HTML

1-Introduction to HTML

2-Elements and crowns

3-Headings and Organization

4-Links and Images

5-Lists and Tables

6-Forms

7-Attributes and Styles

1- HTML, or HyperText Markup Language, is the standard language for creating web pages. It provides the basic structure of a website, which is then enhanced and modified by other technologies like CSS and JavaScript. HTML consists of a series of elements or tags that define different parts of a web page's content, such as headings, paragraphs and links.

2- HTML is built using elements, which are defined by tags. Each tag consists of an opening tag (<tagname>) and a closing tag (</tagname>), with the content placed in between. The tags t ell the browser how to display the content on the web page. Some of the essential tags in HTML include <!DOCTYPE> (to declare the document type), <html> (the root element), <head> (contains meta-information about the document), <title> (defines the title of the document), and <body> (contains the actual content of the web page).

3- HTML allows for the use of different heading tags to organize content hierarchically. There are six levels of headings, from <h1> to <h6>, with <h1> being the highest level and <h6> the lowest. Headings help structure the content, making it easier for users to read and for search engines to understand the content's hierarchy. Additionally, HTML provides tags like <p> for paragraphs, for division or container elements, and for inline elements, which help in organizing and styling the content effectively.

4-HTML allows you to create hyperlinks and embed images in your web pages. The <a> tag is used to create hyperlinks, which can link to other web pages, files, or different sections within the same page. The href attribute within the <a> tag specifies the URL of the link. To embed images, the <img> tag is used, which requires the src attribute to specify the image's URL or file path and the alt attribute to provide alternative text for the image.

5-HTML provides tags for creating both ordered and unordered lists. Unordered lists are created using the <ul> tag, with list items within it defined by the <li> tag. Ordered lists, on the other hand, use the <ol> tag, also with list items defined by <li>. Additionally, HTML allows for the creation of tables using the <table> tag. Inside the <table> tag, you define rows using the

<tr> tag, and within each row, you define table headers using the <th> tag and table data using the <td> tag.

6-HTML allows you to create interactive forms for user input using the <form> tag. Inside a form, you can include various types of input fields, such as text boxes (<input type="text">), radio buttons (<input type="radio">), checkboxes (<input type="checkbox">), submit buttons (<input type="submit">) . Forms are essential for gathering information from users, whether it's for login purposes, surveys, or data collection. Each input element within a form can have attributes like name, value, and placeholder to further define the form's behavior and appearance.

7-HTML elements can have attributes that provide additional information about the elements. Attributes are always included in the opening tag and usually come in name/value pairs like name="value". Some common attributes are id, class, src, href, and alt. These attributes help in identifying elements, linking external resources, and providing additional details. Additionally, HTML allows for the inclusion of CSS (Cascading Style Sheets) to style the elements. CSS can be included directly in the HTML file using the <style> tag within the <head>

JAVA SCRIPT

JavaScript Topics

1. **Variables**: Used to store data values.
2. **Arrays**: Collections of multiple values in a single variable.
3. **Conditions**: Using if, else if, and else to control the flow based on conditions.
4. **Objects**: Collections of key-value pairs representing data.
5. **JSON**: Format for storing and transporting data.
6. **Functions**: Blocks of code designed to perform specific tasks.
7. **Scopes**: Contexts in which variables are accessible.
8. **Operators**: Symbols for operations like addition (+), subtraction (-), etc.
9. **Events**: Interactions that can be detected and handled (e.g., clicks).
10. **Best Practices**: Guidelines for writing clean, efficient, and maintainable code.

JavaScript in HTML

- Embedding JavaScript code within HTML using the <script> tag.
- Example: <script src="file.js"></script> for external files or inline script tags.

DOM Manipulation in JavaScript

- **Selecting Elements**: Using id, class, and querySelector to target elements.
- **Document Object Model (DOM)**: Represents the HTML document structure.
- Methods like document.write(), style, and color to change document content and styling.

Query Selectors

- **querySelectorAll**: Selects all elements of a specific class.
- const for variable declaration.
- **Event Listeners**: Detect and handle interactions.
- **innerHTML**: Dynamically change HTML content.

Conditions & Objects

- **Logical Conditions**: Using if, else if, else.
- **Operators**: Symbols for arithmetic and comparison.
- **Objects**: Creating data structures using key-value pairs.
- **JSON**: Format for data exchange.
- **Local Storage**: Persistent storage in the browser.

Console & Functions

- **console.log()**: Outputs data to the console.
- const to define constants.

- **Functions**: Code blocks for tasks and returning values.

Arrays & Loops

- **Arrays**: Store multiple values.
- **Looping Techniques**: Various methods like map(), filter(), reduce(), forEach(), for in, for of, while, do while.