Software Development

JavaScript
Lesson 1

Learning objectives

1. **Create JavaScript variables**

2. **Recognize basic functions**

3. **Write JavaScript expressions**

4. **Set up a local Git repository**

Agenda

CIRCUIT STREAM

Introduction

- Objectives
  - Code dynamic behaviours using JavaScript
  - Manipulate HTML elements to make interactive websites utilizing the Document Object Model (DOM)
  - Debug code
  - Use JavaScript documentation
  - Code API interactions
- Assignments
  - Rock, paper, scissors game
  - Random animal pictures from API
  - Interactive personal website (assessed)

Learning advice

- Get used to breaking down problems
- Use the documentation
- Common pitfalls
  - Overlooking basics
  - Relying on copy & pasting
  - Ignoring practice
  - Skipping problem-solving
  - Not seeking help

Git

- What is a Version Control System (VCS)?
    - Complete change history of every file
    - Branching and merging
    - Traceability
- VCS vs DVCS
- Review Git lesson

HTML/CSS and JavaScript

- Use of the **<script>** tag
- Inline JavaScript
- Internal JavaScript
- External JavaScript

Break

Agenda

01. ~~Introduction to JavaScript~~

02. ~~Git~~

03. ~~HTML/CSS and JavaScript~~

04. Variables

05. Operators and expressions

Variables

- Declaring a variable with **let** and **const**
- Variable types
  - String
  - Number
  - Boolean
  - Undefined
  - Null
  - Object
  - Array
  - Date
- String concatenation and template literals

Operators and expressions

- Operators
  - Assignment
  - Comparison
  - Arithmetic
  - Logical
- Expressions
  - **this**
  - Grouping **( )**
  - **new**

For next class

1. Do the Variables and Functions Exercise in the LMS

2. Do the Git lesson (if you haven't already)

3. Signup in codepen.io for smaller exercises

4. Review the next lesson