Responsive Web Design

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What is Bootstrap?

- ***The most popular HTML, CSS, and JS framework***

- Used for developing responsive, mobile first projects on the web.

- Mobile First Strategy
  - Works and looks great on the mobile device.
  - As the devices scale in the size the content scales and experience is enhanced.

What is Bootstrap?

Designed for everyone, everywhere.

Bootstrap makes front-end web development faster and easier. It's made for folks of all skill levels, devices of all shapes, and projects of all sizes.

Preprocessors

Bootstrap ships with vanilla CSS, but its source code utilizes the two most popular CSS preprocessors, Less and Sass. Quickly get started with precompiled CSS or build on the source.

One framework, every device.

Bootstrap easily and efficiently scales your websites and applications with a single code base, from phones to tablets to desktops with CSS media queries.
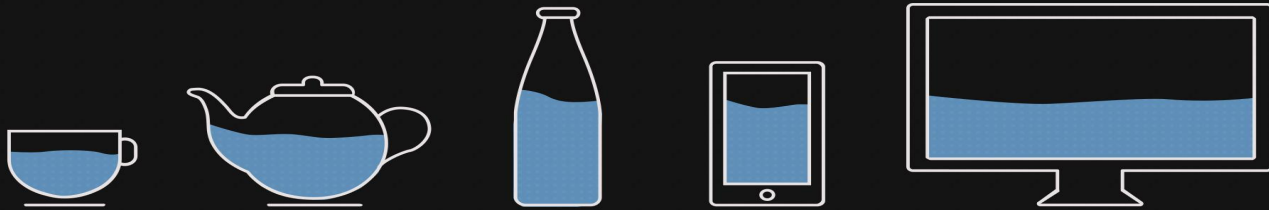
Full of features

With Bootstrap, you get extensive and beautiful documentation for common HTML elements, dozens of custom HTML and CSS components, and awesome jQuery plugins.

Responsive Web Design

- Crafting sites that provide an optimal viewing and interaction experience

- Easy reading and navigation

- Minimal resizing, panning, and scrolling

- Works across a wide range of devices

CONTENT IS LIKE WATER

"You put water into a cup it becomes the cup.
You put water into a bottle it becomes the bottle.
You put it in a teapot, it becomes the teapot."

Illustration by Stéphanie Walter

Why Choose Bootstrap?

- **Speed of Development**
  - **Use of ready made code blocks and pre-defined styles.**
- **Responsiveness**
  - **Mobile devices continue to grow in popularity year after year.**
  - **Use of Bootstrap's grid system and classes make it easier.**
- **Consistency**
  - **Uniformity, same experience across Internet Explorer, Chrome, and Firefox**
- **Customizable**
  - **Ability to fine tune your bootstrap package.**
- **Support**
  - **Large user community behind it. Constantly being updated. Lots of documentation**
- **Themes**
  - **There are a large number of Themes available and either free or very inexpensive**

Similar Responsive Frameworks

- Bootstrap is not alone. There are numerous frameworks that are similar. The key to picking one is to understand your requirements.

- Semantic UI

- ZURB Foundation

- Skeleton

- HTML Boilerplate

- Almost infinitely more…

Semantic UI

Bootstrap Components

- [Grids](#) – Defining pages in terms of columns and rows

- [Typography](#) – Headings / body elements

- [Glyphs](#) – icons that are font based, scalable

- [Navigation](#) – responsive navigation

- [Images](#) – responsive images

- [Helper Classes](#) – clearfix / show / hide / centers

- [Responsive Utilities](#) – hide / show content via class

- [Javascript](#) - Carousel, Tooltip, Tab, Modal, Alerts

Grid System

- Easy to use grid system for creating rows & columns for your content

https://getbootstrap.com/examples/grid/

| .col-md-1 | .col-md-1 | .col-md-1 | .col-md-1 | .col-md-1 | .col-md-1 | .col-md-1 | .col-md-1 | .col-md-1 | .col-md-1 | .col-md-1 | .col-md-1 |

| .col-md-8 | .col-md-4 |

| .col-md-4 | .col-md-4 | .col-md-4 |

| .col-md-6 | .col-md-6 |

Example Grid: Mobile, Tablet, & Desktop

.col-xs-12 .col-sm-6 .col-md-8	.col-xs-6 .col-md-4

.col-xs-6 .col-sm-4	.col-xs-6 .col-sm-4	.col-xs-6 .col-sm-4

```
<div class="row">
  <div class="col-xs-12 col-sm-6 col-md-8">.col-xs-12 .col-sm-6 .col-md-8</div>
  <div class="col-xs-6 col-md-4">.col-xs-6 .col-md-4</div>
</div>
<div class="row">
  <div class="col-xs-6 col-sm-4">.col-xs-6 .col-sm-4</div>
  <div class="col-xs-6 col-sm-4">.col-xs-6 .col-sm-4</div>
  <!-- Optional: clear the XS cols if their content doesn't match in height -->
  <div class="clearfix visible-xs-block"></div>
  <div class="col-xs-6 col-sm-4">.col-xs-6 .col-sm-4</div>
</div>
```

Media Queries

- Allows you to craft CSS to scope media features such as height or width.

- Bootstrap has pre-defined breakpoints mobile, tablet, desktop, & large desktop

- Necessary to know in order to achieve responsive.

```
1   font-size: 11px;
2
3   /* Small devices (tablets, 768px and up) */
4   @media (min-width: @screen-sm-min) {
5       p {
6           font-size: 12px;
7       }
8   };
9
10  /* Medium devices (desktops, 992px and up) */
11  @media (min-width: @screen-md-min) {
12      p {
13          font-size: 13px;
14      }
15  };
16
17  /* Large devices (large desktops, 1200px and up) */
18  @media (min-width: @screen-lg-min) {
19      p {
20          font-size: 14px;
21      }
22  };
23  
```