Front-End Web Development

Bootstrap

GENERAL ASSEMBLY

Today's Learning Objectives

In this lesson, you will:

- Use the Bootstrap CSS library to leverage pre-styled components.
- Adapt Bootstrap components for specific use cases.
- Evaluate CSS frameworks against self-written CSS.

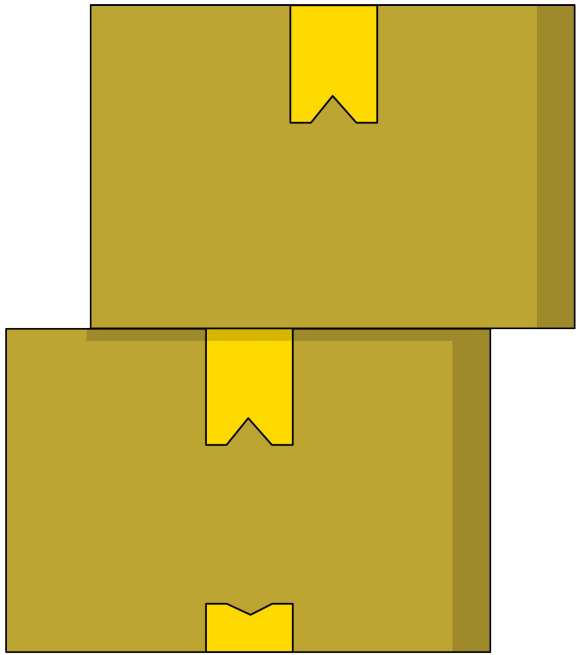
Front-End Web Development

CSS Frameworks

Frameworks

Frameworks are sets of pre-made HTML/CSS/JS components packaged together.

Think of a framework as a bunch of plugins made by the same team that so they work nicely together out of the box.



Should I Use a CSS Framework Like Bootstrap?

Benefits

- Gives you lots of code.
- Grid-based design out of the box.
- Easy integration of JS components.
- Familiar, standard design feel.

Drawbacks

- Gives you lots of code.
- Bloats your site with features you likely won't use.
- Design monotony.

Framework != Instant Boost

"Oh man, I'm getting all this code for free, so I don't have to spend as much time learning how to do things."

— Dangerous Developer Thoughts, Volume XVII

Frameworks will **slow you down** until you learn how to use them.

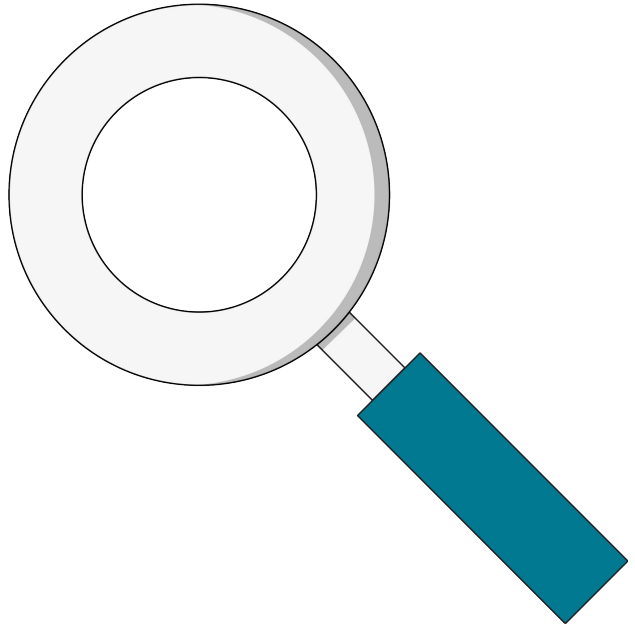
When you choose to use a framework, you're embracing patterns created by other developers. It takes time to learn these patterns.

