library codelab

Getting Started with Bootstrap

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. Since the code is already written for you, all you have to do it link to it via a freely available URL. Bootstrap allows you start from some ready-made formatting that has been pre-done for you, which can save you a lot of work. And, your website will be responsive.
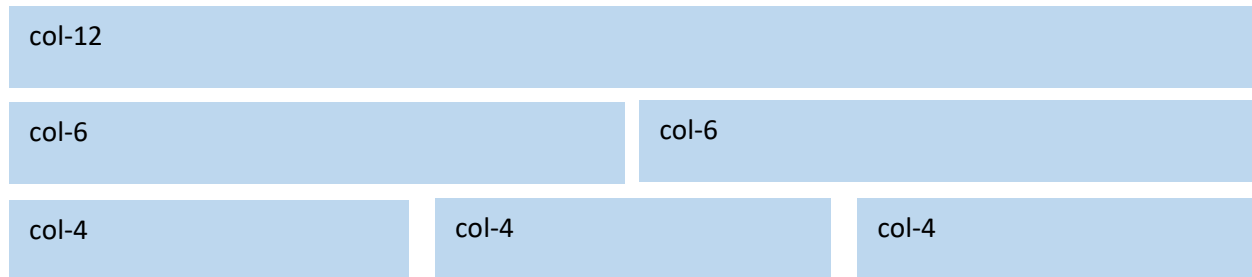

from *w3schools.com*

How Does Bootstrap Work? Bootstrap connects to your html file in the <head> tag, just like you would connect an external CSS file or JavaScript file. You can also download Bootstrap and link the actual files. Once it is linked, you can reference the ready-made code in your html, using CSS classes.

```
<!DOCTYPE html>
<html lang="en">
<head>
<link rel="stylesheet" href="Bootstrap Pre-made CSS Code">
<script src="Bootstrap Pre-made JS Code"></script>
<script src="Bootstrap Pre-made JS Code"> script>
<script src="Bootstrap Pre-made JS Code"></script>
<head>
```
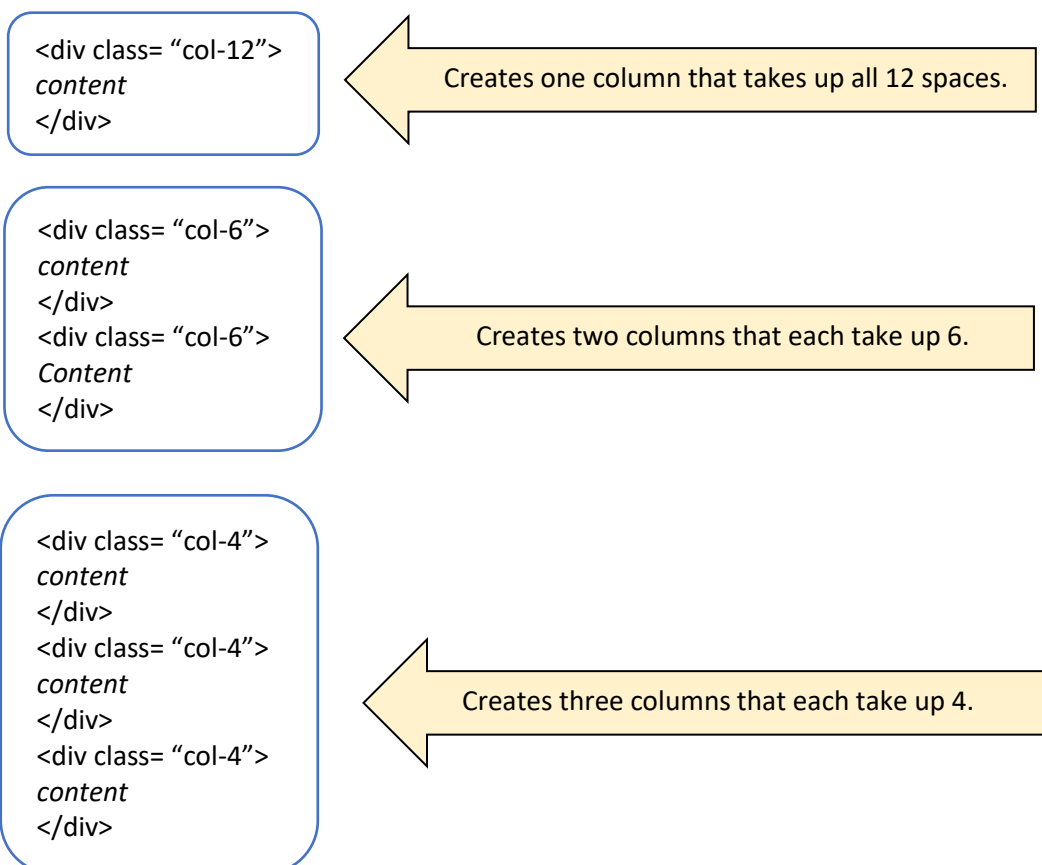
The Bootstrap Grid

