

# Bootstrap 4.4.0

## CSS

---

```
<link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.4.0/css/bootstrap.min.css" integrity="sha384-SI27wrMjH3ZZ89r4o+fGIJtnzkAnFs3E4qz9DIYioCQ519Rd/7UAa8DHcaL8jkWt" crossorigin="anonymous">
```

## JS

---

JS is only necessary if you plan on using one or all of the following components: Alerts, Buttons, Carousel, Collapse, Dropdowns, Modals, Navbar, Tooltips and Scrollspy

```
<script src="https://code.jquery.com/jquery-3.4.1.slim.min.js" integrity="sha384-J6qa4849b1E2+poT4WnyKhv5vZF5SrPo0iEjwBvKU7imGFAV0wwj1yYfoRSJoZ+n" crossorigin="anonymous"></script>
```

```
<script src="https://cdn.jsdelivr.net/npm/popper.js@1.16.0/dist/umd/popper.min.js" integrity="sha384-Q6E9RHvbIyZFJoft+2mJbHaEWldlvI9IOYy5n3zV9zzTtmI3UksdQRVvoxMfooAo" crossorigin="anonymous"></script>
```

```
<script src="https://stackpath.bootstrapcdn.com/bootstrap/4.4.0/js/bootstrap.min.js" integrity="sha384-3qaqj01c6sV/qpzrc1N5DC6i1VRn/HyX4qdPaiEFbn54VjQBEU341pvjz7Dv3n6P" crossorigin="anonymous"></script>
```

## Components

---

Alerts  
Badge  
Breadcrumb  
Buttons  
Button group  
Card  
Carousel  
Collapse  
Dropdowns  
Forms  
Input group  
Jumbotron

List group  
Media Object  
Modal  
Navs  
Navbar  
Pagination  
Popovers  
Progress  
Scrollspy  
Spinners  
Toasts  
Tooltips

## Utilities

---

Borders  
Clearfix  
Close icon  
Colors  
Display  
Embed  
Flex  
Float  
Image replacement  
Position  
Screenreaders  
Shadows  
Sizing  
Spacing  
Text  
Vertical align  
Visibility

## Breakpoints

---

Extra small devices (portrait phones, less than 576px) do not require a breakpoint because Bootstrap 4 is mobile first.

**Breakpoints** | Max container width

not needed=Extra small < 576px | None (auto)

sm=Small ≥ 576px | 540px

md=Medium ≥ 768px | 720px

lg=Large ≥ 992px | 960px

xl=Extra large ≥ 1200px | 1140px

### Media Queries

Change the width value to set a media query for sm, md, lg, xl.

```
/* Small devices (landscape phones, 576px and up) */
```

```
@media (min-width: 576px) { }
```

## Lists

---

`.list-unstyled` Removes default list margin

`.dl-horizontal` Makes list items two columns

`.list-inline` Makes list items inline

`.list-inline-item` Added to each li

### Example

```
<ul class="social-icons list-inline">
<li class="list-inline-item">item 1</li>
</ul>
```

## Typography

---

`.text-left` Left aligned text

`.text-*-left` Left aligned by breakpoint

`.text-center` Center aligned text

`.text-right` Right aligned text

`.text-justify` Justified text

`.text-nowrap` No wrap text

`.text-(lowercase, uppercase, capitalize)` Changes the text capitalization style

`.text-decoration-none` Removes decoration

`.text-truncate` Truncate text with ellipsis

`.lead` Good for first paragraph of article

`.text-monospace` Changes to monospace font

`.font-weight-(bold, bolder, normal, light, lighter, italic)` Changes the font weight

`.blockquote` Slightly increases font-size and sets a bottom margin for blockquotes

`.(h1, h2, h3, h4, h5, h6)` Used to make an element match the heading styles

`.display-(1, 2, 3, 4)` Large display text. 1=96px, 2=88px, 3=72px, 4=56px

## Colors

---

`.text-primary`

`.bg-primary`

`.text-secondary`

`.bg-secondary`

`.text-success`

`.bg-success`

`.text-danger`

`.bg-danger`

`.text-warning`

`.bg-warning`

`.text-info`

`.bg-info`

`.text-light`

`.bg-light`

`.text-dark`

`.bg-dark`

`.text-body`

`.bg-white`

`.text-muted`

`.bg-transparent`

`.text-white`

`.text-black-50`

`.text-white-50`

## Bootstrap 4

### Images

---

`.img-fluid` Make an image responsive  
`.rounded` Adds rounded corners to image  
`.rounded-circle` Crops image to be circle  
`.img-thumbnail` Adds rounded corner and img border

### Floats

---

`.float-left` Floats item left  
`.float-right` Floats item right  
`.float-none` Removes float  
`.float-*-*` Add breakpoints if needed

### Borders

---

#### Add border

`.border` Add border to all sides  
`.border-*` (top, right, bottom, left) Add border on a certain edge

