Assignment set by David Coyle – 11 October 2019

COMP30680 Web Application Development

Assignment 2: JavaScript and JSON

This assignment focuses on the use of JavaScript to read, manipulate and present JSON data in a webpage. The data needed for this assignment is included in two files:

1. ***prizesByYear.json*** – this file provides information on Nobel Prize winners from 1970 to 2018.

2. ***winnersByID.json*** – this file provides further information on individual winners, listed by id.

Your job is to present this data in a webpage. To do this you will need to combine HTML, CSS and JavaScript.

Requirements:

1. Begin by creating a webpage called nobels.html. When this page is opened it should read data from the file 'prizesByYear.json' and provide an interface that allows the user to choose what information to display. The user should be able to:

    - Select the range of years for which the Nobel winners will be displayed, e.g. 1975 to 1980. This selection is mandatory. The user must set a range of years before any information is displayed.

    - Select a category of winners to display, e.g. physics. This selection is optional. If no option is chosen the results across all prize categories should be displayed.

      NOTE: the information necessary to create a list of Nobel prize categories is available in the json file. Seven marks will be deducted if the names of the categories are hardcoded, instead of being read from the json file.

    - A submit button.

2. When the user clicks the submit button the webpage should update to display the following information for each year chosen:

    - The year of the award.
    - The name or names of the winners in each category chosen and the motivation for the award of the prize.
    - By default, you should display both male and female winners. But you are required to include radio buttons alongside the results that allow the user to filter the results to display:
        - Only female winners.
        - Only male winners.
        - All winners.

3. The webpage should allow the user to request more detailed information on Nobel Prize winners displayed in step 2 above, e.g. by clicking on a winner's name or a more information button beside their name. When this option is clicked the following additional information for the chosen winner should be displayed: year of birth, year of death (if relevant), city of birth, category of the award or awards received, motivation for each award, and their affiliations.

   The information needed for this step is available in the file 'winnersByID.json'.

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Marking

This assignment is worth 40% of the total module mark. You will receive an overall grade for the assignment. In determining the grade, the following weighting will be used:

a) **30%**: for implementing the functionality described in step 1 above.
b) **30%**: for implementing the functionality described in step 2 above.
c) **30%**: for implementing the functionality described in step 3 above.
d) **10%:** overall impression and quality of the overall design. For example, is the information presented in a clear manner and have you included appropriate and effective error handing.

Submitting

Submit a single zip file using Moodle. The zip file should include a folder containing your webpage and any associated files.

Please name your zip file using the following format: "Firstname_Lastname_A2_COMP30680.zip".

The deadline for submission is listed on BrightSpace under assignment 2.

Code validation:

Your webpage should be consistent with the HTML 5 standard.

Code reuse

The webpage must be your own work. Any code snippets that are not directly written by you (e.g. used from a tutorial) must be referenced as such within your code. You must directly comment the code to explain its source. Failure to reference code that is not yours will be treated as plagiarism.

Viewing the JSON data

In order to get an initial overview of the data in the JSON file, it is helpful to view it in a JSON viewer such as the one available at:

https://codebeautify.org/jsonviewer

This will give you a tree like view of the data, as shown in the screenshot below. In this image we can see that the JSON data contains information on 934 past Nobel Prize winners. You can also investigate the structure of the JSON data, by navigating through the tree view.

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