Bootstrap 4 is the newest version of Bootstrap, which is the most popular HTML, CSS, and JavaScript framework for developing responsive, mobile-first websites.

- Bootstrap is a free front-end framework for faster and easier web development
- Bootstrap includes HTML and CSS based design templates for typography,
 forms, buttons, tables, navigation, modals, image carousels and many
 other, as well as optional JavaScript plugins
- Bootstrap also gives you the ability to easily create responsive designs

What is Responsive Web Design?

>

Responsive web design is about creating web sites which automatically adjust themselves to look good on all devices, from small phones to large desktops.

```
<!DOCTYPE html>
<html lang="en">
<head>
<title>Bootstrap Example</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css"
```

```
<script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.4.1/jquery.min.js"></script>
<script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.7/umd/popper.min.js"
></script>
<script
src="https://maxcdn.bootstrapcdn.com/bootstrap/4.3.1/js/bootstrap.min.js"></s
cript>
</head>
<body>
<div class="container">
<div class="row">
<div class="col-sm-4">
<h3>Column 1</h3>
Lorem ipsum dolor sit amet, consectetur adipisicing elit...
Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris...
</div>
<div class="col-sm-4">
<h3>Column 2</h3>
Lorem ipsum dolor sit amet, consectetur adipisicing elit...
```

```
Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris...
</div>
<div class="col-sm-4">
<h3>Column 3</h3>
Lorem ipsum dolor sit amet, consectetur adipisicing elit...
Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris...
</div>
</div>
</div>
</body>
</html>
Bootstrap 4 CDN
<!-- Latest compiled and minified CSS -->
k rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css"
>
<!-- jQuery library -->
<script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.4.1/jquery.min.js"></script>
```

```
<!-- Popper JS -->

<script

src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.7/umd/popper.min.js"

></script>
```

<!-- Latest compiled JavaScript -->

<script

src="https://maxcdn.bootstrapcdn.com/bootstrap/4.3.1/js/bootstrap.min.js"></s
cript>

jQuery and Popper?

Bootstrap 4 use jQuery and Popper.js for JavaScript components (like modals, tooltips, popovers etc). However, if you just use the CSS part of Bootstrap, you don't need them.

- Closable alerts
- Buttons and checkboxes/radio buttons for toggling states
- Carousel for slides, controls, and indicators
- Collapse for toggling content
- Dropdowns (also requires Popper.js for perfect positioning)
- Modals (open and close)
- Navbar (for collapsible menus)
- Tooltips and popovers (also requires Popper.js for perfect positioning)
- Scrollspy for scroll behavior and navigation updates

Containers

Bootstrap 4 also requires a containing element to wrap site contents. There are two container classes to choose from:

The .container class provides a responsive fixed width container

The .container-fluid class provides a full width container, spanning the entire width of the viewport

Three Equal Columns

The following example shows how to create three equal-width columns, on all devices and screen widths:

Example

```
<div class="row">
<div class="col">.col</div>
<div class="col">.col</div>
<div class="col">.col</div>
<div class="col">.col</div>
</div>
```

Responsive Columns

The following example shows how to create four equal-width columns starting at tablets and scaling to extra large desktops. On mobile phones or screens that are less than 576px wide, the columns will automatically stack on top of each other:

Example

</div>

```
<div class="row">

<div class="col-sm-3">.col-sm-3</div>
<div class="col-sm-3">.col-sm-3</div>
<div class="col-sm-3">.col-sm-3</div>
<div class="col-sm-3">.col-sm-3</div>
```

Bootstrap 4 Text/Typography

Bootstrap 4 uses a default font-size of 16px, and its line-height is 1.5.

The default font-family is "Helvetica Neue", Helvetica, Arial, sans-serif.

In addition, all elements have margin-top: 0 and margin-bottom: 1rem (16px by default).

<h1> - <h6>

Bootstrap 4 styles HTML headings (<h1> to <h6>) with a bolder font-weight and an increased font-size:

h1 Bootstrap heading (2.5rem = 40px)

h2 Bootstrap heading (2rem = 32px)

h3 Bootstrap heading (1.75rem = 28px)

h4 Bootstrap heading (1.5rem = 24px)

h5 Bootstrap heading (1.25rem = 20px)

h6 Bootstrap heading (1rem = 16px)

Display Headings

Display headings are used to stand out more than normal headings (larger font-size and lighter font-weight), and there are four classes to choose from: .display-3, .display-4

<div class="container">

<h1>Display Headings</h1>

Display headings are used to stand out more than normal headings (larger font-size and lighter font-weight):

<h1 class="display-1">Display 1</h1>

<h1 class="display-2">Display 2</h1>

<h1 class="display-3">Display 3</h1>

<h1 class="display-4">Display 4</h1>

</div>

<small>

In Bootstrap 4 the HTML <small> element is used to create a lighter, secondary text in any heading:

<div class="container">

```
<h1>Lighter, Secondary Text</h1>
The small element is used to create a lighter, secondary text in any
heading:
<h1>h1 heading <small>secondary text</small></h1>
<h2>h2 heading <small>secondary text</small></h2>
<h3>h3 heading <small>secondary text</small></h3>
<h4>h4 heading <small>secondary text</small></h4>
<h5>h5 heading <small>secondary text</small></h5>
<h6>h6 heading <small>secondary text</small></h6>
</div>
<mark>
Bootstrap 4 will style the HTML <mark> element with a yellow background color
and some padding:
<div class="container">
<h1>Highlight Text</h1>
Use the mark element to <mark>highlight</mark>text.
</div>
```

<abbr>

```
Bootstrap 4 will style the HTML <abbr> element with a dotted border bottom:
<div class="container">
<h1>Abbreviations</h1>
The abbr element is used to mark up an abbreviation or acronym:
The <abbr title="World Health Organization">WHO</abbr> was founded in
1948.
</div>
<blook<br/>duote>
Add the .blockquote class to a <blockquote> when quoting blocks of content from
another source:
<div class="container">
<h1>Blockquotes</h1>
The blockquote element is used to present content from another source:
<blook<br/>quote class="blockquote">
For 50 years, WWF has been protecting the future of nature. The world's
leading conservation organization, WWF works in 100 countries and is supported
by 1.2 million members in the United States and close to 5 million globally.
<footer class="blockquote-footer">From WWF's website</footer>
</blockquote>
```

```
</div>
```

<dl>

Bootstrap 4 will style the HTML <dl> element in the following way:

```
<div class="container">
```

The dl element indicates a description list:

<dl>

<dt>Coffee</dt>

<dd>- black hot drink</dd>

<dt>Milk</dt>

<dd>- white cold drink</dd>

</dl>

</div>

| Class | Description | Example |
|-------------------|-------------|---------|
| .font-weight-bold | Bold text | Try it |

| .font-weight-
bolder | Bolder text | Try it |
|--------------------------|---|--------|
| .font-italic | Italic text | Try it |
| .font-weight-light | Light weight text | Try it |
| .font-weight-
lighter | Lighter weight text | Try it |
| .font-weight-
normal | Normal text | Try it |
| .lead | Makes a paragraph stand out | Try it |
| .small | Indicates smaller text (set to 80% of the size of the parent) | Try it |
| .text-left | Indicates left-aligned text | Try it |
| .text-*-left | Indicates left-aligned text on small, medium, large or xlarge screens | Try it |

| .text-break | Prevents long text from breaking layout | Try it |
|---------------------------|---|--------|
| .text-center | Indicates center-aligned text | Try it |
| .text-*-center | Indicates center-aligned text on small, medium, large or xlarge screens | Try it |
| .text-decoration-
none | Removes the underline from a link | Try it |
| .text-right | Indicates right-aligned text | Try it |
| .text-*-right | Indicates right-aligned text on small, medium, large or xlarge screens | Try it |
| .text-justify | Indicates justified text | Try it |
| .text-monospace | Monospaced text | Try it |
| .text-nowrap | Indicates no wrap text | Try it |
| .text-lowercase | Indicates lowercased text | Try it |

| .text-reset | Resets the color of a text or a link (inherits the color from its parent) | |
|------------------|---|--|
| .text-uppercase | Indicates uppercased text | |
| .text-capitalize | Indicates capitalized text | |
| .list-inline | Places all list items on a single line (used together with .list-inline-item on each elements) | |

<

Bootstrap 4 will style the HTML element in the following way:

<div class="container">

<h1>Multiple Code Lines</h1>

For multiple lines of code, use the pre element:

Text in a pre element

is displayed in a fixed-width

font, and it preserves

both spaces and

line breaks.

</div>

Bootstrap 4 Colors

Text Colors

Bootstrap 4 has some contextual classes that can be used to provide "meaning through colors".

The classes for text colors are: .text-muted, .text-primary, .text-success, .text-info, .text-warning, .text-danger, .text-secondary, .text-white, .text-dark, .text-body (default body color/often black) and .text-light:

This text is muted.

This text is important.

This text indicates success.

This text represents some information.

This text represents a warning.

This text represents danger.

Secondary text.

This text is dark grey.

```
Default body color (often black).
```

This text is light grey (on white background).

This text is white (on white background).

Contextual text classes can also be used on links, which will add a darker hover color:

You can also add 50% opacity for black or white text with the .text-black-50 or .text-white-50 classes:

<div class="container">

<h2>Opacity Text Colors</h2>

Add 50% opacity for black or white text with the .text-black-50 or .text-white-50 classes:

Black text with 50% opacity on white background

White text with 50% opacity on black
background

</div>

Background Colors

The classes for background colors are: .bg-primary, .bg-success, .bg-info, .bg-warning, .bg-danger, .bg-secondary, .bg-dark and .bg-light.

```
<div class="container">
<h2>Contextual Backgrounds</h2>
Use the contextual background classes to provide "meaning through"
colors".
Note that you can also add a .text-* class if you want a different text
color:
This text is important.
This text indicates success.
This text represents some information.
This text represents a warning.
This text represents danger.
Secondary background color.
Dark grey background color.
Light grey background color.
</div>
```

Bootstrap 4 Tables

A basic Bootstrap 4 table has a light padding and horizontal dividers.

