BOOTSTRAP

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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 is the most popular HTML, CSS, and JavaScript framework for developing responsive, mobile-first web sites.

• Bootstrap 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

Bootstrap History

• Bootstrap was developed by Mark Otto and Jacob Thornton at Twitter, and released as an open source product in August 2011 on GitHub.

• Advantages of 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 3, mobile-first styles are part of the core framework

• **Browser** **compatibility:** Bootstrap is compatible with all modern browsers (Chrome, Firefox, Internet Explorer, Safari, and Opera)

Where to Get Bootstrap?

• There are two ways to start using Bootstrap on your own web site. • Download Bootstrap from getbootstrap.com

• If you want to download and host Bootstrap yourself, go to [getbootstrap.com](http://getbootstrap.com/getting-started/), and follow the instructions there.

• Include Bootstrap from a CDN

• If you don't want to download and host Bootstrap yourself, you can include it from a CDN (Content Delivery Network).

• MaxCDN provides CDN support for Bootstrap's CSS and JavaScript. You must also include jQuery.

Bootstrap CDN

• You must include the following Bootstrap’s CSS, JavaScript, and jQuery from MaxCDN into your web page.

<!-- Latest compiled and minified Bootstrap CSS -->

<link rel="stylesheet"href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css">

<!-- Latest compiled Bootstrap JavaScript -->

<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/js/bootstrap.min.js"></script>

<!-- latest jQuery library -->

<script src="https://code.jquery.com/jquery-latest.js"></script>

• Advantage of using the Bootstrap CDN:

• Many users already have downloaded Bootstrap from MaxCDN when visiting another site. As a result, it will be loaded from cache when they visit your site, which leads to faster loading time. Also, most CDN's will make sure that once a user requests a file from it, it will be served from the server closest to them, which also leads to faster loading time.

Create Web Page with Bootstrap (1)

• Add the HTML5 doctype

• Bootstrap uses HTML elements and CSS properties that require the HTML5 doctype.

• Always include the HTML5 doctype at the beginning of the page, along with the lang attribute and the correct character set:

<!DOCTYPE html>

<html lang="en"> <head>

<meta charset="utf-8"> </head>

</html>

Create Web Page with Bootstrap (2)

• Bootstrap is mobile-first

• Bootstrap 3 is designed to be responsive to mobile devices. Mobile-first styles are part of the core framework.

• To ensure proper rendering and touch zooming, add the following <meta> tag inside the <head> element:

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

• The width=device-width part sets the width of the page to follow the screen-width of the device (which will vary depending on the device).

• The initial-scale=1 part sets the initial zoom level when the page is first loaded by the browser.

Create Web Page with Bootstrap (3)

• Containers

• Bootstrap also requires a containing element to wrap site contents. • There are two container classes to choose from:

• The .container class provides a responsive **fixed** **width** **container.** ([See Sample](https://fog.ccsf.edu/~hyip/cnit131/week11/samples/00_container.html))

• The .container-fluid class provides a **full** **width** **container**, spanning the entire width of the viewport. ([See Sample](https://fog.ccsf.edu/~hyip/cnit131/week11/samples/00_container_fluid.html))

• **Note:** Containers are not nestable (you cannot put a container inside another container).

Bootstrap Grids

• Bootstrap’s grid system 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:

<div class="col-md-12">Span 12 columns</div>

<div class="col-md-6">Span 6</div><div class="col-md-6">Span 6</div> <div class="col-md-4">Span 4</div><div class="col-md-8">Span 8</div>

<div class="col-md-4">Span 4</div><div class="col-md-4">Span 4</div> <div class="col-md-4">Span 4</div>

• Bootstrap's grid system is responsive, and the columns will re-arrange automatically depending on the screen size.

Grid Classes

• The Bootstrap grid system has four classes: • xs (for phones)

• sm (for tablets)

• md (for desktops)

• lg (for larger desktops)

• The classes above can be combined to create more dynamic and flexible layouts.

Basic Structure of a Bootstrap Grid

<div class="row">

<div class="col-\*-\*"></div> </div>

<div class="row">

<div class="col-\*-\*"></div> <div class="col-\*-\*"></div> <div class="col-\*-\*"></div>

</div>

<div class="row"> ...

</div>

• First; create a row (<div class="row">). Then, add the desired number of columns (tags with appropriate .col-\*-\*classes). Note that numbers in .col-\*-\* should always add up to 12 for each row.

Three Equal Columns

• Three equal columns ([desktop version](https://fog.ccsf.edu/~hyip/cnit131/week11/samples/01_three_equal_columns_desktop.html)): • Three equal columns ([tablet version](https://fog.ccsf.edu/~hyip/cnit131/week11/samples/01_three_equal_columns_tablet.html)):

• Three equal columns ([smart phone version](https://fog.ccsf.edu/~hyip/cnit131/week11/samples/01_three_equal_columns_phone.html)):

Two Unequal Columns

• Two unequal columns ([desktop version](https://fog.ccsf.edu/~hyip/cnit131/week11/samples/02_two_unequal_columns_desktop.html)): • Two unequal columns ([tablet version](https://fog.ccsf.edu/~hyip/cnit131/week11/samples/02_two_unequal_columns_tablet.html)):

• Two unequal columns ([smart phone version)](https://fog.ccsf.edu/~hyip/cnit131/week11/samples/02_two_unequal_columns_phone.html):

Bootstrap Tables

• A **basic** Bootstrap table has a light padding and only horizontal dividers. • The .table class adds basic styling to a table:

• **Striped** **Rows**

• The .table-striped class adds zebra-stripes to a table:

• **Bordered** **Table**

• The .table-bordered class adds borders on all sides of the table and cells:

• **Hover** **Rows**

• The .table-hover class enables a hover state on table rows:

• **Responsive** **Tables**

• The .table-responsive class creates a responsive table. The table will then scroll horizontally on small devices (under 768px). When viewing on anything larger than 768px wide, there is no difference:

Bootstrap Images

• Rounded Corners

• The .img-rounded class adds rounded corners to an image (IE8 does not support rounded corners):

• Circle

• The .img-circle class shapes the image to a circle (IE8 does not support rounded corners):

• Thumbnail

• The .img-thumbnail class shapes the image to a thumbnail:

• Responsive Images

• Images comes in all sizes. So do screens. Responsive images automatically adjust to fit the size of the screen.

• Create responsive images by adding an .img-responsive class to the <img> tag. The image will then scale nicely to the parent element.

• The .img-responsive class applies display: block; and max-width: 100%; and height: auto; to the image:

Bootstrap Buttons

• Button Styles

• Bootstrap provides seven styles of buttons with the following classes:

.btn-default .btn-primary .btn-success .btn-info .btn-warning .btn-danger .btn-link

Bootstrap Button Elements

• The button classes can be used on the following elements: • <a>

• <button> • <input>

Button Sizes

• Bootstrap provides four button sizes with the following classes: .btn-lg

.btn-md .btn-sm .btn-xs

Block Level Buttons

• A block level button spans the entire width of the parent element. • Add class .btn-block to create a block level button:

Active/Disabled Buttons

• A button can be set to an active (appear pressed) or a disabled (unclickable) state:

• The class .active makes a button appear pressed, and the class .disabled makes a button unclickable:

References

• Discovering the Internet: Complete, Jennifer Campbell, Course Technology, Cengage Learning, 5th Edition-2015, ISBN 978-1-285-84540-1.

• Basics of Web Design HTML5 & CSS3, Second Edition, by Terry Felke-Morris, Peason, ISBN 978-0-13-312891-8.

• [W3schools.com](http://www.w3schools.com/bootstrap/default.asp)