Session 3 Homework

Code For Everyone JavaScript

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|  | **Study** |

1. Variable swap

Swapping variable is to exchange the values of two variable so that at the end, one variable contains the value of the other

For example:

let a = 5;

let b = 6;

console.log(a, b); // Result: 5 6

<Perform swapping>

console.log(a, b); // Result: 6 5

Google **‘**JS swap variables**’** to learn about at least **2 ways** to perform this task, write at least **2 examples** to demonstrate you have acquired them, if you need hints, they are at the last page of this homework

1. Split String into Array

Using type conversion from String to Array

const s = ‘Hello beauty there’;

const a = Array(s);

console.log(a); // Result: [“Hello beauty there”]

Might NOT be what a developer expects; sometimes what they really want is

const s = ‘Hello beauty there’;

<Perform splitting>

console.log(a); // Result: [“Hello”, “beauty”, “there”]

Google ‘JS String splitting to Array’ to learn how to perform this task. Write an example to demonstrate your learning. If you need hints, again, they are at the last page of this homework

1. In JavaScript, the spread operator (three dots): **…** can be useful in several tasks. Of these tasks is to log (print out) an array without using loops, try it:

const a = [4, 5, 7, -8];

console.log(...a);

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|  | **Review** |

1. Write a script to simulate a clothes shop, asking and performing certain tasks from users

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*Note: If you want, though optional, you can make it more interesting by using alert instead of console.log to list the shop items*

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|  | **Serious exercices** |

1. Write a script to ask users enter a sequence of numbers, the Numbers are separated by commas, calculate the sum of the numbers and show it to users

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1. Write a script asking users to enter a sequence of numbers, the numbers are separated by commas, find the smallest number and log it out to users

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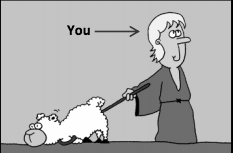
1. Create an array containing at least 5 numbers, then ask users enter a number, perform a search to look for the number in the array, if the number is found, tell user that with the index of it in the array, if not, also tell them so

const arr = [3, 4, 6, -9, 10, -88, 2];

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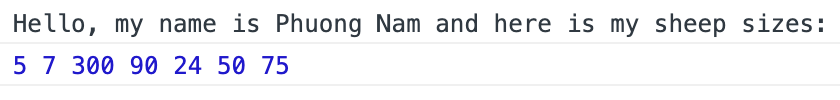
1. You are a shepherd who owns a flock of sheep



Each of your sheep of your flock has varied sizes:



* 1. Create an array to represent the sizes of your flock, and log all of your flock size, expected screen output:



* 1. At the end of each month, you have to choose one and only one sheep to shear and thus you want to choose the biggest one to maximize your profit. Add scripts to search for the biggest sheep in your list:

Hint: Google ‘JS Array find max’

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* 1. When your biggest sheer, its size will return to the default size, which is 8.

Hint: Google ‘JS Array indexOf

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* 1. In the following month, EVERY sheep in your flock grow, they have their size increased by 50. Log them out

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* 1. Let’s do this for 4 months (or as long as you want)

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* 1. After day by day shearing sheep, you became bored. You want to sell your flock to travel the world. In order to have fair trade, you must now calculate the total size of your sheep and then the expected money you can get from selling your flock, before going to the market. Write a program to calculate the total size of your sheep as well as the money you would have. Expected console output:

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|  | **Turtle exercices** |

1. Given the array

const colors = [‘red’, ‘gray’, ‘blue’, ‘purple’, ‘cyan’];

Use [JS Turtle](https://turtle.mindx.edu.vn/), to draw the following shapes

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|  | **Nice-to-do** |

1. (Optional) Write a script asking users to enter a sequence of names, separated by commas (,), Create a new array containing the names, each surrounded with <>. If you need hints, find them at the end of this homework

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1. (Optional) Write a script asking users to enter a sequence of Numbers, separated by commas (,). Create a new array containing only the odd Numbers of the entered sequence. If you need hints, they are at the end of this homework

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|  | **Hints** |

**Study**

1. Variable swap

First, check these links:

* [Stackoverflow - How to swap 2 variables](https://stackoverflow.com/questions/16201656/how-to-swap-two-variables-in-javascript/16201730)
* [Medium - how to swap 2 variables without using temporary variables](https://medium.com/better-programming/how-swap-two-values-without-temporary-variables-using-javascript-8bb28f96b5f6)

If you still get stuck, remember that your mentor is always be there to help :D

1. String splitting

First, check this link:

* <https://stackoverflow.com/questions/2858121/how-to-convert-a-comma-separated-string-to-an-array>

If you still get stuck, remember that your mentor is always be there to help :D

**Nice-to-do**

10. There are at least 2 ways to do it

10.1. Create a different, empty array, loop through all the items in the old array, surround the item with <> pair and then push the result into the newly created array

10.2. Use JavaScript [Array map function](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Array/map)

11. There are at least 2 ways to do it

11.1. Create a different, empty array, loop through all the items in the old array, if the item is odd, push it into the newly created array

11.2. Use JavaScript [Array filter function](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Array/filter)