



Flexbox Fundamentals

Enabling Flexbox

To use flexbox, set the `display` property of a container to `flex` or `inline-flex`.

```
.container { display: flex; /* or inline-flex */ }
```

`flex`: Creates a block-level flex container.

`inline-flex`: Creates an inline-level flex container.

Flex Direction

`flex-direction:` `row;` Items are placed side by side (horizontally) - Default value.

`flex-direction:` `row-reverse;` Items are placed side by side in reverse order (right to left).

`flex-direction:` `column;` Items are placed top to bottom (vertically).

`flex-direction:` `column-reverse;` Items are placed bottom to top (vertically reversed).

Flex Wrap

`flex-wrap:` `nowrap;` Items stay in a single line, even if they overflow the container - Default value.

`flex-wrap:` `wrap;` Items wrap to the next line when they overflow the container.

`flex-wrap:` `wrap-reverse;` Items wrap to the previous line when they overflow the container.

Justify Content & Align Items

Justify Content

`justify-content:` `flex-start;` Items are aligned to the start of the container - Default value.

`justify-content:` `flex-end;` Items are aligned to the end of the container.

`justify-content:` `center;` Items are centered in the container.

`justify-content:` `space-between;` Items are evenly distributed; first item is at the start, last item is at the end.

`justify-content:` `space-around;` Items are evenly distributed with equal space around each item.

`justify-content:` `space-evenly;` Items are distributed so that the spacing between any two items (neither the first nor the last) is the same.

Align Items

`align-items:` `stretch;` Items are stretched to fit the container - Default value.

`align-items:` `flex-start;` Items are aligned to the top of the container.

`align-items:` `flex-end;` Items are aligned to the bottom of the container.

`align-items:` `center;` Items are vertically centered in the container.

`align-items:` `baseline;` Items are aligned based on their baselines.

Flex Item Properties

Flex Grow

`flex-grow:` `0;` Item does not grow to fill available space - Default value.

`flex-grow:` `1;` Item grows to fill available space.

`flex-grow:` `n;` Item grows to fill n times the available space compared to other items with `flex-grow`.

Flex Shrink

`flex-shrink:` `1;` Item can shrink if necessary - Default value.

`flex-shrink:` `0;` Item does not shrink, even if it overflows.

`flex-shrink:` `n;` Item shrinks n times more than other items with `flex-shrink`.

Flex Basis

`flex-basis:` `auto;` Item size is based on its content - Default value.

`flex-basis:` `0;` Item size is based on `flex-grow` and `flex-shrink`.

`flex-basis:` `length;` Item has a fixed size (e.g., `flex-basis: 100px`).

`flex-basis:` `content;` Keyword specifying an automatic size based on the element's content.

Flex Shorthand

The <code>flex</code> property is a shorthand for <code>flex-grow</code> , <code>flex-shrink</code> , and <code>flex-basis</code> .	
<code>flex: flex-grow flex-shrink flex-basis;</code>	
<code>flex: 1;</code> - Equivalent to <code>flex: 1 1 0%;</code> (item grows to fill space, can shrink, basis is 0).	
<code>flex: 2 1 200px;</code> - Item grows twice as much as others, can shrink, and has a basis of 200px.	
<code>flex: initial;</code> - Resets to default values: <code>0 1 auto</code>	
<code>flex: auto;</code> - Sets to <code>1 1 auto</code>	
<code>flex: none;</code> - Sets to <code>0 0 auto</code>	

Advanced Flexbox

Align Self

<code>align-self: auto;</code>	Item inherits the <code>align-items</code> value from the container - Default value.
<code>align-self: flex-start;</code>	Item is aligned to the top of the container, overriding the container's <code>align-items</code> value.
<code>align-self: flex-end;</code>	Item is aligned to the bottom of the container, overriding the container's <code>align-items</code> value.
<code>align-self: center;</code>	Item is vertically centered in the container, overriding the container's <code>align-items</code> value.
<code>align-self: baseline;</code>	Item is aligned based on its baseline, overriding the container's <code>align-items</code> value.
<code>align-self: stretch;</code>	Item is stretched to fit the container, overriding the container's <code>align-items</code> value.

Order

<code>order: 0;</code>	Items are displayed in their source order - Default value.
<code>order: n;</code>	Items are reordered based on the numerical value of the <code>order</code> property. Lower values are displayed first.
Note	Items with the same order value will be displayed in their source order.

Align Content

<code>align-content: stretch;</code>	Lines stretch to take up the remaining space - Default value.
<code>align-content: flex-start;</code>	Lines are packed at the start of the container.
<code>align-content: flex-end;</code>	Lines are packed at the end of the container.
<code>align-content: center;</code>	Lines are packed in the center of the container.
<code>align-content: space-between;</code>	Lines are evenly distributed; the first line is at the start, the last is at the end.
<code>align-content: space-around;</code>	Lines are evenly distributed with equal space around each line.