# Assignment - Temperature Conversion

## Objective

Build an online temperature converter to convert sets of Fahrenheit values entered to degrees Celsius.

## Function Specification

* Each set of user input must be limited to 10 values or less.
* The program must only accept digits (0 to 9) and the negative sign representing degrees Fahrenheit as input.
* Code the program to convert Fahrenheit temperature entered as integer to Celsius temperature represented by floating‑point numbers showing two decimal positions.
* Average temperature in both Fahrenheit and Celsius are to be displayed at the bottom of the conversion list either when the average button was clicked or a maximum of 10 values were entered.
* The average Fahrenheit temperature displayed must also show two decimal positions.

## Graphical Design Specification

*The Title Bar*

* The title should say "Temperature Conversion by *your name*".

*The rest of the display area*

* Design your own colour scheme.
* Decide on the size and positioning of the form and elements yourself. Your design should be sensible and user‑friendly.

*HTML*

* Three **Label** elements, two **TextBox** elements, one **TextArea** element and three **Button** elements.
* Use a **TextBox** element to accept integer values (maximum four digits, positive or negative) representing Fahrenheit temperature as input. Valid values range from -9999 to 9999. This **TextBox** must not accept more than four characters when the number is positive, or five characters when the number is negative. The negative sign (i.e. hyphen) may appear once to the left of the digits.
* Note: temperature absolute zero (0 kelvin, -273.15 Celsius or -460 Fahrenheit) is a nonissue.
* The usage of the **pattern** attribute or **regular expression** is strictly prohibited.
* Use a **Label** element to describe the above **TextBox** element.
* Use a second **TextBox** element to display floating values representing converted Celsius temperature. This element is for display only and should not permit data entry.
* Use another **Label** element to describe the above **TextBox** element.
* Use a **TextArea** element to display a list of all the entered and converted values side‑by‑side. This element is also for display only and should not permit data entry.
* Use the third **Label** element to display column headings above the **TextArea** element.
* The first **Button** element triggers the conversion process.
* The first **Button** element is to be disabled if the Fahrenheit temperature **TextBox** does not contain a valid number.
* The first **Button** element is to be enabled if a valid number is present in the Fahrenheit temperature **TextBox**.
* The first **Button** element, when enabled, can also be triggered whenever the **Enter** key was pressed.
* After triggering the first **Button**, the focus should return to the first **TextBox** with its content cleared.
* The second **Button** element triggers the averaging process. This button must remain disabled until at least one temperature value was successfully converted.
* The third **Button** element resets **TextBox** and **TextArea** elements for additional input and subsequent conversion and averaging. It also disables the first two buttons and hides itself once clicked. This button may only appear after the completion of the averaging process.
* The usage of **on***<event>* attributes such as onclick, onkeydown, or onkeyup is strictly prohibited.

*JavaScript*

* The **click** event of the <button> elements are to be added/removed by the **addEventListener** and the **removeEventListener** methods.

