

Guidelines for doing the extra exercises

- For all the extra exercises, you will start with the HTML and CSS for the user interface. Then, you supply the JavaScript or jQuery that's required to get the desired results.
- Unless an exercise specifies that you need to modify the HTML or CSS, you won't have to do that.
- Make sure every application is coded in strict mode.
- If you are doing an exercise in class with a time limit set by your instructor, do as much as you can in the time limit.
- Feel free to copy and paste code from the book applications or exercises that you've already done.
- Use your book as a guide to coding.

Extra 6-1 Develop the Temperature Converter

In this exercise, you'll use radio buttons to determine whether the conversion is from Fahrenheit to Celsius or vice versa. You'll also modify the DOM so the labels change when a radio button is clicked, and the page displays an error message when the user enters invalid data.

When the user does a conversion from Fahrenheit to Celsius, it looks like this:

Convert temperatures

☒ Fahrenheit to Celsius
☐ Celsius to Fahrenheit

Enter F degrees:

Degrees Celsius:

When the user clicks on the second radio button to do a conversion from Celsius to Fahrenheit, it looks like this:

Convert temperatures

☐ Fahrenheit to Celsius
☒ Celsius to Fahrenheit

Enter C degrees:

Degrees Fahrenheit:

And if the user enters invalid data, it looks like this:

Convert temperatures

☐ Fahrenheit to Celsius
☒ Celsius to Fahrenheit

Enter C degrees:

Degrees Fahrenheit:

You must enter a valid number for degrees.

1. Download the zip file on canvas. It will contain an html file already linked to a css file and js file that are also provided. Make sure to save them all in the same folder.
2. Note that the JavaScript file has some starting JavaScript code, including the `$()` function, three helper functions, three event handler functions, and a `DOMContentLoaded` event handler that attaches the three event handlers.
3. Review how the `toCelsius()` and `toFarhenheit()` event handler functions call the `toggleDisplay()` helper function and pass it strings to display. Also note that the `toggleDisplay()` helper function and the `convertTemp()` event handler function are incomplete.
4. Code the `toggleDisplay()` function so it changes the text in the labels for the text boxes to the values in the parameters that it receives. It should also clear the disabled text box where the computed temperature is displayed.
5. Code the `convertTemp()` function without any data validation. It should use the helper functions to calculate the temperature based on which radio button is checked. The value returned by the helper functions should be rounded to zero decimal places.
6. Add data validation to the `convertTemp()` function. If the entry is not a valid number, a validation message should be displayed in the element with the id of "message".
7. Add any finishing touches to the application whenever that's appropriate. This can be things like moving the focus to the first text box and selecting the text, clearing a previous error message, or clearing a previously computed temperature value.
8. Once all your files are completed you will upload them to a Github Pages repository and submit a link to your index page so I can test your application. Make sure you test it before submitting the link.