



Bootstrap 4

BOOTSTRAP

VERSION 4

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BOOTSTRAP

- ❖ 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 4 is completely free to download and use!



WHAT IS BOOTSTRAP?

- ❖ **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.
- ❖ **Bootstrap 3 vs. Bootstrap 4**
 - Bootstrap 4 is the newest version of Bootstrap; with new components, faster stylesheet and more responsiveness.
 - Bootstrap 4 supports the latest, stable releases of all major browsers and platforms. However, Internet Explorer 9 and down is not supported.



WHY USE BOOTSTRAP?

- ❖ **Easy to use:** Anybody with just basic knowledge of HTML and CSS can start using Bootstrap
- ❖ **Responsive features:** Bootstrap's responsive CSS adjusts to phones, tablets, and desktops
- ❖ **Mobile-first approach:** In Bootstrap, mobile-first styles are part of the core framework
- ❖ **Browser compatibility:** Bootstrap 4 is compatible with all modern browsers (Chrome, Firefox, Internet Explorer 10+, Edge, Safari, and Opera)



WHERE TO GET BOOTSTRAP 4?

- ❖ There are two ways to start using Bootstrap 4 on your own web site.
- ❖ You can:
 - Include Bootstrap 4 from a **CDN**
 - Download Bootstrap 4 from getbootstrap.com

MaxCDN:

```
<!-- Latest compiled and minified CSS -->
<link 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"></script>
```



BOOTSTRAP 4 IS MOBILE-FIRST!

- ❖ Bootstrap 4 is designed to be responsive to mobile devices. Mobile-first styles are part of the core framework.

```
<meta name="viewport" content="width=device-width, initial-scale=1">
```

❖ Containers

- Bootstrap 4 also requires a containing element to wrap site contents.
- 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.

.container

.container-fluid



BOOTSTRAP 4 GRIDS

- ❖ Bootstrap's grid system is built with flexbox and allows up to 12 columns across the page.
- ❖ If you do not want to use all 12 columns individually, you can group the columns together to create wider columns:

span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1
span 4				span 4				span 4			
span 4				span 8							
span 6						span 6					
span 12											



GRID CLASSES

❖ The Bootstrap 4 grid system has five classes:

- **.col-** (extra small devices - screen width less than 576px)
- **.col-sm-** (small devices - screen width equal to or greater than 576px)
- **.col-md-** (medium devices - screen width equal to or greater than 768px)
- **.col-lg-** (large devices - screen width equal to or greater than 992px)
- **.col-xl-** (xlarge devices - screen width equal to or greater than 1200px)

```
<!-- Control the column width, and how they should appear on different devices -->
<div class="row">
  <div class="col-*-*"></div>
  <div class="col-*-*"></div>
</div>
<div class="row">
  <div class="col-*-*"></div>
  <div class="col-*-*"></div>
  <div class="col-*-*"></div>
</div>

<!-- Or let Bootstrap automatically handle the layout -->
<div class="row">
  <div class="col"></div>
  <div class="col"></div>
  <div class="col"></div>
</div>
```



BOOTSTRAP 4 TEXT/TYPOGRAPHY

❖ Bootstrap 4 Default Settings

- 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 `<p>` elements have margin-top: 0 and margin-bottom: 1rem (16px by default).

More Typography Classes

The Bootstrap 4 classes below can be added to style HTML elements further:

Class	Description
<code>.font-weight-bold</code>	Bold text
<code>.font-weight-bolder</code>	Bolder text
<code>.font-italic</code>	Italic text
<code>.font-weight-light</code>	Light weight text
<code>.font-weight-lighter</code>	Lighter weight text
<code>.font-weight-normal</code>	Normal text
<code>.lead</code>	Makes a paragraph stand out
<code>.small</code>	Indicates smaller text (set to 80% of the size of the parent)
<code>.text-left</code>	Indicates left-aligned text



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`.

❖ 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`.

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.



BOOTSTRAP 4 TABLES

- ❖ A basic Bootstrap 4 table has a light padding and horizontal dividers.
 - The **.table** class adds basic styling to a table.

Firstname	Lastname	Email
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:

Firstname	Lastname	Email
John	Doe	john@example.com
Mary	Moe	mary@example.com
July	Dooley	july@example.com



BOOTSTRAP 4 IMAGES

Rounded Corners:



Circle:



Thumbnail:



- ❖ ``
- ❖ ``
- ❖ ``



BOOTSTRAP 4 ALERTS

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

Success! This alert box indicates a successful or positive action.



Info! This alert box indicates a neutral informative change or action.



Warning! This alert box indicates a warning that might need attention.



Danger! This alert box indicates a dangerous or potentially negative action.



Primary! This alert box indicates an important action.



Secondary! This alert box indicates a less important action.



Dark! Dark grey alert box.



BOOTSTRAP 4 BUTTONS

Bootstrap 4 provides different styles of buttons:

Basic Primary Secondary Success Info Warning Danger Dark Light [Link](#)

❖ Button Sizes

- `.btn-lg` , `.btn-sm`

Large

Default

Small

❖ 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

❖ Spinner Buttons

- Add class `.spinner-border`



Loading..



Loading..



Loading..



