Assignment-2 Javascript functions

Time:60 mins

1.Write a function named tellFortune that:

- takes 4 arguments: number of children, partner's name, geographic location, job title.
- outputs your fortune to the screen like so: "You will be a X in Y, and married to Z with N kids."
- Call that functions 3 times with 3 different values for the arguments.

Coding:

```
// Function to tell fortune
function tellFortune(numChildren, partnerName, location, jobTitle)
{
   var fortune = "You will be a " + jobTitle + " in " + location + ", and married to " + partnerName +
" with " + numChildren + " kids.";
   console.log(fortune);
}
// Call the function with different values
tellFortune(2, "Kumar", "Chennai", "Software Engineer");
tellFortune(0, "Raman", "Bengalore", "Writer");
tellFortune(3, "Arun", "Mumbai", "Architect");
```

Output:

```
You will be a Software Engineer in Chennai, and married to Kumar with 2 kids.
You will be a Writer in Bengalore, and married to Raman with 0 kids.
You will be a Architect in Mumbai, and married to Arun with 3 kids.
```

2.**The Puppy Age Calculator**

You know how old your dog is in human years, but what about dog years? Calculate it!

Write a function named calculateDogAge that:

takes 1 argument: your puppy's age.

calculates your dog's age based on the conversion rate of 1 human year to 7 dog years.
outputs the result to the screen like so: "Your doggie is NN years old in dog years!"
Call the function three times with different sets of values.
Bonus: Add an additional argument to the function that takes the conversion rate of human to dog years.

Coding:

```
function calculateDogAge(puppyAge, conversionRate = 7)
{
   var dogAge = puppyAge * conversionRate;
   console.log("Your doggie is " + dogAge + " years old in dog years!");
}

// Call the function with different values and conversion rates
calculateDogAge(2);
calculateDogAge(3, 6);
calculateDogAge(1, 8);
```

Output:

Your doggie is 14 years old in dog years!
Your doggie is 18 years old in dog years!
Your doggie is 8 years old in dog years!

3.**The Lifetime Supply Calculator**

Ever wonder how much a "lifetime supply" of your favorite snack is? Wonder no more!
Write a function named calculateSupply that:
takes 2 arguments: age, amount per day.
calculates the amount consumed for rest of the life (based on a constant max age).
outputs the result to the screen like so: "You will need NN to last you until the ripe old age of X"
Call that function three times, passing in different values each time.
Bonus: Accept floating point values for amount per day, and round the result to a round number.

Coding:

```
function calculateSupply(age, amountPerDay)
{
    // Assuming a constant max age
    const maxAge = 75;

    // Calculate the total amount needed
    var totalAmount = Math.round((maxAge - age) * 365 * amountPerDay);



    console.log("You will need " + totalAmount + " to last you until the ripe old age of " + maxAge);
}

// Call the function with different values
calculateSupply(20, 1000);
calculateSupply(25, 1500);
calculateSupply(35, 2000);
```

Output:

You will need 20075000 to last you until the ripe old age of 75

You will need 27375000 to last you until the ripe old age of 75

You will need 29200000 to last you until the ripe old age of 75

4.**The Geometrizer**

Create 2 functions that calculate properties of a circle, using the definitions here.

Create a function called calcCircumfrence:

Pass the radius to the function.

Calculate the circumference based on the radius, and output "The circumference is NN".

Create a function called calcArea:

Pass the radius to the function.

Calculate the area based on the radius, and output "The area is NN".

Coding:

```
// Function to calculate circumference
function calcCircumference(radius)
{
   // Assuming π (pi) is approximately 3.14159
   var circumference = 2 * Math.PI * radius;
   console.log("The circumference is " + circumference.toFixed(2));
}

// Function to calculate area
function calcArea(radius)
{
   // Assuming π (pi) is approximately 3.14159
   var area = Math.PI * Math.pow(radius, 2);
   console.log("The area is " + area.toFixed(2));
}

// Example usage
var radius1 = 9;
var radius2 = 7;

calcCircumference(radius1);
calcArea(radius1);

calcCircumference(radius2);
calcArea(radius2);
```

Output:

The circumference is 56.55
The area is 254.47
The circumference is 43.98
The area is 153.94

5.**The Temperature Converter**

It's hot out! Let's make a converter based on the steps here.

Create a function called celsiusToFahrenheit:

Store a celsius temperature into a variable.

Convert it to fahrenheit and output "NN°C is NN°F".

Create a function called fahrenheitToCelsius:

Now store a fahrenheit temperature into a variable.

Convert it to celsius and output "NN°F is NN°C."

Coding:

```
// Function to convert Celsius to Fahrenheit
function celsiusToFahrenheit(celsius)
{
    var fahrenheit = (celsius * 9/5) + 32;
    console.log(celsius + "°C is " + fahrenheit.toFixed(2) + "°F");
}

// Function to convert Fahrenheit to Celsius
function fahrenheitToCelsius(fahrenheit)
{
    var celsius = (fahrenheit - 32) * 5/9;
    console.log(fahrenheit + "°F is " + celsius.toFixed(2) + "°C");
}

// Example usage
var celsiusTemperature = 36;
var fahrenheitTemperature = 98;
```

celsiusToFahrenheit(celsiusTemperature);

fahrenheitToCelsius(fahrenheitTemperature);

Output:

36°C is 96.80°F

98°F is 36.67°C