The .table class adds basic styling to a table:

```
<thead>
Firstname
Lastname
Email
</thead>
John
Doe
john@example.com
Mary
Moe
mary@example.com
```

```
July
Dooley
july@example.com
Striped Rows
The .table-striped class adds zebra-stripes to a table:
<thead>
Firstname
Lastname
Email
</thead>
```

```
John
Doe
john@example.com
Mary
Moe
mary@example.com
July
Dooley
july@example.com
```

Bordered Table

Hover Rows The .table-hover class adds a hover effect (grey background color) on table rows: Black/Dark Table The .table-dark class adds a black background to the table: <thead> Firstname Lastname Email </thead> John

The .table-bordered class adds borders on all sides of the table and cells:



Dark Striped Table

Combine .table-dark and .table-striped to create a dark, striped table: <thead> Firstname Lastname Email </thead> John Doe john@example.com



Borderless Table

The .table-borderless class removes borders from the table:

Contextual Classes



```
Primary
Joe
joe@example.com
Success
Doe
john@example.com
Danger
Moe
mary@example.com
Info
```

```
Dooley
july@example.com
Warning
Refs
bo@example.com
Active
Activeson
act@example.com
Secondary
Secondson
```

```
sec@example.com
Light
Angie
angie@example.com
Dark
Bo
bo@example.com
```

The contextual classes that can be used are:

| Class | Description |
|------------------|--|
| .table-primary | Blue: Indicates an important action |
| .table-success | Green: Indicates a successful or positive action |
| .table-danger | Red: Indicates a dangerous or potentially negative action |
| .table-info | Light blue: Indicates a neutral informative change or action |
| .table-warning | Orange: Indicates a warning that might need attention |
| .table-active | Grey: Applies the hover color to the table row or table cell |
| .table-secondary | Grey: Indicates a slightly less important action |
| .table-light | Light grey table or table row background |
| .table-dark | Dark grey table or table row background |

Table Head Colors

The .thead-dark class adds a black background to table headers, and the .thead-light class adds a grey background to table headers:

```
<thead class="thead-dark">

Firstname
Lastname
Email
```

```
</thead>
John
Doe
john@example.com
Mary
Moe
mary@example.com
July
Dooley
july@example.com
```

```
<thead class="thead-light">
Firstname
Lastname
Email
</thead>
John
Doe
john@example.com
Mary
Moe
mary@example.com
```

```
July
Dooley
july@example.com
Small table
The .table-sm class makes the table smaller by cutting cell padding in half:
<thead>
Firstname
Lastname
Email
</thead>
```

```
John
Doe
john@example.com
Mary
Moe
mary@example.com
July
Dooley
july@example.com
```

Responsive Tables

The .table-responsive class creates a responsive table: an horizontal scrollbar is added to the table on screens that are less than 992px wide (if needed). When viewing on anything larger than 992px wide, there is no difference:

```
<div class="table-responsive">

    ...

</div>
```

You can also decide when the table should get a scrollbar, depending on screen width:

```
<div class="table-responsive-sm">

    ...

</div>
```

Bootstrap 4 Image Shapes

Rounded Corners

The .rounded class adds rounded corners to an image:

```
<img src="cinqueterre.jpg" class="rounded" alt="Cinque Terre">
```

Circle

The .rounded-circle class shapes the image to a circle:

```
<img src="cinqueterre.jpg" class="rounded-circle" alt="Cinque Terre">
```

Thumbnail

The .img-thumbnail class shapes the image to a thumbnail (bordered):

Example

```
<img src="cinqueterre.jpg" class="img-thumbnail" alt="Cinque Terre">
```

Aligning Images

Float an image to the right with the .float-right class or to the left with .float-left:

```
<img src="paris.jpg" class="float-left">
<img src="paris.jpg" class="float-right">
```

Centered Image

Center an image by adding the utility classes .mx-auto (margin:auto) and .d-block (display:block) to the image:

```
<img src="paris.jpg" class="mx-auto d-block">
```

Responsive Images

Images come in all sizes. So do screens. Responsive images automatically adjust to fit the size of the screen.

Create responsive images by adding an .img-fluid class to the tag. The image will then scale nicely to the parent element.

The .img-fluid class applies max-width: 100%; and height: auto; to the image:

Example

Bootstrap 4 Jumbotron

A jumbotron indicates a big grey box for calling extra attention to some special content or information.

Use a <div> element with class .jumbotron to create a jumbotron:

```
<div class="jumbotron">
  <h1>Bootstrap Tutorial</h1>
  Bootstrap isthe most popular HTML, CSS...
</div>
```

Full-width Jumbotron

If you want a full-width jumbotron without rounded borders, add the .jumbotron-fluid class and a .container or .container-fluid inside of it:

Example

```
<div class="jumbotron jumbotron-fluid">
    <div class="container">
        <h1>Bootstrap Tutorial</h1>
        Bootstrap is the most popular HTML, CSS...
        </div>
    </div>
```

Bootstrap 4 Alert

Bootstrap 4 provides an easy way to create predefined alert messages:

```
Alerts are created with the .alert class, followed by one of the contextual classes .alert-success, .alert-info, .alert-warning, .alert-danger, .alert-primary, .alert-secondary, .alert-light or .alert-dark:

<div class="alert alert-success">
        <strong>Success!</strong> Indicates a successful or positive action.
```

Alert Links

</div>

Add the alert-link class to any links inside the alert box to create "matching colored links":

```
<div class="alert alert-success">
  <strong>Success!</strong> You should <a href="#" class="alert-link">read this
```

```
message</a>.
```

Closing Alerts

To close the alert message, add a .alert-dismissible class to the alert container.

Then add class="close" and data-dismiss="alert" to a link or a button element (when you click on this the alert box will disappear).

```
<div class="alert alert-success alert-dismissible">
  <button type="button" class="close" data-dismiss="alert">&times;</button>
  <strong>Success!</strong> Indicates a successful or positive action.
</div>
```

Button Styles

Bootstrap 4 provides different styles of buttons:

Basic Primary Secondary Success Info Warning Danger Dark Light Link

```
<button type="button" class="btn">Basic</button>
<button type="button" class="btn btn-primary">Primary</button>
<button type="button" class="btn btn-secondary">Secondary</button>
<button type="button" class="btn btn-success">Success</button>
<button type="button" class="btn btn-info">Info</button>
<button type="button" class="btn btn-warning">Warning</button>
<button type="button" class="btn btn-warning">Danger</button>
<button type="button" class="btn btn-danger">Danger</button></br/>
<button type="button" class="btn btn-danger">Danger</button></br/>
<button type="button" class="btn btn-danger">Danger</button></br/>
<button>
```

```
<button type="button" class="btn btn-dark">Dark</button>
<button type="button" class="btn btn-light">Light</button>
<button type="button" class="btn btn-link">Link</button>

The button classes can be used on <a>, <button>, or <input> elements:
<a href="#" class="btn btn-info" role="button">Link Button</a>
<button type="button" class="btn btn-info">Button</button>
<input type="button" class="btn btn-info" value="Input Button">
<input type="submit" class="btn btn-info" value="Submit Button">
```

Button Outline

Bootstrap 4 provides eight outline/bordered buttons:

Primary Secondary Success Info Warning Danger Dark Light

```
<button type="button" class="btn btn-outline-primary">Primary</button>
<button type="button" class="btn btn-outline-secondary">Secondary</button>
<button type="button" class="btn btn-outline-success">Success</button>
<button type="button" class="btn btn-outline-info">Info</button>
<button type="button" class="btn btn-outline-warning">Warning</button>
<button type="button" class="btn btn-outline-danger">Danger</button>
<button type="button" class="btn btn-outline-dark">Dark</button>
<button type="button" class="btn btn-outline-dark">Dark</button>
<button type="button" class="btn btn-outline-light text-dark">Light</button></br/>
<button type="button" class="btn btn-outline-light text-dark">Light</button></br/>
</button>
```

Button Sizes

Use the .btn-lg class for large buttons or .btn-sm class for small buttons:

Large Default Small

```
<button type="button" class="btn btn-primary btn-lg">Large</button>
<button type="button" class="btn btn-primary">Default</button>
<button type="button" class="btn btn-primary btn-sm">Small</button>
```

Block Level Buttons

Add class .btn-block to create a block level button that spans the entire width of the parent element.

Full-Width Button

Example

```
<button type="button" class="btn btn-primary btn-block">Full-Width Button</button>
```

Active/Disabled Buttons

A button can be set to an active (appear pressed) or a disabled (unclickable) state:

Active Primary Disabled Primary

The class .active makes a button appear pressed, and the disabled attribute makes a button unclickable. Note that <a> elements do not support the disabled attribute and must therefore use the .disabled class to make it visually appear disabled.

Example

```
<button type="button" class="btn btn-primary active">Active Primary</button>
<button type="button" class="btn btn-primary" disabled>Disabled

Primary</button>
<a href="#" class="btn btn-primary disabled">Disabled Link</a>
```

Spinner Buttons

```
You can also add "spinners" to a button.
```

<button class="btn btn-primary">

```
</button>
<br/>
<button class="btn btn-primary" disabled>
<span class="spinner-grow spinner-grow-sm"></span>
Loading..
</button>
```

Bootstrap 4 Button Groups

Bootstrap 4 allows you to group a series of buttons together (on a single line) in a button group:

Use a <div> element with class .btn-group to create a button group:

```
<div class="btn-group">
  <button type="button" class="btn btn-primary">Apple</button>
  <button type="button" class="btn btn-primary">Samsung</button>
  <button type="button" class="btn btn-primary">Sony</button>
  </div>
```

Tip: Instead of applying button sizes to every button in a group, use class .btn-group-lg for a large button group or the .btn-group-sm for a small button group:

```
<div class="btn-group btn-group-lg">
  <button type="button" class="btn btn-primary">Apple</button>
  <button type="button" class="btn btn-primary">Samsung</button>
```

```
<button type="button" class="btn btn-primary">Sony</button> </div>
```

Vertical Button Groups

Bootstrap 4 also supports vertical button groups: Use the class .btn-group-vertical to create a vertical button group:

```
<div class="btn-group-vertical">
  <button type="button" class="btn btn-primary">Apple</button>
  <button type="button" class="btn btn-primary">Samsung</button>
  <button type="button" class="btn btn-primary">Sony</button>
  </div>
```

Nesting Button Groups & Dropdown Menus

Nest button groups to create dropdown menus (you will learn more about dropdowns in a later chapter):

```
Example
```

```
<div class="btn-group">
  <button type="button" class="btn btn-primary">Apple</button>
  <button type="button" class="btn btn-primary">Samsung</button>
  <div class="btn-group">
    <button type="button" class="btn btn-primary dropdown-toggle" data-toggle="dropdown">
        Sony
```

```
</button>
  <div class="dropdown-menu">
   <a class="dropdown-item" href="#">Tablet</a>
   <a class="dropdown-item" href="#">Smartphone</a>
  </div>
</div>
</div>
Split Button Dropdowns
<div class="btn-group">
 <button type="button" class="btn btn-primary">Sony</button>
 <button type="button" class="btn btn-primary dropdown-toggle dropdown-
toggle-split" data-toggle="dropdown">
  <span class="caret"></span>
 </button>
 <div class="dropdown-menu">
  <a class="dropdown-item" href="#">Tablet</a>
  <a class="dropdown-item" href="#">Smartphone</a>
</div>
</div>
Vertical Button Group w/ Dropdown
<div class="btn-group-vertical">
<button type="button" class="btn btn-primary">Apple</button>
```

```
<br/>
```

Button Groups Side by Side

Button groups are "inline" by default, which makes them appear side by side when you have multiple groups:

```
<div class="btn-group">
  <button type="button" class="btn btn-primary">Apple</button>
  <button type="button" class="btn btn-primary">Samsung</button>
  <button type="button" class="btn btn-primary">Sony</button>
  </div>
</div>
</div>

<button type="button" class="btn btn-primary">BMW</button>
  <button type="button" class="btn btn-primary">Mercedes</button>
```

```
<br/><button type="button" class="btn btn-primary">Volvo</button></div>
```

Bootstrap 4 Badges

Badges are used to add additional information to any content. Use the .badge class together with a contextual class (like .badge-secondary) within elements to create rectangular badges. Note that badges scale to match the size of the parent element (if any):

```
<h1>Example heading <span class="badge badge-secondary">New</span></h1>
<h2>Example heading <span class="badge badge-secondary">New</span></h2>
<h3>Example heading <span class="badge badge-secondary">New</span></h3>
<h4>Example heading <span class="badge badge-secondary">New</span></h4>
<h5>Example heading <span class="badge badge-secondary">New</span></h5>
<h6>Example heading <span class="badge badge-secondary">New</span></h6>
<h6>Example heading <span class="badge badge-secondary">New</span></h6>
```

Contextual Badges

Use any of the contextual classes (.badge-*) to change the color of a badge:

```
<span class="badge badge-primary">Primary</span>
<span class="badge badge-secondary">Secondary</span>
<span class="badge badge-success">Success</span>
<span class="badge badge-danger">Danger</span>
<span class="badge badge-warning">Warning</span>
<span class="badge badge-info">Info</span>
```

```
<span class="badge badge-light">Light</span>
<span class="badge badge-dark">Dark</span</pre>
```

Pill Badges

Use the .badge-pill class to make the badges more round:

```
<span class="badge badge-pill badge-primary">Primary</span>
<span class="badge badge-pill badge-secondary">Secondary</span>
<span class="badge badge-pill badge-success">Success</span>
<span class="badge badge-pill badge-danger">Danger</span>
<span class="badge badge-pill badge-warning">Warning</span>
<span class="badge badge-pill badge-info">Info</span>
<span class="badge badge-pill badge-light">Light</span>
<span class="badge badge-pill badge-light">Dark</span>
<span class="badge badge-pill badge-dark">Dark</span>
```

Badge inside an Element

An example of using a badge inside a button:

```
<button type="button" class="btn btn-primary">

Messages <span class="badge badge-light">4</span>
</button>
```

Bootstrap 4 Progress Bars

A progress bar can be used to show a user how far along he/she is in a process.

