JavaScript For-Loop Assignment

Introduction

In this assignment, you will be practicing more with JavaScript for-loops. These challenges will cover counting with loops, using loops with arrays, and combining loops with conditionals.

Instructions

Challenge 1: Multiples of Three

1. Write a for-loop that counts from 1 to 30. For each number, if it's a multiple of 3, log "Fizz" to the console. If it's not, log the number itself.

Hint: Use the modulus operator (**%**). If **num % 3** equals **0**, **num** is a multiple of **3**.

Challenge 2: Looping through Arrays and Modifying Elements

1. Create an array **numberList** with numbers from 1 to 10.
2. Write a for-loop that iterates through each index in the **numberList** array. Multiply the number at each index by 5, and update the element at that index with the new number.
3. Log the updated array to the console.

Hint: Access an array element with **array[index]** and you can update it by assigning a new value.

Challenge 3: Looping through String Arrays

1. Create a string array **wordsArray** with words "cat", "window", "bottle", "car", "JavaScript".
2. Write a for-loop that goes through each index in the **wordsArray**. If the word at that index has more than 4 letters, log "Long word alert!" to the console. Otherwise, log the word itself.

Hint: Use the **length** property on strings to check how many characters it has. e.g., **"word".length**.

Challenge 4: Updating TextContent of a Paragraph

1. Write a for-loop that counts from 1 to 5.
2. For each iteration, add the current number to the **textContent** of a **<p>** element with an ID of **"myParagraph"**.

Hint: You can select HTML elements with **document.getElementById()** and modify their **textContent**.

Challenge 5: Odd Numbers with For-Loops and Conditionals

1. Write a for-loop that counts from 1 to 20.
2. Within the for-loop, use an if-statement to check if the current number is odd. If it is, log the number to the console.

Hint: An odd number when divided by **2** has a remainder of **1**.

Submission

Once you have completed all the challenges, save your work, and submit your script (.js) file according to the submission instructions.