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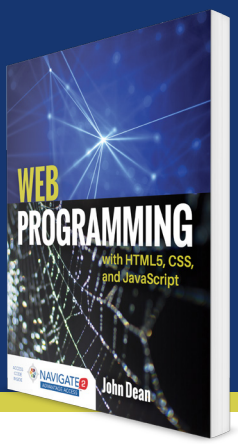


CHAPTER 9
PROJECT

Web Programming with HTML5, CSS, and JavaScript/First Edition

John Dean

Implement a web page that generates a restaurant bill.

Provide number boxes for tax rate percentage, the meal's price, and the tip percentage. After the Calculate button is clicked, if the input values are valid, display the bill below the button. The bill should show the meal's price, the tax amount, the tip amount, and the total payment due. See the sample session for details.

You must include appropriate attributes for your input controls, and that includes appropriate attributes for input validation. The tax rate percentage control should accept a number between 0 and 100, with a maximum of 2 digits at the right of the decimal point. The price control should accept a number between 0 and 1000, with a maximum of 2 digits at the right of the decimal point. The tip percentage control should accept an integer between 0 and 200.

Use JavaScript to check for input errors and display error messages in a dialog. For each user input that is outside of the range described above, display an error message. If there's invalid input, erase the previously displayed restaurant bill before displaying the error message dialog.

In printing your error dialog, do not use hard-coded values for the valid ranges for a particular input control. Instead, retrieve those values with the input control's `min` and `max` properties. If you want more details, go to Mozilla's DOM reference page at:

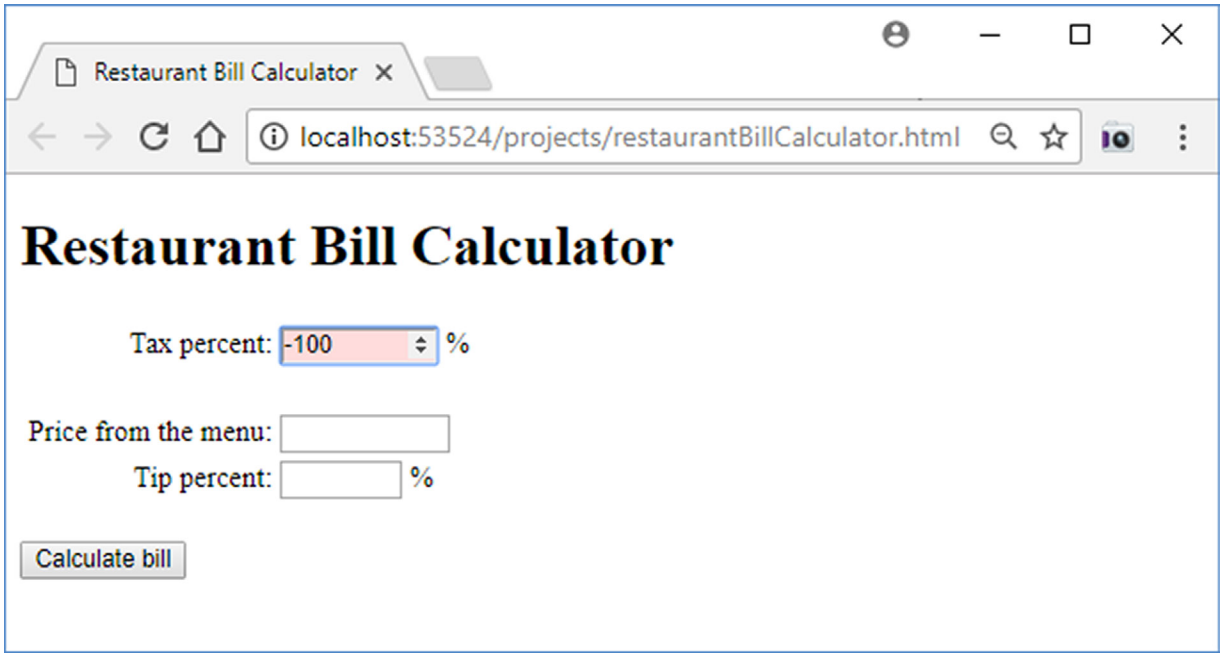
https://developer.mozilla.org/en-US/docs/Web/API/HTMLInputElement and look up the `min` and `max` properties.

Implement CSS rules such that when a number control has focus, the control's background becomes light green for valid input and light red for invalid input.

Use label elements for the three input control prompts.

