PROMINEO TECH

Intro to JavaScript Week 3 Coding Assignment

Points possible: 75

URL to Your GitHub Repository: https://github.com/CardioLeo/wk3_promineo

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, <u>ages[7]</u> – 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.

```
function challengeOne() {
const ages = [3, 9, 23, 64, 2, 8, 28, 93];
//step 1.a.:
console.log(ages[ages.length -1] - ages[0]);
//age 1.b.:
ages.push(67);
console.log(ages[ages.length -1] - ages [0]);
//age 1.c.:
let sum = 0
```

```
    for (let i = 0; i < ages.length; i++) {
        sum=+ages[i];
    }
    console.log(Math.round(sum/ages.length));
    }
     challengeOne();
```

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.

```
//2
const names = ["Sam", "Tommy", "Tim", "Sally", "Buck", "Bob"];
let sum = 0;
//2a.
function challengeTwo() {
   for (let i = 0; i < names.length; i++) {
      sum += names[i].length;
   }
console.log(sum / names.length);
let next = " ";
for (let i = 0; i < names.length; i++) {
   next += names[i]+" ";
   }
console.log(next.trim());
return 0;
}
challengeTwo();
```

3. How do you access the last element of any array?

```
const shades_of_red = ["scarlet", "maroon", "purple", "reddish-purple", "reddish-pink",
"pinkish", "red"];
const red=shades_of_red[shades_of_red.length - 1];
console.log(red);
```

4. How do you access the first element of any array?

```
const shades_of_red = ["scarlet", "maroon", "purple", "reddish-purple", "reddish-pink",
"pinkish", "red"];
console.log(shades_of_red[0]);
```

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 namesLength = [];
const namesArraySun = ["Kellog", "Samantha", "Katlyne"];
const namesArrayMon = ["Kelly", "Sam", "Kate"];
const namesArrayTue = ["Joe", "Curly", "Mo", "Carly", "Bob"];
const namesArrayWed = ["Carson", "Carsen", "Carlsen", "Carlson", "Carl's One Son"];
const namesArrayThu = ["Jam", "Bam", "Boo", "Bla"];
const namesArrayFri = ["Mike", "Hal",];
const namesArraySat = ["Ike"];

function challengeFive(arr) {
let i = 0;
while (i < arr.length) {
   namesLength[i] = arr[i].length;
   i++;
}
   console.log(arr);
   console.log(namesLength);
   return 0;
}
challengeFive(namesArraySun);
challengeFive(namesArrayMon);
challengeFive(namesArrayTue);
challengeFive(namesArrayWed);
challengeFive(namesArrayThu);
challengeFive(namesArrayFri);
challengeFive(namesArraySat);
```

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.

```
function challengeSix(arr) {
```

```
    let namesLength = [];
    let i = 0;
    let sum = 0;
    while (i < arr.length) {
        sum = sum + arr[i].length;
        namesLength[i] = arr[i].length;
        i++;
    }
      console.log(arr);
      console.log(namesLength);
      console.log(sum);
      return 0;
    }

    challengeSix(namesArraySun);
    challengeSix(namesArrayMon);
    challengeSix(namesArrayTue);
    challengeSix(namesArrayWed);
    challengeSix(namesArrayThu);
    challengeSix(namesArrayFri);
    challengeSix(namesArraySat);
```

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 ladyNYSnow(word, n) {
        let out = word;
        let in_out = "";
        for (let i = 0; i < n; i++) {
            in_out = in_out + word;
        }
      console.log(in_out);
      return 0;
    }

    let blarg = "Hello";
    ladyNYSnow(blarg, 3);
    ladyNYSnow("fellowshipofthe", 23);
    ladyNYSnow("helo", 123);
```

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 challengeEight(firstName, lastName) {
    let fullName = firstName + " " + lastName;
    console.log(fullName);
    return 0;
}

firstName = "Rascal";
lastName = "Scarlet";
challengeEight(firstName, lastName);
```

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.

```
function challengeNine(arrNum) {
  let sum = 0;
  let i = 0;
  while (i < arrNum.length) {
      sum = sum + arrNum[i];
      i++;
      if (sum > 100) {
  console.log("Wait! ... Now it's " + true + " - "+ sum + " is greater than 100!!
Congratulations!");
  } else {
  console.log("Unfortunately, " + sum + " is the sum so far, and that is smaller than
100!!");
}}
return 0;
}
const arrNumbersSafeForMe = [23, 25, 46, 231];
challengeNine(arrNumbersSafeForMe);
```

10. Write a function that takes an array of numbers and returns the average of all the elements in the array.

```
function challengeTen(arrNum) {
  let sum = 0;
  let i = 0;
  while (i < arrNum.length) {
      sum = sum + arrNum[i];
```

```
        i++;
    }
    console.log(sum / arrNum.length);
    return 0;
}
const arrGNumbSaf = [15, 25, 5, 15];
challengeTen(arrGNumbSaf);
```

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.

```
function challengeEleven(arrNum1, arrNum2) {
    let sum1 = 0;
    let i1 = 0;
    while (i1 < arrNum1.length) {
        sum1 = sum1 + arrNum1[i1];
        i1++;
    }

    let num1 = sum1 / arrNum1.length;

    let sum2 = 0;
    let i2 = 0;
    while (i2 < arrNum2.length) {
        sum2 = sum2 + arrNum2[i2];
        i2++;
    }
    let num2 = sum2 / arrNum2.length;

    console.log(num1 > num2);
    console.log(num1 + " is greater than " + num2);
    return 0
}
const arrGNumbSaf1 = [8, 2, 456, 231, 56];
const arrGNumbSaf2 = [2, 5, 7, 9, 11, 27];
challengeEleven(arrGNumbSaf1, arrGNumbSaf2);
```

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.

```
let isHotOutside = true;
```

```
let moneyInPocket = 25;

function willBuyDrink(bool, num) {
    if (bool === true && num > 10.50) {
        console.log(true);
    }
  return 0;
}

willBuyDrink(isHotOutside, moneyInPocket);
```

13. Create a function of your own that solves a problem. In comments, write what the function does and why you created it.

```
let isOnMyLinux = true;
let isInTerminal = true;
let havePreference = true;

function useBash(bool1, bool2, bool3) {
    if (bool1 === true && bool2 === true && bool3 === true) {
        console.log("You should definitely use bash for this assignment since it's on linux
and in the terminal!");
    } else {
            console.log("I suppose you could use JavaScript.....");
    }
  return 0;
}

useBash(isOnMyLinux, isInTerminal, havePreference);
```

Screenshots of Code:

Screenshots of Running Application: