



## Intro to JavaScript Week 3 Coding Assignment

**Points possible:** 75

**URL to Your GitHub Repository:** [Rcruzn33/w3project: Week 3 project pushed into repository \(github.com\)](https://github.com/Rcruzn33/w3project)

**URL to Your Coding Assignment Video: Part 1** [https://youtu.be/cY\\_fXLbRxm](https://youtu.be/cY_fXLbRxm)

**Part 2** <https://youtu.be/XYcmY9DqpuY>

**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:



# PROMINEO TECH

```
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indexjs - Visual Studio Code

JS indexjs U X
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1 //1. Create an array called ages that contains the following values: 3, 9, 23, 64, 2, 8, 28, 93.
2 let ages = [3,9,23,64,2,8,28,93];
3 console.log(ages);
4 //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 el
5 console.log("Subtracting the last element of the array by the first element of the array = ", ages[ages.length-1] - ages[0]);
6 //b. Add a new age to your array and repeat the step above to ensure it is dynamic (works for arrays of different lengths).
7 console.log(ages.push(35));
8 console.log("subtracting the last element of the array by the first element of the array with the new age value added =", ages[ages.length-1] - ages[0]);
9 //c. Use a loop to iterate through the array and calculate the average age. Print the result to the console.
10 let total = 0;
11 for(let i = 0; i < ages.length; i++) {
12     total = (total + ages[i])
13 }
14 console.log("Average age of the array= ", total/ages.length);
15 //2. Create an array called names that contains the following values: 'Sam', 'Tommy', 'Tim', 'Sally', 'Buck', 'Bob'.
16 const names = ["Sam", "Tommy", "Tim", "Sally", "Buck", "Bob"];
17 console.log(names);
18 //a. Use a loop to iterate through the array and calculate the average number of letters per name. Print the result to the console.
19 let total1 = 0;
20 for(i=0;i < names.length;i++) {
21     total1 = total1 + names[i].length;
22 }
23 console.log("Average letters per name in the array= ", total1/names.length);
24 //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.
25 console.log(names);
26 let concatenatedNames = "";
27 console.log(concatenatedNames);
28 for(let i = 0; i < names.length; i++) {
29     console.log("name= ", names[i]);
30     concatenatedNames = concatenatedNames + names[i] + " ";
31 }
32 console.log("concat names= ", concatenatedNames);
33 //3. How do you access the last element of any array?
34 //let array = []
35 //console.log(array[array.length-1])
36 //4. How do you access the first element of any array?
37 //let array = []
```

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indexjs - Visual Studio Code