To create a default progress bar, add a .progress class to a container element and add the .progress-bar class to its child element. Use the CSS width property to set the width of the progress bar:

```
<div class="progress">
    <div class="progress-bar" style="width:70%"></div>
    </div>
```

Progress Bar Height

The height of the progress bar is 16px by default. Use the CSS height property to change it. Note that you must set the same height for the progress container and the progress bar:

Example

```
<div class="progress" style="height:20px">
        <div class="progress-bar" style="width:40%;height:20px"></div>
        </div>
```

Progress Bar Labels

Add text inside the progress bar to show the visible percentage:



```
<div class="progress">
    <div class="progress-bar" style="width:70%">70%</div>
    </div>
```

Colored Progress Bars

By default, the progress bar is blue (primary). Use any of the Bootstrap 4 contextual background classes to its color:

```
<!-- Blue -->
<div class="progress">
 <div class="progress-bar" style="width:10%"></div>
</div>
<!-- Green -->
<div class="progress">
 <div class="progress-bar bg-success" style="width:20%"></div>
</div>
<!-- Turquoise -->
<div class="progress">
 <div class="progress-bar bg-info" style="width:30%"></div>
</div>
<!-- Orange -->
```

```
<div class="progress">
 <div class="progress-bar bg-warning" style="width:40%"></div>
</div>
<!-- Red -->
<div class="progress">
 <div class="progress-bar bg-danger" style="width:50%"></div>
</div>
<!-- White -->
<div class="progress border">
 <div class="progress-bar bg-white" style="width:60%"></div>
</div>
<!-- Grey -->
<div class="progress">
 <div class="progress-bar bg-secondary" style="width:70%"></div>
</div>
<!-- Light Grey -->
<div class="progress border">
 <div class="progress-bar bg-light" style="width:80%"></div>
</div>
<!-- Dark Grey -->
```

```
<div class="progress">
  <div class="progress-bar bg-dark" style="width:90%"></div>
  </div>
```

Striped Progress Bars

Use the .progress-bar-striped class to add stripes to the progress bars:

```
<div class="progress">
    <div class="progress-bar progress-bar-striped" style="width:40%"></div>
    </div>
```

Animated Progress Bar

Add the .progress-bar-animated class to animate the progress bar:

Example

```
<div class="progress-bar progress-bar-striped progress-bar-animated" style="width:40%"></div>
```

Multiple Progress Bars

Progress bars can also be stacked:

```
<div class="progress">
    <div class="progress-bar bg-success" style="width:40%">
    Free Space
    </div>
```

```
<div class="progress-bar bg-warning" style="width:10%">
    Warning
    </div>
    <div class="progress-bar bg-danger" style="width:20%">
    Danger
    </div>
</div>
```

Bootstrap 4 Spinners

To create a spinner/loader, use the .spinner-border class:

```
<div class="spinner-border"></div>
```

Colored Spinners

Use any **text color utilites** to add a color to the spinner:

```
<div class="spinner-border text-muted"></div>
<div class="spinner-border text-primary"></div>
<div class="spinner-border text-success"></div>
<div class="spinner-border text-info"></div>
<div class="spinner-border text-warning"></div>
<div class="spinner-border text-danger"></div>
<div class="spinner-border text-danger"></div>
<div class="spinner-border text-secondary"></div>
<div class="spinner-border text-dark"></div>
<div class="spinner-border text-dark"></div>
<div class="spinner-border text-light"></div></div></div>
```

Growing Spinners

Use the .spinner-grow class if you want the spinner/loader to grow instead of "spin":

```
<div class="spinner-grow text-muted"></div>
<div class="spinner-grow text-primary"></div>
<div class="spinner-grow text-success"></div>
<div class="spinner-grow text-info"></div>
<div class="spinner-grow text-warning"></div>
<div class="spinner-grow text-danger"></div>
<div class="spinner-grow text-danger"></div>
<div class="spinner-grow text-secondary"></div>
<div class="spinner-grow text-dark"></div>
<div class="spinner-grow text-dark"></div>
<div class="spinner-grow text-light"></div></div></div></div></div>
```

Spinner Size

Use .spinner-border-sm or .spinner-grow-sm to create a smaller spinner:

```
<div class="spinner-border spinner-border-sm"></div>
<div class="spinner-grow spinner-grow-sm"></div>
```

Spinner Buttons

You can also add spinners to a button, with or without text:

```
<button class="btn btn-primary">
 <span class="spinner-border spinner-border-sm"></span>
</button>
<button class="btn btn-primary">
 <span class="spinner-border spinner-border-sm"></span>
 Loading..
</button>
<button class="btn btn-primary" disabled>
 <span class="spinner-border spinner-border-sm"></span>
 Loading..
</button>
<button class="btn btn-primary" disabled>
 <span class="spinner-grow spinner-grow-sm"></span>
 Loading..
</button>
```

Bootstrap 4 Pagination

If you have a web site with lots of pages, you may wish to add some sort of pagination to each page.

To create a basic pagination, add the .pagination class to an
 element. Then
 add the .page-item to each element and a .page-link class to each link
 inside :

Active State

The .active class is used to "highlight" the current page:

```
    class="page-item"><a class="page-link" href="#">Previous</a>
    class="page-item"><a class="page-link" href="#">1</a>
    class="page-item active"><a class="page-link" href="#">2</a>
    class="page-item"><a class="page-link" href="#">3</a>
    class="page-item"><a class="page-link" href="#">Next</a>
```

Disabled State

The .disabled class is used for un-clickable links:

Pagination Sizing

Pagination blocks can also be sized to a larger or a smaller size:

```
Add class .pagination-lg for larger blocks or .pagination-sm for smaller blocks:
```

```
<a class="page-link" href="#">3</a>
<a class="page-link" href="#">Next</a>
```

Pagination Alignment

Use utility classes to change the alignment of the pagination:

```
<!-- Default (left-aligned) -->

...

<!-- Center-aligned -->

...

<!-- Right-aligned -->

...
```

Breadcrumbs

Another form for pagination, is breadcrumbs:

The .breadcrumb and .breadcrumb-item classes indicates the current page's location within a navigational hierarchy:

```
    class="breadcrumb-item"><a href="#">Photos</a>
    class="breadcrumb-item"><a href="#">Summer 2017</a>
    class="breadcrumb-item"><a href="#">Italy</a>
    class="breadcrumb-item">Rome
```

Bootstrap 4 List Groups

The most basic list group is an unordered list with list items:

To create a basic list group, use an
 element with class .list-group,
 and elements with class .list-group-item:

```
    First item
    Second item
    Third item
```

Active State

Use the .active class to highlight the current item:

```
    class="list-group-item active">Active item
    class="list-group-item">Second item
    class="list-group-item">Third item
```

List Group With Linked Items

First item HYPERLINK "javascript:void(0)" HYPERLINK "javascript:void(0)"

HYPERLINK "javascript:void(0)" Second item HYPERLINK "javascript:void(0)"

HYPERLINK "javascript:void(0)" HYPERLINK "javascript:void(0)" Third item

To create a list group with linked items, use <div> instead of and <a> instead of Optionally, add the .list-group-item-action class if you want a grey background color on hover:

```
<div class="list-group">
  <a href="#" class="list-group-item list-group-item-action">First item</a>
  <a href="#" class="list-group-item list-group-item-action">Second item</a>
  <a href="#" class="list-group-item list-group-item-action">Third item</a>
  </div>
```

Disabled Item

The .disabled class adds a lighter text color to the disabled item. And when used on links, it will remove the hover effect:

<u>Disabled item HYPERLINK "javascript:void(0)" HYPERLINK "javascript:void(0)"</u> HYPERLINK "javascript:void(0)" Disabled HYPERLINK "javascript:void(0)"

```
HYPERLINK "javascript:void(0)" HYPERLINK "javascript:void(0)" item HYPERLINK
```

"javascript:void(0)" HYPERLINK "javascript:void(0)" HYPERLINK

"javascript:void(0)"Third item

```
<div class="list-group">
  <a href="#" class="list-group-item disabled">Disabled item</a>
  <a href="#" class="list-group-item disabled">Disabled item</a>
  <a href="#" class="list-group-item">Third item</a>
  </div>
```

Flush / Remove Borders

Use the .list-group-flush class to remove some borders and rounded corners:

```
    class="list-group-item">First item
    class="list-group-item">Second item
    class="list-group-item">Third item
    class="list-group-item">Fourth item
```

Horizontal List Groups

If you want the list items to display horizontally instead of vertically (side by side instead of on top of each other), add the .list-group-horizontal class to .list-group:

```
class="list-group-item">First itemclass="list-group-item">Second item
```

```
class="list-group-item">Third itemclass="list-group-item">Fourth item
```

Contextual Classes

Contextual classes can be used to color list items:

Link items with Contextual Classes

Action item HYPERLINK "javascript:void(0)" HYPERLINK "javascript:void(0)"

HYPERLINK "javascript:void(0)" Success item HYPERLINK "javascript:void(0)"

