



Introduction to Bootstrap Framework for Responsive Web Sites

What is Bootstrap?

“Bootstrap is the most popular HTML, CSS, and JavaScript framework for developing responsive, mobile-first web sites.” – From [W3Schools Bootstrap Tutorial](#)

Why Use It?

- **Responsive Web Design:** lots of built-in (“out of the box”) features to ensure that your site looks good across all types/sizes of devices
- **NavBar:** Beautiful menus!
- **Consistent look and feel:** buttons, menus, headings, lists, and many other Web page components
- **Themes:** Many lovely themes available to change the colors and other aspects of appearance just by swapping out a file! See [Bootswatch](#) for a nice selection of free downloadable themes

How to Get Bootstrap into Your Web Project

Bootstrap consists of JavaScript and CSS files that need to be added to your project

Edit an existing Web project or create a new one:

- For our demo we will use Glitch: Go to <https://glitch.com>
- Open your Web project from our previous meeting or click the New Project button and select “hello-webpage”
- Select the index.html file in the editor
- View in the Browser using the Show option above the list of files to see the “before Bootstrap” appearance

Get Bootstrap and add to your project

- Go to <https://getbootstrap.com/docs/4.4/getting-started/introduction/>
- Follow the instructions under **Quick start** to copy and paste the CSS and the JS links into your index.html page
 - CSS goes inside the <head> element
 - JS goes just before the closing </body> tag
- This initial example uses the CDN (**C**ontent **D**elivery **N**etwork) source for the CSS and JavaScript files, i.e., the files are hosted in the cloud rather than copied to your project
- Take another look at your project in the Browser; depending on what content you have on your page you may see differences from the previous appearance

```

1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4 <title>Hello!</title>
5 <meta charset="utf-8" />
6 <meta http-equiv="X-UA-Compatible" content="IE=edge" />
7 <meta name="viewport" content="width=device-width, initial-scale=1" />
8 <link
9   rel="stylesheet"
10  href="https://stackpath.bootstrapcdn.com/bootstrap/4.4.1/css/bootstrap.min.css"
11  integrity="sha384-Vkoo8x4G6s03+Hhvx8T/Q5PaXtkktu6ug5TOeNV6gBiFeWPGFN9MuhOf23Q9Ifjh"
12  crossorigin="anonymous"
13 />
14 <!-- import the webpage's stylesheet -->
15 <link rel="stylesheet" href="/style.css" />
16 <!-- import the webpage's javascript file -->
17 <script src="/script.js" defer></script>
18 </head>
19 <body>
20 <h1>Hi there!</h1>
21
22 <p>
23   I'm your cool new webpage. Made with
24   <a href="https://glitch.com">Glitch</a>!
25 </p>
26
27 <!-- include the Glitch button to show what the webpage is about and
28      to make it easier for folks to view source and remix -->
29 <div class="glitchButton" style="position:fixed;top:20px;right:20px;"></div>
30 <script src="https://button.glitch.me/button.js"></script>
31 <script
32   src="https://code.jquery.com/jquery-3.4.1.slim.min.js"
33   integrity="sha384-J6qa4849b1E2+poT4WnyKhvSvZFS5SrPo0iEjwBvKU7imGFAV0wwj1yYfoR5JoZ+n"
34   crossorigin="anonymous"
35 ></script>
36 <script
37   src="https://cdn.jsdelivr.net/npm/popper.js@1.16.0/dist/umd/popper.min.js"
38   integrity="sha384-Q6E9RHvbiYzFJoft+2mJbHaEWldlvI9IOYy5n3zV9zzTtmI3UksdQRVvoxMfooAo"
39   crossorigin="anonymous"
40 ></script>
41 <script
42   src="https://stackpath.bootstrapcdn.com/bootstrap/4.4.1/js/bootstrap.min.js"
43   integrity="sha384-wfSDf2E50Y2D1uUdj003uMB3njUD4Ih7YwaYd11qfktj0Uod8GCEX130g8ifwB6"
44   crossorigin="anonymous"
45 ></script>
46 </body>
47 </html>

```

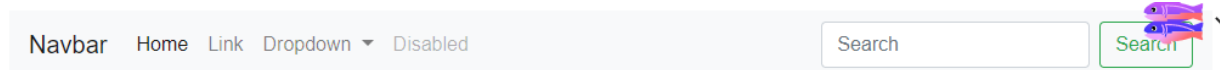
Insert Bootstrap stylesheet link in <head> before your project-specific stylesheet(s)

Insert JQuery, Popper, and Bootstrap JavaScript sources above closing </body> tag

Add some features to showcase Bootstrap's Power

Navigation

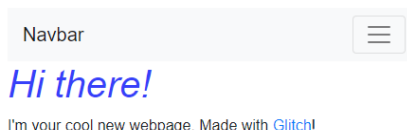
- Go to <https://getbootstrap.com/docs/4.4/components/navbar/>
- Scroll to the first code example under "Supported Content"
- Click "Copy" in the upper right of the Navbar example
- Paste it into your project right under the <body> tag, i.e., at the start of the content
- View your page in the Browser again



Hi there!