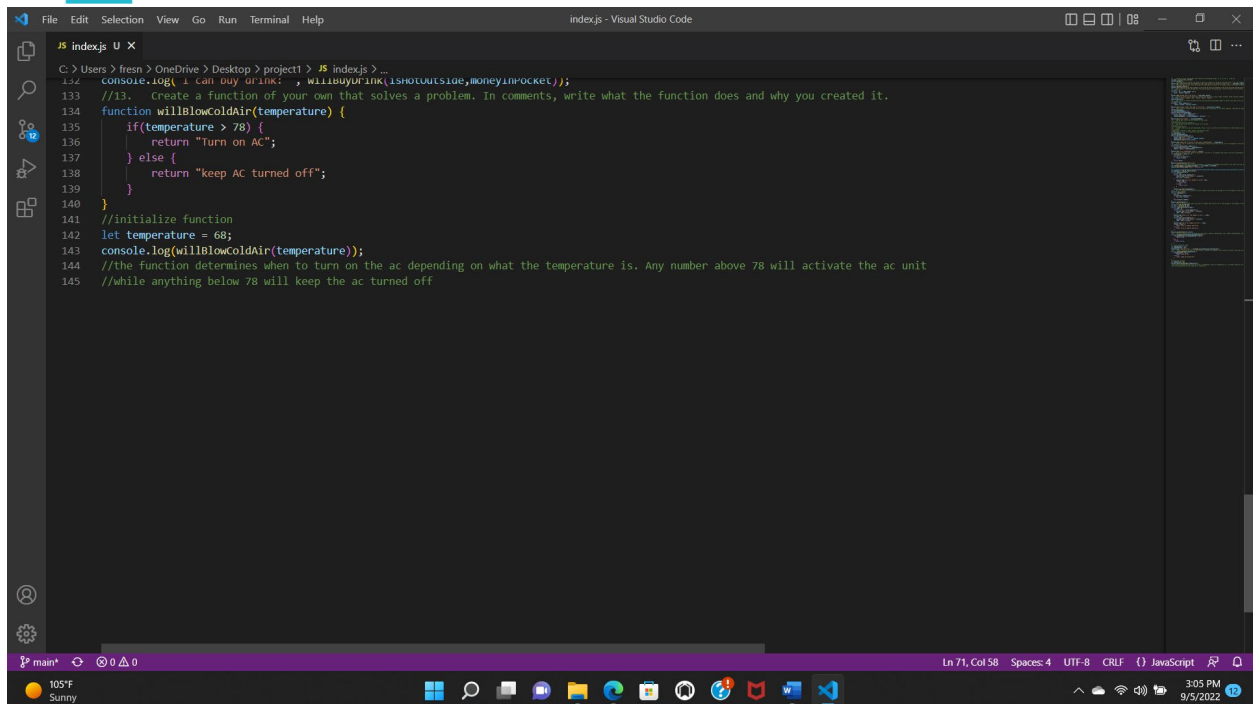
JS indexjs U X
C:\Users\fresh> OneDrive\ Desktop > project1 > JS indexjs > ...
36 //4. How do you access the first element of any array?
37 //let array = []
38 //console.log(array[0])
39 //5. Create a new array called nameLengths. Write a loop to iterate over the previously created names array and add the length of each name to the nameLengths array.
40 //For example:
41 //namesArray = ["Kelly", "Sam", "Kate"] //given this array
42 //nameLengths = [5, 3, 4] //create this new array
43 let nameLengths = [];
44 console.log(nameLengths);
45 for(let i=0;i<names.length;i++) {
46     console.log("name ", names[i]);
47     console.log("letter count= ", names[i].length);
48     nameLengths.push(names[i].length);
49 }
50 console.log("pushed sum of letters of each name to NameLengths= ", nameLengths);
51 //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.
52 let total2 = 0;
53 for(let i=0;i<nameLengths.length;i++) {
54     console.log("nameLength: ", nameLengths[i]);
55     total2 = total2 + nameLengths[i];
56 }
57 console.log("sum of nameLengths array= ", total2);
58 //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
59 let someFunction = (word,n) => {
60     let result = "";
61     for(let i = 0;i<n;i++) {
62         result += word;
63     }
64     return result;
65 };
66 console.log(someFunction("Hello",2));
67 //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 sp
68 let createFullName = (firstName,lastName) => `${firstName} ${lastName}`;
69 console.log(createFullName("Ruben", "Delacruz"));
70
71 //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.
72 let myNumbers = [100,50,200,80,120,60];
```



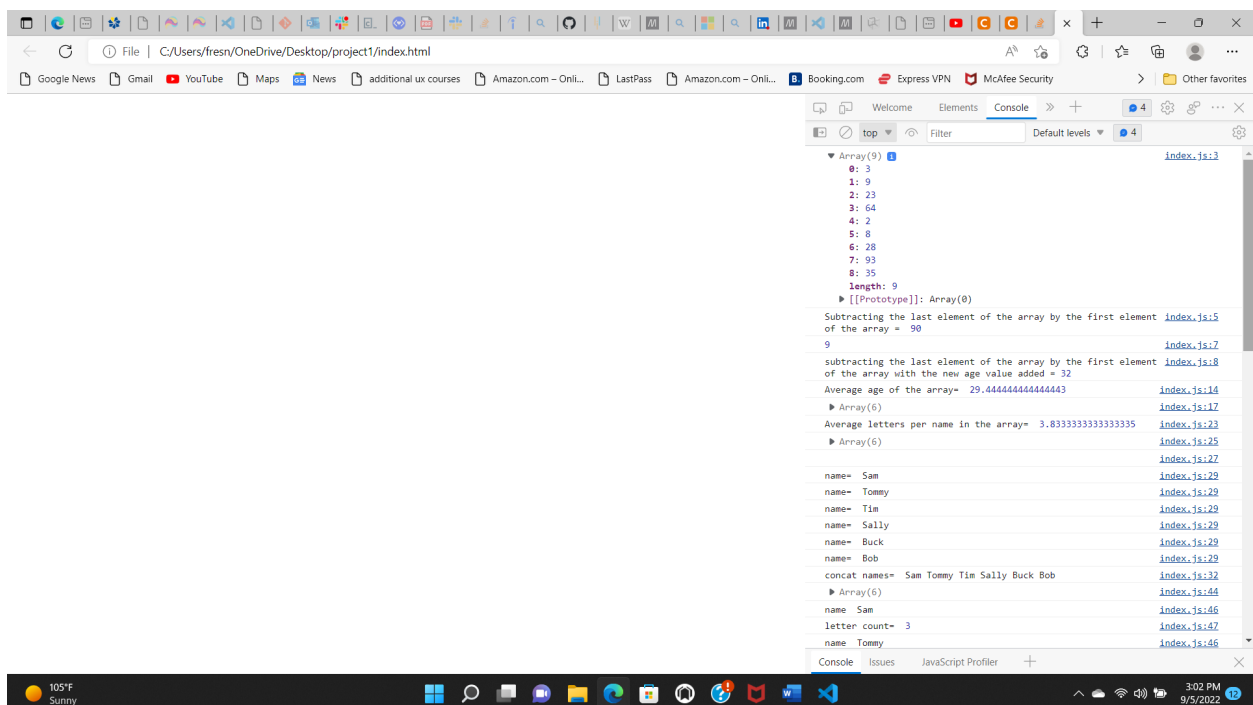
# PROMINEO TECH

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JS indexjs U X
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16
71 //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.
72 let myNumbers = [100,50,200,80,120,60];
73 function sumArray(array) {
74   let sum = 0;
75   for(let i=0;i<array.length;i++) {
76     console.log("Printed Number: ", array[i]);
77     sum = sum + array[i];
78   }
79   console.log("sum of all numbers in array", sum);
80   if(sum > 100) {
81     return true;
82   } else {
83     return false;
84   }
85 }
86 console.log(sumArray(myNumbers));
87 //10. Write a function that takes an array of numbers and returns the average of all the elements in the array.
88 let arr = [1,2,3,4,5];
89 function average(arr) {
90   sum = 0;
91   for(i=0;i<arr.length;i++) {
92     sum = sum + arr[i];
93   }
94   return(sum/arr.length);
95 }
96 console.log(average(arr));
97 //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.
98 let arr1 = [100,200,300,400];
99 let arr2 = [0,100,20,10,30];
100 function sumArray1(array1,array2) {
101   let sum1 = 0;
102   for(let i = 0; i < arr1.length;i++) {
103     console.log("Printed Number: ",arr1[i]);
104     sum1 = sum1 + arr1[i];
105   }
106   console.log("sum of all the numbers in arr1: ", sum1);
107   let sum2 = 0;
108   for(let i=0;i<arr2.length;i++) {
109     console.log("Printed Number: ",arr2[i]);
110     sum2 = sum2 + arr2[i];
111   }
112   console.log("sum of all numbers in arr2: ", sum2);
113   if(sum1 > sum2) {
114     return "arr1 is greater than arr2"
115   } else {
116     return "arr2 is greater than arr1"
117   }
118 }
119 console.log(sumArray1(arr1,arr2));
120 //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 25.
121 function willBuyDrink(isHotOutside,moneyInPocket) {
122   if((isHotOutside) && (moneyInPocket > 25)) {
123     return true;
124   } else {
125     return false;
126   }
127 }
128 // I will initialize value
129 let isHotOutside = false;
130 let moneyInPocket = 40;
131 console.log("I can buy drink: ", willBuyDrink(isHotOutside,moneyInPocket));
132 //13. Create a function of your own that solves a problem. In comments, write what the function does and why you created it.
133 function willBlowColdAir(temperature) {
134   if(temperature > 78) {
135     return "Turn on AC";
136   } else {
137     return "Keep AC turned off";
138   }
139 }
140 //initialize function
141 let temperature = 75;
142 console.log(willBlowColdAir(temperature));
```