#### Remove Border

`.border-0` Remove border to all sides  
`.border-*-0` (top, right, bottom, left) Remove border on a certain edge

#### Border Radius

`.rounded` Adds border radius on all edges  
`.rounded-*` (top, right, bottom, left, circle) Adds a border radius  
`.rounded-0` Removes border radius

### Display

---

Value can equal one of the following:  
`none`, `inline`, `inline-block`, `block`, `table`, `table-cell`, `table-row`, `flex`, `inline-flex`

`.d-(value)` for xs  
`.d-(sm, md, lg, and xl)-(value)` sets display value for breakpoint and up

### Position

---

`.position-(static, relative, absolute, fixed, sticky)` Sets CSS position values but not responsive  
`.fixed-(top, bottom)` Position an element to the top of the viewport.  
`.sticky-top` Position an element at the top of the viewport, but only after you scroll past it. Not fully supported in IE.

### Shadows

---

`.shadow` The regular sized box drop shadow  
`.shadow-(none, sm, lg)` Remove box drop shadow or change its size.

### Sizing

---

Make an element as wide or as tall (relative to its parent)

`.w-(5%, 50%, 75%, 100%, auto)` Sets width  
`.h-(5%, 50%, 75%, 100%, auto)` Sets height  
`.mw-(5%, 50%, 75%, 100%, auto)` Sets max-width  
`.mh-(5%, 50%, 75%, 100%, auto)` Sets max-height

## Spacing

---

### Sides

**t**= top, **b**=bottom, **l**=left, **r**=right,  
**x**=x axis, **y**=y-axis

### Size

The values for each level of spacing are calculation of the base font size which is 16px or 1rem.

Here the pixel equivalents. **0**=0px, **1**=4px,  
**2**=2px, **3**=16px, **4**=24px, **5**=48px, **auto**

`.m(t, b, l, r, x, y)-(sm, md, lg, and xl)-(0, 1, 2, 3, 4, 5, auto)` Sets margin value, remove breakpoint for xs

`.p(t, b, l, r, x, y)-(sm, md, lg, and xl)-(0, 1, 2, 3, 4, 5, auto)` Sets padding value, remove breakpoint for xs

`.mx-auto` Used to horizontally center an element relative to parent container

### Negative Margin

Add the letter n in from of the margin size value to apply a negative margin.

For example: `.mt-n1` would apply a size 1 negative top margin.

## Vertical Align

---

`.align-(baseline, top, middle, bottom, text-top, text-bottom)` Changes the vertical alignment of inline, inline-block, inline-table, and table cell elements.

## Visibility

---

These classes do not modify the display property and do not affect layout.

`.visible` Takes up space and visible

`.invisible` Takes up space and invisible

## Overflow

---

Set how content overflows a parent element.

`.overflow-auto` Container will have a scroll if the content overflows

`.overflow-hidden` The container will not scroll and the content will be cut off.

## Screenreaders

---

`.sr-only` Only show on screen readers

`.sr-only-focusable` Show element when it has a focused state

## Bootstrap 4

# Starter Template

---

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <!-- Required meta tags -->
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-
fit=no">
    <!-- Bootstrap CSS -->
    <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.4.0/
css/bootstrap.min.css" integrity="sha384-SI27wrMjH3ZZ89r4o+fGIJtnzkAnFs3E4qz9DIYioCQ5L
9Rd/7UAa8DHcaL8jkWt" crossorigin="anonymous">
    <!-- Main CSS -->
    <link rel="stylesheet" href="css/main.css">
  </head>
  <body>
    <div class="container">
      <h1>Hello, world!</h1>
      <div class="row">
        <div class="col-sm-6">Left Column</div>
        <div class="col-sm-6">Right Column</div>
      </div>
    </div>
    <!-- jQuery first, then Popper, then Bootstrap JS. -->
    <script src="https://code.jquery.com/jquery-3.4.1.slim.min.js"
integrity="sha384-J6qa4849b1E2+poT4WnyKhv5vZF5SrPo0iEjwBvKU7imGFAV0wwj1yYfoRSJoZ+n"
crossorigin="anonymous"></script>
    <script src="https://cdn.jsdelivr.net/npm/popper.js@1.16.0/dist/umd/popper.min.js"
integrity="sha384-Q6E9RHvbIyZFJoft+2mJbHaEwldlvI9I0Yy5n3zV9zzTtmI3UksdQRVvoxMfooAo"
crossorigin="anonymous"></script>
    <script src="https://stackpath.bootstrapcdn.com/bootstrap/4.4.0/js/bootstrap.min.js"
integrity="sha384-3qaqj0lc6sV/qpzrc1N5DC6i1VRn/HyX4qdPaiEFbn54VjQBEU341pvjz7Dv3n6P"
crossorigin="anonymous"></script>
    <!-- Main JS -->
    <script src="js/main.js"></script>
  </body>
</html>
```

## One Column Centered Grid

---

