



2. HTML and CSS

2.1 HTML

- *Hypertext* - Comprising Link to other text
- *Markup* - Tags and Elements
- Main Tags
 - `<h1>` to `<h6>`
 - `<p>`
 - `
`
 - `` or `<bold>`
 - `` or `<i>`
 - `` and ``
 - ``
 - `<div>`
 - `<table>`
 - `<tr>`
 - `<td>` or `<th>`
 - `<form>`

- Action → Where to submit form data
- Method → How? GET | POST

```
<form action="reg" method="post">
  <label for="usrnm">Username</label>
  <input type="text" name="usrnm" />

  <label for="pswrd">Password</label>
  <input type="password" name="pswrd" />

  <input type="submit" />
</form>
```

- Types
 - Checkbox
 - Email
 - Number
 - File
 - Text
 - Password
 - Select
 - Text area

2.2 DOM - Document Object Model

- Whenever Web Browsers receive an HTML document → It creates a DOM
- Tree Structure of Objects

2.3 Web Accessibility

- Important to design website in such a way that everyone can access it easily.
- WAI - Web Accessibility Initiative
 - Aims to allow people with disability - To navigate and interact with websites

- Disabilities - Audio and Visual, Cognitive, and Physical
 - Assistive Technology - Screen Reader Software, Speech Recognition Software, Subtitles and Scripts
 - It is important to use correct HTML syntax → Best possible techniques are essential
 - **ARIA** - Accessible Rich Internet Application
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2.4 CSS - Cascading Style Sheet

- Selector
- Declaration Block - { }
- Property: Value
- **Selector Types**
 - HTML Selector
 - ID - #
 - Class -. (Dot)
 - Element with Class → p.className
 - Descendant - #blog h1
 - Useful when the HTML elements are contained within another selector.
 - Child - #blog > h1
 - More specific than the descendant selector
 - Only select elements that are immediate
 - Pseudo - a: hover
- Remember Precedence
- **Colors**
 - RGB - 0 to 255 → represents the intensity of the color

```
p {  
  color: rgb(255, 0, 0)  
}
```

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- RGBA - A (Alpha Channel): Defines the opacity or transparency
 - HSL - Hue, Saturation, and Lightness
 - Think of a rainbow in a circular form
 - Hue represents the angle → 0 is red, 120 green, and 240 blue.
 - Saturation → Distance from center of the circle to edge → 0 means grey and 100% means full color
 - Lightness → Think of the circle as a 3D Cylinder → Bottom is Black and the Top is White.
 - 0% → bottom and 100% → top.
 - Hex Value
 - Color names
 - **Text**
 - font-family → include fallback order
 - font-size
 - text-transform
 - text-decoration
 - text-decoration-line
 - text-decoration-color
 - text-decoration-style
 - text-decoration-thickness
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2.5 Box Model

- Once the elements are downloaded → Web browser needs to know the representational layout.
- For different elements, → Rectangle or Box are assigned.
 - CSS Properties are applied to these boxes.
- Box
 - **Content**

- Actual Content → Text or Image
- Browsers are smart enough to figure out the layout
- However, developers can also do this with the use of height and width properties

- **Padding**

- Extends the content size
- Known as Padding Box Width and Padding Box Height

- **Border**

- Goes around content and padding
- Solid - Dashed - Dotted - Double
- border-width : thin | medium | thick

- **Margin**

- Separates the elements from neighbors
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2.6 Document Flow - Block x Inline

- The way through which web browsers calculate the position of HTML elements.
 - **Block-Level**
 - Occupies full horizontal width and vertical height of the content.
 - div - form - heading (h1 to h6)
 - **Inline**
 - Only occupies the height and width of the content
 - Don't appear in new line → Inline
 - a - img - input - label - b - i - em - span
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2.7 Alignment Basics

- text-align
 - aligns text → left (default for EN) | right (default for R-L languages) | center | justify

- float property
 - float: left | right
 - Sets elements position → relative to the text content in the parent element