One of the most important features to understand about Bootstrap is the grid it uses to organize content. When using CSS by itself, it can be very difficult to get different elements to sit nicely next to each other and to create columns on your website. It can also be a lot of work to make these columns **responsive**, meaning the columns will stack, if you are on a mobile device.

Bootstrap organizes content into a 12 grid system. You can set up columns and rows to set your content up using any set of numbers that add up to 12. (See below.)

col-12

col-6	col-6

col-4	col-4	col-4

The code for this would look like this:

```
<div class= "col-12">
content
</div>
```
Creates one column that takes up all 12 spaces.

```
<div class= "col-6">
content
</div>
<div class= "col-6">
Content
</div>
```
Creates two columns that each take up 6.

```
<div class= "col-4">
content
</div>
<div class= "col-4">
content
</div>
<div class= "col-4">
content
</div>
```
Creates three columns that each take up 4.

for the grid system to work, your columns must be wrapped in a container (see pg. 3)

A CSS class is a way to connect html elements to CSS. You can give any html element a class, by inserting a **class=" "** inside the opening html tag. In a normal CSS file, you would then reference that class and specify what formatting you want to apply. In Bootstrap, there are pre-defined classes you can use, that do different things. It looks like this:

<h1 class="jumbotron"> Welcome to my website!</h1>

A <div> is an HTML tag that you can use to group content that doesn't apply any formatting changes or give any instructions. A div is a great way to apply a class to a group of other tags, since a div on its own won't change your HTML.

Now #menu will change both p and img

```
<div id="menu">
    <p> Welcome to my website!</p>
    <img src="images/photo1.jpeg">
</div>
```

Common Bootstrap Components

Class	What it Does	Add-ons/Alternatives	What it Does
jumbotron	Announcement-style banner containing content	Jumbotron-fluid	Makes jumbotron full screen
btn	Creates a nicely formatted button (used within <button> html tag).	btn-primary; btn -secondary; btn-success; btn-danger	A button with specific color scheme
container	Declares a standard width for content; required for using the grid system. Will force all content to only be as wide as the container.	container-fluid	Makes the container full screen (depending on the size of your screen), will resize accordingly.
col-4	Puts content in a column that is 1/3 of the page. Grid system uses a total of 12- so 4/12 is a three column layout.	col-12; col-3; col-9	Differently sized columns – must add up to 12 total. Any combination with work.
row	Creates row to wrap around columns	--	--
mt-4	Adds 4px to top margin	mb-2, ml-4, mr-6	Can add any number of px to any side margin
text-center	Centers your text	text-justify; text-left; text-right	Can move text in any alignment

Project: Bootstrap Website

In this exercise, we will take a website without any CSS or special formatting, and use Bootstrap to format and structure each page.

1. Download the files to your computer. There are three HTML files for you to work with, and a folder that includes the same files, but includes Bootstrap formatting. You can use these files if you get stuck.

2. Open the index.html file in your text editor (such as Sublime Text) and open it in the browser as well. As we make changes, we will save our html file in our text editor and refresh it in the browser.

3. First, we need to add in the Bootstrap code. Go to Bootstrap.com and copy the code that will go in between the <head> tags of your html doc.

4. Save your index.html doc and refresh it in the browser. Notice what has changed, just by inserting the Bootstrap code. Insert the same code in your govt.html file and your neighborhoods.html file.

*Before you get started, review CSS Classes, and HTML divs, as these tools will help you connect your Bootstrap formatting.

5. Use the "container" class to wrap your content. What does this change on your page? *More about Bootstrap Containers*

6. Next, use the Bootstrap Grid System to rearrange your content and make it appear more similar to the website this practice is based on: WelcomeCLT.org.

7. Use the Bootstrap Navbar to spruce up your menu navigation.

8. Use the grid system to change your neighborhood.html file and make three columns--one for each neighborhood.

9. Use the grid system to arrange your pictures on the govt.html page to have 2 rows of 6.

10. Using Bootstrap.com as a reference, make other cosmetic changes to your site. For example, buttons, and the jumbotron class.