CALIBRAINT TECHNOLOGIES

MILESTONE 3

Forms, Lists, and Tables
Accessibility
SEO
HTML APIs
HTML Comments

Forms, Lists, and Tables

Forms

- The <form> element is a container for different types of input elements, such as: text fields, checkboxes, radio buttons, submit buttons, etc
- HTML form elements

<input> - Accepts user input in various formats like text, passwords, numbers, etc.

<label> - Associates a text label with a form element, improving accessibility, especially for screen readers.

<select> - Creates a drop-down list for selecting one or more options.

<textarea> - Allows for multi-line text input.

<button> - Represents a clickable button used to submit forms or trigger actions.

<fieldset> - Groups related form elements, typically with a border around them.

<legend> - Provides a caption for the <fieldset>, describing the grouped elements.

<datalist> - Specifies a list of pre-defined options for an <input> element, enabling auto-complete.

<output> - Displays the result of a calculation or user interaction, often linked to forms.

<option> - Defines an individual item within a <select> or <datalist> element.

<optgroup> - Groups <option> elements within a <select> for categorization.

Lists

- An HTML list is a record of related information used to display the data or any information on web pages in the ordered or unordered form.
- An unordered list starts with the <ul> tag. Each list item starts with the <li> tag.

- Example for unordered list
    - List
    - List
- An ordered list starts with the <ol> tag. Each list item starts with the <li> tag.

1. First item
2. Second item
3. Third item
4. Fourth item

- A description list is a list of terms, with a description of each term.The <dl> tag defines the description list, the <dt> tag defines the term (name), and the <dd> tag describes each term

Tables

- **HTML tables** are essential for organizing and displaying data in a structured format on web pages.
- Creating a table in HTML is a fundamental skill for web developers. It is used for product information, presenting data analytics, or designing a pricing comparison chart, etc
- .The <table> element defines the start and end of the table. It acts as a container for all the table-related elements.
- Syntax

```
<table>
    <tr>
        <th></th>
        <th></th>
        ...
    </tr>
    <tr>
        <td></td>
        <td></td>
        ...
    </tr>
    ...
</table>
```

Accessibility

- Web accessibility is about building digital spaces that are inclusive and navigable for everyone, regardless of their abilities.
- Use Clear Language
- Keep sentences as short as possible

- Avoid dashes. Instead of writing 1-3, write 1 to 3
- Avoid abbreviations. Instead of writing Feb, write February.
- Avoid slang words.

SEO

- HTML SEO tags are bits of code that can be used to describe content to search engines.
- The meta description tag or SEO description is an HTML tag that, like the meta title, provides brief information about a page. Its main purpose is to let users know what the page is about and entice them to click through from the SERP to your site.
- It always goes inside the <head> element of a page's HTML code and starts with <meta name="description" tag.
- <meta name="description" content="Your discription."/>
- Google said that they can use the meta description tag to generate a description of a page that will be featured in the snippet, but they certainly don't use it to rank pages. Not much has changed since then.
- But since the description can increase the click-through rate of the SERP snippet, it does have an indirect effect on page rankings.

HTML APIs

- HTML APIs are pre-defined sets of functions and protocols that allow web developers to interact with web browsers, manipulate HTML documents, and control web applications without writing complex code.
- These APIs are built directly into the browser, making them easy to access using JavaScript, without needing external libraries.
- Browser Built-in APIs:
    - HTML APIs are integrated into modern web browsers, so they don't need installation or special setup.
    - Examples include Geolocation API, Web Storage API, and Canvas API.
- Easy Integration with HTML and JavaScript:
    - APIs can be accessed using JavaScript within HTML files.
    - They allow developers to enhance the functionality of websites by interacting with elements like forms, media, or graphics.
- No Extra Downloads:
    - APIs are available out-of-the-box in browsers, meaning developers can directly use them without installing any additional tools or libraries.
- Manipulating DOM Elements:
    - APIs like the DOM API (Document Object Model API) allow for dynamic manipulation of HTML and CSS directly from JavaScript.
- Various Functionalities:
    - HTML APIs cover a wide range of functionalities including user location (Geolocation API), storage (Web Storage API), drawing on web pages (Canvas API), accessing user devices (Camera API), etc.

List of API

- Web Storage API - Used to store data locally in the browser: Enables websites to store key-value pairs in a browser for later retrieval, even after the browser is closed (Local Storage) or just for the session (Session Storage).
- Canvas API - Used to draw graphics on a webpage: Provides a way to create 2D shapes, images, and animations directly in the browser using JavaScript. Commonly used in games, charts, and visualizations.
- Fetch API - Used to make HTTP requests to servers: A modern, promise-based interface for fetching resources such as data from APIs, enabling asynchronous calls for dynamic content loading.
- Drag and Drop API - Used to enable drag-and-drop functionality: Allows users to click and drag an element and drop it into a target area, used in applications such as file uploads and interactive UIs.
- Web Workers API - Used to run JavaScript in background threads: Helps execute scripts in the background without affecting the performance of the main webpage, useful for handling large computations or tasks without freezing the UI.
- File API - Used to access files from a user's device: Lets web applications read contents of files (such as text, images, or videos) uploaded by users, often used in file upload interfaces.
- History API - Used to manipulate browser history: Allows developers to modify the browser's history stack, enabling smooth transitions between states in single-page applications without full page reloads.
- Fullscreen API - Used to display web content in fullscreen: Enables websites to request fullscreen display for elements, such as videos or images, providing a more immersive user experience.
- Notification API - Used to display desktop notifications: Allows web applications to send notifications to the user, even when the website is not active, commonly used for updates, messages, or reminders.
- Battery Status API - Used to access the device's battery information: Provides information about the battery’s charge level and whether the device is charging, helping applications optimize performance based on battery state.

HTML Comments

- HTML comments are used to insert notes or explanations within the HTML code. These comments are not visible to users on the webpage but can be seen in the HTML source code.
- Syntax: HTML comments start with <!-- and end with -->.
- Explaining sections of code for easier understanding and maintenance.Temporarily disabling a section of code during development or testing.
- Providing notes for other developers working on the same project.