Web Client-Side Programming – Homework 3
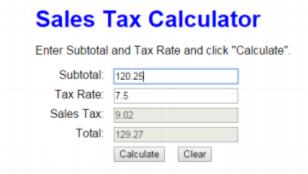
A Form - the shape and structure of something as distinguished from its material.
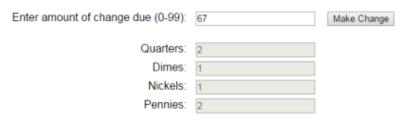
Description

For this assignment we will create a simple web form that reacts to user input and dynamically updates the html on the page.

Specifications

- Starting with the basic HTML 5 Template (index.html) on Canvas, create an application that calculates Sales Tax and calculates change.
- The two forms should be on one page and look like what is shown below.
- Use an external style sheet to add presentation to the application.

Sales Tax Calculator

Enter Subtotal and Tax Rate and click "Calculate".

Subtotal:	120.25
Tax Rate:	7.5
Sales Tax:	9.02
Total:	129.27

[Calculate]   [Clear]

Change Calculator

Enter amount of change due (0-99): 67   [Make Change]

Quarters:	2
Dimes:	1
Nickels:	1
Pennies:	2

- Note – All JavaScript should be in an external JS file.
- For Sales Tax Form
  - Code an event handler (function) named processEntries() that gets the user entries, calculates the sales tax and total, and displays those results in the text boxes.
  - Break the steps for the calculation and display into different functions.
  - Code an onload event handler that attaches the processEntries() function to the click event of the Calculate button.
  - Make sure you add data validation to the processEntries() function. The subtotal entry should be a valid, positive number that's less than 10,000. The tax rate should be a valid, positive number that's less than 12.
  - The error messages should be displayed in an alert dialog boxes, and the error messages should be:
    - Subtotal must be > 0 and < 10000
    - Tax Rate must be > 0 and < 12
  - Make sure the cursor is moved to the Subtotal field when the application starts and when the user clicks on the Calculate button.
  - Add the JavaScript event handler for the click event of the Clear button. This should clear all text boxes and move the cursor to the Subtotal field.

- o Add JavaScript event handlers for the click events of the Subtotal and Tax Rate text boxes. Each handler should clear the data from the text box.
- For the Change Calculator Form
  - o Code an event handler named processEntry() that gets the user's entry and checks to make sure that it is a number between 0 and 99. If it isn't, display an alert dialog box for the error. If it is valid, call a function named makeChange() and pass it the user's entry.
  - o Code the makeChange() function, which should have one parameter that accepts the user's entry. This function shouldn't return anything, but it should display the results in the text boxes for Quarters, Dimes, Nickels, and Pennies.
    - ▪ Hint – use a combination of the modulus and division operator to calculate the number of coins.
- Do not forget to put a comment at the top of the code file with your name and assignment.
- Do not forget to validate both your HTML and your CSS files.

Documentation

You will need to create a document (.docx, .rtf, .pdf) which contains the following:

- A screenshot of your page running on your local webserver. Your screenshot needs to include the address bar with the localhost url and shows the input, error for invalid input, and the result.
- You will need to validate the index.html and your CSS file using the validator (link on Canvas) and include a screenshot of the successful validation (Green Bar).

What to Submit

You need to submit your index.html, CSS file, and your external JS file along with your Document. Make sure your document is in the correct format and includes your name.