CS230 - Web Information Processing

Assignment 1

Assignment Release Date:	08-02-2022
Submission Due Date:	18-02-2022
Feedback Due Date (estimated):	07-03-2022 (for assignments that make Due Date)
Support Laboratories	Lab 01, Lab 02 (Two Weeks)
Total Mark:	5%

This Assignment is worth 5% of the Web Information Processing CA Component.

This is an open-book, graded assignment. You can use any resource available on the web, or in a textbook to help with the assignment. **You must not engage with another student, in person or electronically (phone, social media, etc.) to secure assistance with this assignment. If you do so you will receive an automatic fail (0%).** We will perform similarity checks on submitted assignments to check for collaborative efforts. A reasonable attempt at this assignment will gain you 5% of your continual assignment marks.

Assignment 1 - An Interactive Food Pyramid

For this assignment, you are required to develop an interactive Food Pyramid chart using HTML/CSS/JS similar to the one shown in Figure 1, below.

The Food Pyramid

The Food Pyramid shows how much of what you eat overall should come from each shelf to achieve a healthy, balanced diet. The shape of the Food Pyramid shows the types of foods and drinks people need to eat most for healthy eating. It is divided into six shelves and each provides you with the range of nutrients and energy needed for good health. Healthy eating is all about choosing the right amounts from each shelf.

An interactive Food Pyramid allows you to record the number of foods consumed in any given day by categorising and recording the food types for each shelf.

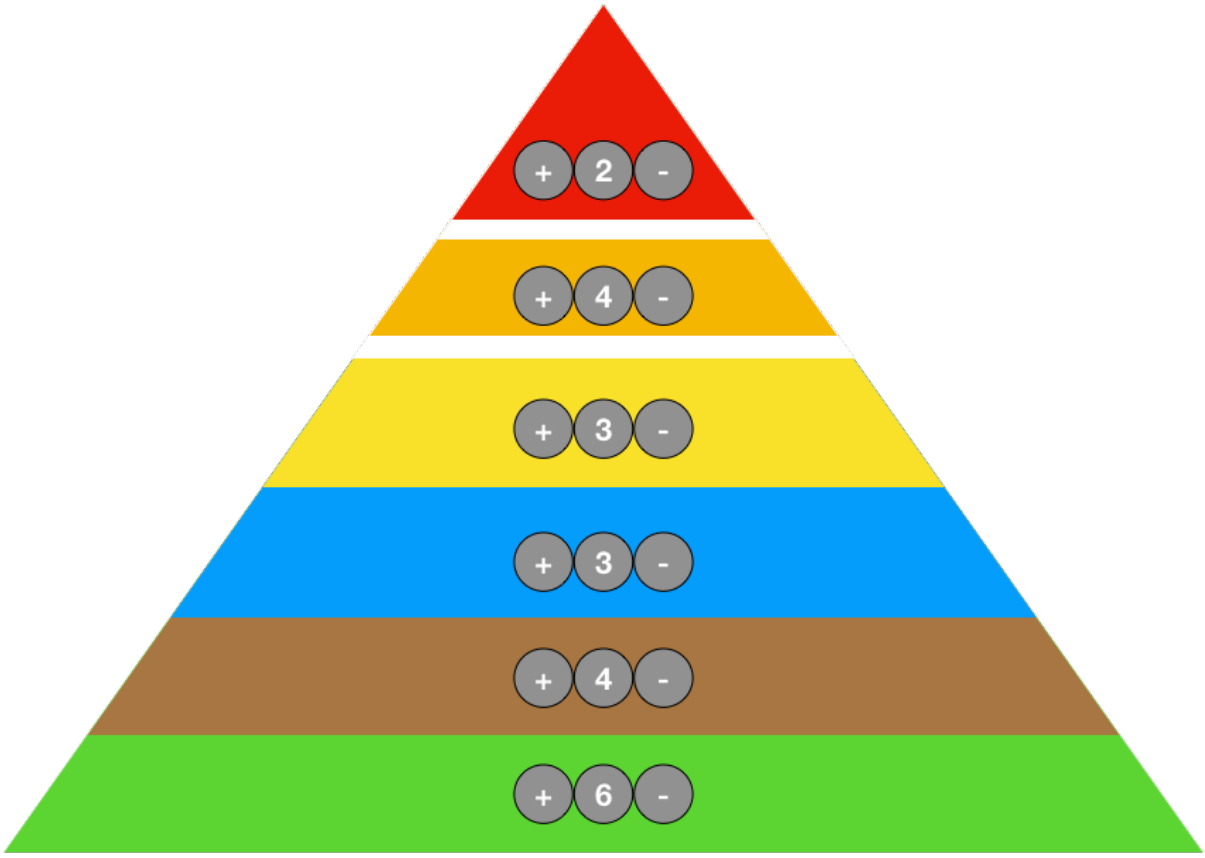
Assignment 01 - Requirements

Your assignment is to create an Interactive food diary that allows users to record the different food shelf details for today, and to record today's date. For this assignment, you do not need to create a database, etc. just work on the "front end", i.e. the food pyramid and interactive elements.