HYPERLINK "javascript:void(0)" HYPERLINK "javascript:void(0)" Secondary item

HYPERLINK "javascript:void(0)" HYPERLINK "javascript:void(0)" HYPERLINK

```
"javascript:void(0)"Info item HYPERLINK "javascript:void(0)" HYPERLINK
"javascript:void(0)" HYPERLINK "javascript:void(0)"Warning item HYPERLINK
"javascript:void(0)" HYPERLINK "javascript:void(0)" HYPERLINK
"javascript:void(0)"Danger item HYPERLINK "javascript:void(0)" HYPERLINK
"javascript:void(0)" HYPERLINK "javascript:void(0)"Primary item HYPERLINK
"javascript:void(0)" HYPERLINK "javascript:void(0)" HYPERLINK
"javascript:void(0)"Dark item HYPERLINK "javascript:void(0)" HYPERLINK
"javascript:void(0)" HYPERLINK "javascript:void(0)"Light item
<div class="list-group">
 <a href="#" class="list-group-item list-group-item-action">Action item</a>
 <a href="#" class="list-group-item list-group-item-action list-group-item-
success">Success item</a>
 <a href="#" class="list-group-item list-group-item-action list-group-item-
secondary">Secondary item</a>
 <a href="#" class="list-group-item list-group-item-action list-group-item-
info">Info item</a>
 <a href="#" class="list-group-item list-group-item-action list-group-item-
warning">Warning item</a>
 <a href="#" class="list-group-item list-group-item-action list-group-item-
danger">Danger item</a>
 <a href="#" class="list-group-item list-group-item-action list-group-item-
primary">Primary item</a>
 <a href="#" class="list-group-item list-group-item-action list-group-item-
dark">Dark item</a>
 <a href="#" class="list-group-item list-group-item-action list-group-item-
```

```
light">Light item</a>
</div>
```

List Group with Badges

Combine .badge classes with utility/helper classes to add badges inside the list group:

```
    class="list-group-item d-flex justify-content-between align-items-center">
    Inbox
    <span class="badge badge-primary badge-pill">12</span>

    class="list-group-item d-flex justify-content-between align-items-center">
    Ads
    <span class="badge badge-primary badge-pill">50</span>
    cli class="list-group-item d-flex justify-content-between align-items-center">
    Junk
    <span class="badge badge-primary badge-pill">99</span>
```

Bootstrap 4 Cards

A card in Bootstrap 4 is a bordered box with some padding around its content. It includes options for headers, footers, content, colors, etc.

Basic Card

A basic card is created with the .card class, and content inside the card has a .card-body class:

```
<div class="card">
    <div class="card-body">Basic card</div>
    </div>
```

If you are familiar with Bootstrap 3, cards replace old panels, wells, and thumbnails.

The .card-header class adds a heading to the card and the .card-footer class adds a footer to the card:

```
<div class="card">
  <div class="card-header">Header</div>
  <div class="card-body">Content</div>
  <div class="card-footer">Footer</div>
  </div>
```

Contextual Cards

To add a background color the card, use contextual classes (.bg-primary, .bg-success, .bg-info, .bg-warning, .bg-danger, .bg-secondary, .bg-dark and .bg-light.

```
<div class="container">
<h2>Cards with Contextual Classes</h2>
<div class="card">
<div class="card-body">Basic card</div>
</div>
<br>
<div class="card bg-primary text-white">
<div class="card-body">Primary card</div>
</div>
<br>
<div class="card bg-success text-white">
<div class="card-body">Success card</div>
</div>
<br>
<div class="card bg-info text-white">
<div class="card-body">Info card</div>
```

```
</div>
<br>
<div class="card bg-warning text-white">
<div class="card-body">Warning card</div>
</div>
<br>
<div class="card bg-danger text-white">
<div class="card-body">Danger card</div>
</div>
<br>
<div class="card bg-secondary text-white">
<div class="card-body">Secondary card</div>
</div>
<br>
<div class="card bg-dark text-white">
<div class="card-body">Dark card</div>
```

```
</div>
<br>
<div class="card bg-light text-dark">
<div class="card-body">Light card</div>
</div>
</div>
Use .card-title to add card titles to any heading element. The .card-text class is
used to remove bottom margins for a  element if it is the last child (or the only
one) inside .card-body. The .card-link class adds a blue color to any link, and a
hover effect.
<div class="card">
 <div class="card-body">
  <h4 class="card-title">Card title</h4>
  Some example text. Some example text.
  <a href="#" class="card-link">Card link</a>
  <a href="#" class="card-link">Another link</a>
 </div>
</div>
```

Card Images

Add .card-img-top or .card-img-bottom to an to place the image at the top or at the bottom inside the card. Note that we have added the image outside of the .card-body to span the entire width:

```
<div class="card" style="width:400px">
    <img class="card-img-top" src="img_avatar1.png" alt="Card image">
        <div class="card-body">
            <h4 class="card-title">John Doe</h4>
            Some example text.
            <a href="#" class="btn btn-primary">See Profile</a>
            </div>
            </div></div>
```

Stretched Link

Add the .stretched-link class to a link inside the card, and it will make the whole card clickable and hoverable (the card will act as a link):

```
<div class="container">
```

h2>Stretched Link in Card</h2>

Add the .stretched-link class to a link inside the card, and it will make the whole card clickable (the card will act as a link):

```
<div class="card" style="width:400px">
<img class="card-img-top" src="img_avatar1.png" alt="Card image"
style="width:100%">
<div class="card-body">
<h4 class="card-title">John Doe</h4>
Some example text some example text. John Doe is an architect and engineer
<a href="#" class="btn btn-primary stretched-link">See Profile</a>
</div>
</div>
</div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></tibe>
```

Card Image Overlays

Turn an image into a card background and use .card-img-overlay to add text on top of the image:

```
<div class="card" style="width:500px">
  <img class="card-img-top" src="img_avatar1.png" alt="Card image">
  <div class="card-img-overlay">
    <h4 class="card-title">John Doe</h4>
  Some example text.
```

```
<a href="#" class="btn btn-primary">See Profile</a>
</div>
</div>
```

Card Columns

The .card-columns class creates a masonry-like grid of cards (like pinterest). The layout will automatically adjust as you insert more cards.

```
<div class="card-columns">
<div class="card bg-primary">
 <div class="card-body text-center">
  Some text inside the first card
 </div>
</div>
<div class="card bg-warning">
 <div class="card-body text-center">
  Some text inside the second card
 </div>
</div>
<div class="card bg-success">
 <div class="card-body text-center">
  Some text inside the third card
 </div>
</div>
<div class="card bg-danger">
```

```
<div class="card-body text-center">
  Some text inside the fourth card
  </div>
  </div>
  <div class="card bg-light">
        <div class="card-body text-center">
            Some text inside the fifth card
        </div>
  </div>
  <div class="card-body text-center">
        < div class="card-body text-center">
        < div class="card-body text-center">
        < div class="card-body text-center">
        < class="card-text">Some text inside the sixth card
        </div>
  </div>
  </div>
  </div>
</div>
```

The .card-deck class creates a grid of cards that are of equal height and width.

The layout will automatically adjust as you insert more cards.

```
<div class="card-body text-center">
  Some text inside the second card
  </div>
  </div>
  <div class="card bg-success">
        <div class="card-body text-center">
        Some text inside the third card
        </div>
  </div>
  <div class="card bg-danger">
        <div class="card-body text-center">

        </div>
  </div>
  </div>
  </div>
  </div>
  </div>
</div></div>
```

Card Group

The .card-group class is similar to .card-deck. The only difference is that the .card-group class removes left and right margins between each card.

```
<div class="card-group">

<div class="card bg-primary">

<div class="card-body text-center">

Some text inside the first card
```

```
</div>
</div>
<div class="card bg-warning">
 <div class="card-body text-center">
  Some text inside the second card
 </div>
</div>
<div class="card bg-success">
 <div class="card-body text-center">
  Some text inside the third card
 </div>
</div>
<div class="card bg-danger">
 <div class="card-body text-center">
  Some text inside the fourth card
 </div>
</div>
</div>
```

Bootstrap 4 Dropdowns

A dropdown menu is a toggleable menu that allows the user to choose one value from a predefined list:

Dropdown button

```
<div class="dropdown">
  <button type="button" class="btn btn-primary dropdown-toggle" data-
toggle="dropdown">
    Dropdown button
  </button>
  <div class="dropdown-menu">
    <a class="dropdown-item" href="#">Link 1</a>
  <a class="dropdown-item" href="#">Link 2</a>
  <a class="dropdown-item" href="#">Link 2</a>
  <a class="dropdown-item" href="#">Link 3</a>
  </div>
</div></div>
```

Dropdown Divider

The .dropdown-divider class is used to separate links inside the dropdown menu with a thin horizontal border:

```
<div class="dropdown-divider"></div>
```

Dropdown Header

The .dropdown-header class is used to add headers inside the dropdown menu:

```
<div class="dropdown-header">Dropdown header 1</div>
```

Highlight a specific dropdown item with the .active class (adds a blue background color).

To disable an item in the dropdown menu, use the .disabled class (gets a light-grey text color and a "no-parking-sign" icon on hover):

```
<a class="dropdown-item active" href="#">Active</a>
<a class="dropdown-item disabled" href="#">Disabled</a>
```

Dropdown Position

You can also create a "dropright" or "dropleft" menu, by adding the .dropright or .dropleft class to the dropdown element. Note that the caret/arrow is added automatically:

Dropright

<div class="dropdown dropright">

Dropleft

<div class="dropdown dropleft">

Dropdown Menu Right

Wide dropdown button to demonstrate this example

To right-align the dropdown menu, add the .dropdown-menu-right class to the element with .dropdown-menu:

<div class="dropdown-menu dropdown-menu-right">

Dropup

```
If you want the dropdown menu to expand upwards instead of downwards, change the <div> element with class="dropdown" to "dropup":
```

```
<div class="dropup">
```

Grouped Buttons with a Dropdown

```
<div class="btn-group">
  <button type="button" class="btn btn-primary">Apple</button>
  <button type="button" class="btn btn-primary">Samsung</button>
  <div class="btn-group">
        <button type="button" class="btn btn-primary dropdown-toggle" data-toggle="dropdown">
        Sony
        </button>
        <div class="dropdown-menu">
              <a class="dropdown-item" href="#">Tablet</a>
        <a class="dropdown-item" href="#">Smartphone</a>
        </div>
        </div>
        </div>
    </div></div></div></div></div></div</pre>
```

Split Button Dropdowns

```
<div class="btn-group">
  <button type="button" class="btn btn-primary">Primary</button>
  <button type="button" class="btn btn-primary dropdown-toggle dropdown-</pre>
```

```
toggle-split" data-toggle="dropdown">
 </button>
 <div class="dropdown-menu">
  <a class="dropdown-item" href="#">Link 1</a>
  <a class="dropdown-item" href="#">Link 2</a>
 </div>
</div>
Vertical Button Group w/ Dropdown
<div class="btn-group-vertical">
 <button type="button" class="btn btn-primary">Apple</button>
 <button type="button" class="btn btn-primary">Samsung</button>
<div class="btn-group">
  <button type="button" class="btn btn-primary dropdown-toggle" data-
toggle="dropdown">
   Sony
  </button>
  <div class="dropdown-menu">
   <a class="dropdown-item" href="#">Tablet</a>
   <a class="dropdown-item" href="#">Smartphone</a>
  </div>
 </div>
</div>
```

Accordion

Collapsible Group Item #1

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Collapsible Group Item #2

Collapsible Group Item #3

The following example shows a simple accordion by extending the card component.

Note: Use the data-parent attribute to make sure that all collapsible elements under the specified parent will be closed when one of the collapsible item is shown.

```
Example
```

```
<div id="accordion">

<div class="card">

<div class="card-header">

<a class="card-link" data-toggle="collapse" href="#collapseOne">

Collapsible Group Item #1

</a>

</div>

<div id="collapseOne" class="collapse show" data-parent="#accordion">

<div class="card-body">

Lorem ipsum..

</div>
```

```
</div>
</div>
<div class="card">
 <div class="card-header">
  <a class="collapsed card-link" data-toggle="collapse" href="#collapseTwo">
   Collapsible Group Item #2
  </a>
 </div>
 <div id="collapseTwo" class="collapse" data-parent="#accordion">
  <div class="card-body">
   Lorem ipsum..
  </div>
 </div>
</div>
<div class="card">
 <div class="card-header">
  <a class="collapsed card-link" data-toggle="collapse" href="#collapseThree">
   Collapsible Group Item #3
  </a>
 </div>
 <div id="collapseThree" class="collapse" data-parent="#accordion">
  <div class="card-body">
   Lorem ipsum..
```

```
</div>
</div>
</div>
</div>
```

Bootstrap 4 Navs

```
    class="nav-item">
    <a class="nav-link" href="#">Link</a>
    class="nav-item">
    <a class="nav-link" href="#">Link</a>
    class="nav-item">
    <a class="nav-link" href="#">Link</a>
    cli class="nav-item">
    <a class="nav-item">
    <a class="nav-item">
    <a class="nav-link" href="#">Disabled</a>
```

Aligned Nav

<u>Link HYPERLINK "javascript:void(0)" HYPERLINK "javascript:void(0)" HYPERLINK</u>
"javascript:void(0)"Link HYPERLINK "javascript:void(0)" HYPERLINK

```
"javascript:void(0)" HYPERLINK "javascript:void(0)"Link HYPERLINK
```

Add the .justify-content-center class to center the nav, and the .justify-content-end class to right-align the nav.

```
<!-- Centered nav -->
```

```
<!-- Right-aligned nav -->
```

Vertical Nav

Link HYPERLINK "javascript:void(0)" HYPERLINK "javascript:void(0)" HYPERLINK

"javascript:void(0)"Link HYPERLINK "javascript:void(0)" HYPERLINK

"javascript:void(0)" HYPERLINK "javascript:void(0)"Link HYPERLINK

"javascript:void(0)" HYPERLINK "javascript:void(0)" HYPERLINK

"javascript:void(0)"Disabled

Add the .flex-column class to create a vertical nav:

[&]quot;javascript:void(0)" HYPERLINK "javascript:void(0)" HYPERLINK

[&]quot;javascript:void(0)"Disabled HYPERLINK "javascript:void(0)" HYPERLINK

[&]quot;javascript:void(0)" HYPERLINK "javascript:void(0)"Link HYPERLINK

[&]quot;javascript:void(0)" HYPERLINK "javascript:void(0)" HYPERLINK

[&]quot;javascript:void(0)"Link HYPERLINK "javascript:void(0)" HYPERLINK

[&]quot;javascript:void(0)" HYPERLINK "javascript:void(0)"Link HYPERLINK

[&]quot;javascript:void(0)" HYPERLINK "javascript:void(0)" HYPERLINK

[&]quot;javascript:void(0)"Disabled

Tabs

Active HYPERLINK "javascript:void(0)" HYPERLINK "javascript:void(0)" HYPERLINK "javascript:void(0)" HYPERLINK "javascript:void(0)" HYPERLINK "javascript:void(0)" HYPERLINK "javascript:void(0)" Link HYPERLINK "javascript:void(0)" HYPERLINK "javascri

Turn the nav menu into navigation tabs with the .nav-tabs class. Add the .active class to the active/current link. If you want the tabs to be togglable, see the last example on this page.

```
    class="nav-item">
    <a class="nav-item">
    class="nav-item">
    <a class="nav-link" href="#">Link</a>
    class="nav-item">
    <a class="nav-item">
    <a class="nav-link" href="#">Link</a>
    cli class="nav-item">
    <a class="nav-item">
</a>
```

Pills

Active HYPERLINK "javascript:void(0)" HYPERLINK "javascript:void(0)" HYPERLINK "javascript:void(0)" HYPERLINK "javascript:void(0)" HYPERLINK "javascript:void(0)" HYPERLINK "javascript:void(0)" Link HYPERLINK "javascript:void(0)" Link HYPERLINK "javascript:void(0)" HYPERLINK "jav

Turn the nav menu into navigation pills with the .nav-pills class. If you want the pills to be togglable, see the last example on this page.

```
    class="nav-item">
    <a class="nav-link active" href="#">Active</a>
    class="nav-item">
    ca class="nav-link" href="#">Link</a>
    cli class="nav-item">
    <a class="nav-link" href="#">Link</a>
    cli class="nav-item">
    <a class="nav-item">
    <a class="nav-item">
    <a class="nav-item">
    <a class="nav-item">
    <a class="nav-item">
</a>
```

```
Justified Tabs/pills
Justify the tabs/pills with the <a href="may-justified">.nav-justified</a> class (equal width):
..
ul class="nav nav-tabs nav-justified">..
Pills with Dropdown
<a class="nav-link active" href="#">Active</a>
<a class="nav-link dropdown-toggle" data-
toggle="dropdown" href="#">Dropdown</a>
 <div class="dropdown-menu">
  <a class="dropdown-item" href="#">Link 1</a>
  <a class="dropdown-item" href="#">Link 2</a>
  <a class="dropdown-item" href="#">Link 3</a>
 </div>
class="nav-item">
 <a class="nav-link" href="#">Link</a>
```

```
<a class="nav-link disabled" href="#">Disabled</a>
Tabs with Dropdown
<a class="nav-link active" href="#">Active</a>
<a class="nav-link dropdown-toggle" data-
toggle="dropdown" href="#">Dropdown</a>
 <div class="dropdown-menu">
  <a class="dropdown-item" href="#">Link 1</a>
  <a class="dropdown-item" href="#">Link 2</a>
  <a class="dropdown-item" href="#">Link 3</a>
 </div>
<a class="nav-link" href="#">Link</a>
<a class="nav-link disabled" href="#">Disabled</a>
```

Bootstrap 4 Navigation Bar

A navigation bar is a navigation header that is placed at the top of the page:

With Bootstrap, a navigation bar can extend or collapse, depending on the screen size.

A standard navigation bar is created with the .navbar class, followed by a responsive collapsing class: .navbar-expand-xl|lg|md|sm (stacks the navbar vertically on extra large, large, medium or small screens).

To add links inside the navbar, use a
 element with class="navbar-nav". Then
 add elements with a .nav-item class followed by an <a> element with a .nav-link class:

```
<!-- A grey horizontal navbar that becomes vertical on small screens --> <nav class="navbar navbar-expand-sm bg-light">
```

```
<!-- Links -->

<a class="nav-link" href="#">Link 1</a>

cli class="nav-item">

<a class="nav-item">

<a class="nav-link" href="#">Link 2</a>

cli class="nav-item">
```

```
<a class="nav-link" href="#">Link 3</a>
 </nav>
Vertical Navbar
<!-- A vertical navbar -->
<nav class="navbar bg-light">
<!-- Links -->
<a class="nav-link" href="#">Link 1</a>
 <a class="nav-link" href="#">Link 2</a>
 <a class="nav-link" href="#">Link 3</a>
 </nav>
```

Use any of the .bg-color classes to change the background color of the navbar (.bg-primary, .bg-success, .bg-info, .bg-warning, .bg-danger, .bg-secondary, .bg-dark and .bg-light)

Tip: Add a **white** text color to all links in the navbar with the .navbar-dark class, or use the .navbar-light class to add a **black** text color.

```
<nav class="navbar navbar-expand-sm bg-light navbar-light">
<a class="nav-link" href="#">Active</a>
 <a class="nav-link" href="#">Link</a>
 <a class="nav-link" href="#">Link</a>
 <a class="nav-link disabled" href="#">Disabled</a>
 </nav>
<!-- Black with white text -->
<nav class="navbar navbar-expand-sm bg-dark navbar-dark">...</nav>
```

```
<!-- Blue with white text -->
<nav class="navbar navbar-expand-sm bg-primary navbar-dark">...</nav>
Active/disabled state: Add the .active class to an <a> element to highlight the
current link, or the .disabled class to indicate that the link is un-clickable.
Brand / Logo
The .navbar-brand class is used to highlight the brand/logo/project name of your
page:
<nav class="navbar navbar-expand-sm bg-dark navbar-dark">
 <a class="navbar-brand" href="#">Logo</a>
</nav>
When using the .navbar-brand class on images, Bootstrap 4 will automatically
style the image to fit the navbar vertically.
<nav class="navbar navbar-expand-sm bg-dark navbar-dark">
 <a class="navbar-brand" href="#">
  <img src="bird.jpg" alt="Logo" style="width:40px;">
 </a>
```

Collapsing The Navigation Bar

</nav>

Very often, especially on small screens, you want to hide the navigation links and replace them with a button that should reveal them when clicked on.

To create a collapsible navigation bar, use a button with class="navbar-toggler", data-toggle="collapse" and data-target="#thetarget". Then wrap the navbar content (links, etc) inside a div element with class="collapse navbar-collapse", followed by an id that matches the data-target of the button: "thetarget".

Example

```
<nav class="navbar navbar-expand-md bg-dark navbar-dark">
 <!-- Brand -->
 <a class="navbar-brand" href="#">Navbar</a>
 <!-- Toggler/collapsibe Button -->
<button class="navbar-toggler" type="button" data-toggle="collapse" data-</pre>
target="#collapsibleNavbar">
 <span class="navbar-toggler-icon"></span>
 </button>
 <!-- Navbar links -->
 <div class="collapse navbar-collapse" id="collapsibleNavbar">
 <a class="nav-link" href="#">Link</a>
```

```
<a class="nav-link" href="#">Link</a>

cli class="nav-item">
<a class="nav-link" href="#">Link</a>

</di>
</div>
</nav>
```

Navbar With Dropdown

Navbars can also hold dropdown menus:

```
<nav class="navbar navbar-expand-sm bg-dark navbar-dark">
<!-- Brand -->
<a class="navbar-brand" href="#">Logo</a>
<!-- Links -->

<a class="nav-link" href="#">Link 1</a>

cli class="nav-item">
<a class="nav
```

```
class="nav-item dropdown">
        <a class="nav-link dropdown-toggle" href="#" id="navbardrop" data-toggle="dropdown">
            Dropdown link
        </a>
        <div class="dropdown-menu">
            <a class="dropdown-item" href="#">Link 1</a>
        <a class="dropdown-item" href="#">Link 2</a>
        <a class="dropdown-item" href="#">Link 3</a>
        </div>
```

Fixed Navigation Bar

The navigation bar can also be fixed at the top or at the bottom of the page.

A fixed navigation bar stays visible in a fixed position (top or bottom) independent of the page scroll.

The .fixed-top class makes the navigation bar fixed at the top:

Example

```
<nav class="navbar navbar-expand-sm bg-dark navbar-dark fixed-top">
...
</nav>
```

Use the .fixed-bottom class to make the navbar stay at the **bottom** of the page:

Example

```
<nav class="navbar navbar-expand-sm bg-dark navbar-dark fixed-bottom">
...
</nav>
```

Use the .sticky-top class to make the navbar fixed/stay at the **top** of the page when you scroll **past** it. **Note:** This class does not work in IE11 and earlier (will treat it as position:relative).

```
<nav class="navbar navbar-expand-sm bg-dark navbar-dark sticky-top">
...
</nav>
```

Bootstrap 4 Forms

Bootstrap 4's Default Settings

Form controls automatically receive some global styling with Bootstrap .All textual <input>, <textarea>, and <select> elements with class .form-control have a width of 100%.

