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# Spacing

Bootstrap includes a wide range of shorthand responsive margin, padding, and gap utility classes to modify an element's appearance.



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## Margin and padding

Assign responsive-friendly **margin** or **padding** values to an element or a subset of its sides with shorthand classes. Includes support for individual properties, all properties, and vertical and horizontal properties. Classes are built from a default Sass map ranging from **.25rem** to **3rem**.

Using the CSS Grid layout module? Consider using [the gap utility](#).

# Notation

Spacing utilities that apply to all breakpoints, from `xs` to `xxl`, have no breakpoint abbreviation in them. This is because those classes are applied from `min-width: 0` and up, and thus are not bound by a media query. The remaining breakpoints, however, do include a breakpoint abbreviation.

The classes are named using the format `{property}{sides}-{size}` for `xs` and `{property}{sides}-{breakpoint}-{size}` for `sm`, `md`, `lg`, `xl`, and `xxl`.

Where *property* is one of:

- `m` - for classes that set `margin`
- `p` - for classes that set `padding`

Where *sides* is one of:

- `t` - for classes that set `margin-top` or `padding-top`
- `b` - for classes that set `margin-bottom` or `padding-bottom`
- `s` - (start) for classes that set `margin-left` or `padding-left` in LTR, `margin-right` or `padding-right` in RTL
- `e` - (end) for classes that set `margin-right` or `padding-right` in LTR, `margin-left` or `padding-left` in RTL
- `x` - for classes that set both `*-left` and `*-right`
- `y` - for classes that set both `*-top` and `*-bottom`
- blank - for classes that set a `margin` or `padding` on all 4 sides of the element

Where *size* is one of:

- `0` - for classes that eliminate the `margin` or `padding` by setting it to `0`
- `1` - (by default) for classes that set the `margin` or `padding` to `$spacer * .25`
- `2` - (by default) for classes that set the `margin` or `padding` to `$spacer * .5`
- `3` - (by default) for classes that set the `margin` or `padding` to `$spacer`
- `4` - (by default) for classes that set the `margin` or `padding` to `$spacer * 1.5`
- `5` - (by default) for classes that set the `margin` or `padding` to `$spacer * 3`
- `auto` - for classes that set the `margin` to `auto`

(You can add more sizes by adding entries to the `$spacers` Sass map variable.)

## Examples

Here are some representative examples of these classes:

```
.mt-0 {  
  margin-top: 0 !important;  
}
```

```

}

.ms-1 {
  margin-left: ($spacer * .25) !important;
}

.px-2 {
  padding-left: ($spacer * .5) !important;
  padding-right: ($spacer * .5) !important;
}

.p-3 {
  padding: $spacer !important;
}

```

## Horizontal centering

Additionally, Bootstrap also includes an `.mx-auto` class for horizontally centering fixed-width block level content—that is, content that has `display: block` and a `width` set—by setting the horizontal margins to `auto`.

Centered element

```

<div class="mx-auto" style="width: 200px;">
  Centered element
</div>

```

## Negative margin

In CSS, `margin` properties can utilize negative values (`padding` cannot). These negative margins are **disabled by default**, but can be enabled in Sass by setting `$enable-negative-margins: true`.

The syntax is nearly the same as the default, positive margin utilities, but with the addition of `n` before the requested size. Here's an example class that's the opposite of `.mt-1`:

```

.mt-n1 {
  margin-top: -0.25rem !important;
}

```

# Gap

When using `display: grid`, you can make use of `gap` utilities on the parent grid container. This can save on having to add margin utilities to individual grid items (children of a `display: grid` container). Gap utilities are responsive by default, and are generated via our utilities API, based on the `$spacers` Sass map.

