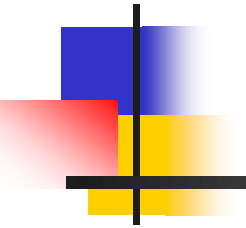


Project 2

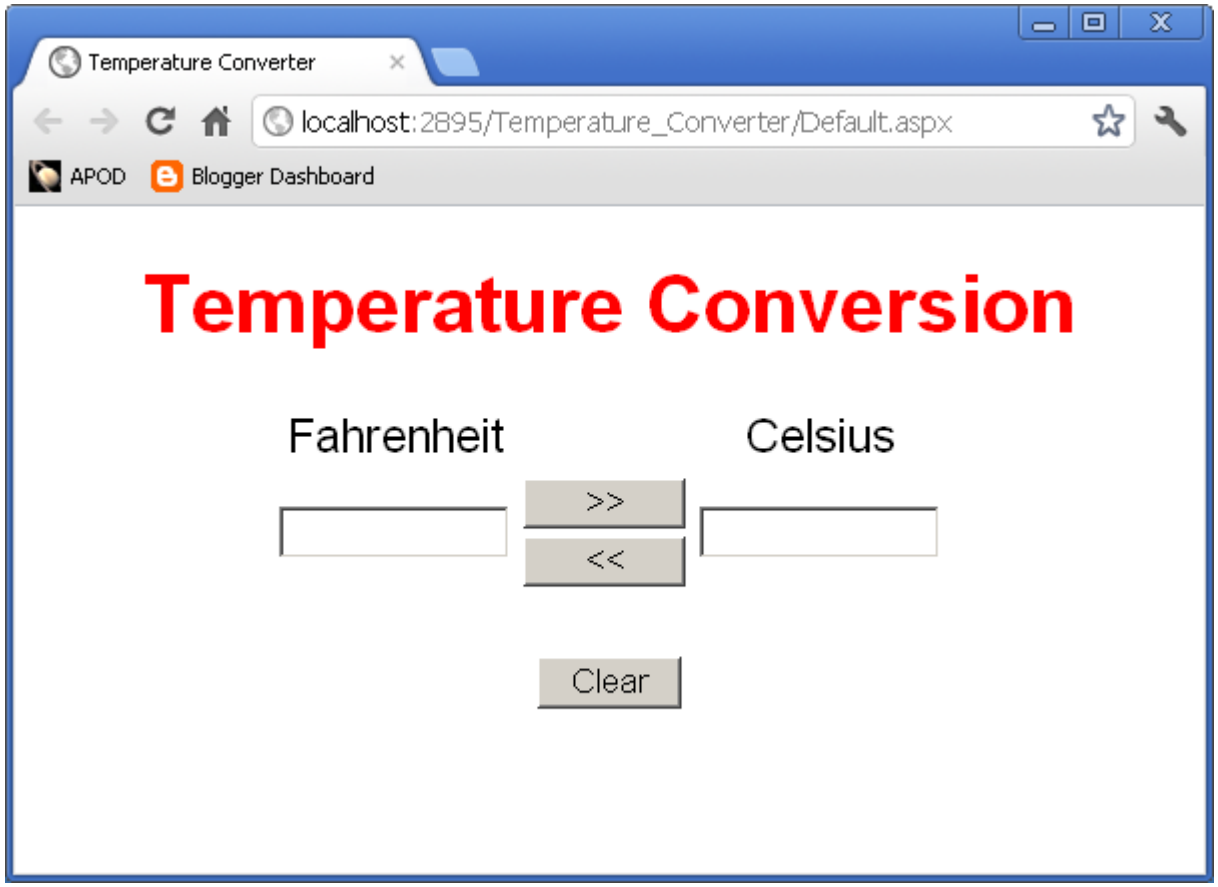
Temperature Conversion

Project 2

- Write an ASPX web forms app to convert temperatures from Fahrenheit to Celsius and from Celsius to Fahrenheit.

