

Comprehensive Overview: Text Alignment, Text Direction, Bidi Controls, and Text Decorations in CSS

1. Text Alignment & Text Direction

`text-align`

- Controls the **horizontal alignment** of inline content within a block container.
- Common values:
 - `left`
 - `right`
 - `center`
 - `justify`
 - `start` / `end` (relative to direction)

`text-align-last`

- Aligns the **last line** of a block or inline element when `text-align: justify` or multi-line situations apply.
- Values: `auto`, `left`, `right`, `center`, `justify`, `start`, `end`.

Example:

```
p {  
  text-align: justify;  
  text-align-last: center;  
}
```

`direction`

- Sets the **base text direction**.
 - `ltr`: left-to-right (default; English, most Western languages)
 - `rtl`: right-to-left (Arabic, Hebrew)

unicode-bidi **and** bidi-override

These are advanced properties for text that mixes left-to-right and right-to-left scripts (bidi content).

- unicode-bidi:
 - normal: default, uses the parent element's direction.
 - embed: creates a new embedding level.
 - bidi-override: overrides the text's implicit direction.

Example:

```
.rtl-text {  
  direction: rtl;  
  unicode-bidi: bidi-override;  
}
```

This combination completely reverses the directionality of the text in the element.

2. Vertical Alignment

vertical-align

- Adjusts the vertical alignment of an inline or inline-block element relative to its line box.
- Common values:
 - baseline (default)
 - top
 - middle
 - bottom
 - sub, super
 - Specific length or percentage

Example:

```
img {  
  vertical-align: middle;  
}
```

Useful for aligning icons, superscripts, subscripts, and inline images with text.

3. Advanced Text Decorations

text-decoration-line

- Specifies which lines to draw on the text.
- Values: `underline`, `overline`, `line-through`, `none`, or combinations.

Example:

```
u {
  text-decoration-line: underline;
}
.del {
  text-decoration-line: line-through;
}
.mark {
  text-decoration-line: underline overline;
}
```

text-decoration-color

- Sets the color of the line(s).
- Example: `text-decoration-color: red;`

text-decoration-style

- Controls the style of the line.
- Values: `solid`, `double`, `dotted`, `dashed`, `wavy`.

Example:

```
a {
  text-decoration-line: underline;
  text-decoration-style: wavy;
  text-decoration-color: blue;
}
```

text-decoration-thickness

- Adjusts the thickness of the text decoration line.
- Values: `auto`, a percentage, `<length>` (e.g. `2px`).

Example:

```
h2 {
  text-decoration-line: underline;
  text-decoration-thickness: 3px;
}
```

Full Shorthand: `text-decoration`

Combine all these in one line.

```
a {  
  text-decoration: underline wavy red 2px;  
}
```

4. Summary Table

Property	Purpose/Effect	Sample Values	Example
<code>text-align</code>	Inline horizontal alignment	left, right, center	<code>text-align: center</code>
<code>text-align-last</code>	Last line alignment	center, right, justify	<code>text-align-last: right</code>
<code>direction</code>	Text reading direction	ltr, rtl	<code>direction: rtl</code>
<code>unicode-bidi</code>	Bidi text flow control	normal, embed, bidi-override	<code>unicode-bidi: bidi-override</code>
<code>vertical-align</code>	Vertical alignment of inline/inline-block	baseline, middle, top	<code>vertical-align: middle</code>
<code>text-decoration-line</code>	Type(s) of decoration line(s)	underline, overline, line-through	<code>text-decoration-line: underline overline</code>
<code>text-decoration-color</code>	Color of the decoration line(s)	red, #333, rgba(...)	<code>text-decoration-color: red</code>
<code>text-decoration-style</code>	Style of the decoration line	wavy, solid, dashed	<code>text-decoration-style: dashed</code>
<code>text-decoration-thickness</code>	Thickness of the decoration line	2px, 0.15em, auto	<code>text-decoration-thickness: 2px</code>

Best Practices

- Choose `text-align` and `direction` to match the page or language's expected reading flow, especially for multi-lingual websites.
- Use `unicode-bidi` and `bidi-override` **only** when working with complex, mixed-direction content.
- Prefer the new individual `text-decoration-*` properties for better visual control vs. the old `text-decoration` shorthand.
- Combine underline, overline, and line-through as needed with colors and thicknesses to improve accessibility and style.

Let me know if you'd like code demos or browser support details for any property!