Intro to JavaScript Week 3 Coding Assignment

Points possible: 75

URL to Your GitHub Repository: njyecats/Week3: Week3 (github.com) – GitHub page is active.

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

```
1   <!DOCTYPE html>
2   <html lang="en">
3   <head>
4       <meta charset="UTF-8">
5       <meta http-equiv="X-UA-Compatible" content="IE=edge">
6       <meta name="viewport" content="width=device-width, initial-scale=1.0">
7       <title>Week 3</title>
8   </head>
9   <body>
10      <script src="index.js"></script>
11      <script src="indexwk3.js"> </script>
12  </body>
13  </html><!-- <html>
14      <head>
15
16      </head>
17  </html> -->
```

PROMINEO TECH

```
var ages = [3, 9, 23, 64, 2, 8, 28, 93];
var res = ages [ages.length-1]-ages[0];
console.log (res);
ages.push (40);
res = ages [ages.length-1]-ages[0];
console.log (res);
var total = 0;
for(let i = 0; i < ages.length; i++){
    total+=ages[i];
}
console.log (total/ages.length);

var names = ["Sam", "Tommy", "Tim", "Sally", "Buck", "Bob"];
console.log (names);
var letters = 0;
var cat = '';
var nameLengths = [];
nameLengths.length = names.length;

for (let i = 0; i < names.length; i++){
    nameLengths [i]=names [i].length;

    cat+=names[i]+ ' ';
    console.log (names[i].length);
    letters+=names[i].length;
}
console.log (nameLengths);
console.log(cat);
ages [ages.length-1];
console.log ('the last element of ages is: ' + ages[ages.length-1]);

console.log ('the first element of ages is: ' + ages[0]);
total=0;
for (let i = 0; i < nameLengths.length; i++) {
total += nameLengths [i];
}
console.log (total);

function repeatCat(word, n)
{var results = '';
for(let i = 0; i < n; i++)
{
results+=word;
}
return results;
};
console.log(repeatCat("Hello", 3));
```

PROMINEO TECH

```
function createFullName(firstName, lastName) {
return firstName + ' ' + lastName;
}


function sumArray(numbers)
{let sum = 0;
for (let i = 0; i < numbers.length; i++) {
  sum += numbers[i]
}
return sum > 100;
}
console.log(sumArray(ages));


function avgArray(numbers)
{let sum = 0;
for(let i = 0; i < numbers.length; i++){
    sum+=numbers[i];
}
return sum/numbers.length;
}
console.log (avgArray(ages));

function compareArray(first, second)
{
return avgArray (first)> avgArray (second);
}
console.log (compareArray(ages, nameLengths));

function willBuyDrink (isHotOutside, moneyInPocket)
{
return isHotOutside && (moneyInPocket > 10.50)
}
console.log ("Will Buy Drink Testing");
console.log (willBuyDrink(true, 20));
console.log (willBuyDrink(true, 9.99));
console.log (willBuyDrink(false, 12));
console.log (willBuyDrink(false, 10));

```

Screenshots of Running Application:

PROMINEO TECH

Set root folder | Don't show again

top | Filter | Default levels | 1

▶ (6) ['Sam', 'Tommy', 'Tim', 'Sally', 'Buck', 'Bob']	index.js:14
3	index.js:24
5	index.js:24
3	index.js:24
5	index.js:24
4	index.js:24
3	index.js:24
▶ (6) [3, 5, 3, 5, 4, 3]	index.js:27
Sam Tommy Tim Sally Buck Bob	index.js:28
the last element of ages is: 40	index.js:30
the first element of ages is: 3	index.js:32
23	index.js:37
HelloHelloHello	index.js:47
true	index.js:62
30	index.js:72
true	index.js:78
Will Buy Drink Testing	index.js:84
true	index.js:85
false	index.js:86
false	index.js:87
false	index.js:88
Initial House Prices	indexwk3.js:12
Number of Houses for sale 10	indexwk3.js:13
Average House Price 483170	indexwk3.js:14
Number of Houses for sale 13	indexwk3.js:13
Average House Price 428653.8461538461	indexwk3.js:14
Number of Houses for sale 17	indexwk3.js:13
Average House Price 444500	indexwk3.js:14
Number of Houses for sale 25	indexwk3.js:13
Average House Price 437376	indexwk3.js:14
Number of Houses for sale 23	indexwk3.js:13
Average House Price 441543.47826086957	indexwk3.js:14
Number of Houses for sale 22	indexwk3.js:13
Average House Price 449886.36363636365	indexwk3.js:14
Number of Houses for sale 21	indexwk3.js:13
Average House Price 453023.8095238095	indexwk3.js:14
Number of Houses for sale 23	indexwk3.js:13
Average House Price 451891.3043478261	indexwk3.js:14
Week End House Prices	indexwk3.js:12
Number of Houses for sale 21	indexwk3.js:13
Average House Price 457500	indexwk3.js:14

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