8.10.3 Hands-On Practice

PROJECT 1: Art Store

DIFFICULTY LEVEL: Beginner

Overview

Demonstrate your proficiency with loops, conditionals, arrays, and functions in JavaScript. The final project will look similar to that shown in Figure 8.30.

Instructions

1. You have been provided with the HTML file (**ch08-proj01.html**) that includes the markup for the finished version. Preview the file in a browser.
2. Examine the data file **data.js**. It contains an array that we are going to use to programmatically generate the data rows (and replace the hard-coded markup supplied in the HTML file).
3. Open the JavaScript file **functions.js** and create a function called `calculateTotal()` that is passed a quantity and price and returns their product (i.e., multiply the two parameter values and return the result).
4. Within **functions.js**, create a function called `outputCartRow()` that has the following signature:

```
function outputCartRow(item, total) {}
```

5. Implement the body of this function. It should use `document.write()` calls to display a row of the table using the passed data. Use the `toFixed()` method of the number variables to display two decimal places.

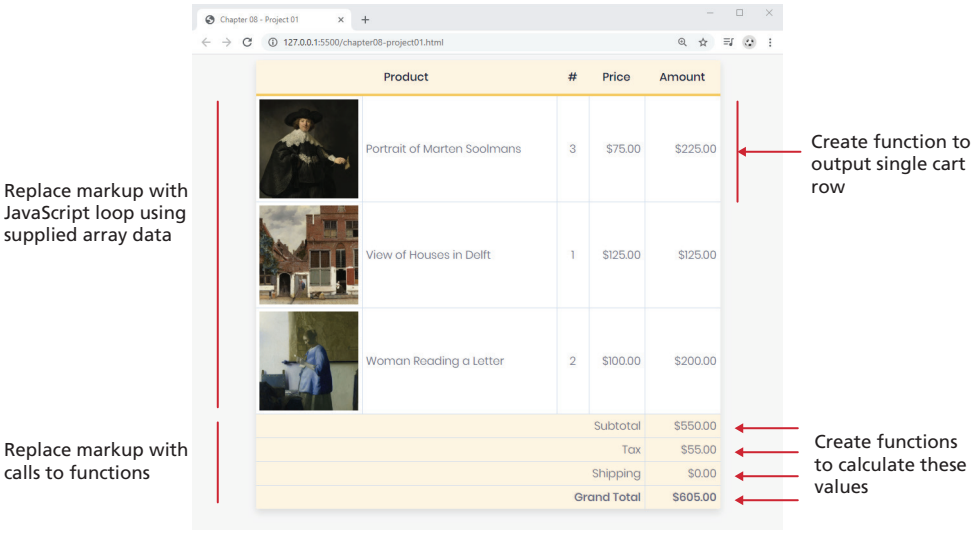

FIGURE 8.30 Completed Project 1

Note: your browser may display a warning message in the console about avoiding `document.write`. You can ignore this for now (in the next chapter and lab, you will learn the correct way to add content using DOM methods).

6. Replace the three cart table rows in the original markup with a JavaScript loop that repeatedly calls this `outputCartRow()` function. Put this loop within the **ch08-proj01.js** file. Add the appropriate `<script>` tag to reference this **ch08-proj01.js** file within the `<tbody>` element.
7. Calculate the subtotal, tax, shipping, and grand total using JavaScript. Replace the hard-coded values in the markup with your JavaScript calculations. Notice that the tax and shipping threshold are input from the user, so that you can verify your calculations are working. The shipping amount should be $40 unless the subtotal is above the shipping threshold, in which case it will be $0.

Test

1. Test the page in the browser. Verify that the calculations work appropriately by changing the input values.

PROJECT 2: Photo Sharing Site

DIFFICULTY LEVEL: Intermediate

Overview

Demonstrate your ability to work with JSON data as well as functions. The final project will look similar to that shown in Figure 8.31.

Instructions

1. You have been provided with the HTML file (**ch08-proj02.html**) that includes the markup (as well as images and stylesheet) for the finished version. Preview the file in a browser. You will be replacing the markup for the three country boxes with two JavaScript loops (one contained within the other) and the `document.write()` function to output the equivalent markup.
2. The CSS styling has been provided. You only need to output the correct HTML. The three images are contained within `<article>` elements. The color blocks are `<span>` elements whose `background-color` style is set via inline CSS using the `hex` property from the `colors` array in the JSON data. The image filename is contained within the `filename` property in the JSON data.
3. In the file **ch08-proj02.js**, convert the JSON string in **photo-data.js** into a JavaScript array object using `JSON.parse()`. Then write a loop that iterates through the photos array and calls `outputCard()`, which you will create in the next step. Pass a single photo object to `outputCard()`.
4. Create a function named `outputCard()` that is passed a single photo object. This function is going to generate the markup (using `document.write`) for a single photo card (a card is a term often used to describe a rectangle