

# jQuery and AJAX (2023)

## Introduction

For this project, you are expected to use jQuery and AJAX to develop a single dynamic web page. It should let users select a region of interest and then display the details about the countries in the selected region. Detailed data about the countries in the world are available via a given API.

## Requirements & constraints:

- You should write your code in a *single* HTML document named `xyz.html` (where xyz refers to your own login).

*Note: Both CSS and JavaScript code must be embedded in the head section of the HTML document. For CSS you may use Bootstrap if you like.*

- For this assessment apart from the jQuery library you should not use any other external JavaScript libraries.
- You are expected to check, before submission, that your web document works as expected in both Chrome and Edge web browsers.
- You should upload your HTML document using the submission link on the module Moodle page *before* the deadline. *Late or non-submission will be awarded a mark of zero.*

## 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.

You should ensure good coding quality with appropriate comments and indentation. Your code should be well organised with minimum code duplication, good readability and maintainability.

## Tasks

1. On loading the web page:

It should have an HTML selection element that contains a list of regions provided by the API using this URL:

<https://www.cs.kent.ac.uk/people/staff/yh/api/country-data/countries/regions>

*Note: It returns a list of regions in JSON format.*

2. On selecting a region from the selection list:

- a) It should display in an HTML table the details about each country in the selected region including the country code, flag, name, capital, population, area, and the population density, i.e. population divided by area, rounded to one decimal place.

Detailed data about the countries in a region are provided by the API using the URL:

<https://www.cs.kent.ac.uk/people/staff/yh/api/country-data/countries/region/{name}>

where the parameter {name} holds the name of the 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/api/country-data/countries/region/Europe>

- b) It should display on the web page the following information about the selected region:
- the total number of countries
  - the name of the largest country, and
  - the name of the most populated country

For example, in Africa there are 59 countries; Algeria is the largest country and Nigeria is the most populated country.

- c) It should show a search input textbox and a button on the web page.

When users enter a search string in the input textbox and then click on the search button, it should display in the table *only* those countries in the selected region whose names or capitals contain the search string regardless of the case.