Web development

lesson 10

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CSS Fonts: Basics

- **What Are CSS Fonts?**

  - Fonts define the appearance of text within a web page.
  - CSS provides various properties to control font family, size, weight, style, and more.
  - Choosing appropriate fonts is key for readability and design aesthetics.

- **Common Font Properties:**

  - `font-family` : Specifies the typeface (e.g., Arial, Georgia).
  - `font-size` : Defines text size.
  - `font-weight` : Sets font thickness (e.g., bold).
  - `font-style` : Specifies style (e.g., italic).

```css
p {
  font-family: Arial, sans-serif;
  font-size: 16px;
}
```

Font Families and Fallbacks

- **What Is** `font-family` **?**

  - `font-family` sets the typeface for an element. Specify multiple fonts as fallbacks.
  - Fallback fonts are listed in case the preferred font is unavailable on the user's device.

- **Syntax:**

  - A list of font names, separated by commas.
  - Last option is typically a **generic font family** (`serif` , `sans-serif` , `monospace`).

```css
h1 {
  font-family: 'Helvetica Neue', Arial, sans-serif;
}
```

- **Tip:**

  - Use quotes for multi-word font names (e.g., `'Times New Roman'`).
  - Generic font families help ensure readable fonts across devices.

Font Size and Responsive Text

- **What Is `font-size` ?**

  - `font-size` controls text size. Use units like `px` , `em` , `rem` , `%` , or viewport-based units (`vw` , `vh`).
  - Larger fonts enhance readability, while smaller fonts save space.

- **Responsive Font Sizing:**

  - Use relative units (`em` , `rem`) for scalable, responsive designs.
  - Viewport units like `vw` make fonts scale with screen size.

```css
p {
  font-size: 1.2em; /* Scales with parent element */
}
.responsive {
  font-size: 3vw; /* Scales with viewport width */
}
```

- **Tip:**

  - For consistency, use `rem` to maintain relative scaling across components, based on root font size.

Font Weight and Style

- **What Is `font-weight` ?**

  - `font-weight` adjusts the boldness of text.
  - Common values: `normal` , `bold` , `lighter` , `bolder` , or numeric values (100 to 900).

- **Font Style:**

  - `font-style` sets the text style to `normal` , `italic` ,or `oblique` .

```css
.bold-text {
  font-weight: bold;
}
.light-text {
  font-weight: 300;
}
.italic-text {
  font-style: italic;
}
```

  - Numeric values for `font-weight` offer precise control, with lower numbers being lighter and higher numbers being bolder.

Line Height and Letter Spacing

- **What Is `line-height` ?**

  - `line-height` controls the vertical spacing between lines of text.
  - Can be a unitless number (relative to `font-size`), percentage, or length unit (e.g., `px` , `em`).

- **Letter Spacing:**

  - `letter-spacing` adjusts the space between characters. Can be positive (wider) or negative (narrower).
  - Useful for enhancing readability or creating design effects.

    ```css
    p {
      line-height: 1.5;
      letter-spacing: 0.1em;
    }
    ```

- **Tip:**

  - Setting a comfortable `line-height` (1.4–1.6) improves readability, especially for long paragraphs.

Advanced Fonts: Google Fonts and Web Fonts

- **What Are Web Fonts?**

  - Web fonts are hosted fonts accessed over the web, providing more design flexibility.

  - Popular options include **Google Fonts** and **Adobe Fonts**.

- **Using Google Fonts:**

  - Go to Google Fonts, select a font, and add the `<link>` to your HTML or import it in CSS.

  ```css
  @import url('https://fonts.googleapis.com/css2?family=Roboto:wght@400;700&display=swap');

  body {
    font-family: 'Roboto', sans-serif;
  }
  ```

- **Font Loading Optimization:**

  - Use the `font-display` property with values like `swap` or `optional` to improve loading speed.

  - Example: `font-display: swap;` (ensures text is visible during font load).