Common Frameworks

Bootstrap: http://getbootstrap.com/

Foundation: http://foundation.zurb.com/

Material Design Lite: https://getmdl.io/



Front-End Web Development

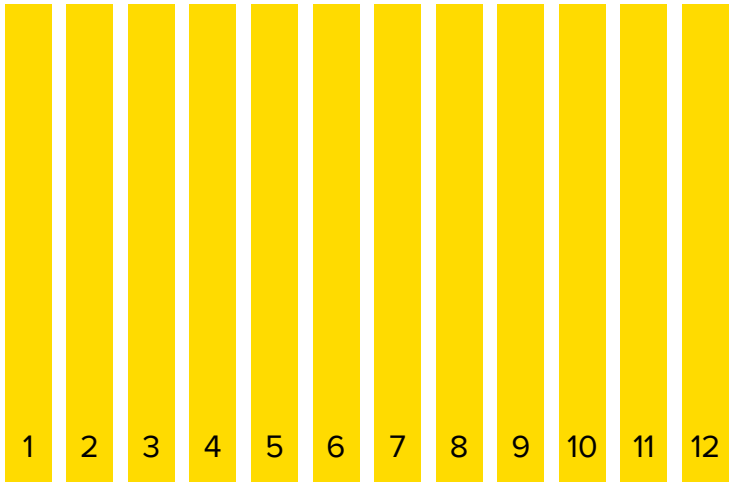
Using Bootstrap

Bootstrap

- The most popular framework.
  - Standard-feeling style
- Responsive grid system.
  - Easy, built-in breakpoints
- Plug-and-play components.
  - Navbars, modals, carousels...

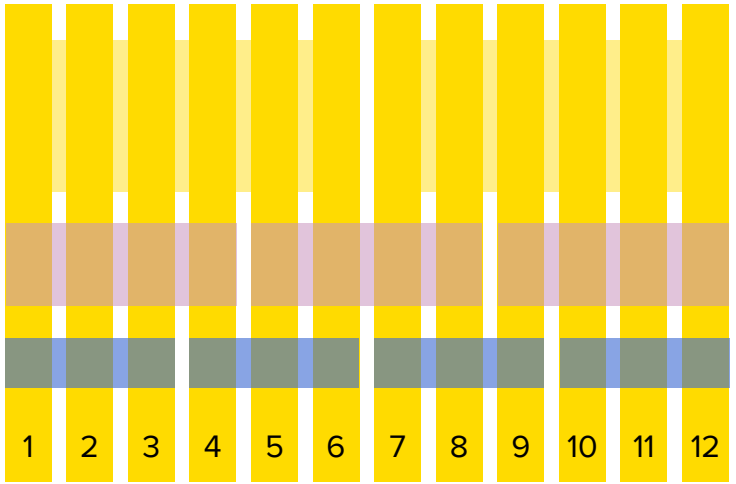
Grid-Based Design

- Bootstrap sets up a series of 12 columns that automatically respond to screen size.



Bootstrap Grid

- You can create boxes that clip into the grid and take up 1–12 columns.



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Bootstrap Grid

All content should be placed within grid columns. Build column classes using the following formula:

`col-{screen-size}-{width}`

Examples of Bootstrap column classes:

`<div class="col-md-6">`	A **`div`** for medium-sized screens that is 6 columns wide.
`<div class="col-xs-2">`	A **`div`** for extra-small screens that is 2 columns wide.

Bootstrap Rules of the Grid

- Columns must be placed into an element with the **`row`** class to create horizontal groups.
- The total column widths in a row must add up to 12.
    - If you don't define specific numbers, Bootstrap will divide the columns equally.
- **`row`** must be placed within a parent with the class of:
    - **`.container`** (fixed-width), or;
    - **`.container-fluid`** (full-width) for proper alignment.

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Bootstrap Grid

The grid structure is very similar to what we've done:

`<div class="container">`	Top-level element; holds all other code.
`<div class="row">`	• Horizontal row used to hold **`col`** elements. • Must be the child of a **`container`**.
`<div class="col">`	• Used to hold content (text/images/etc.). • Must be the immediate child of a **`row`**.