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JS indexjs U X
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105 }
106 console.log("sum of all the numbers in arr1: ", sum1);
107 let sum2 = 0;
108 for(let i=0;i<arr2.length;i++) {
109   console.log("Printed Number: ",arr2[i]);
110   sum2 = sum2 + arr2[i];
111 }
112 console.log("sum of all numbers in arr2: ", sum2);
113 if(sum1 > sum2) {
114   return "arr1 is greater than arr2"
115 } else {
116   return "arr2 is greater than arr1"
117 }
118 }
119 console.log(sumArray1(arr1,arr2));
120 //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 25.
121 function willBuyDrink(isHotOutside,moneyInPocket) {
122   if((isHotOutside) && (moneyInPocket > 25)) {
123     return true;
124   } else {
125     return false;
126   }
127 }
128 // I will initialize value
129 let isHotOutside = false;
130 let moneyInPocket = 40;
131 console.log("I can buy drink: ", willBuyDrink(isHotOutside,moneyInPocket));
132 //13. Create a function of your own that solves a problem. In comments, write what the function does and why you created it.
133 function willBlowColdAir(temperature) {
134   if(temperature > 78) {
135     return "Turn on AC";
136   } else {
137     return "Keep AC turned off";
138   }
139 }
140 //initialize function
141 let temperature = 75;
142 console.log(willBlowColdAir(temperature));
```



### Screenshots of Running Application:





# PROMINEO TECH

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Welcome | Elements | Console

top | Filter | Default levels | 4