```
<div class="container">
  <div class="row justify-content-center">
    <div class="col-md-6"></div>
  </div>
</div>
```

## Two Column Grid

---

```
<div class="container">
  <div class="row">
    <div class="col-sm-6"></div>
    <div class="col-sm-6"></div>
  </div>
</div>
```

## Three Column Grid

---

```
<div class="container">
  <div class="row">
    <div class="col-sm-4"></div>
    <div class="col-sm-4"></div>
    <div class="col-sm-4"></div>
  </div>
</div>
```

## Responsive Container & Row

---

```
<div class="container-md">
  <div class="row row-cols-1 row-cols-md-3">
    <div class="col"></div>
    <div class="col"></div>
    <div class="col"></div>
  </div>
</div>
```

## Figures

---

```
<figure class="figure">
  
  <figcaption class="figure-caption">A
  caption for the above image.</figcaption>
</figure>
```

## Media Object

---

```
<div class="media">
  
  <div class="media-body">
    <h5 class="mt-0">Media heading</h5>
    Media object description text
  </div>
</div>
```

## Code

---

**<code>**  
Used to display inline code in a paragraph

**<pre class="pre-scrollable">**  
Display multiple lines of code. Use **.pre-scrollable** class to set a max-height of 340px and provide a y-axis scrollbar

**<var>**  
Used to display math variables

**<kbd>**  
Used to display keyboard input

**<samp>**  
Used to display sample output

## Bootstrap 4

# Navbar

---

```
<nav class="navbar navbar-toggableable-md navbar-dark bg-primary">
  <button class="navbar-toggler navbar-toggler-right" type="button" data-
toggle="collapse" data-target="#navbarNavDropdown" aria-controls="navbarNavDropdown"
aria-expanded="false" aria-label="Toggle navigation">
  <span class="navbar-toggler-icon"></span>
</button>
<a class="navbar-brand" href="#">Navbar</a>
<div class="collapse navbar-collapse" id="navbarNavDropdown">
  <ul class="navbar-nav">
    <li class="nav-item active">
      <a class="nav-link" href="#">Home <span class="sr-only">(current)</span></a>
    </li>
    <li class="nav-item">
      <a class="nav-link" href="#">Features</a>
    </li>
    <li class="nav-item">
      <a class="nav-link" href="#">Pricing</a>
    </li>
    <li class="nav-item dropdown">
      <a class="nav-link dropdown-toggle" href="http://example.com"
id="navbarDropdownMenuLink" data-toggle="dropdown" aria-haspopup="true" aria-
expanded="false">
        Dropdown link
      </a>
      <div class="dropdown-menu" aria-labelledby="navbarDropdownMenuLink">
        <a class="dropdown-item" href="#">Action</a>
        <a class="dropdown-item" href="#">Another action</a>
        <a class="dropdown-item" href="#">Something else here</a>
      </div>
    </li>
  </ul>
</div>
</nav>
```

# Modal

---

```
<!-- Button trigger modal -->
<button type="button" class="btn btn-primary" data-toggle="modal" data-
target="#myModal">
  Launch demo modal
</button>

<!-- Modal -->
<div class="modal fade" id="myModal" tabindex="-1" role="dialog" aria-
labelledby="exampleModalLabel" aria-hidden="true">
  <div class="modal-dialog" role="document">
    <div class="modal-content">
      <div class="modal-header">
        <h5 class="modal-title" id="exampleModalLabel">Modal title</h5>
        <button type="button" class="close" data-dismiss="modal" aria-label="Close">
          <span aria-hidden="true">&times;</span>
        </button>
      </div>
      <div class="modal-body">
        <h2>Modal body heading</h2>
        <p>Modal body text description</p>
      </div>
      <div class="modal-footer">
        <button type="button" class="btn btn-secondary" data-dismiss="modal">Close</
button>
        <button type="button" class="btn btn-primary">Save changes</button>
      </div>
    </div>
  </div>
</div>
</div>
</div>
```



## Bootstrap 4

# Forms

---

```
<form>
  <div class="form-group">
    <label for="exampleInputEmail1">Email address</label>
    <input type="email" class="form-control" id="exampleInputEmail1" aria-
describedby="emailHelp" placeholder="Enter email">
    <small id="emailHelp" class="form-text text-muted">We'll never share your email
with anyone else.</small>
  </div>
  <div class="form-group">
    <label for="exampleInputPassword1">Password</label>
    <input type="password" class="form-control" id="exampleInputPassword1"
placeholder="Password">
  </div>
  <div class="checkbox">
    <label>
      <input type="checkbox"> Check me out
    </label>
  </div>
  <button type="submit" class="btn btn-primary">Submit</button>
</form>
```

# Buttons

---

`.btn` Needs to be added to all buttons because it adds padding and margin

`.btn-*` primary, secondary, success, danger, warning, info, light, dark, link

`.btn-outline-*` primary, secondary, success, danger, warning, info, light, dark, link

`.btn-lg` Large button

`.btn-sm` Smaller than default button

### Example