You must use HTML elements to create the chart - you may not use images to create the structure of the individual components (trapezoids and triangle) layered as a pyramid, i.e. you cannot just create an image, load it and overlay it with the interactive components. Colour and other styling settings must be achieved using CSS. You must use "pure" Javascript (JS) only. Do not use jQuery, or any Javascript Framework. Figure 1 is a template - feel free to style the layers or buttons according to your preferences. Just make sure you meet the fundamental requirements.

Your food pyramid must have the following interactive functionality: It should provide an indicator showing the number of items consumed for a particular shelf, for example, in the figure shown, it shows 6 items on the "Vegetables, salad and fruit" shelf (the bottom one). It should also include buttons (or similar devices) to increase and decrease the number of items on the shelf. The (+ / -) buttons (controls) should only appear when you hover over a particular shelf. The shelf numbers (6 for the lowest shelf) should always be displayed. You should also have some interactive method for inputting the date for the daily record. You do not need to validate the date.

Figure 1



My Food Pyramid
[05-Feb-2021]

Note the breaks between the shelf containing "foods and drinks high in fat, sugar and salt" (red shelf) and the shelf containing "fats, spreads and oils" (orange colour). This is a re-

quirement. Similarly, there is a space separating the shelf containing “fats, spreads and oils” (orange colour) and the other connected shelves.

This assignment is to be completed using HTML, CSS and (pure) JavaScript only. Remember, either jQuery, nor any other JavaScript Framework, should be used in this assignment. No image files should be included in your solution to generate the basic Food Pyramid shelves (HTML/CSS only).

Assignment 01 - Extra Credit Option

For extra credit (5%), adjust the height of the individual Food Pyramid Shelves depending on the number of items on that shelf, and update the colour of the circle containing the number of items depending on whether the number is greater, within, or below the recommended guideline quantities, for both children ages 1-4, and for adults, teenagers and children aged 5 and over, for that shelf. Note that the overall pyramid shape must be preserved regardless of the height of the individual shelves. Note that you should be providing a method to switch between the two different food pyramid recommendations. You should also implement some kind of date validation for the extra credit option.

Resources - The Food Pyramid

These online documents provide useful information about the Food Pyramid in and Irish context.

https://www.safefood.net/Professional/Nutrition/Nutrition-resources/Healthy-eating-guidelines
https://www.safefood.net/getattachment/9f1ecc09-64bc-4fca-831b-2e30f2f15abf/Food-Pyramid.jpg?lang=en-IE
http://irishheart.ie/wp-content/uploads/2017/01/ihf_food_diary_a5.pdf

Resources - Making Pyramids with HTML/CSS

These online documents provide useful information about creating Food Pyramid components using HTML and CSS (use these for information - please do not directly copy and paste code as it may flag as a plagiarised submission).

https://www.creativebloq.com/css3/how-create-pyramid-layout-css-31619524
https://jsfiddle.net/augburto/Zb9nb/
https://codepen.io/nikolaygit/pen/wnchq
https://css-tricks.com/the-shapes-of-css/

IMPORTANT SUBMISSION DETAILS

Before submitting your assignment students should check that their solution works in Chrome and Firefox.

All work must be submitted via Moodle (see "Assignments" section for submission). Work submitted via other means will not be accepted unless you have prior arrangements with the Head Demonstrator (Behnam Faghih). All work MUST be submitted by the due-date deadline. Late submissions will not be accepted.

*The assignment submission is a zip file named "**assignment-01-xxxxxxxxx.zip**" (where "xxxxxxxxx" is your student id) containing a solution file named "**assignment-01.html**" together with any other resources used in the assignment solution. External CSS and Javascript files should be named "**assignment-01.css**" and "**assignment-01.js**", respectively. Please ensure that all external files use relative directory referencing, rather than hard-coding the files' location.*