```
name= Bob
concat names= Sam Tommy Tim Sally Buck Bob
Array(6)
name Sam
letter count= 3
name Tommy
letter count= 5
name Tim
letter count= 3
name Sally
letter count= 5
name Buck
letter count= 4
name Bob
letter count= 3
pushed sum of letters of each name to NameLengths=
Array(6)
nameLength: 3
nameLength: 5
nameLength: 3
nameLength: 5
nameLength: 4
nameLength: 3
sum of nameLengths array= 23
HelloHelloHello
Ruben Delacruz
Printed Number: 100
Printed Number: 50
Printed Number: 200
Printed Number: 80
```

Console | Issues | JavaScript Profiler

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Welcome | Elements | Console

top | Filter | Default levels | 4

```
nameLength: 4
nameLength: 3
sum of nameLengths array= 23
HelloHelloHello
Ruben Delacruz
Printed Number: 100
Printed Number: 50
Printed Number: 200
Printed Number: 80
Printed Number: 120
Printed Number: 60
sum of all numbers in array 610
true
3
Printed Number: 100
Printed Number: 200
Printed Number: 300
Printed Number: 400
sum of all the numbers in arr1: 1000
Printed Number: 0
Printed Number: 100
Printed Number: 20
Printed Number: 10
Printed Number: 30
sum of all numbers in arr2: 160
arr1 is greater than arr2
I can buy drink: false
keep AC turned off
```

Console | Issues | JavaScript Profiler

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