```
<a class="btn btn-primary" href="#" role="button">Link</a>
<button class="btn btn-secondary" type="submit">Button</button>
```

## Carousel

---

```

<div id="carousel-name" class="carousel slide" data-ride="carousel">
  <ol class="carousel-indicators">
    <li data-target="#carousel-name" data-slide-to="0" class="active"></li>
    <li data-target="#carousel-name" data-slide-to="1"></li>
    <li data-target="#carousel-name" data-slide-to="2"></li>
  </ol>
  <div class="carousel-inner" role="listbox">
    <div class="carousel-item active">
      
      <div class="carousel-caption d-none d-md-block">
        <h3>Carousel Slider Title</h3>
        <p>Description text to further describe the content of the slide image</p>
        <a href="" class="btn btn-primary">Call to Action</a>
      </div>
    </div>
    <div class="carousel-item">
      
      <div class="carousel-caption d-none d-md-block">
        <a href="" class="btn btn-primary">Call to Action</a>
      </div>
    </div>
  </div>
  <a class="carousel-control-prev" href="#carousel-name" role="button" data-slide="prev">
    <span class="carousel-control-prev-icon" aria-hidden="true"></span>
    <span class="sr-only">Previous</span>
  </a>
  <a class="carousel-control-next" href="#carousel-name" role="button" data-slide="next">
    <span class="carousel-control-next-icon" aria-hidden="true"></span>
    <span class="sr-only">Next</span>
  </a>
</div>

```

## Bootstrap 4

### Jumbotron

---

```
<div class="jumbotron jumbotron-fluid">
  <div class="container">
    <h1 class="display-3">Fluid jumbotron</h1>
    <p class="lead">This is a modified jumbotron that occupies the entire horizontal
space of its parent.</p>
  </div>
</div>
```

### Card

---

```
<div class="card" style="width: 20rem;">
  
  <div class="card-body">
    <h4 class="card-title">Card title</h4>
    <p class="card-text">Some quick example text to build on the card title and make up
the bulk of the card's content.</p>
    <a href="#" class="btn btn-primary">Go somewhere</a>
  </div>
</div>
```

### Breadcrumbs

---

```
<ol class="breadcrumb">
  <li><a href="#">Home</a></li>
  <li><a href="#">Library</a></li>
  <li class="active">Data</li>
</ol>
```

### Responsive embed

---

```
<div class="embed-responsive embed-responsive-16by9">
  <iframe class="embed-responsive-item" src="..."></iframe>
</div>
```

## Tabs

---

```
<ul class="nav nav-tabs" id="myTab">
  <li class="nav-item">
    <a class="nav-link active" data-toggle="tab" href="#tabOne">Tab 1</a>
  </li>
  <li class="nav-item">
    <a class="nav-link" data-toggle="tab" href="#tabTwo">Tab 2</a>
  </li>
</ul>
<div class="tab-content pt-3" id="myTabContent">
  <div class="tab-pane fade active show" id="tabOne">Tab One Content</div>
  <div class="tab-pane fade" id="tabTwo">Tab Two Content</div>
</div>
```

## Alerts

---

```
<div class="alert alert-warning alert-dismissible fade show" role="alert">
  <strong>Note</strong> This alert is dismissable.
  <button type="button" class="close" data-dismiss="alert" aria-label="Close">
    <span aria-hidden="true">&times;</span>
  </button>
</div>
```

## Collapse

---

```
<a class="btn btn-primary mb-3 collapsed" data-toggle="collapse"
href="#collapseContent" role="button" aria-expanded="false" aria-
controls="collapseContent"><span class="if-collapsed"><b>+</b> Show Content</span>
  <span class="if-not-collapsed"><b>-</b> Hide Content</span></a>
<div class="collapse" id="collapseContent">
  <div class="card card-body">Collapse Content</div>
</div>
<style> /* this custom CSS is used to toggle the button text */
[data-toggle="collapse"].collapsed .if-not-collapsed,
[data-toggle="collapse"]:not(.collapsed) .if-collapsed {display: none;}
</style>
```

## Bootstrap 4

### Tables

---

```
<table class="table">
  <thead class="thead-dark">
    <tr>
      <th>#</th>
      <th>thead-dark</th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <th scope="row">1</th>
      <td>Nina</td>
    </tr>
  </tbody>
</table>
```

### Dropdowns

---

```
<div class="dropdown">
  <button class="btn btn-secondary dropdown-toggle" type="button" id="dropdown" data-
toggle="dropdown" aria-haspopup="true"
aria-expanded="false">Dropdown Actions</button>
  <div class="dropdown-menu" aria-labelledby="dropdown">
    <a class="dropdown-item" href="#">Action One</a>
    <a class="dropdown-item" href="#">Action Two</a>
    <a class="dropdown-item" href="#">Action Three</a>
  </div>
</div>
```

# Component CSS Format and Media Queries

---