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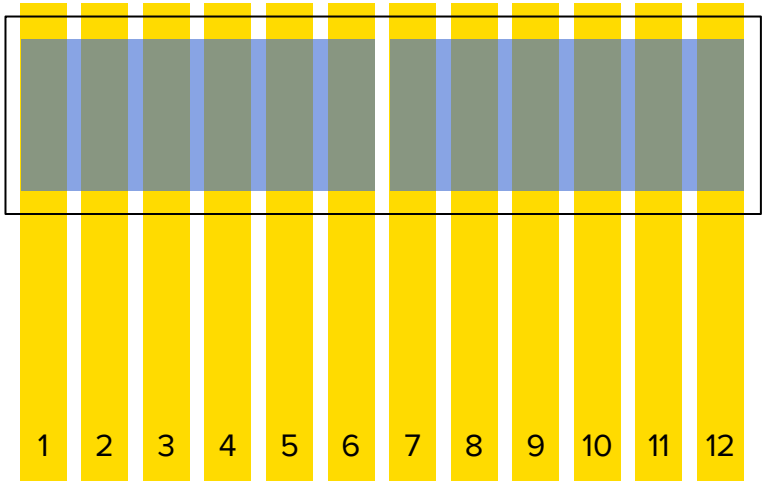
All Together

This is how you Bootstrap:

```
<div class="container">
  <div class="row">
    <div class="col">
      Your content here.
    </div>
    <div class="col">
      Your content here.
    </div>
  </div>
</div>
```



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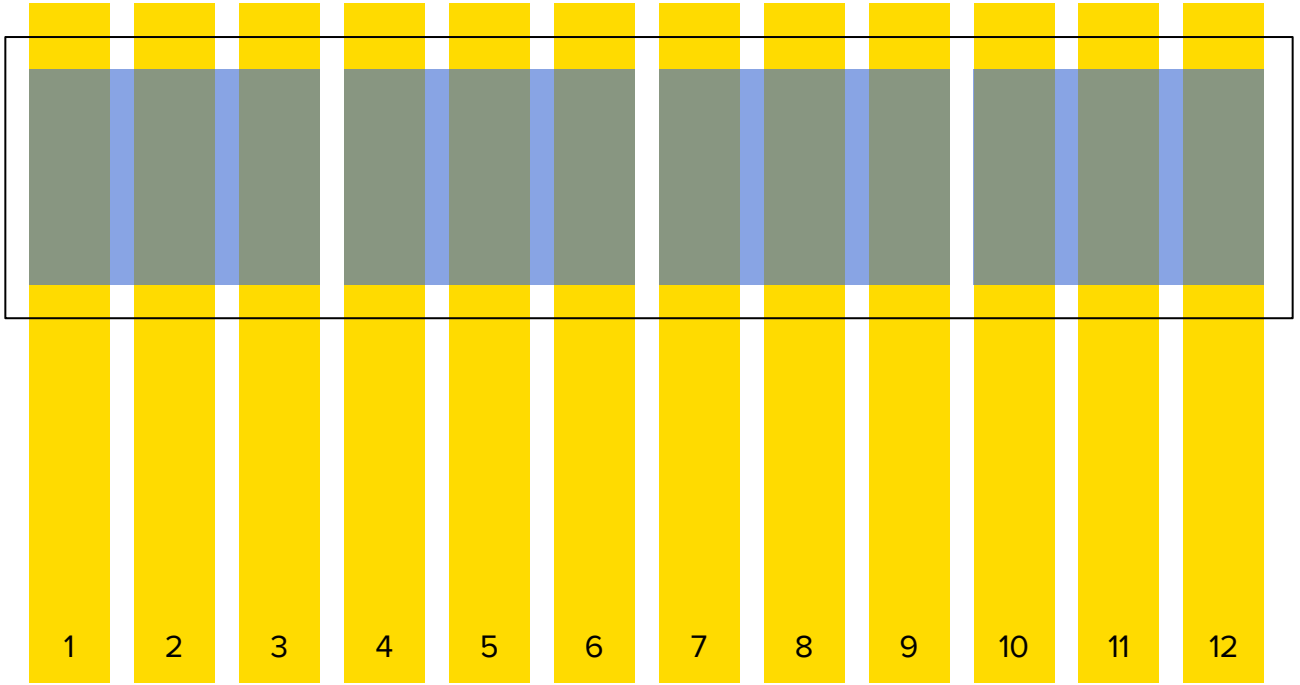
Discussion:

How Would We Make This Layout?