Bootstrap 4 Form Layouts

Bootstrap provides two types of form layouts:

• Stacked (full-width) form

• Inline form

Bootstrap 4 Stacked Form

```
<form action="/action_page.php">
<div class="form-group">
<label for="email">Email address:</label>
<input type="email" class="form-control" id="email">
</div>
<div class="form-group">
<label for="pwd">Password:</label>
<input type="password" class="form-control" id="pwd">
</div>
<div class="form-group form-check">
<label class="form-check-label">
<input class="form-check-input" type="checkbox"> Remember me
</label>
</div>
<button type="submit" class="btn btn-primary">Submit</button>
```

```
</form>
```

Bootstrap Inline Form

```
<form class="form-inline" action="/action_page.php">
<label for="email">Email address:</label>
<input type="email" class="form-control" id="email">
<label for="pwd">Password:</label>
<input type="password" class="form-control" id="pwd">
<div class="form-check">
<label class="form-check-label">
<input class="form-check-label">
<input class="form-check-input" type="checkbox"> Remember me</il>

</div>
<button type="submit" class="btn btn-primary">Submit</button>
</form>
```

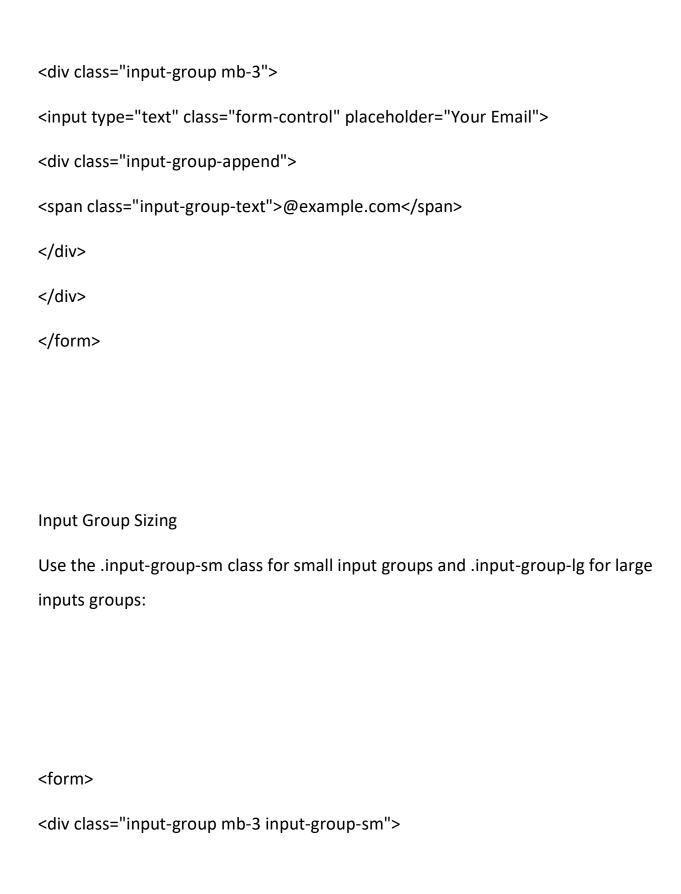
Bootstrap 4 Input Groups

The .input-group class is a container to enhance an input by adding an icon, text or a button in front or behind the input field as a "help text".

Use .input-group-prepend to add the help text in front of the input, and .input-group-append to add it behind the input.

At last, add the .input-group-text class to style the specified help text.

```
<form>
<div class="input-group mb-3">
<div class="input-group-prepend">
<span class="input-group-text">@</span>
</div>
<input type="text" class="form-control" placeholder="Username">
</div>
```



```
<div class="input-group-prepend">
<span class="input-group-text">Small</span>
</div>
<input type="text" class="form-control">
</div>
</form>
<form>
<div class="input-group mb-3">
<div class="input-group-prepend">
<span class="input-group-text">Default</span>
</div>
<input type="text" class="form-control">
</div>
</form>
<form>
<div class="input-group mb-3 input-group-lg">
<div class="input-group-prepend">
<span class="input-group-text">Large</span>
</div>
```

```
<input type="text" class="form-control">
</div>
</form>
Multiple Inputs and Helpers
Add multiple inputs or addons:
<!-- Multiple inputs -->
<form>
<div class="input-group mb-3">
<div class="input-group-prepend">
<span class="input-group-text">Person</span>
</div>
<input type="text" class="form-control" placeholder="First Name">
<input type="text" class="form-control" placeholder="Last Name">
</div>
</form>
```

```
Input Group Buttons
```

```
<div class="input-group mb-3">
<input type="text" class="form-control" placeholder="Search">
<div class="input-group-append">
<button class="btn btn-success" type="submit">Go</button>
</div>
</div>
```

Input Group with Dropdown Button

Add a dropdown button in the input group. Note that you don't need the .dropdown wrapper, as you normally would.

```
<div class="input-group mt-3 mb-3">
<div class="input-group-prepend">
<button type="button" class="btn btn-outline-secondary dropdown-toggle" data-toggle="dropdown">
```

Dropdown button

Input Group Labels

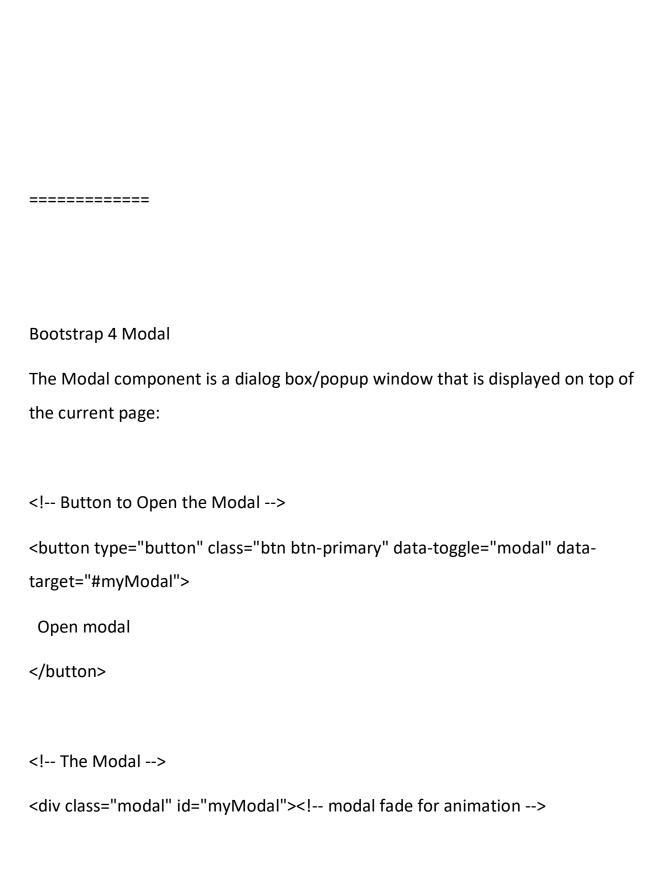
Put labels outside of the input group, and remember that the value of the for attribute should match the id of the input.

Click on the label and it will bring focus to the input:

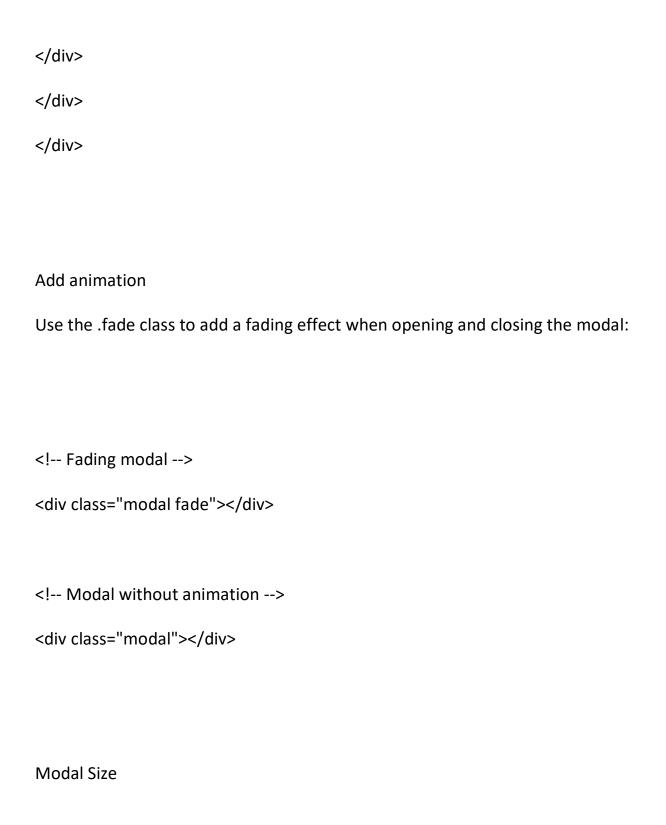
```
<label for="demo">Write your email here:</label>
<div class="input-group mb-3">
<input type="text" class="form-control" placeholder="Email" id="demo"</pre>
name="email">
<div class="input-group-append">
<span class="input-group-text">@example.com</span>
</div>
</div>
Bootstrap 4 Carousel
The Carousel is a slideshow for cycling through elements.
<div id="demo" class="carousel slide" data-ride="carousel">
<!-- Indicators -->
```

```
data-target="#demo" data-slide-to="1">
data-target="#demo" data-slide-to="2">
<!-- The slideshow -->
<div class="carousel-inner">
<div class="carousel-item active">
<img src="la.jpg" alt="Los Angeles">
</div>
<div class="carousel-item">
<img src="chicago.jpg" alt="Chicago">
</div>
<div class="carousel-item">
<img src="ny.jpg" alt="New York">
</div>
</div>
<!-- Left and right controls -->
<a class="carousel-control-prev" href="#demo" data-slide="prev">
```

```
<span class="carousel-control-prev-icon"></span>
</a>
<a class="carousel-control-next" href="#demo" data-slide="next">
<span class="carousel-control-next-icon"></span>
</a>
</div>
Add Captions to Slides
<div class="carousel-item">
<img src="la.jpg" alt="Los Angeles">
<div class="carousel-caption">
<h3>Los Angeles</h3>
We had such a great time in LA!
</div>
</div>
```



```
<div class="modal-dialog">
<div class="modal-content">
<!-- Modal Header -->
<div class="modal-header">
<h4 class="modal-title">Modal Heading</h4>
<button type="button" class="close" data-dismiss="modal">&times;</button>
</div>
<!-- Modal body -->
<div class="modal-body">
    Modal body..
</div>
<!-- Modal footer -->
<div class="modal-footer">
<button type="button" class="btn btn-danger" data-</pre>
dismiss="modal">Close</button>
</div>
```



Change the size of the modal by adding the .modal-sm class for small modals, .modal-lg class for large modals, or .modal-xl for extra large modals.
Add the size class to the <div> element with class .modal-dialog:</div>
Small Modal
<div class="modal-dialog modal-sm"></div>
Centered Modal
Center the modal vertically and horizontally within the page, with the .modal-
Center the modal vertically and horizontally within the page, with the .modal-dialog-centered class:
dialog-centered class:
dialog-centered class:
dialog-centered class:
dialog-centered class:

Bootstrap 4 Tooltip

The Tooltip component is small pop-up box that appears when the user moves the mouse pointer over an element:

```
<div class="container">
<h3>Tooltip Example</h3>
<a href="#" data-toggle="tooltip" title="Hooray!">Hover over me</a>
</div>
<script>
$(document).ready(function(){
$('[data-toggle="tooltip"]').tooltip();
});
</script>
```

Positioning Tooltips

By default, the tooltip will appear on top of the element.