```
/*
 * Component section heading
 *
 * Component description and use
 */

/* base - shared styles */
.component { width: 220px; }

/* Sub-component with component name as a prefix to isolate styles and
break the cascade. */

.component-heading {
  display: block;
  width: 100px;
  font-size: 1rem;
}

/* variant - alert color */
.component-alert {
  color: #ff0000;
}

/* variant - success color */
.component-success {
  color: #00ff00;
}

/* Add media queries below components instead of a separate stylesheet
or section to make updating easier */

@media (min-width: 480px) {
  .component-heading { width:auto; }
}
```

# Learn Bootstrap 4 and Responsive Design Basics.. Fast!



Learn More  
BootstrapQuickStart.com

## Alphabetical Index of CSS Classes

---

.active  
 .accordion  
 .alert  
 .alert-(primary, secondary, success, danger, warning, info, light, dark)  
 .alert-dismissible  
 .alert-heading  
 .alert-link  
 .align-(baseline, top, middle, bottom, text-top, text-bottom)  
 .align-content-(sm, md, lg, xl)-(around, between, center, end, start, stretch)  
 .align-items-(sm, md, lg, xl)-(baseline, center, end, start, stretch)  
 .align-self-(sm, md, lg, xl)-(auto, baseline, center, end, start, stretch)  
 .arrow  
 .badge  
 .badge-(primary, secondary, success, danger, warning, info, light, dark)  
 .badge-pill  
 .bg-(primary, secondary, success, danger, warning, info, light, dark, transparent, white)  
 .blockquote  
 .blockquote-footer  
 .border-(light, dark primary, secondary, transparent, white, warning, success, info, danger, 0, top-0, right-0, bottom-0, left-0)  
 .border-(bottom, left, right, top)  
 .breadcrumb  
 .breadcrumb-item  
 .bs-popover-(auto, bottom, left, right, top)  
 .bs-tooltip-(auto, bottom, left, right, top)  
 .btn  
 .btn-block  
 .btn-group  
 .btn-group-(sm, lg)  
 .btn-group-toggle  
 .btn-group-vertical  
 .btn-(sm, lg)  
 .btn-link  
 .btn-outline-(primary, secondary, success, danger, warning, info, light, dark)  
 .btn-(primary, secondary, success, danger, warning, info, light, dark)  
 .btn-toolbar  
 .card  
 .card-body  
 .card-columns  
 .card-deck  
 .card-footer  
 .card-group  
 .card-header  
 .card-header-pills  
 .card-header-tabs  
 .card-img  
 .card-img-bottom  
 .card-img-overlay  
 .card-img-top  
 .card-link  
 .card-subtitle  
 .card-text  
 .card-title  
 .carousel



## Bootstrap 4

.carousel-caption  
.carousel-control-(next, prev)  
.carousel-control-(next, prev)-icon  
.carousel-fade  
.carousel-indicators  
.carousel-inner  
.carousel-item  
.carousel-item-(left, right)  
.carousel-item-(next, prev)  
.clearfix  
.close  
.col  
.col-(sm, md, lg, xl)-(1-12)  
.col-auto  
.col-form-label  
.col-form-label-(sm, lg)  
.collapse  
.collapsing  
.container  
.container-fluid  
.container-(sm, md, lg, xl)  
.custom-checkbox  
.custom-control  
.custom-control-inline  
.custom-control-input  
.custom-control-label  
.custom-file  
.custom-file-control  
.custom-file-input  
.custom-file-label  
.custom-radio  
.custom-range  
.custom-select  
.custom-select-(sm, lg)  
.custom-switch  
.d-(sm, md, lg, xl)-(none, inline, inline-block, block, table, table-cell, table-row, flex, inline-flex)  
.d-print-(block, inline, inline-block, none, flex, inline-flex, table, table-cell, print-table-row)  
.disabled  
.display-(1, 2, 3, 4)  
.dropdown  
.dropdown-divider  
.dropdown-header  
.dropdown-item  
.dropdown-item-text  
.dropdown-menu  
.dropdown-menu-right  
.dropdown-menu-(sm, md, lg, xl)-(right, left)  
.dropdown-toggle  
.dropdown-toggle-split  
.dropleft  
.dropright  
.dropup  
.embed-responsive  
.embed-responsive-(16by9, 1by1, 21by9, 4by3)  
.embed-responsive-item  
.fade  
.figure  
.figure-caption  
.figure-img  
.fixed-bottom  
.fixed-top  
