



PROMINEO TECH

Intro to JavaScript Week 3 Coding Assignment

Points possible: 75

URL to Your GitHub Repository:

https://github.com/emidavidson/week_3_assignment/blob/main/week3.js

URL to Your Coding Assignment Video:

<https://youtu.be/0xdjfbOaHZY>

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?
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:



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week3.html U

JS week3.js U ●

Extension: Code Runner

```
JS week3.js > ...
1 // 1. Create an array called ages that contains... //
2 var ages=[3, 9, 23, 64, 2, 8, 28, 93];
3 console.log(ages);
4
5 //a. Programmatically subtract the value of the first element in the array from the v
6 // (do not use numbers to reference the last element, find it programmatically, ages[7] )
7 //Print the result to the console.//
8
9 console.log(ages.pop() - ages.shift());
10 console.log(ages);
11
12 //b. Add a new age to your array and repeat the step above to ensure it is dynamic//
13 // (works for arrays of different lengths).//
14
15 ages.push(27);
16 console.log(ages);
17 console.log(ages.pop() - ages.shift());
18 console.log(ages);
19
20 //c. Use a loop to iterate through the array and calculate the average age. //
21 // Print the result to the console. //
22
23
24
25 |
```



EXPLORER ... week3.html week3.js Extension: Code Runner

WEEK_3_ASSIGNMENT week3.html week3.js

```
JS week3.js > ...
1 // 1. Create an array called ages that contains... //
2 var ages=[3, 9, 23, 64, 2, 8, 28, 93];
3 console.log(ages);
4
5 //a. Programmatically subtract the value of the first element in the array from the value in the last
6 // (do not use numbers to reference the last element, find it programmatically, ages[7] - ages[0] is not
7 //Print the result to the console.//
8
9 console.log(ages.pop() - ages.shift());
10 console.log(ages);
11
12 //b. Add a new age to your array and repeat the step above to ensure it is dynamic//
13 // (works for arrays of different lengths).//
14
15 ages.push(27);
16 console.log(ages);
17 console.log(ages.pop() - ages.shift());
18 console.log(ages);
19
20 //c. Use a loop to iterate through the array and calculate the average age. //
21 // Print the result to the console. //
22
23
24 let total = 0
25 for (let i = 0; i < ages.length; i++){
26 total = total + ages[i];
27 }
28
29 console.log(total / ages.length);
30
31 //2. Create an array called names that contains the following
32 //values: 'Sam', 'Tommy', 'Tim', 'Sally', 'Buck', 'Bob'.
33
34 var names = [ "Sam", "Tommy", "Tim", "Sally", "Buck", "Bob" ];
35 console.log(names);
36
37 //a. Use a loop to iterate through the array and calculate the average number of
38 //letters per name. Print the result to the console.
39
40 let letterAverage = 0
41 for (let i = 0; i < names.length; i++){
42 |   letterAverage = letterAverage + names[i].length
43 }
44 console.log(letterAverage / names.length);
45
46 //b. Use a loop to iterate through the array again and concatenate all the names together,
47 //separated by spaces, and print the result to the console.
48
49 let list = (names)
50 for (let i = 0; i < 1; i++){
51   list = names[i] + " " + list;
52 }
```

> OUTLINE
> TIMELINE



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The screenshot shows a code editor interface with the following details:

- EXPLORER**: Shows a folder named "WEEK_3_ASSIGNMENT" containing "week3.html" and "week3.js".
- CODEVIEW**: The main area displays a JavaScript file named "week3.js".
- STATUSBAR**: Shows the file path "JS week3.js > ...".
- RIGHT SIDE**: A vertical sidebar with sections for "OUTLINE" and "TIMELINE".
- CODE SNIPPET**: The code in "week3.js" is as follows:

```
48 let list = (names)
49 for (let i = 0; i < 1; i++){
50 |   list = names.join(" ");
51 }
52 console.log(list);
53
54
55 // 3. How do you access the last element of any array?
56
57 // Using the pop() method we can access the last element in an array. It returns the last element by re-
58
59 // 4. How do you access the first element of any array?
60
61 //The shift() method will remove the first element of an array and return it. you can also refer to the
62
63
64 // 5. Create a new array called nameLengths. Write a loop to iterate over the previously
65 // creates names array and add the length of each name to the namesLength array.
66
67 var nameLengths = [names.length]
68 for (let i = 0; i < names.length; i++){
69 |   nameLengths.push(names[i].length)
70 }
71 console.log(nameLengths);
72
73 //6. Write a loop to iterate over the nameLengths array and calculate the sum of all the elements in
74
75 let sum = 0
76 for (i = 0; i < names.length; i++){
77 |   sum = sum + nameLengths[i];
78 }
79 console.log(sum);
80
81 // 7. Write a function that takes two parameters, word and n, as arguments and returns the word conca-
82
83 function homeworkTakes(word, n){
84   let x = '';
85   for (let i = 0; i < n; i++){
86     |   x += word
87   }
88   return x;
89 }
90 console.log(homeworkTakes("Effort,", 6))
91
92 // 8. Write a function that takes two parameters, firstName and lastName, and returns a full name (th
93
94 function createFullName(firstName, lastName){
95   |   console.log(firstName + " " + lastName);
96 }
97 createFullName("Emily", "Davidson")
98
```