Sample session:

After entering -100 in the first number box, note the light red background color:



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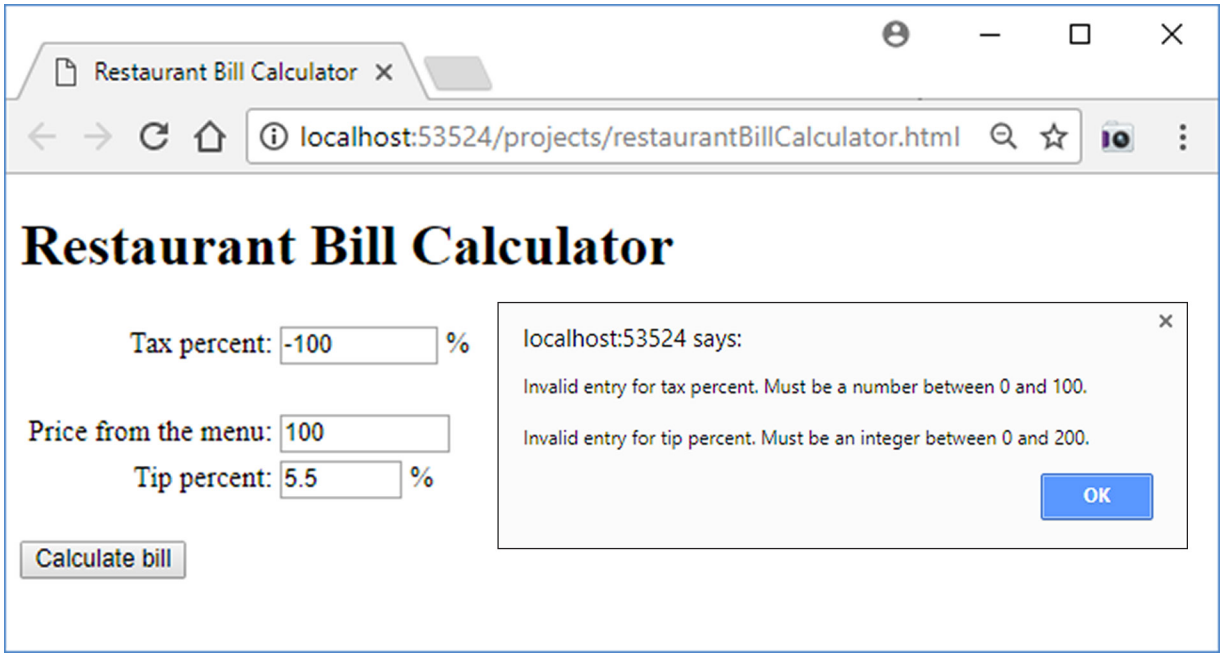
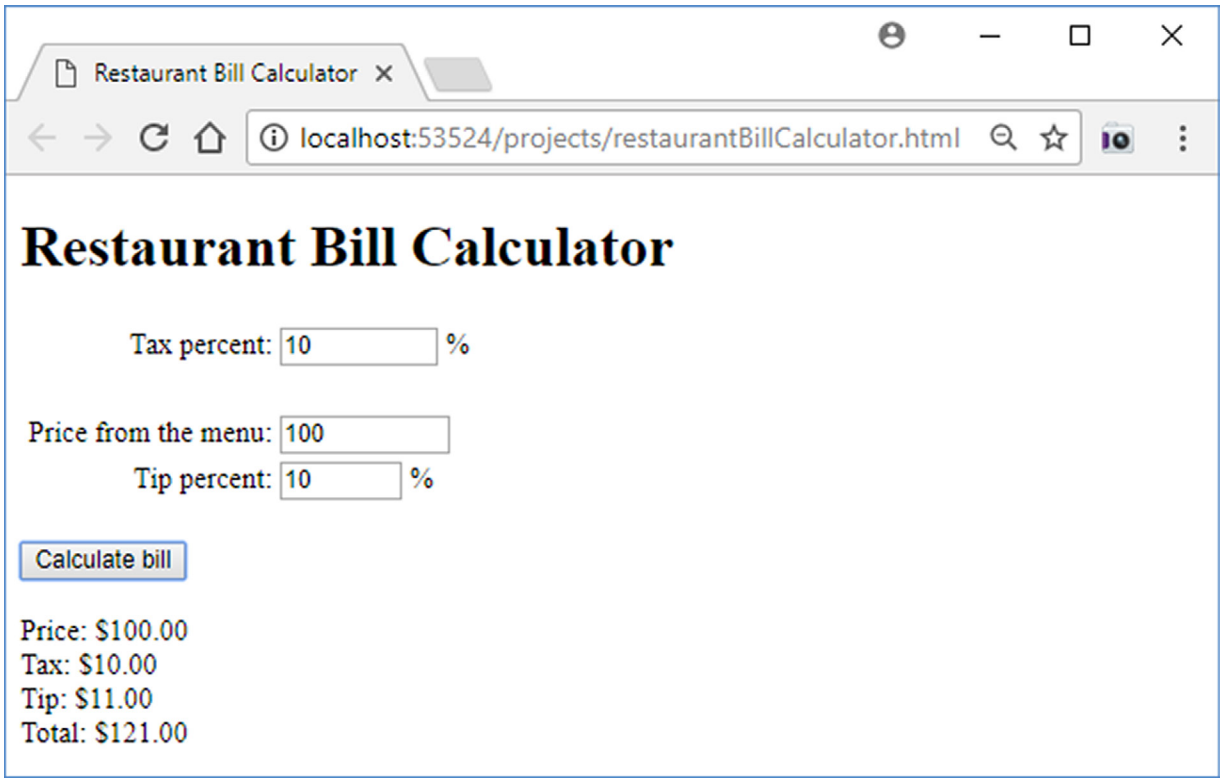
After entering a valid value for the price and an invalid value for the tip and clicking Calculate bill:



After clicking OK, entering all valid values, and clicking Calculate bill:



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