

CSS Font, Text, and Image Properties – Detailed Guide

This document is a **beginner-friendly yet detailed guide** to the most useful **CSS font, text, image, and background image properties**. It is designed for **practice, revision, and real-world usage**.

1. Font Properties in CSS

Font properties control **how text looks** (typeface, size, weight, and style).

Common Font Properties (Definition & Usage)

Property	Definition	Usage Example	Common Values
<code>font-family</code>	Specifies the font type for text	<code>font-family: Arial, sans-serif;</code>	Arial, Roboto, serif, sans-serif
<code>font-size</code>	Controls the size of the text	<code>font-size: 18px;</code>	px, em, rem, %
<code>font-weight</code>	Defines thickness of text	<code>font-weight: bold;</code>	100–900, normal, bold
<code>font-style</code>	Changes text style	<code>font-style: italic;</code>	normal, italic, oblique
<code>font-variant</code>	Displays text in small caps	<code>font-variant: small-caps;</code>	normal, small-caps
<code>line-height</code>	Space between lines of text	<code>line-height: 1.6;</code>	number, px, %

Example

```
p {  
  font-family: 'Roboto', sans-serif;  
  font-size: 16px;  
  font-weight: 400;  
  line-height: 1.5;  
}
```

2. Text Properties in CSS

Text properties control **alignment, spacing, decoration, and color**.

Text Properties (Definition & Usage)

Property	Definition	Usage Example	Common Values
<code>color</code>	Sets text color	<code>color: #333;</code>	hex, rgb, color name
<code>text-align</code>	Aligns text	<code>text-align: center;</code>	left, right, center, justify
<code>text-transform</code>	Changes text case	<code>text-transform: uppercase;</code>	uppercase, lowercase, capitalize
<code>text-decoration</code>	Adds decoration to text	<code>text-decoration: underline;</code>	none, underline, line-through
<code>letter-spacing</code>	Space between letters	<code>letter-spacing: 2px;</code>	px, em
<code>word-spacing</code>	Space between words	<code>word-spacing: 5px;</code>	px, em
<code>text-shadow</code>	Adds shadow to text	<code>text-shadow: 2px 2px 5px gray;</code>	x y blur color
<code>white-space</code>	Controls text wrapping	<code>white-space: nowrap;</code>	normal, nowrap

Example

```
h1 {  
  color: navy;  
  text-align: center;  
  text-transform: uppercase;  
  letter-spacing: 2px;  
}
```

3. Image Properties in CSS

Image properties control **size, shape, and visual effects**.

Image Properties (Definition & Usage)

Property	Definition	Usage Example	Common Values
<code>width</code>	Sets image width	<code>width: 300px;</code>	px, %, auto
<code>height</code>	Sets image height	<code>height: auto;</code>	px, %, auto
<code>max-width</code>	Prevents overflow	<code>max-width: 100%;</code>	%, px

Property	Definition	Usage Example	Common Values
<code>border-radius</code>	Rounds image corners	<code>border-radius: 50%;</code>	px, %
<code>object-fit</code>	Fits image inside box	<code>object-fit: cover;</code>	cover, contain
<code>opacity</code>	Controls transparency	<code>opacity: 0.7;</code>	0-1
<code>box-shadow</code>	Adds shadow	<code>box-shadow: 0 4px 8px gray;</code>	x y blur color

Example

```
img {
  width: 200px;
  border-radius: 10px;
  object-fit: cover;
}
```

4. Background Image Properties

Used to apply images to **containers (div, section, body)**.

Background Properties (Definition & Usage)

Property	Definition	Usage Example	Common Values
<code>background-image</code>	Sets background image	<code>background-image: url('img.jpg');</code>	url()
<code>background-size</code>	Controls image size	<code>background-size: cover;</code>	cover, contain
<code>background-position</code>	Positions image	<code>background-position: center;</code>	top, center
<code>background-repeat</code>	Repeats image	<code>background-repeat: no-repeat;</code>	repeat, no-repeat
<code>background-attachment</code>	Scroll behavior	<code>background-attachment: fixed;</code>	scroll, fixed

Example

```
.hero {
  background-image: url('banner.jpg');
```

```
background-size: cover;
background-position: center;
height: 300px;
}
```

5. Real-World Practice Example

```
.card {
  width: 300px;
  padding: 20px;
  font-family: Arial, sans-serif;
  text-align: center;
  box-shadow: 0 4px 10px rgba(0,0,0,0.2);
}

.card img {
  width: 100%;
  border-radius: 10px;
}

.card h2 {
  text-transform: uppercase;
  letter-spacing: 1px;
}
```

6. How to Practice Effectively

- Change values and observe results in browser
- Combine font + text properties
- Practice responsive images using `%` and `max-width`
- Use `rem` instead of `px` for better scaling

7. CSS Units Explained (px, em, rem, %)

CSS units control **size and responsiveness**. Choosing the right unit is important for scalable layouts.

Common CSS Units (Two-Line Explanation)

Unit	Explanation	Example
<code>px</code>	Fixed unit that does not scale with screen or font size. Best for precise layouts.	<code>font-size: 16px;</code>

Unit	Explanation	Example
em	Relative to the parent element's font size. Scales with nesting.	font-size: 1.5em;
rem	Relative to the root (html) font size. Best for responsive design.	font-size: 1rem;
%	Relative to parent element size. Commonly used for width and height.	width: 50%;

Usage Tip

- Use rem for fonts
- Use % for layouts
- Avoid too much nesting with em

8. CSS Practice Exercises (With Answers)

Exercise 1: Font Styling

Task: Make text bold, 18px size, and use Arial.

Answer:

```
p {
  font-family: Arial, sans-serif;
  font-size: 18px;
  font-weight: bold;
}
```

Exercise 2: Text Alignment

Task: Center align text and make it uppercase.

Answer:

```
h1 {
  text-align: center;
  text-transform: uppercase;
}
```

Exercise 3: Responsive Image

Task: Make image responsive and rounded.

Answer:

```
img {  
  max-width: 100%;  
  border-radius: 10px;  
}
```

Exercise 4: Background Image

Task: Add a background image that covers the container.

Answer:

```
div {  
  background-image: url('img.jpg');  
  background-size: cover;  
  background-position: center;  
}
```

9. Interview-Oriented CSS Questions (Two-Line Answers)

1. What is the difference between `class` and `id`?

A class can be reused multiple times, while an id is unique and used once per page.

2. Difference between `display: none` and `visibility: hidden`?

`display: none` removes the element from layout, `visibility: hidden` keeps space.

3. What is `rem` and why is it preferred?

`rem` is relative to root font size and provides consistent scaling.

4. How do you make images responsive?

Use `max-width: 100%` and `height: auto`.

5. Difference between `inline` and `block` elements?

Inline elements don't start new lines; block elements do.

6. What does `object-fit: cover` do?

It fills the container while maintaining image aspect ratio.

End of Document

This guide now includes **units, exercises, and interview prep** for complete CSS fundamentals.