Grid item 1

Grid item 2

Grid item 3

```
<div class="d-grid gap-3">  
  <div class="p-2 bg-light border">Grid item 1</div>  
  <div class="p-2 bg-light border">Grid item 2</div>  
  <div class="p-2 bg-light border">Grid item 3</div>  
</div>
```

Support includes responsive options for all of Bootstrap's grid breakpoints, as well as six sizes from the `$spacers` map (0–5). There is no `.gap-auto` utility class as it's effectively the same as `.gap-0`.

## Sass

## Maps

Spacing utilities are declared via Sass map and then generated with our utilities API.

```
$spacer: 1rem;  
$spacers: (  
  0: 0,  
  1: $spacer * .25,  
  2: $spacer * .5,  
  3: $spacer,  
  4: $spacer * 1.5,  
  5: $spacer * 3,  
)
```

```
$negative-spacers: if($enable-negative-margins, negativify-map($spacers), null);
```

## Utilities API

Spacing utilities are declared in our utilities API in `scss/_utilities.scss`. [Learn how to use the utilities API.](#)

```
"margin": (
  responsive: true,
  property: margin,
  class: m,
  values: map-merge($spacers, (auto: auto))
),
"margin-x": (
  responsive: true,
  property: margin-right margin-left,
  class: mx,
  values: map-merge($spacers, (auto: auto))
),
"margin-y": (
  responsive: true,
  property: margin-top margin-bottom,
  class: my,
  values: map-merge($spacers, (auto: auto))
),
"margin-top": (
  responsive: true,
  property: margin-top,
  class: mt,
  values: map-merge($spacers, (auto: auto))
),
"margin-end": (
  responsive: true,
  property: margin-right,
  class: me,
  values: map-merge($spacers, (auto: auto))
),
"margin-bottom": (
  responsive: true,
  property: margin-bottom,
  class: mb,
  values: map-merge($spacers, (auto: auto))
),
"margin-start": (
  responsive: true,
  property: margin-left,
  class: ms,
```

```
    values: map-merge($spacers, (auto: auto))
  ),
  // Negative margin utilities
  "negative-margin": (
    responsive: true,
    property: margin,
    class: m,
    values: $negative-spacers
  ),
  "negative-margin-x": (
    responsive: true,
    property: margin-right margin-left,
    class: mx,
    values: $negative-spacers
  ),
  "negative-margin-y": (
    responsive: true,
    property: margin-top margin-bottom,
    class: my,
    values: $negative-spacers
  ),
  "negative-margin-top": (
    responsive: true,
    property: margin-top,
    class: mt,
    values: $negative-spacers
  ),
  "negative-margin-end": (
    responsive: true,
    property: margin-right,
    class: me,
    values: $negative-spacers
  ),
  "negative-margin-bottom": (
    responsive: true,
    property: margin-bottom,
    class: mb,
    values: $negative-spacers
  ),
  "negative-margin-start": (
    responsive: true,
    property: margin-left,
    class: ms,
    values: $negative-spacers
  ),
  // Padding utilities
  "padding": (
    responsive: true,
    property: padding,
```

```
    class: p,  
    values: $spacers  
  ),  
  "padding-x": (  
    responsive: true,  
    property: padding-right padding-left,  
    class: px,  
    values: $spacers  
  ),  
  "padding-y": (  
    responsive: true,  
    property: padding-top padding-bottom,  
    class: py,  
    values: $spacers  
  ),  
  "padding-top": (  
    responsive: true,  
    property: padding-top,  
    class: pt,  
    values: $spacers  
  ),  
  "padding-end": (  
    responsive: true,  
    property: padding-right,  
    class: pe,  
    values: $spacers  
  ),  
  "padding-bottom": (  
    responsive: true,  
    property: padding-bottom,  
    class: pb,  
    values: $spacers  
  ),  
  "padding-start": (  
    responsive: true,  
    property: padding-left,  
    class: ps,  
    values: $spacers  
  ),  
  ),
```



Designed and built with all the love in the world by the Bootstrap team with the help of our contributors.

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Currently v5.0.2.

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