BOOTSTRAP OTHER COMPONENTS

- ❖ **Button Groups**
- ❖ **Badges**
- ❖ **Progress Bars**
- ❖ **Spinners**
- ❖ **Pagination**
- ❖ **Cards**
- ❖ **Dropdowns**
- ❖ **Collapse**
- ❖ **Navs**
- ❖ **Navigation Bar**
- ❖ **Forms**
- ❖ **Inputs**

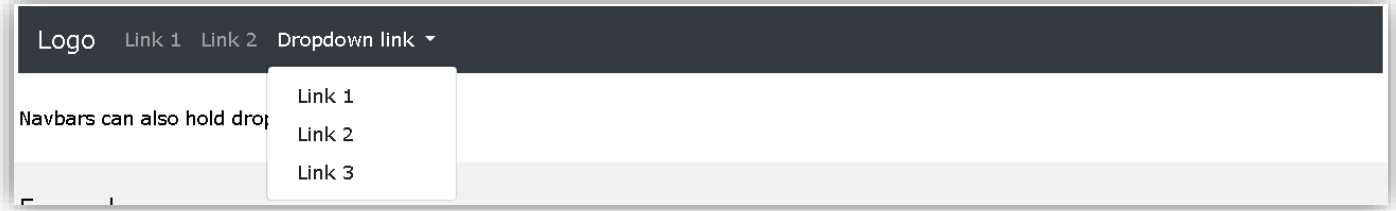


NAVBAR WITH DROPDOWN

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

  <!-- Links -->
  <ul class="navbar-nav">
    <li class="nav-item">
      <a class="nav-link" href="#">Link 1</a>
    </li>
    <li class="nav-item">
      <a class="nav-link" href="#">Link 2</a>
    </li>

    <!-- Dropdown -->
    <li 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>
    </li>
  </ul>
</nav>
```



BOOTSTRAP 4 FORMS

❖ Bootstrap provides two types of form layouts:

- Stacked (full-width) form
- Inline form

❖ Form Validation

- HTML5 Controls required, pattern,...

❖ Bootstrap supports the following form controls:

- input,textarea,checkbox,radio,select

❖ Inputs Group

- 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".

```
<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>
```

A visual representation of the Bootstrap 4 input group. It consists of a light gray rounded rectangle containing an '@' symbol on the left and a text input field with the placeholder text 'Username' on the right.

BOOTSTRAP 4 CAROUSEL

```
<div id="demo" class="carousel slide" data-ride="carousel">

  <!-- Indicators -->
  <ul class="carousel-indicators">
    <li data-target="#demo" data-slide-to="0" class="active"></li>
    <li data-target="#demo" data-slide-to="1"></li>
    <li data-target="#demo" data-slide-to="2"></li>
  </ul>

  <!-- The slideshow -->
  <div class="carousel-inner">
    <div class="carousel-item active">
      
    </div>
    <div class="carousel-item">
      
    </div>
    <div class="carousel-item">
      
    </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>
```



BOOTSTRAP 4 MODAL

```
<!-- Button to Open the Modal -->
<button type="button" class="btn btn-primary" data-toggle="modal" data-target="#myModal">
  Open modal
</button>

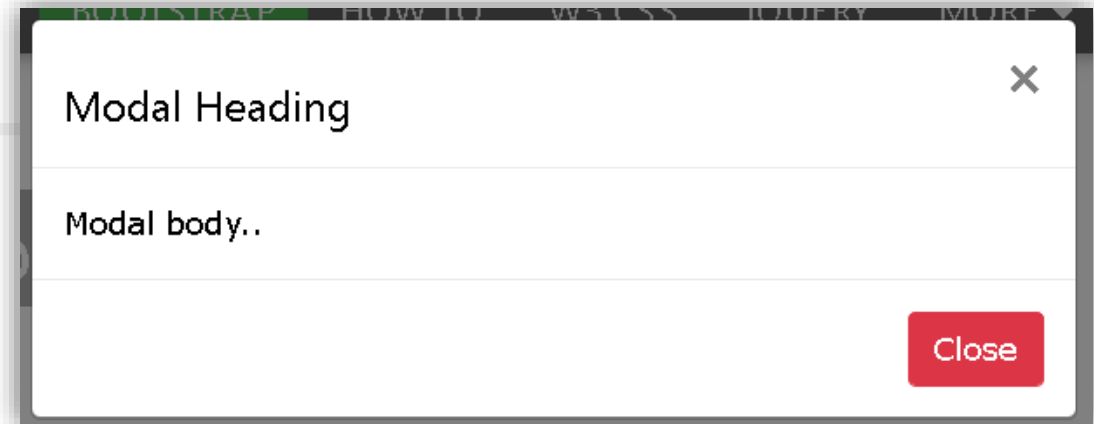
<!-- The Modal -->
<div class="modal" id="myModal">
  <div class="modal-dialog">
    <div class="modal-content">

      <!-- 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-dismiss="modal">Close</button>
      </div>

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



BOOTSTRAP TOOLTIP & 4 POPOVER

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

```
<a href="#" data-toggle="tooltip" title="Hooray!">Hover over me</a>
```

```
<script>
$(document).ready(function(){
  $('[data-toggle="tooltip"]').tooltip();
});
</script>
```



BOOTSTRAP 4 ICONS

- ❖ Bootstrap 4 **does not** have its own icon library ([Glyphicons from Bootstrap 3](#) are not supported in BS4).
- ❖ However, there are many free icon libraries to choose from, such as Font Awesome and Google Material Design Icons.

```
<link rel="stylesheet" href="https://use.fontawesome.com/releases/v5.7.0/css/all.css" integrity="sha384-lZN37f5QGtY3VHgisS14W3ExzMWZxybE1SJSEsQp9S+oqd12jhcu+A56Ebc1zFSJ" crossorigin="anonymous">
```

Example

```
<i class="fas fa-cloud"></i>  
<i class="fas fa-coffee"></i>  
<i class="fas fa-car"></i>  
<i class="fas fa-file"></i>  
<i class="fas fa-bars"></i>
```



REFERENCES

❖ <https://getbootstrap.com/>

❖ <http://w3schools.com/>