.flex-(sm, md, lg, xl)-(row, row-reverse, column)  
.flex-(sm, md, lg, xl)-(nowrap, wrap, wrap-reverse)  
.flex-column

.flex-column-reverse  
.flex-fill  
.flex-grow-\*  
.flex-shrink-\*  
.float-(sm, md, lg, xl)-(none, left, right)  
.focus  
.font-italic  
.font-weight-(bold, bolder, light, lighter, normal)  
.form-check  
.form-check-inline  
.form-check-input  
.form-check-label  
.form-control  
.form-control-file  
.form-control-(sm, lg)  
.form-control-plaintext  
.form-control-range  
.form-group  
.form-inline  
.form-row  
.form-text  
.h-(100, 75, 50, 25, auto)  
(h1-h6)  
.hide  
.img-fluid  
.img-thumbnail  
.initialism  
.input-group  
.input-group-append  
.input-group-(sm, lg)  
.input-group-prepend  
.input-group-text  
.invalid-feedback  
.invalid-tooltip  
.invisible  
.is-invalid  
.is-valid  
.jumbotron  
.jumbotron-fluid  
.justify-content-(sm, md, lg, xl)-(start, end, center, between, around)  
.lead  
.list-group  
.list-group-flush  
.list-group-horizontal-(sm, md, lg, xl)  
.list-group-item  
.list-group-item-action  
.list-group-item-(primary, secondary, success, danger, warning, info, light, dark)  
.list-(inline, inline-item, unstyled)  
.m(t,b,r,l,x,y)-(sm, md, lg, xl)-(0, 1, 2, 3, 4, 5, n1, n2, n3, n4, n5)  
.mark  
.media  
.media-body  
.mh-100  
.modal  
.modal-backdrop  
.modal-body  
.modal-content  
.modal-dialog  
.modal-dialog-(centered, scrollable)  
.modal-footer  
.modal-header  
.modal-(sm, lg)  
.modal-open  
.modal-scrollbar-measure  
.modal-title

## Bootstrap 4

.nav  
.nav-fill  
.nav-item  
.nav-justified  
.nav-link  
.nav-pills  
.nav-tabs  
.navbar  
.navbar-brand  
.navbar-collapse  
.navbar-(dark, light)  
.navbar-expand-(sm, md, lg, xl)  
.navbar-nav  
.navbar-text  
.navbar-toggler  
.navbar-toggler-icon  
.no-gutters  
.offset-(sm, md, lg, xl)-(1-12)  
.order-(sm, md, lg, xl)-first  
.order-(sm, md, lg, xl)-last  
.order-(sm, md, lg, xl)-(0-12)  
.p(t,b,r,l,x,y)-(sm, md, lg, xl)-(0, 1, 2, 3, 4, 5, n1, n2, n3, n4, n5)  
.overflow-(auto, hidden)  
.page-item  
.page-link  
.pagination  
.pagination-(sm, lg)  
.popover  
.popover-body  
.popover-header  
.position-(absolute, fixed, relative, static, sticky)  
.pre-scrollable  
.progress  
.progress-bar  
.progress-bar-animated  
.progress-bar-striped  
.rounded  
.rounded-(top, right, bottom, left, circle, pill, 0, lg, sm)  
.rounded-circle  
.row  
.row-cols-(sm, md, lg, xl)-(1, 2, 3, 4, 5, 6)  
.shadow-(none, sm, lg)  
.show  
.showing  
.small  
.spinner-(border, border-sm, grow, grow-sm)  
.sr-only  
.sr-only-focusable  
.stretched-link  
.tab-content  
.tab-pane  
.table  
.table-active  
.table-bordered  
.table-borderless  
.table-hover  
.table-(primary, secondary, success, danger, warning, info, light, dark)  
.table-responsive-(sm, md, lg, xl)  
.table-sm  
.table-striped  
.text-(primary, secondary, success, danger, warning, info, light, dark, muted, white, decoration-none, reset)  
.text-hide  
.text-justify

.text-(sm, md, lg, xl)-(center, left, right)  
.text-(lowercase, uppercase, capitalize, black-50, body, monospace, white-50, break)  
.text-(wrap, nowrap)  
.text-truncate  
.text-warning  
.thead-dark  
.thead-light  
.toast  
.toast-(body, header)  
.tooltip  
.tooltip-inner  
.valid-feedback  
.valid-tooltip  
.vh-100  
.vw-100  
.visible  
.w-(100, 75, 50, 25)  
.was-validated  
.w-auto

## Convert Pixels to REMS

| <b>Pixels</b>                 | <b>REMS</b> | <b>Pixels</b> | <b>REMS</b> |
|-------------------------------|-------------|---------------|-------------|
| 1 px                          | 0.0625      | 26 px         | 1.625       |
| 2 px                          | 0.125       | 27 px         | 1.6875      |
| 3 px                          | 0.1875      | 28 px         | 1.75        |
