i];
125         return (sum1/arrAve.length);
126     }
127 }
128
129 // //11. Write a function that takes two arrays of numbers and returns true if the average of the
130 // // elements in the first array is greater than the average of the elements in the second array.
131 function junktion () {
132     x = sumXArray/xArray.length;
133     m = sumMArray/mArray.length;
134     if (x > m) {
135         return (true);
136     } else {
137         return (false);
138     }
139 }
140
141 // //12. Write a function called willBuyDrink that takes a boolean isHotOutside, and a number moneyInPocket, and
142 // // returns true if it is hot outside and if moneyInPocket is greater than 10.50.
143 function willBuyDrink () {
144     isHotOutside = true;
145     moneyInPocket = 17.01;
146     if (isHotOutside = true && moneyInPocket > 10.50) {
147         return true;
```

Ln 165, Col 33 Sp



# PROMINEO TECH

```
C:\Users\trepy> OneDrive\ Desktop\ Week 2 > JS Week 3 coding assignment.js > ...
140
141 // //12.   Write a function called willBuyDrink that takes a boolean isHotOutside, and a number moneyInPocket, and
142 // //      returns true if it is hot outside and if moneyInPocket is greater than 10.50.
143 function willBuyDrink () {
144     isHotOutside = true;
145     moneyInPocket = 17.01;
146     if (isHotOutside = true && moneyInPocket > 10.50) {
147         return true;
148     } else {
149         return false;
150     }
151 }
152
153
154 // //13.   Create a function of your own that solves a problem. In comments, write what the function does and
155 // //      why you created it.
156 function whatsForDinner () {
157     moneyInWallet = 25
158     if (moneyInWallet > 45) {
159         return "We're going out to eat!";
160     } else if (moneyInWallet < 45 && moneyInWallet > 20) {
161         return "We've got enough for pizza tonight";
162     } else {
163         return "PB & J sandwiches again...";
164     }
165 } console.log(whatsForDinner());
166
167 // This code helps break down what we can get for dinner tonight and makes the choice easier to
168 // celebrate completing the assignment assuming we have enough money to do so.
```

## Screenshots of Running Application:



# PROMINEO TECH

```
Inspector Console Debugger Network {}
Filter Output
▶ Array(9) [ 3, 9, 23, 64, 2, 8, 28, 93, 17 ]
14
3
12
35
99
101
109
137
230
247
27.444444444444443
3
8
11
16
20
23
Sam Tommy Tim Sally Buck Bob
▶ Array(6) [ 3, 5, 3, 5, 4, 3 ]
23
We've got enough for pizza tonight
>>
```

**URL to GitHub Repository:**

**<https://github.com/trepvox/Java-week-3.git>**