Week One JavaScript Assessment Exercises

Exercise 1

- Declare a variable itemPrice and set it to 19.99.
- Declare a variable quantity and set it to 3.
- Calculate the totalCost by multiplying itemPrice and quantity.
- Declare a variable discountPercentage and set it to 0.15 (for 15%).
- Calculate the discountAmount by multiplying totalCost by discountPercentage.
- Calculate the finalPrice by subtracting discountAmount from totalCost.
- Print the finalPrice to the console, formatted to 2 decimal places (you can use toFixed(2)).

Exercise 2

- Create an array called colors containing the strings "red", "green", "blue", "yellow".
- Use a for loop to iterate through the colors array.
- Inside the loop, print each color name to the console.
- Looping with a Simple Condition:
- Use a for loop to loop through numbers from 1 to 20.
- Inside the loop, use an if statement to check if the current number is divisible by 4.
- If the number is divisible by 4, print the number to the console.

Exercise 3

- Create an array called grades containing the numbers `[85, 92, 78, 95, 88]`.
- Declare a variable sumOfGrades and initialize it to 0.
- Use a loop to iterate through the grades array.
- Inside the loop, add the current grade to sumOfGrades.
- After the loop, print the final sumOfGrades to the console.

Exercise 4

- Create an array called temperatures with the following values: `[32, 45, 60, 75, 82, 55, 90]`.
- Create an empty array called warmTemperatures.
- Use a loop to iterate through the temperatures array.
- Inside the loop, use an if statement to check if the current temperature is greater than 60.
- If the temperature is greater than 60, add it to the warmTemperatures array.
- After the loop, print the warmTemperatures array to the console.

Exercise 5

- Create an array called words containing the strings `["apple", "banana", "cat", "dog", "elephant", "fig"]`.
- Declare a variable longWordCount and initialize it to 0.
- Use a loop to iterate through the words array.
- Inside the loop, use an if statement to check if the length of the current word is greater than 5.
- If the word's length is greater than 5, increment longWordCount.
- After the loop, print the longWordCount to the console.

Exercise 6

- Create an array called points with the following values: `[1, 4, 3, 6, 5, 2]`.
- Create an empty array called processedPoints.
- Use a loop to iterate through the points array.
- Inside the loop, use an if statement:
- If the current number is even, multiply it by 10 and add the result to processedPoints.
- If the current number is odd, add 5 to it and add the result to processedPoints.
- After the loop, print the processedPoints array to the console.

Exercise 7

- Create an array called dataPoints with the following values: `[15, 8, 22, 11, 30, 5, 18]`.
- Declare variables minimumValue and maximumValue. Initialize minimumValue to the first element of the array and maximumValue to the first element of the array.
- Use a loop to iterate through the dataPoints array starting from the second element.
- Inside the loop, use if statements to compare the current element with minimumValue and maximumValue, updating them as needed.
- After the loop, print both the minimumValue and maximumValue to the console.

Exercise 8

Create an object called studentScores with the following structure:

```
let studentScores = {
  math: 90,
  science: 85,
  history: 78,
  art: 92,
};
```

- Use a for...in loop to iterate through the studentScores object.
- Inside the loop, print the name of the subject (the key) and its corresponding score (the value) to the console (e.g., "Subject: math, Score: 90").

Good luck!