**CSS Colors, Backgrounds, Fonts, and Text Styles**

**1. Colors in CSS**

**A. Ways to Define Colors**

1. **Named Colors**
2. color: red;
3. color: blue;
4. color: gold;
5. **Hexadecimal** (#RRGGBB)
   * R, G, B → 00 to FF (hex values)
6. color: #ff0000; /\* red \*/
7. color: #00ff00; /\* green \*/
8. color: #0000ff; /\* blue \*/
9. **RGB / RGBA** (Red, Green, Blue, Alpha)
   * RGB: rgb(255, 0, 0)
   * RGBA: rgba(255, 0, 0, 0.5) → transparency
10. **HSL / HSLA** (Hue, Saturation, Lightness, Alpha)
11. color: hsl(0, 100%, 50%); /\* red \*/
12. color: hsla(0, 100%, 50%, 0.5); /\* red with transparency \*/

**B. CSS Properties**

* color → Text color
* background-color → Background color

**Example:**

p {

color: navy;

background-color: lightyellow;

}

**2. Backgrounds**

**A. Background Color**

div {

background-color: #f0f0f0;

}

**B. Background Image**

div {

background-image: url('image.jpg');

background-repeat: no-repeat;

background-size: cover; /\* stretch image to cover container \*/

background-position: center;

}

**C. Background Properties**

| **Property** | **Description** |
| --- | --- |
| background-color | Set color behind content |
| background-image | Set image as background |
| background-repeat | repeat, no-repeat, repeat-x, repeat-y |
| background-size | auto, cover, contain, specific size |
| background-position | top, bottom, left, right, center, % |
| background-attachment | scroll, fixed, local |
| Background | Shorthand for all properties |

**Example (Shorthand):**

div {

background: url('bg.jpg') no-repeat center/cover;

}

**3. Fonts in CSS**

**A. Font Family**

* Sets the typeface for text

p {

font-family: Arial, sans-serif;

}

* Always provide a **fallback font**

**Common Font Types:**

1. **Serif** → Times New Roman, Georgia (decorative)
2. **Sans-serif** → Arial, Helvetica (modern, clean)
3. **Monospace** → Courier New, Consolas (code)
4. **Cursive / Fantasy** → Comic Sans, Papyrus

**B. Font Size**

p {

font-size: 16px; /\* px, em, rem, %, vw \*/

}

**C. Font Weight**

p {

font-weight: normal; /\* 400 \*/

font-weight: bold; /\* 700 \*/

font-weight: 100-900; /\* thin to extra-bold \*/

}

**D. Font Style**

p {

font-style: normal; /\* default \*/

font-style: italic; /\* slanted text \*/

font-style: oblique; /\* slanted (less common) \*/

}

**E. Text Transform**

p {

text-transform: uppercase; /\* UPPERCASE \*/

text-transform: lowercase; /\* lowercase \*/

text-transform: capitalize; /\* First letter capitalized \*/

}

**4. Text Decoration & Spacing**

| **Property** | **Description** |
| --- | --- |
| text-decoration | underline, overline, line-through, none |
| text-decoration-color | color of underline/line |
| text-decoration-style | solid, dotted, dashed, double, wavy |
| letter-spacing | space between letters |
| word-spacing | space between words |
| line-height | vertical spacing between lines |

**Example:**

h1 {

text-decoration: underline wavy red;

letter-spacing: 2px;

word-spacing: 5px;

line-height: 1.5;

}

**5. Text Alignment**

p {

text-align: left; /\* default \*/

text-align: center; /\* center horizontally \*/

text-align: right; /\* align right \*/

text-align: justify; /\* align text to both edges \*/

}

**6. Text Overflow & Wrapping**

* Handle overflow content in containers

p {

white-space: nowrap; /\* single line \*/

overflow: hidden; /\* hide overflow \*/

text-overflow: ellipsis; /\* show ... \*/

word-wrap: break-word; /\* wrap long words \*/

}

**7. Practical Example**

<p class="styled-text">

This is a demo of styled text with colors, fonts, and background.

</p>

.styled-text {

color: #333; /\* text color \*/

background-color: #f9f9f9; /\* background \*/

font-family: 'Arial', sans-serif;

font-size: 18px;

font-weight: 600;

font-style: italic;

text-transform: capitalize;

text-align: center;

letter-spacing: 1.5px;

word-spacing: 4px;

line-height: 1.6;

padding: 15px;

border: 2px solid #ccc;

border-radius: 5px;

}

**Result:**

* Centered, readable text
* Stylish background, spacing, and font enhancements
* Good for cards, banners, and highlighted sections

**8. Quick Tips / Interview Points**

1. Use **hex, RGB(A), HSL(A)** for colors depending on transparency needs.
2. Always provide **fallback fonts** for cross-browser support.
3. Use **background-size: cover** for responsive background images.
4. Use **text-transform** instead of manually typing uppercase.
5. Use **letter-spacing and line-height** for better readability.
6. **Shorthand properties** (background, font) make code cleaner.

**9. Common Interview Questions**

1. Difference between **inline vs block text styling**?
2. Difference between **hex, RGB, RGBA, HSL**?
3. How to make **responsive background images**?
4. How to **align text center vertically and horizontally**?
5. Difference between **text-align, justify-content, align-items**?
6. Explain **letter-spacing, word-spacing, line-height** and their importance