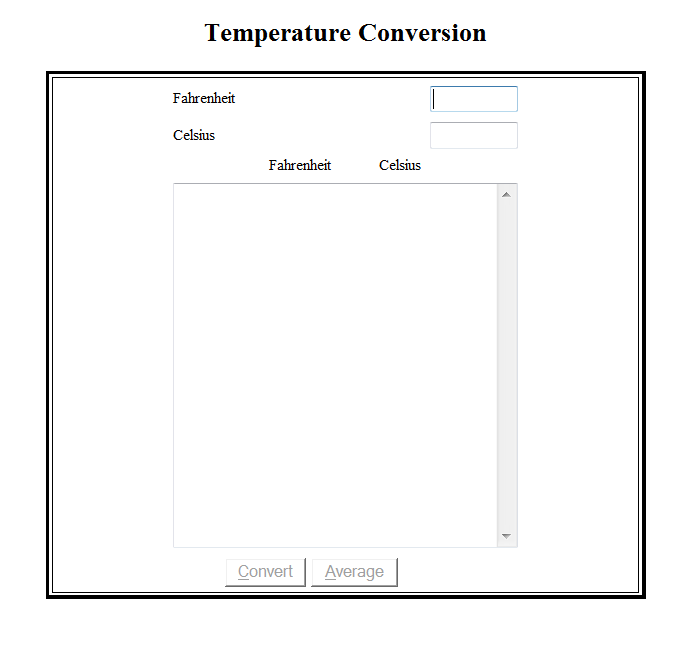
## Assignment Requirement

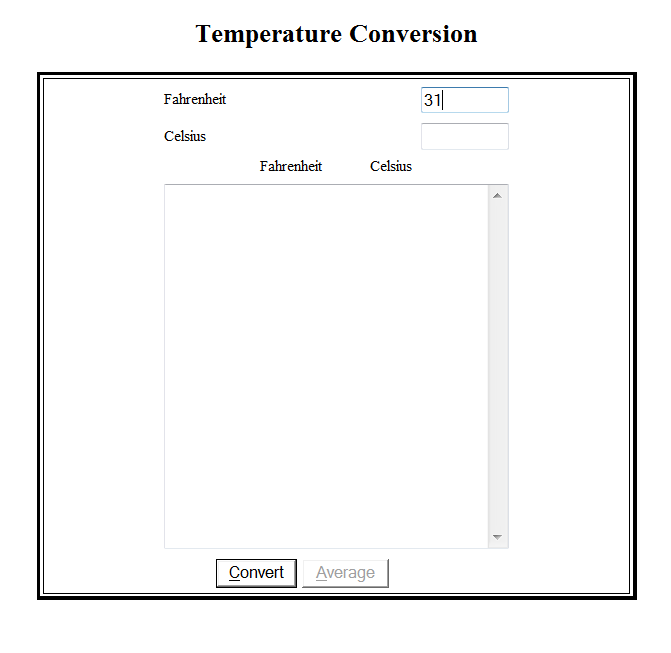
1. Submit your assignment, one **.htm/.html** file, one **.css** file and one **.js** file, by date specified in the course addendum.
2. Ensure your deliverable is virus free.
3. Your **.htm**/**.html** file must pass the W3C Markup Validator’s checking process with no more than one warning.
4. Your **.css** file must pass the W3C CSS Validator’s checking process with zero error or warning.
5. Ensure you have handed in your latest version.

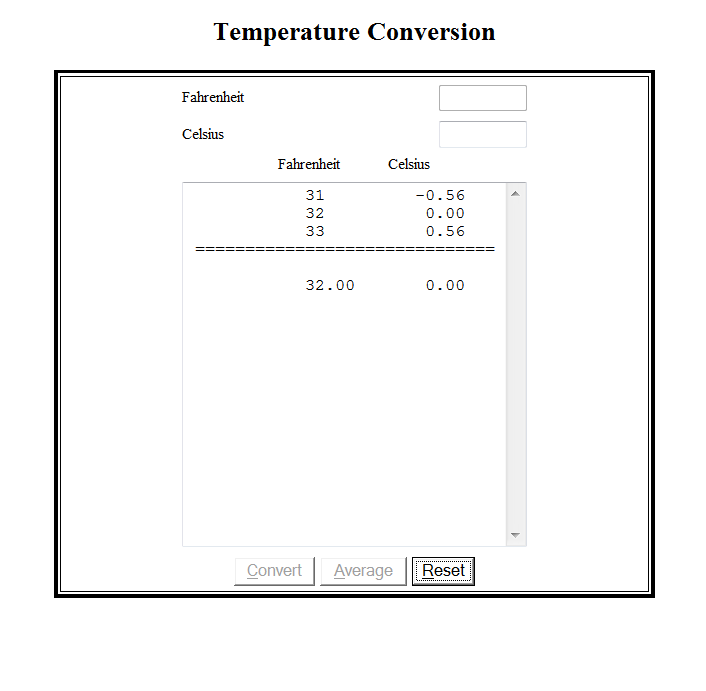
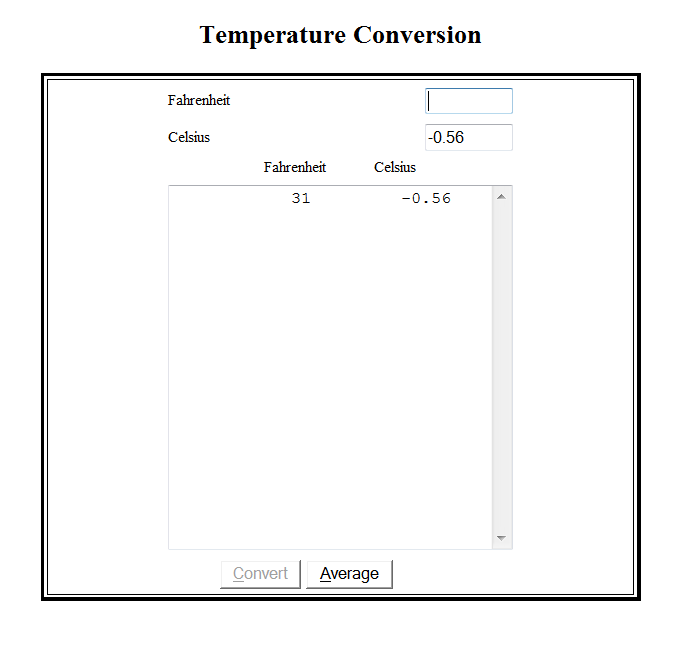
Note: This assignment is worth 25% of your final grade.

**IMPORTANT:** This is not a group/team assignment and your assignment must be YOUR original work; plagiarism in any shape or form will render your assignment score as ZERO. You may be asked to explain how your assignment code works to demonstrate that it is indeed your original work.

## Possible Assignment Outcome

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