

# Assignment #2

College Vanier – 420-HSU-VA – Internet II

## Instructions

1. Write all your JavaScript code in strict mode
2. Use *let* and *const* for variable declarations (do not use the *var* keyword anywhere)
3. Create a folder called "Assignment2\_YourName"
4. Include the following:
  - a separate folder for each question solution (three in total) including all the needed files to run and present your solutions in a browser.
  - an HTML file (*index.html*) in the base of "Assignment2\_YourName" folder. This HTML should present a link to each HTML file inside the questions subfolders.
  - a README file for extra instructions/comments, if needed
  - a LICENSE file, or make sure you include the license as a comment in each file
5. Compress the folder and upload the zip file

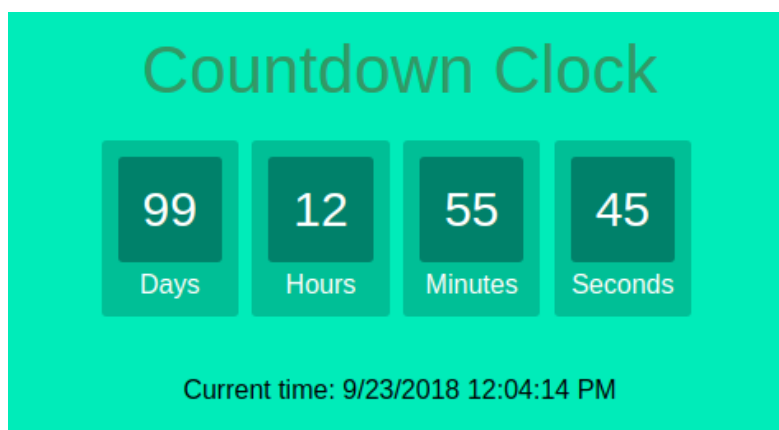
## Question 1: building a countdown clock

For this exercise, use the given folder **01.CountdownClock**, which contains an HTML, a CSS and a JS file. You do not need to edit the HTML nor the CSS file, but feel free to improve them.

In the file *countdown.js* write the body of the function **runClock()** which will calculate the remaining time to the next new years eve. This function takes no argument and should:

1. Appropriately set the HTML elements identified by **days**, **hours**, **minutes** and **seconds**
2. Write the current date by setting the HTML element identified by **dateNow**

The HTML output should look like the following:



## Question 2: sort an array by 2 criteria

Write a JS function that orders a given array of strings, by **length in ascending order** as primary criteria, and by **number of vowels in descending order** as second criteria. The comparison operations should be **case-insensitive**.

Write your own HTML file for this exercise, following the instructions bellow:

1. Strings should be entered using an HTML form. The user will be able to enter a set of strings separated by comma, where each string will become an element in your array.
2. The output should present the input strings ordered by the 2 criteria, in the HTML.

*Hints:*

- Creating a comparing function by 2 criteria can be achieved by first comparing by the **main criteria**. Only if the two items are equally ordered by that criteria, you then to compare by the **second criteria** and the result of that comparison is the result of the comparing function.
- For comparing the amount of vowels, it will be easier if you use regular expressions. Check the available methods for strings at [https://www.w3schools.com/jsref/jsref\\_obj\\_string.asp](https://www.w3schools.com/jsref/jsref_obj_string.asp)

Examples:

Input	Output
alpha, tea, est, file, sort	tea, est, file, sort, alpha
John, Laura, David, Yu	Yu, John, Laura, David

## Question 3: array fun

Write a JS code to complete the following tasks on a array of integers:

1. **Sort** the numbers in *descending* order
2. **Output** the sorted numbers in your HTML
3. **Remove** any integers greater than 40
4. **Multiply** each remaining number by 3.5 and then **subtract** 2
5. **Output** the **sum** of all the resulting numbers in your HTML file

The user will be able to enter a set of integers separated by comma via an HTML form, where each integer will become an element in your array.

You **must** use array iterators in your solution.

Example:

Input	Output
3, 6, 43, 12	43, 12, 6, 3 67.5