Intro to JavaScript Week 3 Coding Assignment

Points possible: 75

URL to Your GitHub Repository:

https://github.com/beebegun2/Week_3_coding_assignment.git

URL to Your Coding Assignment Video:

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.

```
//1.    Create an array called ages that contains the following values: 3, 9, 23, 64, 2, 8, 28, 93.

let ages = [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.
        //this means subtract (position 0) from the value of in the last element which is (position 7) but don't use the numbers to reference
        the last element. ... that means use ages.pop and ages.shift
        console.log("original array",ages);
        let lastEl = ages.pop();
        let firstEl = ages.shift();

        console.log(lastEl-firstEl);

//    b.    Add a new age to your array and repeat the step above to ensure it is dynamic (works for arrays of different lengths).

for(let i = 0; i < ages.push; i++){

}
ages.push(98);
    console.log("ages after push",ages);

//    c.    Use a loop to iterate through the array and calculate the average age. Print the result to the console.
let total = 0;

for(let i = 0; i < ages.length; i++){
    total = total + ages[i];
    // 0 = 0 + 3
    // 3 = 3 + 9
    // 12 = 12 + 23 etc...
}
console.log(total);
console.log(total / ages.length);
```

2.

```
//2.    Create an array called names that contains the following values: 'Sam', 'Tommy', 'Tim', 'Sally', 'Buck', 'Bob'.

let names = ['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.
    */
for (let i = 0; i < names.length; i++) {

average = names.join('').length / names.length
console.log(average)
}
/*  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.*/
// use a loop to iterate thru the array again and concatenate all of the names together
// then separate by spaces
// print to console logs

console.log(names);

// loop concatenating all of the names together then separate with spaces ..instead of '' use ' '
for (let i = 0; i < names.length; i++) {

nameJoin = names.join(' ')
console.log(nameJoin)
}
```

```
▶ (6) ['Sam', 'Tommy', 'Tim', 'Sally', 'Buck', 'Bob']        Week3.js:64
6 Sam Tommy Tim Sally Buck Bob                               Week3.js:70
>
```

5.

```
let namesArray = ["Kelly", "Sam", "Kate"];
let nameLengths = namesArray.map(function(element){
    return element.length;
});
console.log(nameLengths);
```

```
▼ (3) [5, 3, 4] i
    0: 5
    1: 3
    2: 4
    length: 3
```

6.

```
let lengthSum = 0
for (let i = 0; i < nameLengths.length; i++) {

    lengthSum = lengthSum + nameLengths[i];
}
console.log(lengthSum);
```

```
12                                                    Week3.js:104
```

7.

```
108   let word = "Alright";
109   let n = 3;
110   console.log("Phrase by Matthew McConaughey");
111   function wordRepeat(){
112   for(let i = 0; i < word.repeat; i++){
113       wordRepeat = word.repeat, [3]
114   }
115   }
116   //call function
117   wordRepeat(word, n);
118
119   console.log (`${word.repeat(3)}`);
```

```
Phrase by Matthew McConaughey                         Week3.js:110
AlrightAlrightAlright                                 Week3.js:119
```

8.

```
function fullName(firstName, lastName){
    return firstName + " " + lastName;
 }

 //calling the function and assigning the return to a variable
 var fullname = fullName("Shannon", "Beebe");

 console.log(fullname)
```

Shannon Beebe Week3.js:124

9.

```
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.
// make a function of numbers */
function addingNumbers(myArrayParameter) {
console.log("This is my function of adding numbers", myArrayParameter);
//return a boolean return true - if sum of all together is more than 100 / else return false i.e. ... if (a + b < c){ console.log
("False")}else{console.log(false);} a is the parameter... b is the array... c is the boolean
if(myArrayParameter + myArray > 100) {
    console.log('True');
}else{
console.log('False');
}
}
//make an array
let myArray = [5, 9, 14, 30, 6];
//referencing the parameter from above
addingNumbers(myArray);
```