| 4 px                          | 0.25        | 29 px         | 1.8125      |
| 5 px                          | 0.3125      | 30 px         | 1.875       |
| 6 px                          | 0.375       | 31 px         | 1.9375      |
| 7 px                          | 0.4375      | 32 px         | 2           |
| 8 px                          | 0.5         | 33 px         | 2.0625      |
| 9 px                          | 0.5625      | 34 px         | 2.125       |
| 10 px                         | 0.625       | 35 px         | 2.1875      |
| 11 px                         | 0.6875      | 36 px         | 2.25        |
| 12 px                         | 0.75        | 37 px         | 2.3125      |
| 13 px                         | 0.8125      | 38 px         | 2.375       |
| 14 px                         | 0.875       | 39 px         | 2.4375      |
| 15 px                         | 0.9375      | 40 px         | 2.5         |
| Default Bootstrap 4 font size | 1           | 41 px         | 2.5625      |
| 16 px                         |             | 42 px         | 2.625       |
| 17 px                         | 1.0625      | 43 px         | 2.6875      |
| 18 px                         | 1.125       | 44 px         | 2.75        |
| 19 px                         | 1.1875      | 45 px         | 2.8125      |
| 20 px                         | 1.25        | 46 px         | 2.875       |
| 21 px                         | 1.3125      | 47 px         | 2.9375      |
| 22 px                         | 1.375       | 48 px         | 3           |
| 23 px                         | 1.4375      | 49 px         | 3.0625      |
| 24 px                         | 1.5         | 50 px         | 3.125       |
| 25 px                         | 1.5625      |               |             |

## Multiples of Common Units of Measure

| Multiples of 15 |     | Multiples of 30 |      |
|-----------------|-----|-----------------|------|
| 15              | 405 | 30              | 810  |
| 30              | 420 | 60              | 840  |
| 45              | 435 | 90              | 870  |
| 60              | 450 | 120             | 900  |
| 75              | 465 | 150             | 930  |
| 90              | 480 | 180             | 960  |
| 105             | 495 | 210             | 990  |
| 120             | 510 | 240             | 1020 |
| 135             | 525 | 270             | 1050 |
| 150             | 540 | 300             | 1080 |
| 165             | 555 | 330             | 1110 |
| 180             | 570 | 360             | 1140 |
| 195             | 585 | 390             | 1170 |
| 210             | 600 | 420             | 1200 |
| 225             | 615 | 450             | 1230 |
| 240             | 630 | 480             | 1260 |
| 255             | 645 | 510             | 1290 |
| 270             | 660 | 540             | 1320 |
| 285             | 675 | 570             | 1350 |
| 300             | 690 | 600             | 1380 |
| 315             | 705 | 630             | 1410 |
| 330             | 720 | 660             | 1440 |
| 345             | 735 | 690             | 1470 |
| 360             | 750 | 720             | 1500 |
| 375             | 765 | 750             | 1530 |
| 390             | 780 | 780             | 1560 |

# Default Text Sizes

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Bootstrap's font sizes are calculated off of the body font size by using rem values. If you change the body font size all styles will be increased/decreased automatically. Rem stands for "root em" because it calculates the size based on the size of the root of the document or body tag.

| Tag / Class | Default Font size  |
|-------------|--|
| body        | 16px; line-height: 1.5;<br>font-family: "Helvetica Neue", Helvetica, Arial,<br>sans-serif; |
