**Fahrenheit to Celsius Converter: The Process**

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Our Critical Thinking Assignment this week was to create a script that could convert Fahrenheit to Celsius. The conversion calculation should be viewable on all modern browsers. JavaScript adds functionality directly to a web page and is generally supported by the most popular browsers like Chrome, Safari, and Firefox (Vodnik & Gosselin, 2015). Therefore, the code includes a feature detection library from Modernizr to ensure consistency across browsers. In this essay, I will review the process outlined in the assignment. For historical reference, the following instructions received through our learning management system, Canvas, have been condensed and discussed below.

**The Process**

There were seven steps in this project. Using the Visual Studio Code editor, I followed the first step by opening the JavaScript data file in HandsOnProject 2-1 and added my name and date to the comments section at the top. For steps 2 and 3, I scrolled to the bottom of the body and added the opening and closing script tags, along with the Convert function in between the script tags.

**Figure 1**

The Original Script

A screenshot of a computer screen

Description automatically generated with medium confidence

*Note:* Screenshot of the JavaScript added to the bottom of the code, just before the closing body tag.

Step 4 describes this function in more detail. It starts by interpreting and assigning the input Fahrenheit value to variable degF. It then calculates the degF values to get the Celsius equivalent, which is assigned the variable degC. Lastly, the getElementId method of the Document object finds the cValue and assigns it to the innerHTML property of degC (Vodnik & Gosselin, 2015). In step 5, we added an event handler to the button to assign multiple handlers to a single click event (Vodnik & Gosselin, 2015). Finally, in step 6, we save and test the conversion calculation in a live environment.

**Figure 2**

The Test

Graphical user interface, text

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*Note*: I added -40 into the Fahrenheit box and clicked the Convert to C button. The calculation did not work correctly, as the Celsius box should also be -40.

As the calculation did not work correctly, the last portion of step 6 takes us through the correction and step 7 performs the final test. The solution needs to ensure the equations are calculated with the correct order of operations. Therefore, to correct the degC calculation, I placed parenthesis around degF – 32 and then around 5 / 9. This way, it would first calculate equations in the parenthesis before multiplying those values.

**Figure 3**

The Corrected Code

A screenshot of a computer screen

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*Note:* This is the corrected code, which adds parentheses to ensure the proper order of operations.

**Figure 4**

The Correct Calculation

Graphical user interface

Description automatically generated

*Note*: After saving the corrected code, the calculation works well.

Overall, this project was a good example of how a simple coding error can change the script’s functionality. In the temperature conversion calculation, a few degrees can make a big difference. Therefore, it is critical developers test, check, and verify all statements, especially those with mathematical calculations.

**Reference**

Vodnik, S., & Gosselin, D. (2015). *JavaScript: The web warrior series.* (6th ed.). Cengage.