- The web form should be similar to that shown on the next slide.

The Web Form

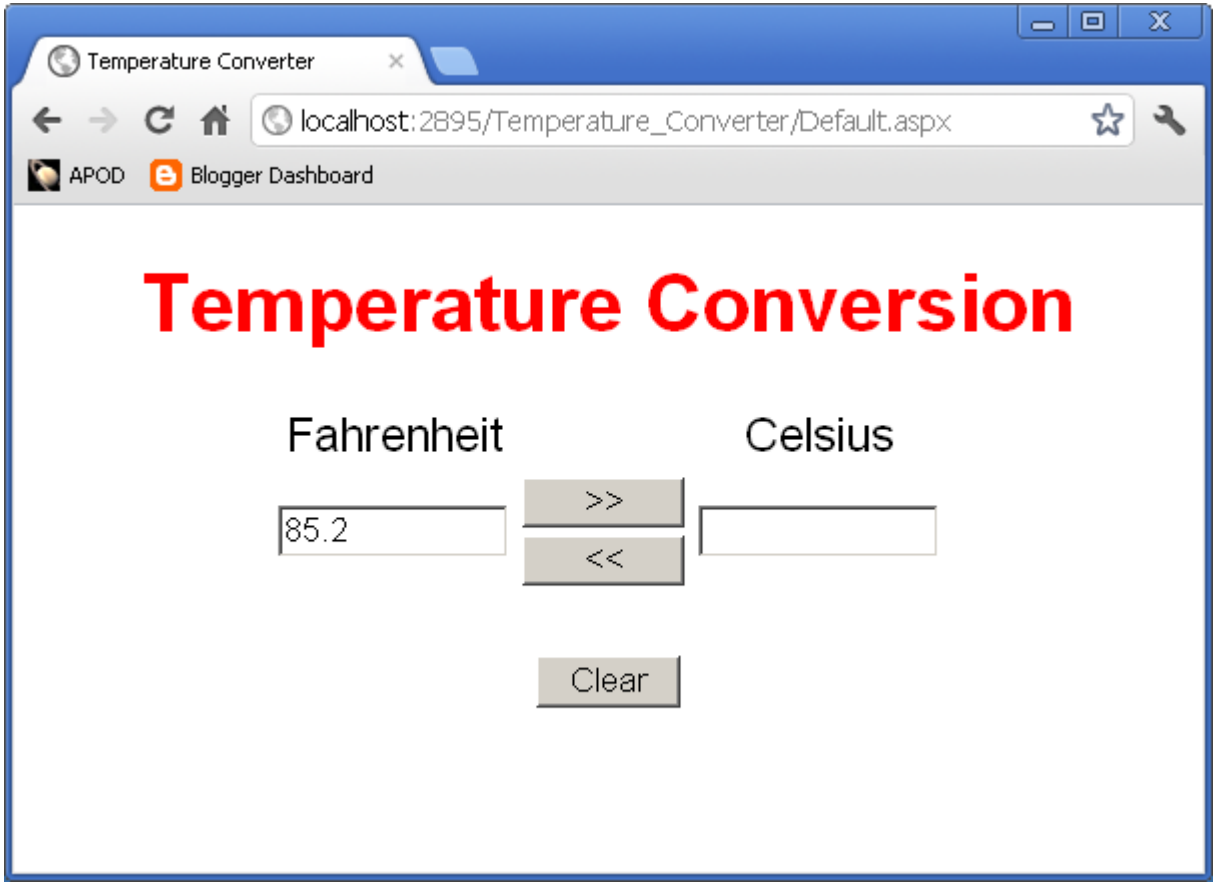

Temperature Converter
localhost:2895/Temperature_Converter/Default.aspx
APOD
Blogger Dashboard
Temperature Conversion
Fahrenheit
Celsius
>>
<<
Clear

Functional Requirements

- The user can enter a decimal number into either TextBox and click the corresponding “Convert” button.
- The app does the conversion and displays the result in the other TextBox.
- The user must then click the Clear button before doing anything else.

