ITS30605 Web Programming

Practical Assignment 2, August 2022 Semester

The purpose of this assignment is:

- to demonstrate practical skills using scripting languages such as HTML, JavaScript and Cascading Style Sheets to design and develop web pages

TGC 2.0 Learning Outcome(s) Assessed:

ML02   Apply simple logic using JavaScript in enabling interactivity and functionality in a website. (TGC 2.2, 2.3)

This assignment is a continuation from assignment 1. The primary focus of this assignment is to add dynamic interactivity with front-end scripting in JavaScript. However, ensure that proper formatting in all JavaScript, HTML and CSS scripts are observed.

Task 0 (done as and when required)

Add any required HTML attributes to the participating HTML elements – this will ease the implementation of JavaScript into your website. Additionally, any loose ends according to the feedback received in Assignment 1 should be considered as well.
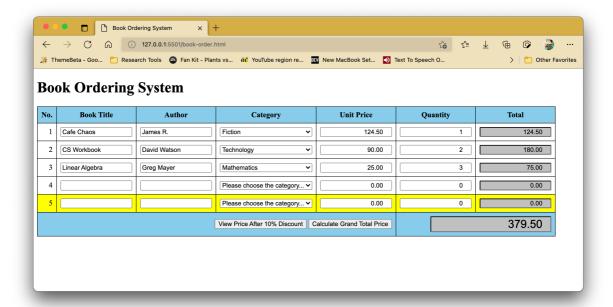
NOTE: Like in Assignment 1, you are to apply additional CSS to improve and enhance the webpage's layout. You are **ONLY** permitted to use external CSS for this HTML file.

Task 1

In `book-order.html`, link an **external JavaScript file** named `book-order.js` which contains code that meets the following criteria:

1. Create a function called `calculateTotal()` to calculate Unit Price × Quantity, and assign the result value to the total text field for each row. Then, sum the amounts in the Total text fields and assign the result value to the grand total text field.

2. Execute the function `calculateTotal()` when a user clicks on the "Calculate Grand Total Price" button.

The following picture shows a webpage output example after executing the JavaScript code.

WARNING: All points in Tasks 2 and 3 will be void if the `calculateTotal()` function does not run when the "Calculate Grand Total Price" button is clicked.

Task 2

In `calculateTotal()` and/or `book-order.html`, make the following additions/modifications:

1. All unit price values obtained from the number inputs must be rounded to 2 decimal places before calculating their respective totals.

2. All quantity values obtained from the number inputs must be rounded to the nearest integer before calculating their respective totals.

3. All item totals and the grand total must be presented in a 2 decimal place format.

4. None of the fields should contain a negative value. Should any of these fields contain such a value, reset them to zero before proceeding with the grand total calculation.

   NOTE: The mechanism of how negative values are detected is up to your interpretation, be it during when users enter the values or only during when the "Calculate Grand Total Price" button is clicked.

5. Additionally, the user should be alerted with an appropriate message when a negative value is detected. You may use the appropriate medium (i.e., prompt box, paragraph text under the table, etc.) to carry out this function.

Task 3: Discount Offers

In `book-order.html`, insert another `<script>` element and implement the following criteria:

1. Create a function that automatically checks if the Grand Total value is more than 250. If the Grand Total value is more than 250, display a button below the table or beside the "Calculate Grand Total" button that allows for a 10% discount.

2. Create another function that calculates the new Grand Total price when this additional button is selected. After that, display a message in an alert box displaying a message with the new Grand Total price. Ensure this new Grand Total price is also rounded to 2 decimal places.

   NOTE: You are not required to edit the value inside the Grand Total input field, but if you choose to do so, ensure that the discount function does not recursively reducing the grand total price a second time.

You may want to strategize on where you place your `<script>` tags, depending on whether to be placed in the `<head>` or `<body>` section, and their relative positions from one another.

Additional Requirements

1. In cases where you are to create an external JS file, you are to be kept in a separate subfolder called "js". **DO NOT USE THE SAME FOLDER TO KEEP YOUR CSS/IMAGE FILES**.

2. You are strictly forbidden from using any front-end frameworks to complete this assignment. All points pertaining to CSS styling and JavaScript will automatically be void should this requirement go unheeded.

3. All prior HTML and CSS requirements for book-order.html apply to this assignment as well.

Overall Presentation and Naming Convention

Ensure that all named variables in your JavaScript code is named properly, following the Camel Case/Snake Case naming convention, or in full capital letters.

Proper Script Formatting

You will also be graded on proper indentation and structure; improper use of such will warrant severe point deductions. Additionally, the use of deprecated HTML attributes/elements/etc. is strictly forbidden.

Submission Guidelines

This assignment should be carried out individually.

Your submission should include a zip file containing all essential scripts and/or files required. Ensure that you have a separate subfolder for offline CSS files, JavaScript files, and image files each, if there are any.

TAKE NOTE:

- Submissions are to be made through the submission link made available through TIMeS. Submissions via e-mail or other media outlets will be disregarded.

Compress your project folder containing all relevant files in a zip file before submission.

Your zip file should be named using the following naming convention:

```
its30605_asgn2_<student_id>.zip
```

For example, a student with ID 0321342 will name their zip file as:

```
its30605_asgn2_0321342.zip
```

Marks Breakdown and Assessment Contribution

Criteria	Awarded Points
Task 1 Part 1: Complete `calculateTotal()` Part 2: Proper execution of `calculateTotal()` - **Disqualify all points from Tasks 2 an 3 if function does not execute properly**	10 (5 each)
Task 2 Part 1: Round unit price values to 2 decimal places Part 2: Round quantity values to nearest integer value Part 3: Round item total values to 2 decimal places Part 4: Grand total to be presented in 2 decimal places Part 5: Countermeasure for negative values Part 6: Appropriate user error alerts	30 (5 each)
Task 3 Discount Checking and Discounted Price Calculation	10 (5 each)
Overall Presentation and Naming Convention - Variable naming convention (using proper naming conventions, meaningful/descriptive names for variables) - Strategic locations for all JavaScript code	10 (5 each)
Proper Script Formatting - Proper location of HTML document elements - HTML document structure (includes proper location of document items, attribute values, and indentation) - HTML Content (no deprecated elements/tags) - Proper CSS usage	20 (5 each)
TOTAL	**80**

Total points will be scaled to 20% for assessment contribution.

Submission Deadline

Week 9 (October 29, 2022), 12:00 midnight (+1 hour tolerance)

- Marks are deducted by 2% for each calendar day from the given deadline. Any submission at a date exceeding **FIVE (5)** days from the stipulated deadline will be given no regard of any form, thus no marks will be given (refer to **Non-Submission of Assignment** in the MI).

- Barring extenuating circumstances, no marks are awarded for submission of any kind after the 7th calendar day from the given deadline. Late submissions in the form of hard copies will not be accepted.

As according to set requirements set by Taylor's College, assignment feedback and/or score sheet will be returned within FOURTEEN (14) days, i.e., November 12, 2022.

Plagiarism

JavaScript code as well as HTML and CSS scripts should not resemble stark resemblance to another person's assignment report. As you are assessed on the decisions you make on crafting and styling a website, you are strongly advised not to share the same styling of webpages with each other.

Marks are capped at half of the given maximum immediately for both parties involved in a plagiarism act, separate from any mark deduction due to tardiness.