JAVASCRIPT | DAY 3 | CLASSWORK

Basic Exercises

Terms and Conditions:

Each exercise can be solved in various ways, so please provide your own unique solutions

Ex 1 | Highest value in an array

Create a program to find the highest value in an array.
For example, given an array with the values 1, 7, -3, 9, your program should efficiently pinpoint and return the highest value, which in this case is 9.

Ex 2 | Temperature v2.0

Remember the other day's exercise where you had to create a function about providing information about the weather. Now if you have finished it successfully it is time to upgrade it to the version 2.0. You should create a nice looking responsive front-end for your program (mobile friendly) and introduce more detailed weather descriptions. (e.g. If the temperature is above 32°C, the program could say, "The weather is hot." etc). Moreover you also need to display a proper image for the current weather condition.

Intermediate Exercises

Ex 1 | Compare two numbers

Create a JavaScript program that will calculate and display the average grade for each student in the class.

Here are the points for each student:

Martin = 76,64,81,57,94

Thomas = 85,49,81,72,55

Klaus = 65,91,84,67,85

Maria = 93,70,81,64,84

David = 81,99,71,100,69

Based on their average score, output the grade, according to this scale:

- Below 60 = F
- Below 70 = D
- Below 80 = C
- Below 90 = B
- Below 100 = A

Finally, calculate the class average and output it (e.g. if the class average is 74 points, their average grade will be C).

Ex 2 | FizzBuzz

Create a JavaScript program which iterates the integers from 1 to 100.

- For multiples of three print "Fizz" instead of the number
- For the multiples of five print "Buzz".
- For numbers which are multiples of both three and five print "FizzBuzz".

e.g.

1

2

Fizz

4

Buzz

Fizz

7

8

Fizz

Buzz

11

Fizz

13

14

FizzBuzz

16

17

Fizz

19

Buzz

etc.

Ex 3 | Pyramid Pattern Generator

Create a program that generates the classic pyramid pattern, using a loop. The pyramid should be constructed with asterisks (*), where each new line of the pyramid has one more asterisk than the line before it, starting from one asterisk at the top. Aim to replace the following pattern:

*

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Challenge

To solve this task, you will need two arrays: Student and MathGrades.In Students, store the names of students (e.g., ["John", "Jane"]). Correspondingly, in MathGrades, store their math grades (ranging from 0 to 100) at the same indexes as their names. For example:

Students = [“John”, “Jane”]

MathGrades = [70, 85]

Next, use a variable to store a student's name. This name should be compared against the names in the Students array. When a match is found, display the student's name and their math grade. The output should be formatted nicely, like so:
"John has reached 70 points in Math this season."
Furthermore the grades should also be checked and change the color based on the following conditions

- Less than 60: Red
- Between 60 and 70: Yellow
- Over 70: Green
- Exactly 100: Blue

Hint: Use the prompt() function to create an alert window where the user can enter a name. This name can then be stored in a variable. For example:

let result = prompt("type your name");