HTML Basics Tags

Headings: *<h1>, <h2>, <h3>, <h4>, <h5>, <h6>*
Paragraph: *<p>*
Line Break: *
*
Horizontal Rule: *<hr>*
Lists: * (unordered), <ol> (ordered)*
Items in a list: *<li>*
Links: *<a> (href attribute for link destination)*
Images: *<img> (src attribute for image source, alt attribute for alternative text)*
Divisions: *<div> (for grouping elements)*
Spans: *<span> (for inline styling)*

Table

Table: *<table>*
Table Row: *<tr>*
Table Header: *<th>*
Table Data: *<td>*

List

Unordered List: *<ul>*
Ordered List: *<ol>*
List Items: *<li>*

Working with Links

Internal Links: Point to other pages within the same website.
External Links: Point to pages on other websites.
Anchor Links: Link to specific sections within a page.

Image Handling

Image Source: src attribute specifies the image file.
Alternative Text: alt attribute provides a textual description for users with visual impairments.
Image Width and Height: width and height attributes can be used to specify the dimensions.

Form-Input Elements

Text Input: <input type="text">
Password Input: <input type="password">
Checkbox: <input type="checkbox">
Radio Button: <input type="radio">
Submit Button: <input type="submit">
Reset Button: <input type="reset">
Select List: <select>
Option: <option>
Textarea: <textarea>

HTML5 Form Elements

Date Input: <input type="date">
Time Input: <input type="time">
Email Input: <input type="email">
Number Input: <input type="number">
Range Input: <input type="range">
Color Input: <input type="color">
File Input: <input type="file">

HTML5 Attributes

Placeholder: Provides a hint for the user in the input field.
Required: Makes the field mandatory.
Autofocus: Automatically focuses on the field when the page loads.
Autocomplete: Suggests values based on previous entries.
List: Associates a <datalist> element with the input.

Semantic Elements

Article: Represents a self-contained article.
Section: Represents a thematic grouping of content.
Nav: Represents a navigation section.
Aside: Represents content that is tangentially related to the main content.
Header: Represents the header of a document or section.
Footer: Represents the footer of a document or section.
Main: Represents the main content of a document.

JavaScript

JavaScript is a programming language used to add interactivity to web pages.

JavaScript Variables

1. Declaration: var, let, or const.
2. Data Types: Numbers, strings, booleans, objects, arrays.

Internal and External JavaScript

1. Internal JavaScript: Embedded within <script> tags within the HTML document.
2. External JavaScript: Linked to the HTML document using the <script> tag with the src attribute.

JavaScript Variables

Feature	`var`	`let`	`const`
Scope	Function-scoped	Block-scoped	Block-scoped
Hoisting	Hoisted (initialized as `undefined`)	Hoisted (but uninitialized)	Hoisted (but uninitialized)
Reassignability	Can be reassigned	Can be reassigned	Cannot be reassigned
Redeclaration	Allowed in the same scope	Not allowed in the same scope	Not allowed in the same scope
Immutability	No immutability	No immutability	Identifier immutable, but contents of objects/arrays can be modified

Events, JavaScript Event Handling

Events: Actions that occur in a web page, such as clicking a button or typing text.
Event Handling: Adding JavaScript code to respond to events.
Common Events: click, mouseover, mouseout, keydown, keyup, submit.

Built-in Methods in JavaScript

String Methods: length, charAt, indexOf, toUpperCase, toLowerCase, slice, substring, replace, split.
Number Methods: toString, toFixed, toPrecision, parseInt, parseFloat.
Array Methods: length, push, pop, shift, unshift, join, indexOf, slice, splice.
Date Methods: getFullYear, getMonth, getDate, getHours, getMinutes, getSeconds, setFullYear, setMonth, setDate, setHours, setMinutes, setSeconds.

Events, JavaScript Event Handling

JavaScript Validation

Client-side validation: Using JavaScript to check input values before submitting the form.
Server-side validation: Verifying input values on the server to ensure data integrity.

String, Date, Array in JavaScript

Strings: Sequences of characters.
Dates: Represent specific points in time.
Arrays: Ordered collections of values.

Implicit Objects of JavaScript

1. Window object: Represents the browser window.
2. Document object: Represents the HTML document.
3. Location object: Represents the URL of the current page.
4. Navigator object: Represents information about the user's browser.
5. History object: Represents the browser's history.

Document Object Model (Window, Frame,Navigator Objects)

1. DOM: A tree-like structure representing the HTML document.
2. Window object: The top-level object in the DOM.
3. Frame object: Represents a frame within a window.
4. Navigator object: Provides information about the user's browser.

Working with Regular Expressions

Regular expressions: Patterns used to match text.
Common uses: Validating email addresses, searching for specific patterns within text.