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Guided Walk-Through:

Bootstrap Grid Reference

Check out the CodePen below to see grid breakpoints in action!

Reference code:

https://codepen.io/GAmarketing/pen/d0e2cdc701db443264dbe8caa9853ca0

Partner Exercise:

Grid Layouts

45 minutes

Recreate the grid layouts displayed in this document:

https://ga-instruction.s3.amazonaws.com/assets/front-end-web-development/fewd-bootstrap/layouts.pdf

Front-End Web Development

Bootstrap Components

Components Made Easy

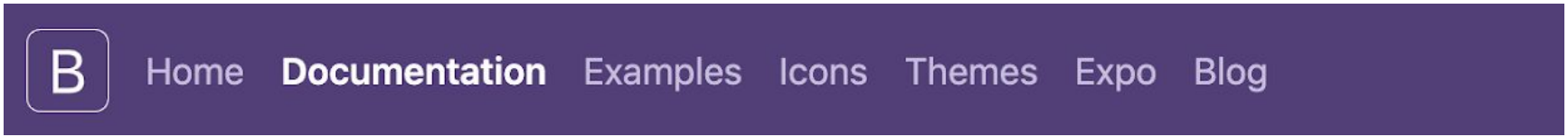
Bootstrap has a solid set of standard components that can easily be dropped into your site:

- Navigation bars
- Modals
- Image carousels
- Dropdown menus
- And so much more!

Bootstrap Nav

You've definitely seen the Bootstrap **navbar** before!

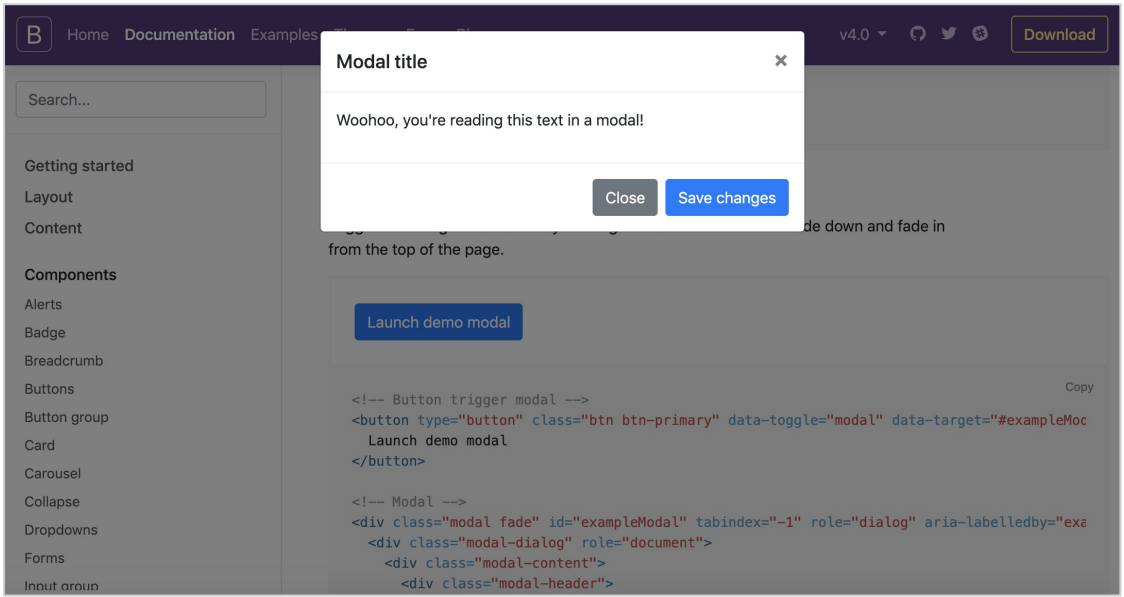
```
<nav class="navbar navbar-default" role="navigation">
  <div class="container">
    ...
  </div>
</nav>
```



Modals: Pop Ups for Good, not Spam!