I'm your cool new webpage. Made with [Glitch](#)!

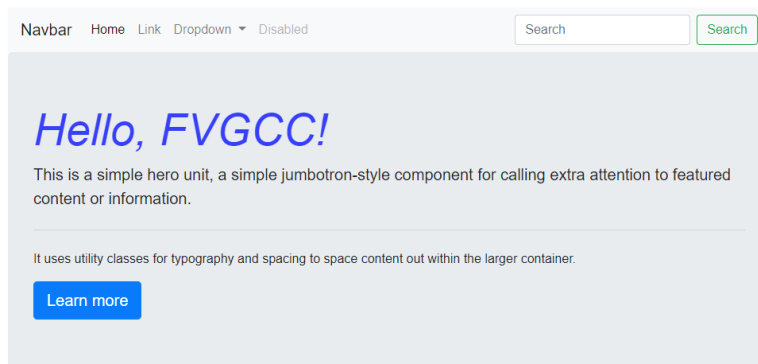
- Resize the Window or look at your site on your phone to see the Responsive design: The bar menu changes to the "hamburger" menu!



- **Tip:** Move the Glitch button to the bottom: find the “glitchButton” div near the bottom of the code and change “top” to “bottom”

Jumbotron

- <https://getbootstrap.com/docs/4.4/components/jumbotron/>
- Copy and paste to your page right below the </nav> closing tag
- Modify the text in the Jumbotron and view your page again



Hi there!

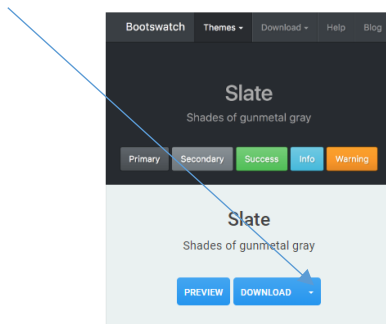
I'm your cool new webpage. Made with [Glitch](#)

Responsive Columns

- You can design a layout with multiple columns that look great on a large tablet or computer but too small on a phone; responsive design in Bootstrap will automatically stack the columns based on screen size
- Try using the first code example here: <https://getbootstrap.com/docs/4.4/layout/grid/>

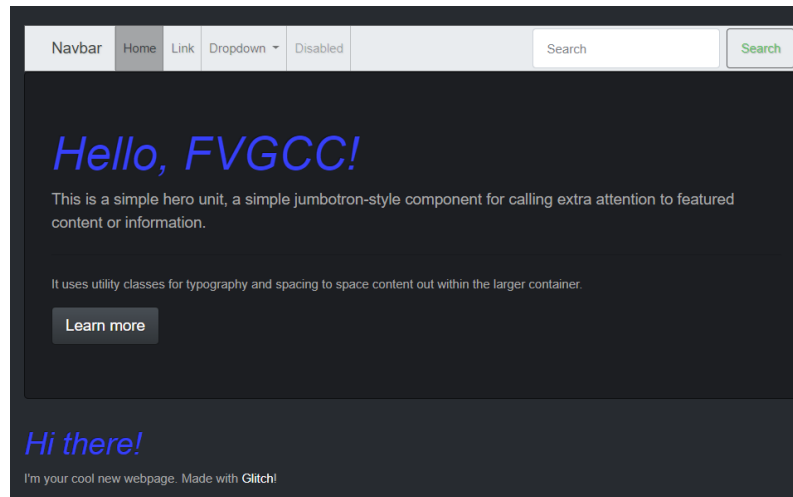
Change the Theme!

- Bootstrap consists of JavaScript and CSS; it is the CSS that affects the appearance, so we can easily change the look by changing the CSS
- Go to [Bootswatch.com](https://bootswatch.com)
- Find an appealing theme and click the Preview button; when you find one you like click the arrow next to Download. Choose bootstrap.css from the list



- In your Glitch project, click “New File” above the file list, then “Upload a File”, select the bootstrap.css file from your downloads folder
- Replace the existing bootstrap css link with your new file:

- First make a copy of the index.html file by clicking the three stacked dots next to file name and selecting duplicate, so we can compare the two
- In your original index.html, find the link for bootstrap.min.css in the header; change it to this: `<link rel="stylesheet" href="bootstrap.css" />`
- And, just like that, we have a Slate Theme!



Much, Much, More!

- Explore using some of the other components using the examples from one of these sites:
 - Bootstrap: <https://getbootstrap.com/>
 - <https://www.w3schools.com/bootstrap4/>

