

Project Description

You are in the process of designing a web application which process country data to produce some dynamic reports.

You have been asked to process the XML/JSON data about different countries, which is attached:

- `Country.xml`: Contains some info about European Countries
- `Country-data.json`: Contains some information about all countries

In this project, you also need to collect some JSON data using currency API in order to show the exchange rate of each country currency vs USD or EUR.

Answer the following question

Q1) Using `Country.xml`, Develop a JavaScript program using AJAX in order to read the XML file and display its data in the following format:

Country name	Capital	Unemployment	Total GDP

Note: Try to spend a good amount of time to understand the XML dataset! I know it is a big dataset!

Q2) Convert the `Contry.xml` file into JSON and validate it. Design a HTML page which takes country name from the user and display the following data about each city in HTML table

Province Name	Local Name	Population (2011)	No of Cities in the Province

Note: Some countries don't have provinces, so they only have cities! Use your creativity to display them properly.

Q3) Using online Currency APIs like ([http:// fixer.io](http://fixer.io) or <http://jsonrates.com/>) develop a program (using AJAX) which displays the Exchange rate of each country currency vs EURO or USD.

Note: You need to register for API-key to access to complete JSON data.

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Q4) Using the `Country-Data.json`, develop a web application which

- Prompt user to enter a country name
- Display the following info about each country:
 - Region , capital, currency_code, Language_native_name

Q5) Redesign Q1 by using XSLT/XPath.

- By designing proper XML/XSLT/XPATH documents, display the same output as Q1.

Q6) Using <https://restcountries.eu/> API data, develop an HTML page which takes *country name* from the user and displays the followings:

- Country name
- Region
- Flag (image)
- Native name
- Area
- Using the currency API in Q3, find the exchange rate of the country currency vs EURO.
- Name of Neighbor Countries (Preferably full country name not 3 letters name)
 - *Hint: use border property!*

Note: The *country-data.json* that you have worked with in previous question was taken from <https://restcountries.eu/> API. You can easily find how to use this API here: <https://restcountries.eu/>

Bonus: Q7) Redesign Q2.

- You need to use the concepts that we studied on the first part of the course (XSLT/XPATH,...).
- You work with Country.xml data.
- By designing proper XML/XSLT/XPATH documents, display the same output as Q2.
- Use your creativity to apply proper style to the output

Submission:

You need to submit the followings:

- 1) You need to take screenshot of the source code in the IDE and also the output, save them into the MS-Word file. You also need to identify how you work collaboratively as a team and the breakdown of the tasks which has been done by each group members.
- 2) You need to validate the documents whenever required.
- 3) ZIP all the html/xml/json/css files and submit them.
- 4) Record a video which demonstrate all questions including a walkthrough of your solution/coding, the challenges that you faced and evaluate your project out of 10.

Rubrics

The project has 15% of the total which the mark is divided as follow:

- Process XML data using JavaScript/Ajax(6%)
- Process JSON data using JavaScript/Ajax(6%)
- Developing XSLT document (3%)

In designing XML documents and developing JavaScript codes, you need to use your design/coding skills in order to fulfil the project functional requirements and also consider the followings:

- Use your creativity to apply some CSS formatting styles like layout/color/font to the pages, facilitate use input using dropdownlists, and good way of navigation
- Add comments you your design/coding
- Assign proper name (for files, methods, variables,...)
- Add proper conditions to handle the errors