Modals allow content to be focused in a pop-up window on top of other content.

They can be toggled with JavaScript in reaction to any event, typically responding to button clicks.



Guided Walk-Through: Components in Action

This CodePen uses a navbar, carousel, cards, and modals to create a standard layout on the home page.

Reference code:

https://codepen.io/GAmarketing/pen/OJPoEBR

Front-End Web Development

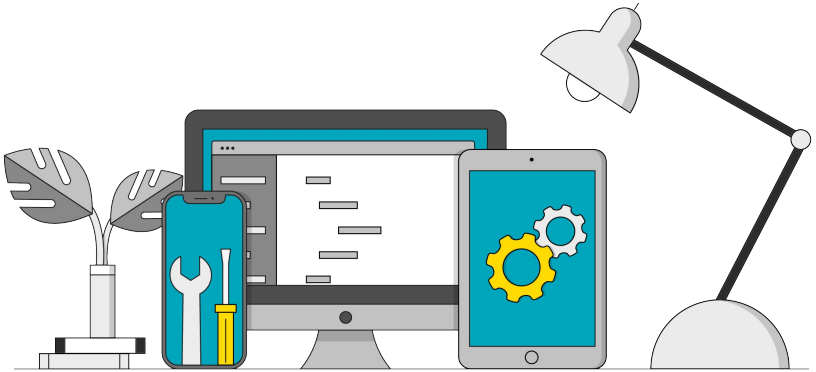
Styles

(Without the Pain and Suffering of Tweaking It Yourself)

Responsive Images

Creating responsive images is as easy as adding this class to your image:

```
.img-responsive
```



This class gives us the following code:

```
max-width: 100%;
height: auto;
```

Stylized Images

Check out these puppies:

```
<img src="puppy.jpg" class="img-rounded" alt="Rounded Puppy">
<img src="puppy.jpg" class="img-circle" alt="Circle Puppy">
<img src="puppy.jpg" class="img-thumbnail" alt="Puppy Thumbnail">
```

- **`img-rounded`** creates rounded rectangles.
- **`img-circle`** turns images into circles.
- **`img-thumbnail`** puts a nice border around images.

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Buttons

http://getbootstrap.com/css/#buttons

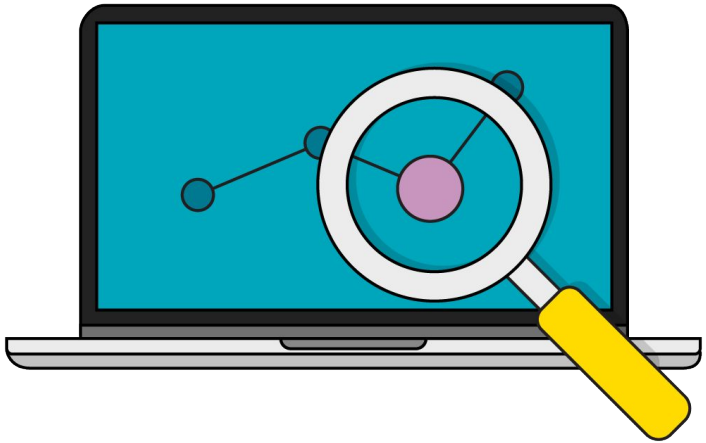
```
<!-- Standard button -->
<button type="button" class="btn btn-default">Default</button>
```

We can change button color and size very easily. Follow that link to see how.

Group Exercise:
Recreate a Bootstrap Site

Identify a site using Bootstrap and attempt to recreate it. There are many resources that list sites that use Bootstrap, or you can check your favorite sites for Bootstrap-style layouts and components.

https://expo.getbootstrap.com/



Key Takeaways

CSS Frameworks Are a Trade-Off

- You get pre-built style and components in exchange for learning and using their exact patterns.
- Frameworks can add unnecessary bloat to a site.

For Next Time

Developer Tools

- The command line provides a direct interface with more powerful control over your computer.
- Git and GitHub are industry-standard tools for version control.

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