Project submission:

- Phase 1: April 11 (project Q 1~4 : code + screenshot of output)
- Phase 2: April 18 (Complete project + video)

Project Team: Team of two

Assessment Weight: 15% of your final course Grade

Assessment includes:

- Submitting project week by week (deliverables in each week is posted in BB) (6%)
- Final project submission includes all project file + project document + Video recording (7%)
- Project peer evaluation + presentation in Week 14 (2%)

Submission Deadline: End of week13

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 info about Countries (this is famous data set called *mondial*)
- *Country-json.json*: Contains info about Countries (this is famous data set called *restcounties*)

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

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 News APIs (https://newsapi.org) develop a program (using AJAX) which takes user input (country_name) and displays the top ten headlines of each country. Display minimum of three selected fields for each headlines in proper format/style (use your creativity)

- **Bonus**: For non-english headlines, you may need to find a way to translate it to English, then display ten translated headlines and highlight three "health" related headlines.

Note: You need to register for API-key to access to complete JSON data.Also study the API doc to learn how to get access to Top Headlines.

Q4) Redesign Q1 by using XSLT/XPath.
- By designing proper XML/XSLT/XPATH documents, display the same output as Q1.

Q5) Using https://restcountries.com/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!*

Q6) Use your creativity, try to find another related API in order to add additional information (for each country) to the existing output of Q5. So when user search for a country, related information about sport/olympic, pandemic, vaccination, … will be displayed aside Q5 output.

- Your web application should utilize JSON data extracted from any Web API. You may find API from the followings:
    - A. Pick any APIs from here: https://any-api.com/
    - B. OR here: https://developer.edamam.com/
    - C. OR here: https://rapidapi.com/collection/list-of-free-apis
      Note: Please do not use the APIs that we have used in previous assignments/activities, not currency exchange rate api!
- Use your creativity to apply proper style to the output

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

Design/Development Notes:
- *I am expecting a professional teamwork and fair collaboration between team members*
- *In this project, you also need to use the concept that we have learned so far in order to extract information from XML/JSON data sources. In this project, you are free to use JS (ES6+) or jQuery and also use either XHR or Fetch to implement Ajax calls.*
- *You are allowed to use any material from the internet, but those materials should be relevant to our course and you should be able to answer any question about what you submit at the end.*
- *You can do brainstorming with other groups, but any form of sharing work/code is strictly avoided.*

Project Submission:

- Add the following declaration at the top of .html files

```
/*********************************************************************************
 *  ITC5202 – Project
 *  I declare that this assignment is my own work in accordance with Humber Academic Policy.
 *  No part of this assignment has been copied manually or electronically from any other source
 *  (including web sites) or distributed to other students.
 *
 *  Group member Name: _____ Student IDs: _____ Date:
_____
 *
 *
 *********************************************************************************/
```

- Compress (.zip) the files in your Visual Studio working directory (this is the folder that you opened in Visual Studio to create your client side code).
- Complete & Submit the project document (given template).
- Record a detailed walk-through/demonstration video presentation of the project

Important Note:

- Submitted assignments must run locally, ie: start up errors causing the assignment/app to fail on startup will result in a **grade of zero (0)** for the assignment.
- **LATE SUBMISSIONS for assignments**. There is a deduction of 15% for Late submissions, and after two days it will grade of zero (0).
- Assignments should be submitted along with a video-recording which contains a detailed walkthrough of solution. Without recording, the assignment can get the maximum of 1/3 of the total.

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