| p, li       | 1rem / 16px  |
| h1          | 2.5rem / 40px  |
| h1 small    | 80% / 32px   |
| h2          | 2rem / 32px  |
| h2 small    | 80% / 25.6px   |
| h3          | 1.75rem / 28px   |
| h3 small    | 80% / 22.4px   |
| h4          | 1.5rem / 24px  |
| h4 small    | 80% / 24px   |
| h5          | 1.25rem / 20px   |
| h5 small    | 80% / 16px   |
| h6          | 1rem / 16px  |
| h6 small    | 80% / 12.8px   |
| .display-1  | 6rem / 90px  |
| .display-2  | 5.5rem / 82.5px  |
| .display-3  | 4.5rem / 67.5px  |
| .display-4  | 3.5rem / 52.5px  |

# CSS Code Best Practices

- Try and list properties in this order: 1. Positioning, 2. Box model (display, float, width, etc), 3. Typography (font, line-height), 4. Visuals (background, border, opacity), 5. Misc (CSS3 properties)
- Any rule set with multiple declarations should be split to separate lines because syntax errors on Line numbers would be hard to find.
- Use soft-tabs set to two spaces, set encoding to UTF-8
- When using multiple CSS files, break them down by component instead of page.
- Keep media queries as close to their relevant rule sets whenever possible. Don't bundle them all in a separate stylesheet or at the end of the document.
- Do not use @import because it slows down page load.
- Place closing braces of declaration blocks on a new line.
- End all declarations with a semi-colon to prevent errors.
- Lowercase all hex values. For example, #fff instead of #FFF.
- Avoid specifying units for zero values. For example, margin: 0; instead of margin: 0px;

Inspired by Code Guide by Mark Otto: <http://codeguide.co/>



## Additional Reference

# Design Inspiration

- **Bootstrap Expo**  
<https://expo.getbootstrap.com/>
- **Built With Bootstrap**  
<http://builtwithbootstrap.com/>
- **Wrap Bootstrap**  
<https://wrapbootstrap.com/>
- **Official Bootstrap Themes**  
<https://themes.getbootstrap.com/>
- **AWWWARDS**  
<https://www.awwwards.com/websites/responsive-design/>
- **Media Queries**  
<https://mediaqueri.es/>
- **Pattern Tap**  
<http://zurb.com/patterntap>
- **CodePen Pattern Library**  
<http://codepen.io/patterns/>
- **Building Blocks**  
<http://foundation.zurb.com/building-blocks/>

# HTML Reference

- **Mozilla HTML Reference**  
<https://developer.mozilla.org/en-US/docs/Web/HTML>
- **HTMLReference.io**  
<https://htmlreference.io/>

# CSS Reference

- **Mozilla CSS Reference**  
<https://developer.mozilla.org/en-US/docs/Web/CSS/Reference>
- **CSS-Tricks Almanac**  
<https://css-tricks.com/almanac/>
- **Can I Use?**  
<https://caniuse.com/>
- **CSSreference.io**  
<https://cssreference.io/>

# JavaScript Reference

- **Mozilla JavaScript Reference**  
<https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference>
- **jQuery Documentation**  
<https://api.jquery.com/>

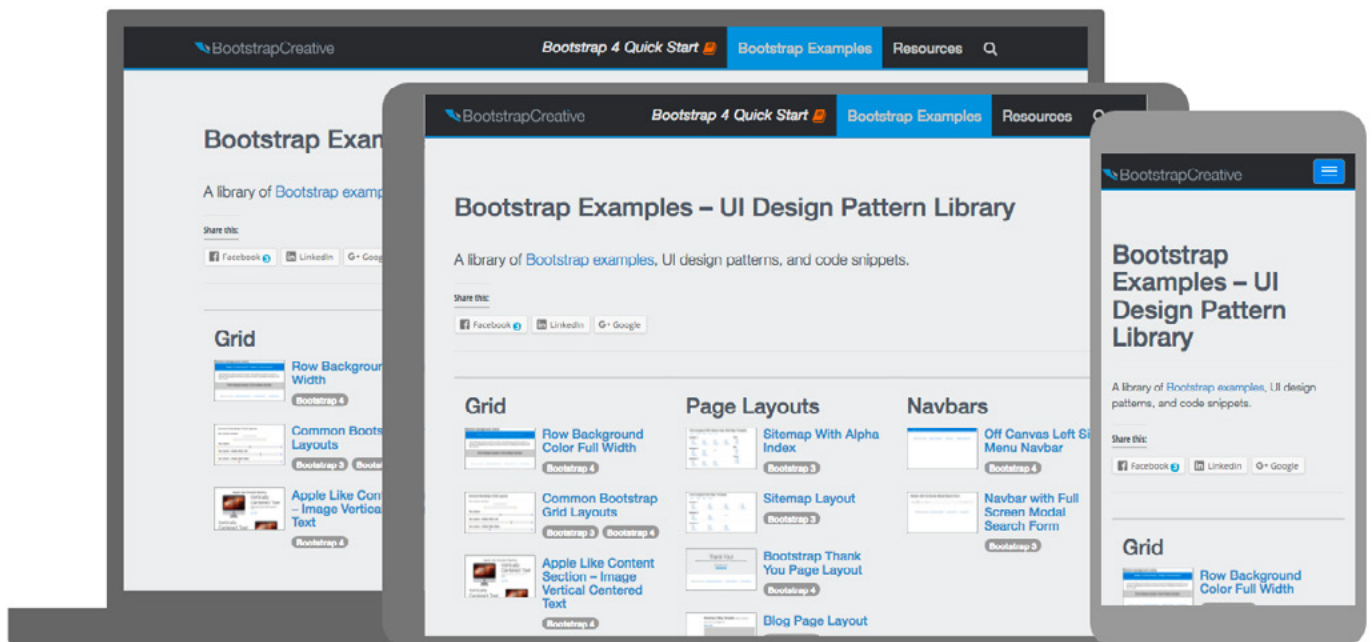
# Bootstrap Reference

- **Bootstrap 4 Classes Reference**  
<https://bootstrapcreative.com/resources/bootstrap-4-css-classes-index/>
- **Bootstrap 3 Classes Reference**  
<https://bootstrapcreative.com/resources/bootstrap-3-css-classes-index/>
- **Official Bootstrap Documentation**  
<http://getbootstrap.com/>
- **Bootsnip - Bootstrap Code Snippets**  
<https://bootsnipp.com/>

# Bootstrap Code Snippets and Examples Library

A collection of code snippets to help you quickly customize components. Includes the necessary HTML, CSS, and JS you need to implement in your project.

<https://bootstrapcreative.com/pattern/>



# Thank you!

I hope you have found this Bootstrap reference guide helpful and informative.

Let's make a responsive web together!

A handwritten signature in blue ink, appearing to read 'Jack', written in a cursive style.

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