Intro to JavaScript Week 3 Coding Assignment

Points possible: 75

URL to Your GitHub Repository:

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

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

var ages = [3, 9, 23, 64, 2, 8, 28, 93];

console.log(ages[ages.length -1] - ages[0]);

/*Add a new age to your array and repeat the step above to ensure it is dynamic (works for arrays of different lengths).
Use a loop to iterate through the array and calculate the average age. Print the result to the console.*/
console.log(ages.push(43));
console.log(ages);
console.log(ages[ages.length - 1] - ages[0]);

let total = 0
for (let i = 0; i < ages.length; i++) {
    const age = ages[i]
    total = (total + age)
}
console.log(total / ages.length)

//#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"];

console.log(names);

//Use a loop to iterate through the array and calculate the average number of letters per name.Print the result to the console.

let x = 0;

for (let i = 0; i < names.length; i++) {
    x = x + names[i].length    //23 letter in total
}
console.log(x / names.length);    //23 is divided by 6 (# of words)

//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.

for (let i = 0; i < names.length; i++) {
    console.log(names.join(" "));    //add space in between the quotes to create space between words
}
```

```
// #3 How do you access the last element of any array ?
let arr1 = [1, 2, 3, 4];
let lastElement = arr1[arr1.length - 1];

console.log(lastElement);

//#4 How do you access the first element of any array ?
let firstElement = arr1[0];

console.log(firstElement);

/* #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 */

let namesArray = ["Kelly", "Sam", "Kate"];
let nameLengths = [5, 3, 4];

for (let i = 0; i < namesArray.length; i++) {
    nameLengths.push(namesArray[i].length);
}
console.log(nameLengths);


// #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.
let z = 0

for (let i = 0; i < nameLengths.length; i++) {
    z += nameLengths[i];
}
console.log(z);
```

PROMINEO TECH

```
// #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').
function ccc(word, n) {
    let x = "";
    for (let i = 0; i < n; i++) {
        x += word
    } return x;
}
console.log(ccc("Hello", 3));

// #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).

function fullName(firstName, lastName) {
    return `${firstName} ${lastName}`
}
console.log(fullName("Edgar", "Carpinteyro"));

// #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.

let arrNum = [100, 23, 45]

function arrIsGreater(arrNum) {
    let sum = 0;
    for (let i = 0; i < arrNum.length; i++) {
        sum = sum + arrNum[i];
    } if (sum > 100) {
            return true;
        } else {
            return false;
        }
    };
console.log(arrIsGreater(arrNum));
```

```
//#10 Write a function that takes an array of numbers and returns the average of all the elements in the array.
let arrNum2 = [10, 20, 30, 40]

function aveEle(z) {
    let m = 0
    for (let i = 0; i < z.length; i++) {
        m = m + z[i]
    } return m / (z.length);
}
console.log(aveEle(arrNum2));

//#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.

let ar1 = [9, 8, 7, 6]
let ar2 = [5, 10, 4, 3]

function arGreater() {
    let add1 = ar1.reduce((accumulator, value) => {
        return accumulator + value;
    }, 0);
    let add2 = ar2.reduce((accumulator, value) => {
        return accumulator + value;
    }, 0);
    if (add1 > add2) {
        return true;
    } else {
        return false;
    }
};
console.log(arGreater())

//#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.

function willBuyDrink (isHotOutside, moneyInPocket) {
    if (isHotOutside = true && moneyInPocket > 10.50) {
        return true;
    } else {
        return false;
    }
};

console.log(willBuyDrink(true, 15.75))
```


```
149
150  // #13 Create a function of your own that solves a problem.In comments, write what the function does and why you created it.
151
152  /* PROBLEM: Create a function called willGoBachataDancng to determine if you have time to go dancing on Wednesdays. If
     completedHomework is completed, timeOfDay is less than 9pm, and wellRested is yes, return true; else return false. If true, return
     the following message in a string: "Yay, I will go bachata dancing! :)"; if false: "I can go bachata dancing next week."
153  */
154
155
156  function willGoBachataDancing(completedHomework, timeOfDay, wellRested) {
157      if ((completedHomework == "completed") && (timeOfDay < 9) && (wellRested == "yes")) {
158          return "Yay, I will go bachata dancing! :)";
159      } else {
160          return "I can go bachata dancing next week.";
161      }
162  };
163
164  console.log(willGoBachataDancing("completed", 8, "yes"));
165
```

```
90                                                          index.js:8
9                                                           index.js:12
▶ (9) [3, 9, 23, 64, 2, 8, 28, 93, 43]                      index.js:13
40                                                          index.js:14
30.333333333333332                                          index.js:21
▶ (6) ['Sam', 'Tommy', 'Tim', 'Sally', 'Buck', 'Bob']       index.js:26
3.8333333333333335                                          index.js:35
6 Sam Tommy Tim Sally Buck Bob                              index.js:40
4                                                           index.js:47
1                                                           index.js:52
▶ (6) [5, 3, 4, 5, 3, 4]                                    index.js:64
24                                                          index.js:73
HelloHelloHello                                             index.js:82
Edgar Carpinteyro                                           index.js:89
true                                                        index.js:105
25                                                          index.js:134
true                                                        index.js:154
true                                                        index.js:166
Yay, I will go bachata dancing! :)                          index.js:182
>
```