WILD CODE SCHOOL

Simple Calculator

JS Workshop

Context

The purpose of this workshop is to guide you through the following core fundamentals in JavaScript via building a Calculator.

During this workshop, we will learn to manipulate :

- Variables
- Operators
- Types
- Control structures

Starting Point - 15 min

Complete the following steps to start the project using your terminal

1. Create a new folder "simple-calculator" and create an empty index.html file.
2. Open the file with your favorite IDE and add the HTML5 structure.
3. In the <body>, add a <script> tag with the code console.log('Hello world');
4. Open index.html in a browser, open the console (F12) and check that you can read the message: 'Hello world'.
5. If it's the case, that's mean you are good to go! You can now remove the "console.log('Hello world');"

You are ready to start!

Wait for the correction or help your classmates

Challenge - 15 min

Let's go back to *index.html*.
The first step in creating our calculator is to instantiate the variables.

1. Create 3 variables:
   a. *firstValue* which will be assigned to the number **1**
   b. *operator* which will be assigned to the string **"+"**
   c. *secondValue* which will be assigned to the number **2**
2. Add three console.log to print the value of *firstValue*, *secondValue* and *operator* in your browser console
3. Check in the browser that you can see the values
4. Now, replace the values using the prompt function to ask the user to type it.
5. What are the prints of the three previous logs?

Wait for the correction or help your classmates

Challenge - 10 min

1. Back to our calculator :
2. Remove the three console.log(...) from your code
3. Add a console.log of firstValue + secondValue: what is the print?
4. Why?
5. Convert the values from string to number with the function parseInt, eg: value = parseInt(value);
6. Now what is the print of the log?

Wait for the correction or help your classmates

Challenge - 10 min

Getting back to our index.html file,

1. Remove the previous console.log(...) from your code
2. Now you will add a condition on the value of the operator :
3. First you will test if the operator is equal to "+" If so, do a console.log of firstValue + secondValue.
4. Then, in any other case, do a console.log of firstValue - secondValue.

Wait for the correction or help your classmates

Challenge - 10 min

1. Now, modify your code in order to use the "switch/case" control structure, and add conditions on "+", "-", "*" and "/".
2. In each case, log the corresponding mathematical operation.
3. Add a default case which logs "Invalid operator".

Wait for the correction or help your classmates

Bonus : move all the code to a function to make it reusable

The price is right - 1 hour

1. - Ask the player's name
2. - Store a random number between 1 and 100 :

   *const random = Math.floor(Math.random() * 100) + 1;*

3. - Ask a number to the player (between 1 and 100)
4. - If the player's number is over the stored value, log "It is less"
5. - If the player's number is under the stored value, log "It is more"
6. - If the player's number equals the stored value, log "<player> wins" (where <player> is replaced by the player's name)
7. - The game stops when the player wins

Wait for the correction or help your classmates