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The screenshot shows a code editor interface with the following details:

- EXPLORER**: Shows a folder named "WEEK_3_ASSIGNMENT" containing "week3.html" and "week3.js".
- week3.html**: A file icon.
- week3.js**: An open file icon.
- Extension: Code Runner**: A status bar item.
- Code Area Content:**

```
JS week3.js > ...
93
94     function createFullName(firstName, lastName){
95         console.log(firstName + " " + lastName);
96     }
97     createFullName("Emily", "Davidson")
98
99 // 9. Write a function that takes an array of numbers and returns true if the sum of all the numbers
100
101 var array = [27, 48, 19, 77]
102
103 function trueOrFalse(array){
104     var sum = 0
105     for (let i = 0; i < array.length; i++){
106         sum += array[i];
107     }if (sum > 100){
108         return true
109     }else{
110         return false
111     }
112 }
113 console.log(trueOrFalse(array));
114
115 // 10. Write a function that takes an array of numbers and returns the average of all the elements in
116
117 var arr = [3, 4, 5, 6, 7]
118
119 function totalAverage(arr){
120     var total = 0
121     for (let i = 0; i < arr.length; i++)
122         total += arr[i];
123 }
124 var average = total / arr.length;
125
126 console.log(average / arr.length);
127
128 // 11. Write a function that takes two arrays of numbers and returns true if the average of the elemen
129
130 var arrayOne = [5, 6, 7]
131 var arrayTwo = [1, 2, 3]
132
133 function compareAverage(arrayOne, arrayTwo){
134
135     var sum1 = 0
136     for (let i = 0; i < arrayOne.length; i++){
137         sum1 = sum1 + arrayOne[i];
138     }
139
140     var sum2 = 0
141     for (let i = 0; i < arrayTwo.length; i++){
142         sum2 = sum2 + arrayTwo[i];
143     }
```
- Right Panel:** A vertical panel showing a list of files or tasks, likely from a task manager or build system.



```
EXPLORER ... < week3.html JS week3.js Extension: Code Runner  
WEEK_3_ASSIGNMENT week3.html week3.js ...  
week3.html  
week3.js  
138 }  
139  
140 var sum2 = 0;  
141 for (let i = 0; i < arrayTwo.length; i++){  
142 sum2 = sum2 + arrayTwo[i];  
143 }  
144  
145 var avgOne = sum1 / arrayOne.length;  
146 var avgTwo = sum2 / arrayTwo.length;  
147  
148 if (avgOne > avgTwo){  
149 return true;  
150 }  
151 }  
152  
153 console.log(compareAverage(arrayOne, arrayTwo));  
154  
155  
156 // 12. Write a function called willBuyDrink that takes a boolean isHotOutside, and a number moneyInPocket  
157 // and returns true if it is hot outside and if moneyInPocket is greater than 10.50.  
158  
159 var temperature = [80];  
160 var moneyInPocket = [12];  
161  
162 function willBuyDrink(temperature, moneyInPocket){  
163 if (temperature >= 80 && moneyInPocket >= 10.50){  
164 return true;  
165 }else{  
166 return false;  
167 }  
168 }  
169 console.log(willBuyDrink(temperature, moneyInPocket));  
170  
171 // 13. Create a function of your own that solves a problem. In comments, write what the function does  
172 // and why you created it.  
173  
174 const soil = 'wet';  
175  
176 function waterPlants(soil){  
177 if (soil === 'wet'){  
178 console.log('do not water');  
179 }  
180 if (soil === 'dry'){  
181 console.log('water');  
182 }  
183 }  
184 console.log(waterPlants(soil));  
185  
186 // I created this function to assist in deciding whether or not to water a plant! //
```

Screenshots of Running Application:



← → ⌂ 127.0.0.1:5500/week3.html ☆ ⌂ ⌂

Console

```
> Array(8) [ 3, 9, 23, 64, 2, 8, 28, 93 ]
90
> Array(6) [ 9, 23, 64, 2, 8, 28 ]
> Array(7) [ 9, 23, 64, 2, 8, 28, 27 ]
18
> Array(5) [ 23, 64, 2, 8, 28 ]
25
> Array(6) [ "Sam", "Tommy", "Tim", "Sally", "Buck", "Bob" ]
3.8333333333333335
Sam Tommy Tim Sally Buck Bob
> Array(7) [ 6, 3, 5, 3, 5, 4, 3 ]
26
Effort,Effort,Effort,Effort,Effort,Effort,
Emily Davidson
true
5
true
true
do not water
```

Errors Warnings Logs Info Debug CSS XHR Requests

week3.js:3:9
week3.js:9:9
week3.js:10:9
week3.js:16:9
week3.js:17:9
week3.js:18:9
week3.js:29:9
week3.js:35:9
week3.js:44:9
week3.js:53:9
week3.js:71:9
week3.js:79:9
week3.js:98:9
week3.js:95:13
week3.js:113:9
week3.js:126:9
week3.js:153:9
week3.js:169:9
week3.js:178:17