CO539 A2 – jQuery and AJAX

Introduction

For this assessment, you are going to use jQuery and AJAX to make a dynamic web page using the detailed data about countries in the world. It provides a way for users to select a region of interest and then display the details about the countries in the selected region. The data about countries are made available to you via a server-side script that we have developed for you.

Requirements & constraints:

- You should write your work on this assignment in a *single* HTML document named `xyz.html` (where `xyz` refers to your own login). **Login = fat3**

  Both CSS and JavaScript code must be embedded in the header section of the HTML document (i.e. between the tags `<head>` and `</head>`).

- You are required to use the jQuery library and avoid plain JavaScript where jQuery can be used.

  For this assessment it is not acceptable to use any other jQuery plugins, external CSS, or any other JavaScript libraries.

- You should submit your HTML file via Moodle before the deadline.

  Late or non-submission will be awarded a mark of zero.

Marking scheme:

Text

Criteria	Max marks
General correctness	3
Design & coding quality	3
Task 1	8
Task 2	10
Task 3	6

General correctness

You are expected to follow the instructions as specified in the assessment. You should ensure that your HTML document is valid and no bugs in your scripts. Please pay attention to issues with loading-order and robustness as well.

Design & coding quality

You should define the visual presentation of your HTML document using CSS. Your web page should be user-friendly with appropriate colour scheme and font, e.g. the table should have proper size, spacing and margins to maximise usability. You should ensure good coding quality with appropriate comments and indentation. Your code should be well organised with minimum code duplication.

Tasks

1. **Selecting a region**

   Add an HTML selection element on your web page that enables users to select a region of interest from a list of regions. The selection list should contain the results from the server-side script `countryData.php` using the URL below:

   https://www.cs.kent.ac.uk/people/staff/yh/co539-A2/countryData.php?regions

   It returns a list of regions in JSON format.

2. **Displaying the details of countries**

   On selecting a region it should display in an HTML table the details about all countries in the selected region: the country's *code*, *name*, *capital*, *population* and *language* for each country.

   Data about the countries' details in a region are provided by the server-side script `countryData.php` with the parameter `region=abc` (where `abc` refers to the name of a region).

   For example the URL below returns the details of all countries in Europe in JSON format:

   https://www.cs.kent.ac.uk/people/staff/yh/co539-A2/countryData.php?region=Europe

3. **Calculating the summary**

   On selecting a region it should also display on the web page the average population and the total number of countries in the selected region.

4. **Sorting the table**

   When users click on the heading of each table column, the details in the table will be sorted in an ascending order by that column.

   E.g. when clicking on the column heading of the first column, i.e. country code, the details in the table will be sorted by the ascending order of the country code.

Accessing the server-side script

The script outputs special HTTP headers, CORS (Cross-Origin Resource Sharing, https://enable-cors.org/), which will allow your browser to access the server-side script using AJAX requests regardless of where your HTML file is, in spite of the same origin policy. This means that you can complete this work from home *without* needing a webserver or database. We have hosted the script on a publicly accessible webserver, so you don't need to use the VPN either. Because of the way these headers are interpreted by your browser, you *must* use the form of the URL as given above (e.g. leaving out the *`www.`* will cause the CORS to fail).