Example

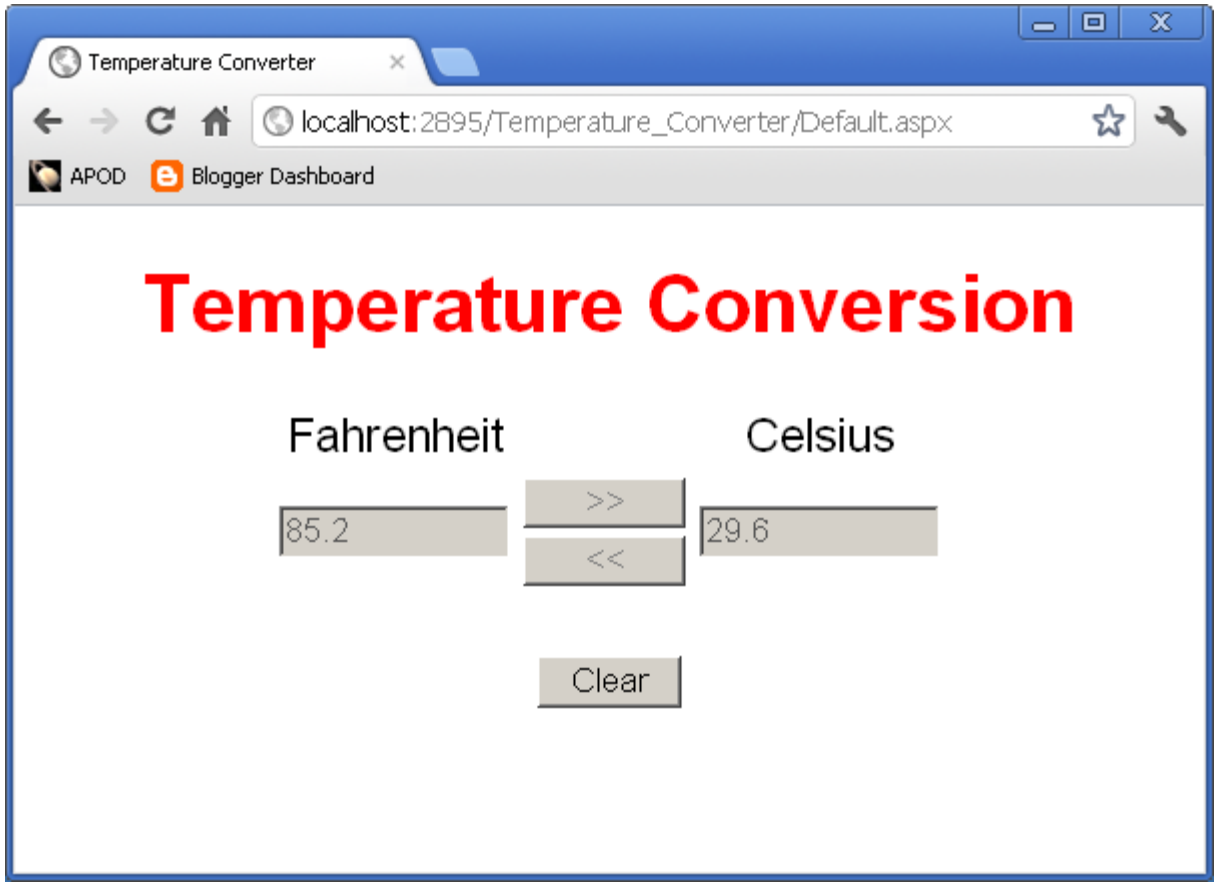
User enters 85.2 into the Fahrenheit input box.



User then clicks the >> button.