Use the data-placement attribute to set the position of the tooltip on top, bottom, left or the right side of the element:

```
<div class="container">
<h3>Tooltip Example</h3>
The data-placement attribute specifies the tooltip position.
<a href="#" data-toggle="tooltip" data-placement="top" title="Hooray!">Top</a>
<a href="#" data-toggle="tooltip" data-placement="bottom"
title="Hooray!">Bottom</a>
<a href="#" data-toggle="tooltip" data-placement="left" title="Hooray!">Left</a>
<a href="#" data-toggle="tooltip" data-placement="right"
title="Hooray!">Right</a>
</div>
<script>
$(document).ready(function(){
 $('[data-toggle="tooltip"]').tooltip();
});
```

</script>

Bootstrap 4 Popover

The Popover component is similar to tooltips; it is a pop-up box that appears when the user clicks on an element. The difference is that the popover can contain much more content.

```
<!DOCTYPE html>
<html lang="en">
<head>
<title>Bootstrap Example</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css"
```

```
<script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.4.1/jquery.min.js"></script>
<script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.7/umd/popper.min.js"
></script>
<script
src="https://maxcdn.bootstrapcdn.com/bootstrap/4.3.1/js/bootstrap.min.js"></s
cript>
</head>
<body>
<div class="container">
<h3>Popover Example</h3>
By default, the popover will appear on the right side of the element.
Use the data-placement attribute to set the position of the popover on top,
bottom, left or the right side of the element.
Note: The placement attributes do not work if it is not enough room for them.
For example, try to remove these paragraphs and click on the "Top" popover to
understand how it works.
<a href="#" title="Header" data-toggle="popover" data-placement="top" data-
content="Content">Top</a>
```

```
<a href="#" title="Header" data-toggle="popover" data-placement="bottom"
data-content="Content">Bottom</a>
<a href="#" title="Header" data-toggle="popover" data-placement="left" data-
content="Content">Left</a>
<a href="#" title="Header" data-toggle="popover" data-placement="right" data-
content="Content">Right</a>
</div>
<script>
$(document).ready(function(){
 $('[data-toggle="popover"]').popover();
});
</script>
</body>
</html>
```

By default, the popover is closed when you click on the element again. However, you can use the data-trigger="focus" attribute which will close the popover when clicking outside the element:

```
<div class="container">
<h3>Popover Example</h3>
<a href="#" title="Dismissible popover" data-toggle="popover" data-trigger="focus" data-content="Click anywhere in the document to close this popover">Click me</a>
</div>
</cript>
$(document).ready(function(){
$('[data-toggle="popover"]').popover();
});
</script>
```

If you want the popover to be displayed when you move the mouse pointer over the element, use the data-trigger attribute with a value of "hover":

```
<div class="container">
<h3>Popover Example</h3>
<a href="#" title="Header" data-toggle="popover" data-content="Some
content">Click Me</a><br>
<a href="#" title="Header" data-toggle="popover" data-trigger="hover" data-
content="Some content">Hover over me</a>
</div>
<script>
$(document).ready(function(){
$('[data-toggle="popover"]').popover();
});
</script>
========
```

Bootstrap 4 Toast

The toast component is like an alert box that is only shown for a couple of seconds when something happens (i.e. when the user clicks on a button, submits a form, etc.).

```
<!DOCTYPE html>
<html lang="en">
<head>
<title>Bootstrap Example</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet"</pre>
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css"
>
<script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.4.1/jquery.min.js"></script>
<script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.7/umd/popper.min.js"
></script>
```

```
<script
src="https://maxcdn.bootstrapcdn.com/bootstrap/4.3.1/js/bootstrap.min.js"></s
cript>
</head>
<body>
<div class="container">
<h3>Toast Example</h3>
A toast is like an alert box that is only shown for a couple of seconds when
something happens (i.e. when a user clicks on a button, submits a form, etc.).
In this example, we use a button to show the toast message.
<button type="button" class="btn btn-primary" id="myBtn">Show
Toast</button>
<div class="toast">
<div class="toast-header">
   Toast Header
</div>
<div class="toast-body">
```

Some text inside the toast body

```
</div>
</div>
</div>
<script>
$(document).ready(function(){
 $("#myBtn").click(function(){
  $('.toast').toast('show');
});
});
</script>
</body>
</html>
```

Show and Hide a Toast

Toasts are hidden by default. Use the data-autohide="false" attribute to show it by default. To close it, use a <button> element and add data-dismiss="toast":

```
<!DOCTYPE html>
<html lang="en">
<head>
<title>Bootstrap Example</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet"</pre>
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css"
>
<script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.4.1/jquery.min.js"></script>
<script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.7/umd/popper.min.js"
></script>
<script
src="https://maxcdn.bootstrapcdn.com/bootstrap/4.3.1/js/bootstrap.min.js"></s
cript>
```

```
</head>
<body>
<div class="container">
<h3>Toast Example</h3>
In this example, we use data-autohide="false" to show the toast by default.
You can close it by clicking on the close (x) icon inside the toast header.
<div class="toast" data-autohide="false">
<div class="toast-header">
<strong class="mr-auto text-primary">Toast Header</strong>
<small class="text-muted">5 mins ago</small>
<button type="button" class="ml-2 mb-1 close" data-
dismiss="toast">×</button>
</div>
<div class="toast-body">
   Some text inside the toast body
</div>
</div>
</div>
```

```
<script>
$(document).ready(function(){
  $('.toast').toast('show');
});
</script>
</body>
</html>
```

Bootstrap 4 Scrollspy

========

Scrollspy is used to automatically update links in a navigation list based on scroll position.

```
<!DOCTYPE html>
<html lang="en">
<head>
<title>Bootstrap Example</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet"</pre>
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css"
>
<script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.4.1/jquery.min.js"></script>
<script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.7/umd/popper.min.js"
></script>
<script
src="https://maxcdn.bootstrapcdn.com/bootstrap/4.3.1/js/bootstrap.min.js"></s
cript>
<style>
 body {
   position: relative;
 }
```

```
</style>
</head>
<body data-spy="scroll" data-target=".navbar" data-offset="50">
<nav class="navbar navbar-expand-sm bg-dark navbar-dark fixed-top">
<a class="nav-link" href="#section1">Section 1</a>
class="nav-item">
<a class="nav-link" href="#section2">Section 2</a>
<a class="nav-link" href="#section3">Section 3</a>
<a class="nav-link dropdown-toggle" href="#" id="navbardrop" data-
toggle="dropdown">
   Section 4
```

```
</a>
<div class="dropdown-menu">
<a class="dropdown-item" href="#section41">Link 1</a>
<a class="dropdown-item" href="#section42">Link 2</a>
</div>
</nav>
<div id="section1" class="container-fluid bg-success" style="padding-
top:70px;padding-bottom:70px">
<h1>Section 1</h1>
Try to scroll this section and look at the navigation bar while scrolling! Try to
scroll this section and look at the navigation bar while scrolling!
Try to scroll this section and look at the navigation bar while scrolling! Try to
scroll this section and look at the navigation bar while scrolling!
</div>
<div id="section2" class="container-fluid bg-warning" style="padding-
top:70px;padding-bottom:70px">
<h1>Section 2</h1>
```

```
Try to scroll this section and look at the navigation bar while scrolling! Try to
scroll this section and look at the navigation bar while scrolling!
Try to scroll this section and look at the navigation bar while scrolling! Try to
scroll this section and look at the navigation bar while scrolling!
</div>
<div id="section3" class="container-fluid bg-secondary" style="padding-
top:70px;padding-bottom:70px">
<h1>Section 3</h1>
Try to scroll this section and look at the navigation bar while scrolling! Try to
scroll this section and look at the navigation bar while scrolling!
Try to scroll this section and look at the navigation bar while scrolling! Try to
scroll this section and look at the navigation bar while scrolling!
</div>
<div id="section41" class="container-fluid bg-danger" style="padding-
top:70px;padding-bottom:70px">
<h1>Section 4 Submenu 1</h1>
Try to scroll this section and look at the navigation bar while scrolling! Try to
scroll this section and look at the navigation bar while scrolling!
Try to scroll this section and look at the navigation bar while scrolling! Try to
scroll this section and look at the navigation bar while scrolling!
</div>
```

```
<div id="section42" class="container-fluid bg-info" style="padding-
top:70px;padding-bottom:70px">
<h1>Section 4 Submenu 2</h1>
Try to scroll this section and look at the navigation bar while scrolling! Try to
scroll this section and look at the navigation bar while scrolling!
Try to scroll this section and look at the navigation bar while scrolling! Try to
scroll this section and look at the navigation bar while scrolling!
</div>
</body>
</html>
=======
Vertical
<!DOCTYPE html>
<html lang="en">
<head>
<title>Bootstrap Example</title>
```

```
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet"</pre>
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css"
>
<script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.4.1/jquery.min.js"></script>
<script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.7/umd/popper.min.js"
></script>
<script
src="https://maxcdn.bootstrapcdn.com/bootstrap/4.3.1/js/bootstrap.min.js"></s
cript>
<style>
 body {
  position: relative;
 }
 ul.nav-pills {
  top: 20px;
  position: fixed;
 }
```

```
div.col-8 div {
 height: 500px;
}
</style>
</head>
<body data-spy="scroll" data-target="#myScrollspy" data-offset="1">
<div class="container-fluid">
<div class="row">
<nav class="col-sm-3 col-4" id="myScrollspy">
<a class="nav-link active" href="#section1">Section 1</a>
class="nav-item">
<a class="nav-link" href="#section2">Section 2</a>
class="nav-item">
<a class="nav-link" href="#section3">Section 3</a>
```

```
<a class="nav-link dropdown-toggle" data-toggle="dropdown" href="#">Section
4</a>
<div class="dropdown-menu">
<a class="dropdown-item" href="#section41">Link 1</a>
<a class="dropdown-item" href="#section42">Link 2</a>
</div>
</nav>
<div class="col-sm-9 col-8">
<div id="section1" class="bg-success">
<h1>Section 1</h1>
Try to scroll this section and look at the navigation list while scrolling!
</div>
<div id="section2" class="bg-warning">
<h1>Section 2</h1>
Try to scroll this section and look at the navigation list while scrolling!
```

```
</div>
<div id="section3" class="bg-secondary">
<h1>Section 3</h1>
Try to scroll this section and look at the navigation list while scrolling!
</div>
<div id="section41" class="bg-danger">
<h1>Section 4-1</h1>
Try to scroll this section and look at the navigation list while scrolling!
</div>
<div id="section42" class="bg-info">
<h1>Section 4-2</h1>
Try to scroll this section and look at the navigation list while scrolling!
</div>
</div>
</div>
</div>
</body>
</html>
```

Bootstrap 4 Utilities

Bootstrap 4 has a lot of utility/helper classes to quickly style elements without using any CSS code.

