# WEB DEVELOPMENT

## Practicum - Week 7.2

## Exercise guidelines

### Folder structure

For this exercise, **create a new folder called week 7.2**. in your web development folder. Only put the files necessary to complete the exercise in here.

**DO NOT** add any source materials in this folder (screenshots, pdf files, ...)

### Submission deadline

These exercises do not require submission.

## Plan of attack

If you've paid attention in the lectures, you should be able to complete every "basic" exercise. Some exercises are marked as optional. You are free to complete these as an additional practice tool, but are not strictly required.

You can create these exercises in an online tool or others, complete it in the console directly or link an HTML page to a JavaScript file. Choose the method of your preference.

### FANCY NANCY

For those among you with some more programming experience, or those looking to go the extra mile, there are **FANCY NANCY** challenges.
Try these to enhance your JS development skills!

### PAPER TRAIL

Every successful exercise starts with a paper trail, which means a plan of attack which you have written down - on paper - in your own words. For some exercises, these paper trails are mandatory. These are marked with the paper trail icon.

## Exercise 1: Pluralizer

Create the function **`pluralizer()`** which is able to convert a singular animal breed to its plural form.

examples: 1 dog - 2 dogs, 1 cat - 6 cats, 1 parrot - 0 parrots

This function has two parameters (name, amount) –> pluralizer('chicken', 3);

Call the function several times and show the result in the console.

**PAPER TRAIL**

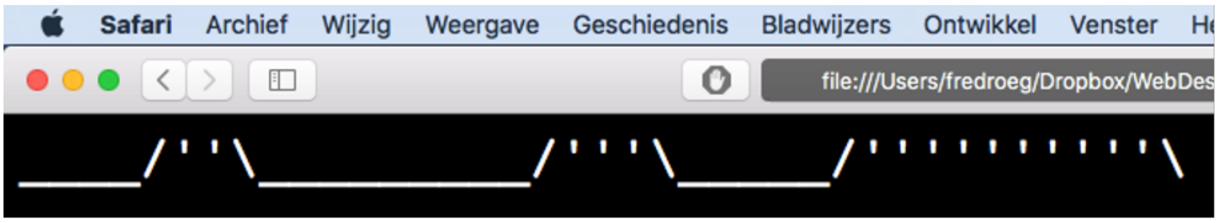
Provide a paper trail of your thought process before coding this exercise

**FANCY NANCY**

Try to find a solution for exceptions such as 'swine', 'sheep', 'buffalo', ...

## Exercise 2: Ain't no mountain hiiiiiiigh enough!

ASCII art is fun. Let's do some drawing in the browser. Create an irregular landscape with some functions.



```
_____/''\___________/'''\______/''''''''''''\
```

The goal: the landscape may consist of flat pieces and mountains.
The idea is that you create the landscape through a number of features:

- A flat piece consists of one or more underscore characters: —> _ _ _
- A mountain rises by means of a forward slash, top = quotation marks, and then drops again
  —> /'''''\
- The result can then look like the picture above.

Printing a flat piece or a mountain **MUST** be done via functions where each time a parameter is given that illustrates its length.

- ex. drawMountain(6) —> resulting in —> /''''''\
- ex. drawFlatArea(3) -> resulting in –> _ _ _

- If you call the function drawMountain(...) subsequently with another parameter, a second shorter or longer mountain will be formed

**PAPER TRAIL**

Provide a paper trail of your thought process before coding this exercise

**FANCY NANCY**

- Each time you refresh the page a random new landscape appears.
- Transform drawMountain() and drawFlatArea() into one function with two parameters (length, type of landscape). In that function, you implement a switch that 'prints' a different result depending on the type of landscape.

## Exercise 2: Chessboard logging

Even more ASCII Art!!

- Draw a chessboard in the console. It consists of white and black squares.
- The "chessboard" is created as 1 single string. Use newline characters to move to the next line.
- At each position of the chessboard there is either a space or a hashtag ("#").
- A chessboard is 8x8.

Showing the string on the console should result in something like this:

```
 # # # #
# # # #
 # # # #
# # # #
 # # # #
# # # #
 # # # #
# # # #
```

## Exercise 4: Recipe

Create an object that contains information about your favorite recipe.

It should contain the following properties:

- name (string)
- portions (number)
- ingredients (array of strings).

On separate lines (one console.log statement for each line) display the recipe to make it look like this:

```
Soup
Portions: 4
Ingredients:
pumpkin
carrot
water
bouillon
```

**PAPER TRAIL**
Provide a paper trail of your thought process before coding this exercise

## Exercise 5: Books

```
const books = [
{
  title: 'Harry Potter',
  author: 'J.K. Rowling',
  alreadyRead: false
},
{
  title: 'Jane Eyre',
  author: 'Charlotte Brontë',
  alreadyRead: true
},
{
  title: 'De verschrikkelijke schoolmeester.',
  author: 'Dolf Verroen',
  alreadyRead: true
}
];
```

Copy the above array of objects.
Loop through the array and log each book into the console:

Example of an individual line: "The Hobbit by J.R.R. Tolkien".

Now use if/else statements to change the output depending on whether you have read the book or not.

- If you have read it, log a string like:
  'You already read the book "The Hobbit" by J.R.R. Tolkien'
- if not:
  'You still have to read the book "The Lord of the Rings" by J.R.R. Tolkien'

**PAPER TRAIL**
Provide a paper trail of your thought process before coding this exercise

**FANCY NANCY**

Make a constructor function for the book object. Create the three books by calling this function.

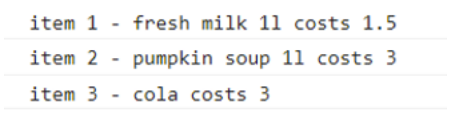
## Exercise 6: Shopping list

Implement a small shopping list application.

Keep track of a list of shopping items as an array of objects.
Every object represents a shopping item.
A shopping item consists of an id, a category name, a description and a price

Keep asking for input via the prompt until the text STOP is entered.
These commands should be allowed  to read/modify the shopping list:

- **LIST**: show the complete list of shopping items
  <u>Example</u>:



```
item 1 - fresh milk 11 costs 1.5
item 2 - pumpkin soup 11 costs 3
item 3 - cola costs 3
```

- **ADD**: add a new shopping list item by entering values (via the prompt) for a category, description and price for the new item (default price is 2).
  The id of the new item is calculated based on the highest shopping list id in the current list.

**PAPER TRAIL**
Provide a paper trail of your thought process before coding this exercise

**FANCY NANCY**

- **REMOVE**: delete the item with the given id (enter this id in the prompt) from the list