Example

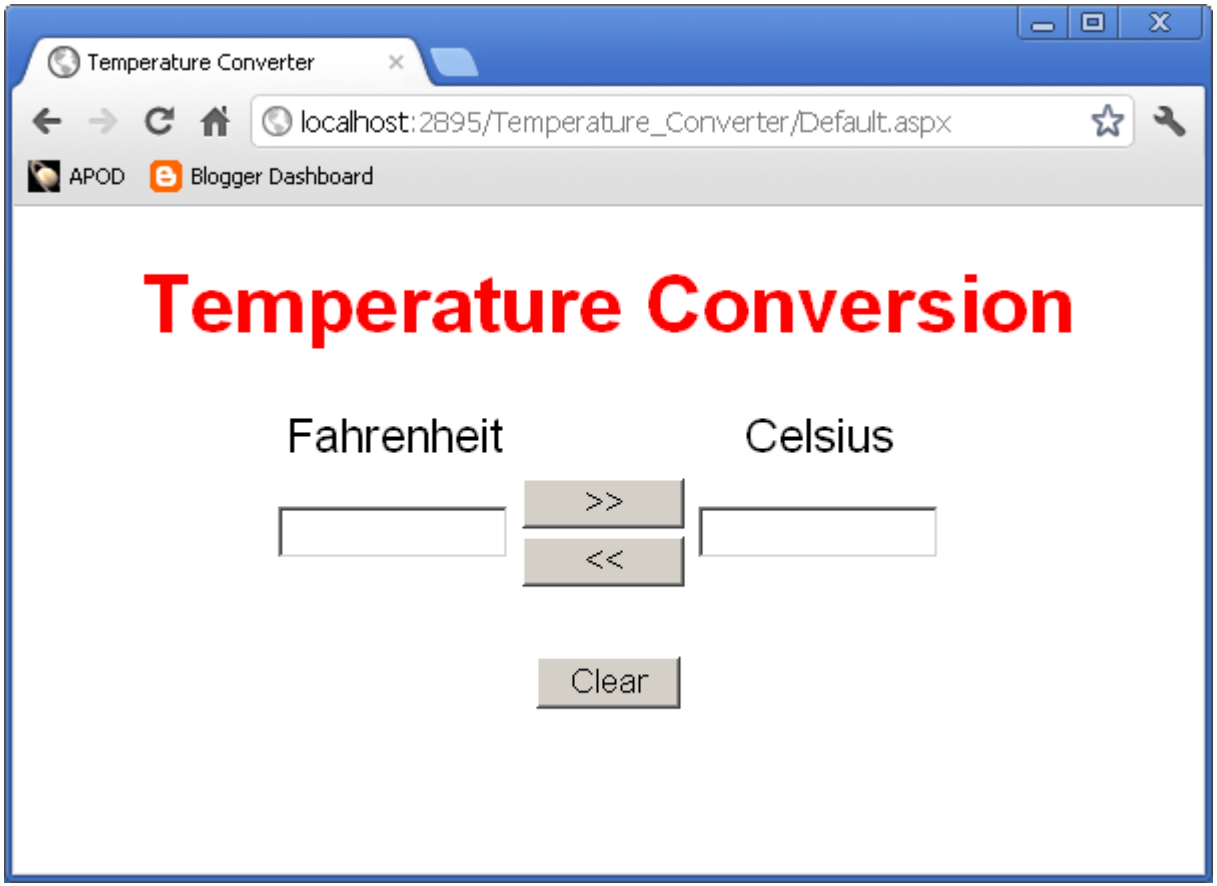
App displays the corresponding Celsius temperature.



Convert buttons and input boxes are now disabled until user clicks Clear.

Example

User clicks Clear and app returns to initial state.



Initial State

- All buttons are enabled.
- Both TextBoxes are empty but enabled.
- User can enter text into either TextBox.

- After entering text into either TextBox
  - User can change contents of either TextBox.

Convert Buttons

- When the user clicks a "convert" button (<< or >>)
  - If the corresponding input is valid
    - Do the conversion.
    - Put the output into the other TextBox
    - Disable both Convert buttons.
    - Disable both TextBoxes.
  - If the input is not valid
    - Display an error message.
    - Disable both Convert buttons.
    - Disable both TextBoxes.

