

Complete HTML Guide

1. Introduction to CSS

CSS (Cascading Style Sheets) is used to apply styles to HTML elements. It controls how elements look on the web page including color, font, layout, spacing, and more.

Example:

```
<style>

p {

    color: blue;

    font-size: 16px;

}

</style>
```

This will make all paragraph text blue and 16px in size.

2. Types of CSS

There are three ways to apply CSS to HTML:

1. Inline CSS - directly in the HTML element.

```
<p style="color: red;">This is red text</p>
```

2. Internal CSS - within a <style> tag inside the <head> section.

```
<style>

h1 {

    color: green;

}

</style>
```

3. External CSS - linked from an external file.

```
<link rel="stylesheet" href="style.css">
```

Benefits: External CSS keeps HTML clean and separates design from content.

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3. CSS Selectors

Selectors are patterns used to select the elements you want to style.

Examples:

- Universal Selector: `* { margin: 0; }`
- Type Selector: `p { font-size: 16px; }`
- Class Selector: `.highlight { color: orange; }`
- ID Selector: `#title { text-align: center; }`

Example:

```
<p class="highlight">This paragraph is orange.</p>
```

4. CSS Colors

Colors can be defined in multiple ways: by name, hex, RGB, HSL.

Example:

```
<style>
  body {
    background-color: #f0f0f0;
    color: rgb(50, 50, 50);
  }
</style>
```

This sets a light gray background with dark gray text.

5. CSS Box Model

Every element is a rectangular box consisting of:

- Content
- Padding (space inside the element)
- Border (outline)
- Margin (space outside the element)

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Example:

```
<style>

div {

    padding: 10px;

    border: 2px solid black;

    margin: 20px;

}

</style>
```

6. Fonts and Text Styling

CSS lets you style text using font properties.

Example:

```
<style>

p {

    font-family: Arial, sans-serif;

    font-size: 18px;

    font-weight: bold;

    text-align: center;

    text-decoration: underline;

}

</style>
```

This centers the text, makes it bold, and underlines it.

7. Margin and Padding

Margin: space outside the border.

Padding: space inside the border.

Example:

```
<style>
```

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```
div {  
    margin: 30px;  
    padding: 15px;  
}  
</style>
```

8. Borders and Backgrounds

You can add borders and background colors or images.

Example:

```
<style>  
div {  
    border: 2px dashed blue;  
    background-color: lightyellow;  
}  
</style>
```

9. Display and Visibility

The display property determines how an element appears.

Common values:

- block
- inline
- inline-block
- none

Example:

```
<style>  
.hidden {  
    display: none;  
}
```

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```
</style>
```

This hides the element from the page.

10. Positioning

CSS positioning defines how elements are placed.

Types:

- static (default)
- relative (relative to its normal position)
- absolute (relative to nearest positioned ancestor)
- fixed (relative to browser window)
- sticky (switches between relative and fixed)

Example:

```
<style>

.box {

    position: absolute;

    top: 50px;

    left: 100px;

}

</style>
```

11. Flexbox

Flexbox is used to layout items in one dimension (row or column) with control over alignment and spacing.

Example:

```
<style>

.container {

    display: flex;

    justify-content: space-between;

}


```

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</style>

12. CSS Grid

CSS Grid is used to create two-dimensional layouts using rows and columns.

Example:

```
<style>

.grid-container {

  display: grid;

  grid-template-columns: auto auto;

  gap: 10px;

}

</style>
```

13. Pseudo-classes

Used to define special states of an element (hover, focus, visited, etc.)

Example:

```
<style>

a:hover {

  color: red;

}

</style>
```

This changes the link color to red when hovered.

14. Media Queries

Used to create responsive designs for different screen sizes.

Example:

```
<style>
```

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```
@media (max-width: 600px) {  
  body {  
    background-color: lightblue;  
  }  
}  
</style>
```