

MILESTONE 3

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

1. Form, Lists, Tables

- Forms are used to collect user input.
- `<form> </form>` tag is used.
- `<form>` element can have the following elements
 - `<input>` - to get input details from user. Input attributes are checked, disabled, max, maxLength, min, pattern, readonly, required, size, step, value. It has many type attributes. They are
 - Button
 - Checkbox
 - Color
 - Date
 - Datetime-local
 - Email
 - File
 - Hidden
 - Image
 - Month
 - Number
 - Password
 - Radio – select only one choice
 - Range
 - Reset
 - Search
 - Submit
 - Tel
 - Text
 - Time

- url
 - week
- <label> - for attribute is equal to id attribute
- <select> - dropdown list
- <textarea> - multiline input field
- <button>
- <fieldset> - used to group related data in form
- <legend> - defines caption for <fieldset>
- <datalist> - dropdown list with pre-defined option.
- <output>
- <option>
- <optgroup>
- List – There are two types of list. The are
 - Unordered List – List starts with tag. Each itm in the list starts with tag
 - Ordered List - List starts with tag. Each itm in the list starts with tag
 - Description List - <dl> : defines description list, <dt> : defines name, <dd> describes the item.
- Tables – used to arrange data in rows and columns
 - <table> </table> is used in starting.
 - <td> </td> Table data - defines a cell of a table.
 - <tr> </tr> Table row - defines row of a table
 - <th> </th> Table headers - defines heading of a table.
- <colgroup> - specifies one or more column in table formatting.
- <col> - specifies each column property for <colgroup> element.

2. Accessibilty

- Used to give a good way to navigate and interact with website.
- It is of – Semantic HTML, Non-Semantic HTML.
- Semantic HTML – Using correct HTML elements for the correct purpose as much as possible. Ex - <form>, <table>, <article> etc.
- Non-Semantic elements - <div>, .
- Heading tags – h1 to h6
- Alternative text – used in img tags.
- Link content should be as simple as possible. Ex- [click here to view.](#)

3. SEO (Search Engine Optimization)

- It helps search engine to understand the content.
- There are 3 main SEO processes:
 - On-page SEO – keywords, content optimization, User experience
 - Technical SEO – making website fully accessible so search engines can crawl in websites seamlessly.
 - Off-page SEO – Brand mentions, reviews
- SEO can be optimized by using console, google analytics, data studio (uses data visualization to make decisions and strategies), pagespeed insights (measures page speed), google lighthouse (open source tool that gives info about website's performance and gives score from 1 to 100)
- How google search works?
- There are 3 stages of working
 - Crawling
 - Indexing
 - Serving search results
- Crawling
 - Google constantly looks for new and updated pages and adds it to list of known pages – URL discovery
 - This fetching is done by googlebot.
 - It is also programmed in such a way to avoid overloading.
 - This crawling can be stopped by using robots.txt in meta tags
 - During crawling, google renders the page by running the code with recent version of JS. This is done to get the content of the site.
- Indexing
 - After crawling, google understands what the page is about.
 - It includes processing, analyzing the text, key tags with attributes like <title>, alt etc.
 - If google finds duplicate on internet, it groups the pages that have similar content. Then google selects the one that is more representative of the group. This also includes websites country, language etc.
 - This is been stored in large database.
- Serving search results
 - From the database, google gives the most relevant result according to user's query. This includes location, device, language etc.,

4. HTML APIs

- HTML APIs are collection of JS libraries which can be used directly in HTML files without incorporating any customize JS code.
- In other way, HTML API is where HTML is embedded in JS.
 - Ex - `const cartValue = document.getElementById("cart-value").textContent;`
 - Here **textContent** renders the value in `` tag.
- So HTML5 specifies scripting API's that can be using along with JS.
- It makes the process more flexible for programming.
- List of HTML APIs
 - Canvas element
 - Timed media playback
 - Offline web applications
 - Drag and drop
 - Geolocation
 - File – get file info from local files via file input
 - High-resolution Time API – provides current time in millisecond which is not dependent on system clock.
 - Navigation Timing API – Offers detailed timing information throughout the page loading.
 - Network information API – provides estimation of bandwidth.
- It is also used to create responsive layouts with web components
 - `<dialog>`
 - `<details>`, `<summary>`
 - `<picture>`
 - `<input>`

5. HTML Comments

- Comments are used to hide content.
- Comments are used to debug HTML.
- It can be used to hide one or more line.
- Syntax - `<!-- Write your comments here -->`