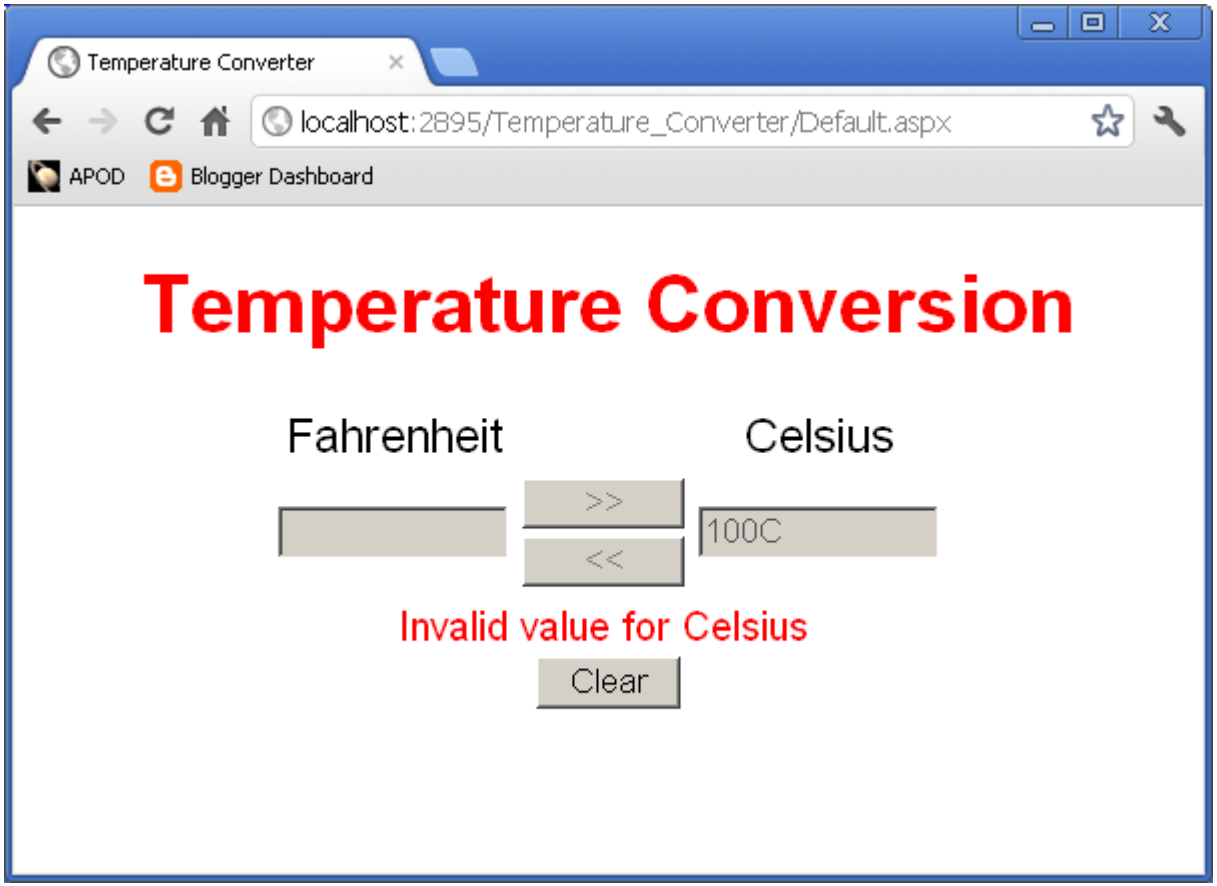
The Clear Button

- The Clear button should always be enabled.

- When the user clicks the “Clear” button
  - Revert to the initial state
    - Clear both TextBoxes.
    - Enable both TextBoxes.
    - Clear the Error Message.
    - Enable both “Convert” buttons.

