

Bootstrap

[Download Demo Code](#)

Goals

- Learn benefits of Bootstrap & how to include it
- Learn Bootstrap layout/grid system
- Meet some of the more important components
- Learn to integrate Font Awesome into sites

Benefits

- Make tricky column layouts easy
- Provides consistent results across browsers
- Make responsive design much easier
- Includes useful interactive components
 - Modals, dropdowns, popovers, etc
- "Declarative" look and feel
 - Easier to theme
 - Familiar for writing custom CSS

Responsive Groups

- xs**
- Cell phones in portrait mode
- sm**
- Cell phones in landscape / small tablets
- md**
- Tablets
- lg**
- Most desktop users
- xl**
- Very-wide desktop windows

Semantic Colors

	Name	Purpose	Default
	<i>primary</i>	Brand color	blue
	<i>secondary</i>	Neutral brand-appropriate color	grey
	<i>success</i>	Operation successful	green
	<i>danger</i>	Dangerous operation / error	red
	<i>warning</i>	Risky operation	orange
	<i>info</i>	FYI message	light blue

Used for table cells, text, buttons, & more

Using Bootstrap

Include their CSS:

<link rel="stylesheet" href="https://cdn.jsdelivr.net/npm/bootstrap@4.5.3/dist/css/bootstrap.min.css" integrity="sha384-1X8t2EcRE3e/1hU/zmQxVncDAy5ulKz4rEkgIXeMed4M0jifIDPvg6uqKI2xIR2" crossorigin="anonymous">

To use interactive components, include JS:

```
<script src="https://unpkg.com/jquery"></script>
<script src="https://unpkg.com/popper"></script>
<script src="https://cdn.jsdelivr.net/npm/bootstrap@4.5.3/dist/js/bootstrap.bundle.min.js"></script>
```

Layout

All content should descend from a *container* element:

- .container-fluid**
- Full-browser-width container (with small amount of breathing room).
- .container**
- Full-browser-width but at specific breakpoints. Makes UI testing easier: far fewer possible layouts to test.

Content that doesn't need to be in columns can go directly in this.

Grids

- 12 Column Layout
- Cells can span any number of columns
- After all columns are used, will become new row
- To use: all columns must be in a **.row**

```
<div class="container">
  <div class="row">
    <div class="col-4">A</div>
    <div class="col-4">B</div>
    <div class="col-4">C</div>
    <div class="col-4">D</div>
    <div class="col-4">E</div>
    <div class="col-4">F</div>
  </div>
</div>
```

two rows of 3 columns

Responsive Grid

- Can specify a breakpoint: that size and above use this
- Specification without breakpoint is for **xs**

different # columns

```
<div class="container">
  <div class="row">
    <div class="col-6 col-md-4">A</div>
    <div class="col-6 col-md-4">B</div>
    <div class="col-6 col-md-4">C</div>
    <div class="col-6 col-md-4">D</div>
    <div class="col-6 col-md-4">E</div>
    <div class="col-6 col-md-4">F</div>
  </div>
</div>
```

(2 columns on cell phones; 3 columns for larger devices)

Auto-Columns

- Can leave off numbers & divide by available size
- Useful when you don't know how many items there will be

auto-columns

```
<div class="container">
  <div class="row">
    <div class="col">A</div>
    <div class="col">B</div>
  </div>

  <div class="row">
    <div class="col">C</div>
    <div class="col">D</div>
    <div class="col">E</div>
  </div>
</div>
```

Learning More

[Grid Docs](#)

Images

- .img-fluid**
- Make image responsive; won't be wider than parent

Learn more: [Images Docs](#)

Tables

- .table**
- Get nice standard table look (use this plus other classes)
- .table-hover**
- Hover-effect over a row
- .table-sm**
- Tighten up margin around cells
- .table-striped**
- Stripe alternative rows

Learn more: [Table Docs](#)

Alerts

Useful for providing feedback/warnings:

- .alert**
- (use this plus other classes)
- .alert-[semantic-color]**
- Use color scheme for this level of message.

Learn more: [Alerts](#)

Buttons

- .btn**
- (Use this plus other classes)
- .btn-[semantic-color]**
- Use color scheme for this level of message
- .btn-link**
- Make button look like a <a> link
- .btn-lg / .btn-sm**
- Make larger or smaller button

Can use on <a> links to look like buttons—very useful!

Learn more: [Button Docs](#)

UI Components

- Breadcrumbs
- Forms
- Lists
- Media cards
- Pagination sets
- and more!

Learn more: [Components](#)

JavaScript Components

Need to add JS for jQuery, Popper, and Bootstrap

- Carousels
- Collapse
- Dropdown
- Modals
- Popovers
- Tooltips
- and more!

Learn more: [Components](#)

Bootstrap Wrap-Up

Does Everyone Use Bootstrap?

No

But almost everyone uses *some* CSS framework

Other popular frameworks:

- [Zurb Foundation](#)
- [Materialize](#)

Theming Bootstrap

- Can write your own CSS to change things
- Can make your own Bootstrap with SASS (*advanced*)
- Can find thousands of Bootstrap themes
- Can easily use [Bootswatch](#)

Font Awesome

- [Awesome set](#) of icons for common symbols & brands
- Comes as a font, so it scales & can be in any color
- Convenient classes for resizing, animating, stacking, and more!

Include this:

```
<link rel="stylesheet"
href="https://use.fontawesome.com/releases/v5.3.1/css/all.css">
```

Use icons by name on a *i* or *span* tag

```
<!-- fab/fas/far for brand/solid/regular -->
<i class="fab fa-apple"></i> <!-- Apple icon -->
<i class="fas fa-star"></i> <!-- solid star -->
<i class="far fa-star"></i> <!-- regular (outline) of star -->

<!-- can add xs/sm/lg/2x/3x/4x/5x/6x/7x/8x/9x/10x to resize -->
<i class="fab fa-apple 3x"></i> <!-- 3x normal size Apple -->

<!-- can animate -->
<i class="fas fa-spinner fa-spin"></i>

<!-- can stack one over another -->
<span class="fa-stack fa-2x">
  <i class="fas fa-square fa-stack-2x"></i>
  <i class="fab fa-amazon fa-stack-1x fa-inverse"></i>
</span>
```

[Font Awesome Docs](#)

Does Everyone Use Font Awesome?

Pretty much.

There are few competing projects, but none nearly as awesome.