

Bootstrap

[Download Demo Code <../bootstrap-demo.zip>](#)

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
primary	Brand color	blue
secondary	Neutral brand-appropriate color	grey
success	Operation successful	green
danger	Dangerous operation / error	red
warning	Risky operation	orange
info	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"
<https://cdn.jsdelivr.net/npm/bootstrap@4.5.3/dist/css/bootstrap.min.css>" integrity="sha384-
TX8t27EcRE3e/ihU7zmQxVncDAy5uIKz4rEkglXeMed4M0jlfIDPvg6uqKI2xXr2" 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 <<https://getbootstrap.com/docs/4.0/layout/grid/>>

Images

.img-fluid

Make image responsive; won't be wider than parent

Learn more: [Images Docs <https://getbootstrap.com/docs/4.0/content/images/>](https://getbootstrap.com/docs/4.0/content/images/)

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 <https://getbootstrap.com/docs/4.5/content/tables/>](https://getbootstrap.com/docs/4.5/content/tables/)

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 <https://getbootstrap.com/docs/4.5/components/alerts/>](https://getbootstrap.com/docs/4.5/components/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 <https://getbootstrap.com/docs/4.5/components/buttons/>](https://getbootstrap.com/docs/4.5/components/buttons/)

UI Components

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

Learn more: [Components <https://getbootstrap.com/docs/4.5/components/>](https://getbootstrap.com/docs/4.5/components/)

JavaScript Components

Need to add JS for jQuery, Popper, and Bootstrap

- Carousels
- Collapse

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

Learn more: [Components <https://getbootstrap.com/docs/4.0/components>](https://getbootstrap.com/docs/4.0/components)

Bootstrap Wrap-Up

Does Everyone Use Bootstrap?

No

But almost everyone uses *some* CSS framework

Other popular frameworks:

- [Zurb Foundation <https://foundation.zurb.com/>](https://foundation.zurb.com/)
- [Materialize <https://materializecss.com/>](https://materializecss.com/)

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 <https://bootswatch.com/>](https://bootswatch.com/)

Font Awesome

- [Awesome set <https://fontawesome.com/cheatsheet>](https://fontawesome.com/cheatsheet) 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 <<https://fontawesome.com/how-to-use/on-the-web/setup/>>

Does Everyone Use Font Awesome?

Pretty much.

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