Error Example

User enters 100C as Celsius input and clicks <<.



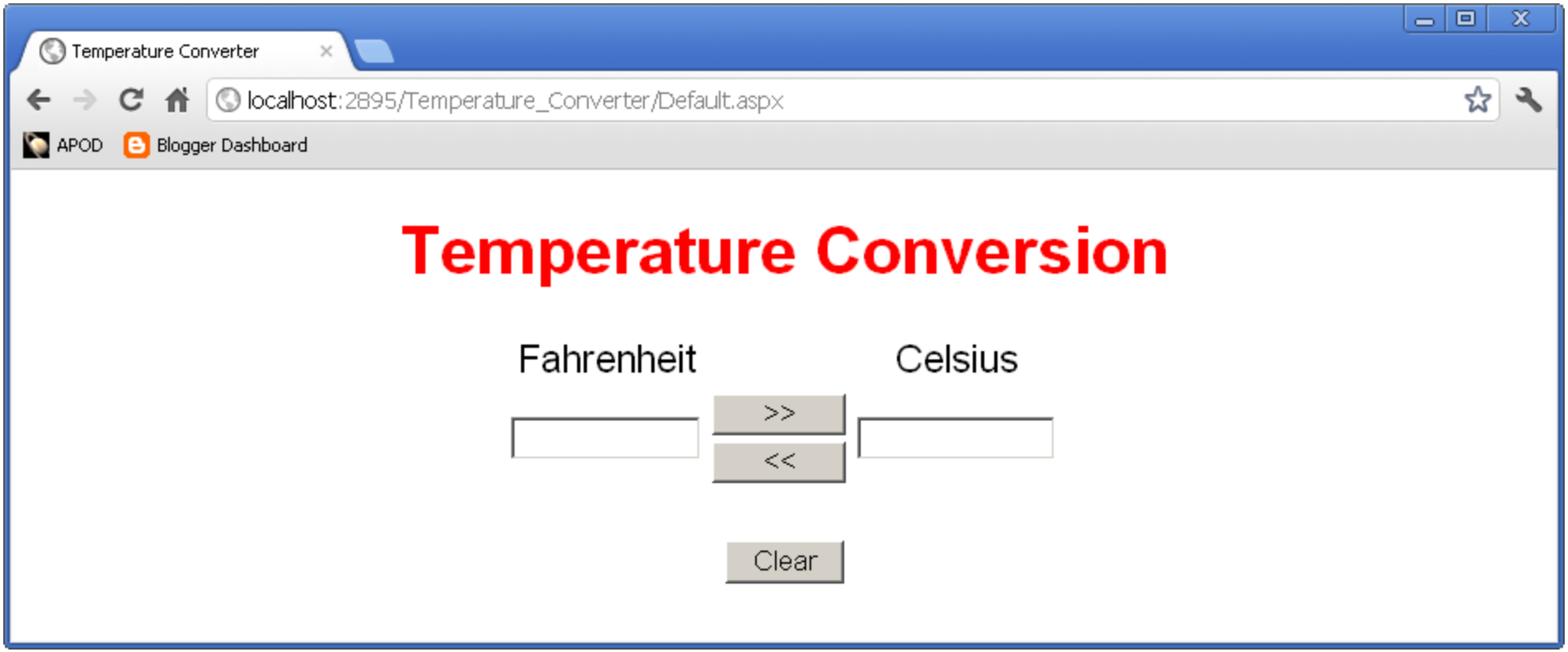
App displays error message and disables both inputs and both Convert buttons.

User must click Clear in order to continue.

