

Assignment 2

Client-Side Dynamic Content with JavaScript (Practical Group Task)

Description:

Each group will continue to work on the website they created in Assignment 1, adding dynamic features using JavaScript functions, DOM manipulation, event handling, and form validation.

Below are the **clearly defined tasks** that each group needs to complete. For groups with 4 members, an additional task is assigned.

Assignment Tasks:

Task 1: JavaScript Functions and Event Handling (25 Marks)	[CLO 3, 4, 5]
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- Add three buttons to your webpage:
 1. Button 1: “Show Details”. When clicked, it should display a hidden section with case-specific details. For example, in the **"School Lunch Box"** case study, clicking this button will reveal a section with details about gourmet lunch boxes.
 2. Button 2: “Hide Details”. When clicked, this button should hide the section that was revealed by the "Show Details" button.
 3. Button 3: “Change Background Color”. This button should change the background color of a specific section (e.g., the header or main content area) of the website.
- Use **JavaScript functions** to implement the logic for showing, hiding, and changing the background color.
- Ensure that clicking the buttons triggers events that are handled by the functions.

Task 2: DOM Manipulation (25 Marks)	[CLO 3, 4, 5]
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Dynamically create and update webpage content using JavaScript and DOM manipulation.

- **Create a list dynamically:** Add a button labeled “Add Item”, which, when clicked, dynamically adds an item to a list (e.g., a list of services offered). For example, in the **“PK Guides & Tours”** case study, clicking this button could add a new tour package to a list of available tours.
- **Remove an item dynamically:** Add another button labeled “Remove Last Item”, which removes the last item in the list when clicked.
- Use JavaScript’s **DOM manipulation** methods like `document.createElement()`, `appendChild()`, and `removeChild()` to implement these features.
- The list should be visible on the page, and users should be able to add and remove items dynamically.

Task 3: Dynamic Styling (25 Marks)	[CLO 3, 4, 5]
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Change the appearance of the webpage dynamically based on user interaction.

- Add a button labeled “Change Text Style”. When clicked, this button should change the font style (e.g., from normal to italic or bold) and color of the text in a specific section of the page. For example, in the “**The Artisan Bakery**” case study, clicking the button could change the description text of a product to be bold and red.
- Add another button labeled “Reset Text Style”, which should reset the font style and color to the original settings.
- Use JavaScript to modify CSS properties dynamically using the style object. For example, change properties like `fontWeight`, `fontStyle`, and `color` of the target elements.

Task 4: Form Validation (25 Marks)

[CLO 3, 4, 5]

Create and validate a form using JavaScript.

- Create a form that includes the following fields:
 1. **Name (text input)**
 2. **Email (text input)**
 3. **Phone Number (text input)**
 4. **Case-Specific Field** (e.g., for the “**Bonsai Pets**” case study, the field could be for selecting a pet type like cat or dog).
- Add a button labeled “Submit”. When clicked, the form data should be validated using JavaScript:
 1. **Name:** Must not be empty.
 2. **Email:** Must be in the correct format (e.g., `example@domain.com`).
 3. **Phone Number:** Must contain only digits.
- If any field fails validation, display an error message next to the field using JavaScript. If all fields are valid, show a success message.
- Use JavaScript functions to implement the form validation logic and handle form submissions.

Task 5*: Additional Task for Groups with 4 Members: Image Rollover Animation (20 Marks)

[CLO 3, 4, 5]

Add an interactive image rollover effect using JavaScript.

- Identify two or more images on your webpage (such as product images, team members, or services).
- Add a **JavaScript function** that changes the image when the user hovers over it (rollover effect). For example, in the “**Bryant Rothmoore Studios**” case study, hovering over a portrait could change the image to a different view.
- Ensure the images revert to their original state when the user moves the mouse away.
- Implement the rollover effect using JavaScript’s `onmouseover` and `onmouseout` events.

Mapping to CLOs:

CLO 3: Build Static and Dynamic Websites and Applications

- Tasks focus on building dynamic websites by using JavaScript for interactive features like DOM manipulation, dynamic styling, and form validation.

CLO 4: Produce Solutions using Web-Oriented Programming Constructs

- Students solve programming challenges using JavaScript constructs, creating dynamic content, managing user inputs, and enhancing website functionality.

CLO 5: Perform Effectively as a Member of a Team

- Team members collaborate on designing, coding, and testing interactive features, ensuring effective teamwork in building and debugging the website.

Submission Guidelines:

- Ensure that all pages are properly linked and navigate smoothly.
- Make sure to add name/roll nos. of all group members in a separate document (word file).
- Ensure the code is thoroughly tested, and all dynamic features are functional.
- Zip your assignment folder and name it: Assignment_2_GroupNumber.zip.
- Submit via the LMS by the given deadline.
- Only one submission per group is required.

Marking Rubrics (For groups of 3 members, Total Marks: 100)

Sr. No.	Criteria	Excellent (25 Marks)	Good (20 Marks)	Satisfactory (15 Marks)	Needs Improvement (10 Marks)	Marks
1.	JavaScript Functions & Event Handling	Fully functional and creative	Mostly functional	Basic event handling	Little or incorrect implementation	25
2.	DOM Manipulation	Fully functional DOM updates	Mostly functional	Basic DOM manipulation	Incorrect or non-functional DOM manipulation	25
3.	Dynamic Styling	Effective styling with transitions	Mostly functional styling	Basic dynamic styling	Little or no styling implemented	25
4.	Form Validation	Complete, error-free validation	Mostly functional	Basic validation, some errors	Little or no form validation	25
Additional Marks (For groups of 4 members)						
5.	Image Rollover Animation (Additional Task)	Smooth, well-implemented rollover	Functional, minor issues	Basic functionality	Incorrect or no rollover effect	25

Good Luck (☺)