Borders

Use the border classes to add or remove borders from an element:

```
<span class="border"></span>
<span class="border border-0"></span>
<span class="border border-top-0"></span>
<span class="border border-right-0"></span>
<span class="border border-bottom-0"></span>
<span class="border border-left-0"></span>
```

Border Color

Add a color to the border with any of the contextual border color classes:

```
<span class="border border-primary"></span>
<span class="border border-secondary"></span>
<span class="border border-success"></span>
<span class="border border-danger"></span>
<span class="border border-warning"></span>
<span class="border border-info"></span>
<span class="border border-light"></span>
<span class="border border-light"></span>
<span class="border border-dark"></span>
<span class="border border-dark"></span></span class="border border-white"></span>
```

Border Radius

Add rounded corners to an element with the rounded classes:

```
<span class="rounded-lg"></span>
<span class="rounded-top"></span>
<span class="rounded-right"></span>
<span class="rounded-bottom"></span>
<span class="rounded-left"></span>
<span class="rounded-circle"></span>
<span class="rounded-circle"></span></span>
```

Float and Clearfix

Float an element to the right with the .float-right class or to the left with .float-left, and clear floats with the .clearfix class:

```
<div class="clearfix">
<span class="float-left">Float left</span>
<span class="float-right">Float right</span>
</div>
```

Bootstrap 4 Flex

To create a flexbox container and to transform direct children into flex items, use the d-flex class:

```
<div class="d-flex p-3 bg-secondary text-white">
<div class="p-2 bg-info">Flex item 1</div>
<div class="p-2 bg-warning">Flex item 2</div>
<div class="p-2 bg-primary">Flex item 3</div>
</div>
```

To create an inline flexbox container, use the d-inline-flex class:

<div class="d-inline-flex p-3 bg-secondary text-white">
<div class="p-2 bg-info">Flex item 1</div>

```
<div class="p-2 bg-warning">Flex item 2</div>
<div class="p-2 bg-primary">Flex item 3</div>
</div>
```

Horizontal Direction

Use .flex-row to display the flex items horizontally (side by side). This is default.

Tip: Use .flex-row-reverse to right-align the horizontal direction:

```
<div class="d-flex flex-row bg-secondary">
<div class="p-2 bg-info">Flex item 1</div>
<div class="p-2 bg-warning">Flex item 2</div>
<div class="p-2 bg-primary">Flex item 3</div>
</div>
```

<div class="d-flex flex-row-reverse bg-secondary">

```
<div class="p-2 bg-info">Flex item 1</div>
<div class="p-2 bg-warning">Flex item 2</div>
<div class="p-2 bg-primary">Flex item 3</div>
</div>
```

Vertical Direction

Use .flex-column to display the flex items vertically (on top of each other), or .flex-column-reverse to reverse the vertical direction:

```
<div class="d-flex flex-column">
<div class="p-2 bg-info">Flex item 1</div>
<div class="p-2 bg-warning">Flex item 2</div>
<div class="p-2 bg-primary">Flex item 3</div>
</div>
</div>
<div class="d-flex flex-column-reverse">
<div class="p-2 bg-info">Flex item 1</div>
<div class="p-2 bg-warning">Flex item 2</div></div</tr>
```

```
<div class="p-2 bg-primary">Flex item 3</div>
```

Justify Content

Use the .justify-content-* classes to change the alignment of flex items. Valid classes are start (default), end, center, between or around:

```
<div class="d-flex justify-content-start">...</div>
<div class="d-flex justify-content-end">...</div>
<div class="d-flex justify-content-center">...</div>
<div class="d-flex justify-content-between">...</div>
<div class="d-flex justify-content-around">...</div>
```

Fill / Equal Widths

Use .flex-fill on flex items to force them into equal widths:

<div class="d-flex">

```
<div class="p-2 bg-info flex-fill">Flex item 1</div>
<div class="p-2 bg-warning flex-fill">Flex item 2</div>
<div class="p-2 bg-primary flex-fill">Flex item 3</div>
</div>
```

Grow

Use .flex-grow-1 on a flex item to take up the rest of the space. In the example below, the first two flex items take up their necessary space, while the last item takes up the rest of the available space:

```
<div class="d-flex">
<div class="p-2 bg-info">Flex item 1</div>
<div class="p-2 bg-warning">Flex item 2</div>
<div class="p-2 bg-primary flex-grow-1">Flex item 3</div>
</div>
</div>
</div>
```

<div class="p-2 bg-info order-3">Flex item 1</div>

```
<div class="p-2 bg-warning order-2">Flex item 2</div>
<div class="p-2 bg-primary order-1">Flex item 3</div>
</div>
```

Auto Margins

Easily add auto margins to flex items with .mr-auto (push items to the right), or by using .ml-auto (push items to the left):

```
<div class="d-flex bg-secondary">
<div class="p-2 mr-auto bg-info">Flex item 1</div>
<div class="p-2 bg-warning">Flex item 2</div>
<div class="p-2 bg-primary">Flex item 3</div>
</div>
<div class="d-flex bg-secondary">
<div class="p-2 bg-info">Flex item 1</div></div>
```

```
<div class="p-2 bg-warning">Flex item 2</div>
<div class="p-2 ml-auto bg-primary">Flex item 3</div>
</div>
```

Align Content

Control the vertical alignment of gathered flex items with the .align-content-* classes. Valid classes are .align-content-start (default), .align-content-end, .align-content-center, .align-content-between, .align-content-around and .align-content-stretch.

```
<div class="container mt-3">
<h2>Align Content</h2>
Control the vertical alignment of gathered flex items with the .align-content-*
classes.
<ep><strong>Note:</strong> This example does not look good on a small devices.
Also note that these classes have no effect on single rows of flex items.
<align-content-start (default):</p>
<div class="d-flex flex-wrap align-content-start bg-light" style="height:300px">
<div class="p-2 border">Flex item 1</div>
```

```
<div class="p-2 border">Flex item 2</div>
<div class="p-2 border">Flex item 3</div>
<div class="p-2 border">Flex item 4</div>
</div>
<br>
.align-content-end:
<div class="d-flex flex-wrap align-content-end bg-light" style="height:300px">
<div class="p-2 border">Flex item 1</div>
<div class="p-2 border">Flex item 2</div>
<div class="p-2 border">Flex item 3</div>
<div class="p-2 border">Flex item 4</div>
</div>
<br>
.align-content-center:
<div class="d-flex flex-wrap align-content-center bg-light" style="height:300px">
<div class="p-2 border">Flex item 1</div>
<div class="p-2 border">Flex item 2</div>
```

```
<div class="p-2 border">Flex item 3</div>
<div class="p-2 border">Flex item 4</div>
<div class="p-2 border">Flex item 5</div>
</div>
<br>
.align-content-around:
<div class="d-flex flex-wrap align-content-around bg-light" style="height:300px">
<div class="p-2 border">Flex item 1</div>
<div class="p-2 border">Flex item 2</div>
<div class="p-2 border">Flex item 3</div>
<div class="p-2 border">Flex item 4</div>
</div>
<br>
</div>
```

========

Bootstrap 4 Media Objects

Bootstrap provides an easy way to align media objects (like images or videos) together with content. Media objects are often used to display blog comments, tweets and so on:

```
<div class="media border p-3">
<img src="img_avatar3.png" alt="John Doe" class="mr-3 mt-3 rounded-
circle"style="width:60px;">
<div class="media-body">
<h4>John Doe <small><i>Posted on February 19, 2016</i></small></h4>
Lorem ipsum...
</div>
</div>
</div>
```

To right-align the media image, add the image after the .media-body container:

<div class="media border p-3">
<div class="media-body">
<h4>John Doe <small><i>Posted on February 19, 2016</i></small></h4>
Lorem ipsum...
</div>
<img src="img_avatar3.png" alt="John Doe" class="ml-3 mt-3 rounded-

circle"style="width:60px;">

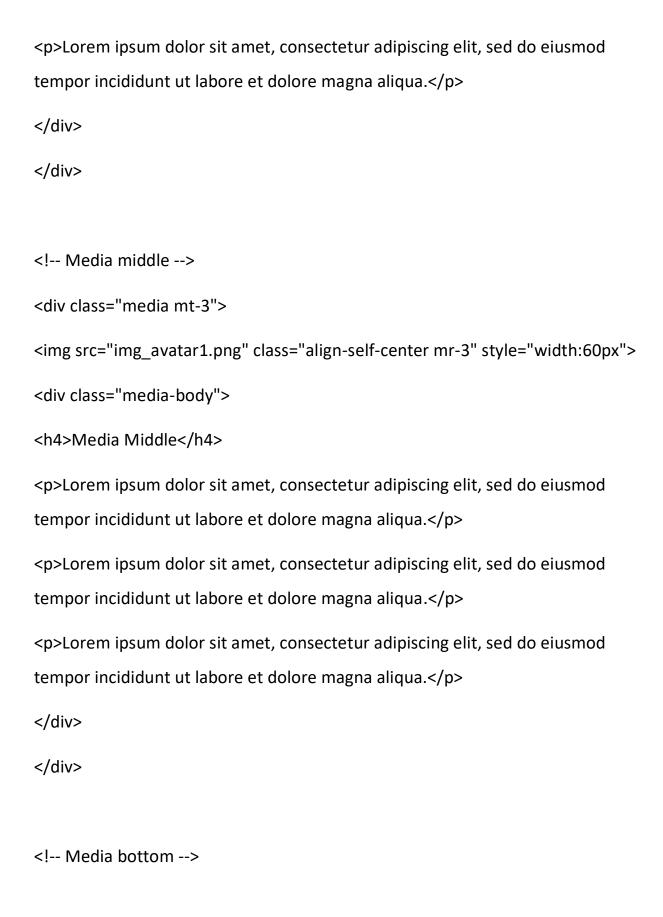
```
</div>
```

```
Top, Middle or Bottom Alignment
```

Use the flex utilities, align-self-* classes to place the media object on the top, middle or at the bottom:

```
<!DOCTYPE html>
<html lang="en">
<head>
<title>Bootstrap Example</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet"</pre>
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css"
>
<script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.4.1/jquery.min.js"></script>
<script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.7/umd/popper.min.js"
></script>
```

```
<script
src="https://maxcdn.bootstrapcdn.com/bootstrap/4.3.1/js/bootstrap.min.js"></s
cript>
</head>
<body>
<div class="container mt-3">
<h2>Media Object</h2>
Place the media object to the top, middle or at the bottom with the flex
utilities, align-self-* classes:<br>
<!-- Media top -->
<div class="media">
<img src="about 3.jpg" class="align-self-start mr-3" style="width:60px;border-
radius:50%">
<div class="media-body">
<h4>Media Top</h4>
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod
tempor incididunt ut labore et dolore magna aliqua.
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod
tempor incididunt ut labore et dolore magna aliqua.
```



```
<div class="media mt-3">
<img src="img_avatar1.png" class="align-self-end mr-3" style="width:60px">
<div class="media-body">
<h4>Media Bottom</h4>
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod
tempor incididunt ut labore et dolore magna aliqua.
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod
tempor incididunt ut labore et dolore magna aliqua.
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod
tempor incididunt ut labore et dolore magna aliqua.
</div>
</div>
</div>
</body>
</html>
```