This is my function of adding numbers Week3.js:130

▼ *(5) [5, 9, 14, 30, 6]*

- 0: 5
- 1: 9
- 2: 14
- 3: 30
- 4: 6
- length: 5
- ▶ [[Prototype]]: Array(0)

False Week3.js:135

10.

```
let avg = myNum => {
    let sum = myNum.reduce((a, b) => a + b);
    let average = sum/myNum.length;
    return average;
  }

  console.log(avg([18, 21, 23, 28, 44, 45]));


  let myNumbers = [18, 21, 23, 28, 44, 45];
  let newArray = [1,2,3,4]

function calcAverage(array){ //inside paranthesis is a parameter
    let total = 0; //always need a starting number
    let average;
    console.log(average)
    //body of the function - logic - calculate average
    // we know we need to itterate our array to calc average
    for(let i =0; i < array.length; i++) {
        total = total + array[i] //we are adding every number of the array
        //0 = 0 +18
        //18 = 18 + 21
        //etc until the final output
        console.log(array.length)
        average = total / array.length
    }
    console.log(total)
    console.log(average)
}

//call function
calcAverage(myNumbers); //inside paranthises is called the "argument to the function"
```

```
29.833333333333332                    Week3.js:151
6 6                                   Week3.js:168
179                                   Week3.js:171
29.833333333333332                    Week3.js:172
```

11.

```
let myNumbers2 = [18, 21, 23, 28, 44, 45];
  let newArray2 = [1,2,3,4]

function calcAverage2(array, array2){ //inside paranthesis is a parameter
    let total2 = 0; //always need a starting number
    let average2;
    console.log("This is my function of averaging two arrays of numbers then finding which array is highe
    //body of the function - logic - calculate average
    // we know we need to itterate our array to calc average
    for(let i =0; i < array2.length; i++) {
        total2 = total2 + array2[i] //we are adding every number of the array
        //0 = 0 +18
        //18 = 18 + 21
        //etc until the final output
        console.log(array2.length)
        average2 = total2 / array2.length
    }
    let total = 0; //always need a starting number
    let average;
    //body of the function - logic - calculate average
    // we know we need to itterate our array to calc average
    for(let i =0; i < array.length; i++) {
        total = total + array[i] //we are adding every number of the array
        //0 = 0 +18
        //18 = 18 + 21
        //etc until the final output
        console.log(array.length)
        average = total / array.length
}
console.log(average, average2);
if(array > array2){
    console.log ("Array is larger than Array2")
}
else if(array < array2){
    console.log("Array2 is larger than Array")
}
}
//call function
calcAverage2(myNumbers, newArray); //inside paranthises is called the "argument to the function"
```

```
4 4                                              Week3.js:194
6 6                                              Week3.js:206
  29.833333333333332 2.5                         Week3.js:209
  Array is larger than Array2                    Week3.js:211
```

12.

```
222   //12.   Write a function called willBuyDrink that takes a boolean isHotOutside, and a number moneyInPocke
      if moneyInPocket is greater than 10.50.
223   //write a function
224   let temp = 98;
225   let moneyInPocket = 15;
226   console.log("This is my function willBuyDrink if its hot and I have enough money");
227   function willBuyDrink() {
228
229   }
230   //create a boolean isHotOutside and a number moneyInPocket
231   if((temp > 100) && (moneyInPocket > 10.50)){
232       console.log("true")
233   }
234   else if ((temp < 100) || (moneyInPocket < 10.50)){
235       console.log("It is not hot enough to buy a drink")
236   }
237   //return true if it is hot outside AND if moneyInPocket is greater than 10.50
238
239   //call function
240   willBuyDrink(temp, moneyInPocket);
```

```
This is my function willBuyDrink if its hot and I have enough money   Week3.js:226
It is not hot enough to buy a drink                                   Week3.js:235
>
```

13.

```
function myDogsNames(a,b){
    console.log("I needed an easier function after this coding Assignment");

return a + ' '+ b;
}
console.log(myDogsNames('Marley',"and"+" " + 'Mina'));
```

```
I needed an easier function after this coding Assignment   Week3.js:254
Marley and Mina                                            Week3.js:258
>
```