Assignment 5: Open Weather Map API (9% of total grade)

Format: Upload zipped folder containing all files to Blackboard.
BE SURE TO PUT YOUR NAME IN THE FILENAME: e.g. JS-Assign5-*YourName*.zip
Purpose: To reinforce and assess API data access techniques learned in class:

- String concatenation and manipulation
- Creating and using functions
- DOM interaction and manipulation
- Creating and using event listeners
- AJAX calls to remote content with XMLHttpRequest()
- Reading API documentation to find the data and code that you wish to use
- Using an API to retrieve data
- Extracting values from a JSON data set

REQUIREMENTS: Create the JavaScript code to complete the functionality for the provided weather application. <u>You may not use jQuery or generativeAI for this assignment</u>. (see rubric on page 2)

<u>Current Weather Application</u>   *(5.5%)*

1. The user will see two city buttons, each with the name of a city: Toronto, and a second city of your choosing.
2. Clicking on one of the buttons will reveal the hidden output section.
3. This section will provide the current weather data for the selected city by using XMLHttpRequest to fetch the OpenWeatherMap **Current** Weather Data API. Output to the appropriate areas of the webpage will be:
   a. the name of the selected city
   b. the current temperature (in Celsius, with text to indicate °C)
   c. the current weather conditions
   d. the API icon that represents the current weather conditions
   e. A fifth property of your choosing. Add contextual text or adjust the raw data to make it user friendly. E.g. in step (b) above, we added °C to the text.
4. Clicking on either button will update the output section with the current weather data for the selected city.

<u>STRETCH GOALS: ONE FUNCTION TO RULE THEM ALL / DYNAMIC ALT</u>   *(3%)*

5. **A:** Make your code "bulletproof" by creating one function to handle both (and any additional!) cities. **B:** Use the API data for the icon image *alt* attribute.

Marking Rubric

Criteria	Proficient	Competent	Novice
Clicking a City	1	0.5	0
	The output section appears; Current Weather API data for the specified city populates the output section.	Data appears, but the button text has not been updated to indicate the 2nd city, or the temperature is missing °C text.	Data for a second city does not appear.
Weather Icon	1	0.5	0
	The weather conditions icon appears in the output, fed from the JSON data.	Icons are used, but they are not from the JSON data, or they are missing an *alt* attribute.	Weather conditions icons are not used in the output.
Fifth Data Item	2	1	0
	A fifth data property from the JSON object has been injected into new markup on the web page and used appropriately.	A fifth data property has been added to the web page, but not smoothly. It feels out of place or is missing contextual helpers.	A fifth data property has not been added successfully.
Error Handling	1.5	0.5	0
	If an AJAX error occurs, a message appears on the web page informing the user.	The message does not appear in the designated element.	AJAX errors are not handled, or an alert() is used.
Professional Practice	0.5	0	0
	The js file has navigational and explanatory commenting, and all self-reflection questions have been answered.	Commenting is inconsistent or unhelpful, or more than two questions have not been answered.	Commenting is inconsistent or unhelpful, and more than two questions have not been answered.
Stretch Goals	3	1	0
	A named function is used and the city is passed as a parameter; image alt text is dynamic from data.	Anonymous functions are used, or image alt text is hard-coded.	The stretch goal does not function without errors.
Critical Fail			**Automatic 0 for assignment.**
	jQuery was not used, and no changes to HTML file outside of specified custom areas.		Use of jQuery, or HTML file is changed other than Custom#1 and Custom#2 sections.