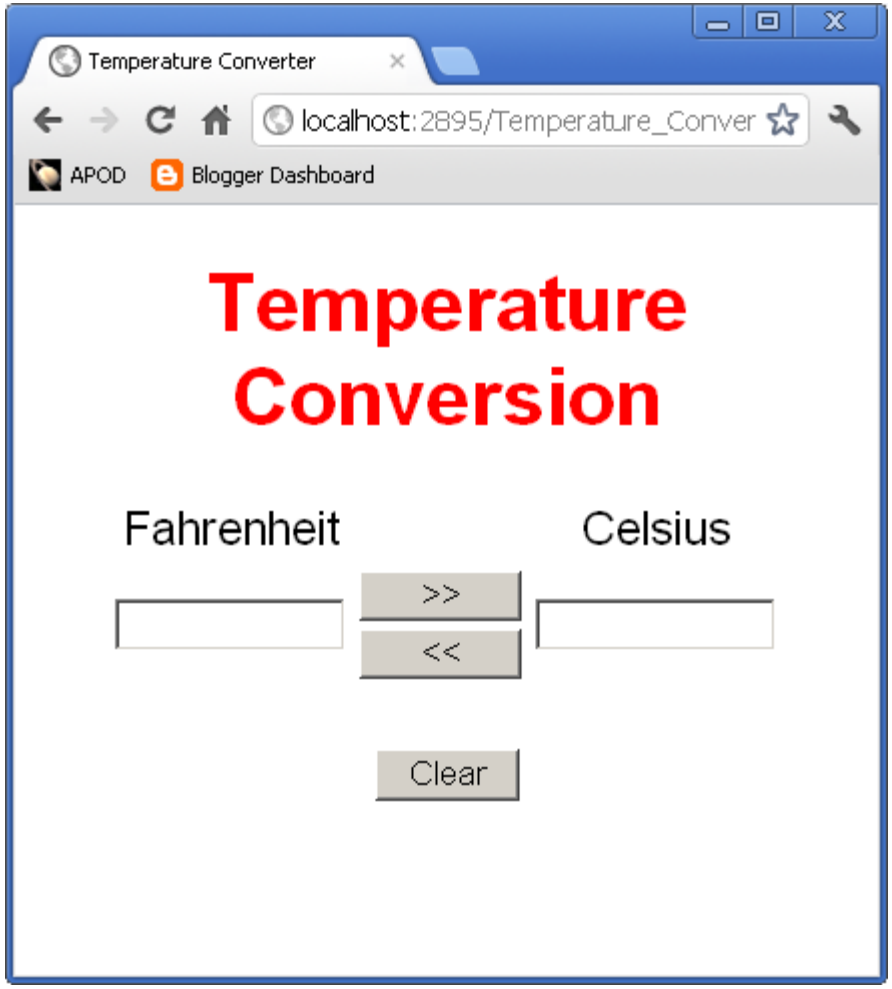
Specifications

- Use the .NET Decimal type for all numerical values and arithmetic operations.
  - See Chapter 5 of textbook.
- Show conversion results with one decmal place.
- Avoid throwing an exception on invalid input.
- Page contents should stay centered (left to right) if page is resized.

Wider Page


Temperature Converter
localhost:2895/Temperature_Converter/Default.aspx
APOD
Blogger Dashboard
Temperature Conversion
Fahrenheit
Celsius
>>
<<
Clear

Narrow Page


Temperature Converter
localhost:2895/Temperature_Conver
APOD
Blogger Dashboard
Temperature Conversion
Fahrenheit
Celsius
>>
<<
Clear

Hints and Tips

- All .NET numeric types have a TryParse method and a ToString method.
  - Look these up if you are not familar with them. They will be useful for this project.
- You may use an HTML table to control layout.
  - The buttons will need to be in a table inside a cell of an outer table.
- Use CSS to control layout if you prefer.

Submission

- Project is due by 11:59 PM, Sunday Sept. 21.
  - No late submissions will be accepted.
- You may work as a pair, or in a group of three.
  - OK to work along if you prefer.
- Deliverables:
  - Default.aspx
  - Default.aspx.cs
- Zip the files and submit the .zip folder using the Canvas Assignment for this class.
- If you work as a pair or a group, submit only one copy of the files.
  - One member submits the files.
  - All members submit a comment identifying who they worked with.