JavaScript Lab Sheet 1

1. Use JavaScript to write Hello on a HTML page

4.1 *Output*: A table of the numbers from 5 to 15 and their squares and cubes, using `alert`.

Hint: the "table" here is simply a set of tabulated numbers. It is not necessary to draw an actual table with borders.

3. Modify 4.1 to use *prompt,* in order to accept the lower limit and the upper limit from the user.

4.2 *Output*: The first 20 Fibonacci numbers, which are defined as in the sequence

$$1, 1, 2, 3, \ldots$$

where each number in the sequence after the second is the sum of the two previous numbers. You must use `document.write` to produce the output.

You must make sure that there is no extra comma (,) at the last position.

4.3 *Input*: Three numbers, using `prompt` to get each.

Output: The largest of the three input numbers.

Hint: Use the predefined function `Math.max`.

See: https://www.w3schools.com/jsref/jsref_max.asp

6. Modify 4.3 to:
   a. Use an *Array* to store the three values,
   b. Use *switch* to print appropriate messages for each of the input, and
   c. Use *Math.max.apply* on the array.

Hint: see https://www.w3schools.com/js/js_function_apply.asp

4.4 Modify the script of Exercise 4.2 to use `prompt` to input a number `n` that is the number of the Fibonacci number required as output.

You must:

1. You must make sure that there is no extra comma (,) at the last position.
2. Validate user's input to make sure that it is a number and is larger than 2.
3. You must display appropriate messages to the user when asking for a new input.

4.6 *Input*: A line of text, using `prompt`.

Output: The words of the input text, in alphabetical order.

Hint: see https://www.w3schools.com/jsref/jsref_sort.asp

4.7 Modify the script of Exercise 4.6 to get a second input from the user, which is either `"ascending"` or `"descending"`. Use this input to determine how to sort the input words.

Reference

Sebesta, R. E. (2014). Programming the World Wide Web (8th Edition).