Software Development

JavaScript
Lesson 3

Learning objectives

1. Code with control flow statements

Agenda

01. Recap

02. Iteration

03. Loops

04. Practice

Recap

- What is a conditional statement?
- What is a switch statement?
- What is an arrow function?
- Truthy / falsy
- Variables and functions exercise

Iterative statements

- **for** loops
- **Exercise:** Sum of 1 to 10 numbers
- Array iteration methods
  - **forEach**
  - **map**
  - **filter**
  - **reduce**

Break

Exercise

- Create an array of fruit names (apple, banana, cherry, pear, strawberry)
- Use map, filter and reduce to calculate the total word length for fruits that have an even number of letters
  - Calculate the total characters of all fruits, which has even length characters

Answer: 26

Other loops

- **while** loops
- **do…while** loops
- **for…of** loops
- **for…in** loops

Loop control

- **break** statement
- **continue** statement

Exercise

We have a color array. Ex: colors = ["red", "blue", "green", "yellow"];

1. Use **forEach** to print each element in an array of colors.
2. Use **map** to create a new array that contains the lengths of each color in the colors array.
3. Use **filter** to create a new array that contains only the colors with names longer than 3 letters.
4. Use **reduce** to find the total length of all color names in the colors array.
5. Create a new array that contains the uppercase version of each color that has more than 3 letters using a combination of **filter** and **map**

Exercise

Complete each task 3 times, using a **for**, **while** and **do…while** loop:

1. Print numbers from 1 to 10
2. Calculate and print the sum of even numbers from 1 to 20
3. Choose a number and print its multiplication table up to 10

For next class

1. **Complete the iteration exercises from the LMS**

2. **Review the next lesson**