Bootstrap Tutorials

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# What is Bootstrap?

1. “Bootstrap is the most popular CSS Framework for developing responsive and mobile-first websites.”

Source: [**https://www.w3schools.com/whatis/whatis\_bootstrap.asp**](https://www.w3schools.com/whatis/whatis_bootstrap.asp)

|  |
| --- |
| ***Mobile-first*** |
| “The mobile first design approach involves starting the product design process by designing for the smallest device first and progressively enhancing the design features for larger layouts—e.g., start designing for mobile and then move on to desktop.”“Mobile first is a design approach that aims to improve the user experience by embracing the constraints of smaller screens and focusing on what’s indispensable for users.”“It was initially proposed in 2009 by Luke Wroblewski, Google's Product Director. In his book "Mobile First," Wroblewski explains that designing web products, starting with the desktop version, is becoming a backward way of thinking about design. Instead, he suggests adopting the mobile first approach, which forces the designer to focus and enables innovation.”“Mobile first supports itself in the concept of progressive enhancement. This web design strategy emphasizes web content first, providing universal access to essential content and allowing users with additional browser features or faster internet to receive an enhanced version of the same page.”Source: <https://www.interaction-design.org/literature/topics/mobile-first> |

1. What is Bootstrap
2. “Bootstrap is a widely-used open-source front-end framework for web development, providing a collection of HTML, CSS, and JavaScript components and tools that enable developers to build responsive, mobile-first websites with ease.” Source: <https://www.geeksforgeeks.org/bootstrap/> (see also: *Applications of Bootstrap*).
3. “In essence, a CSS framework comprises several CSS stylesheets ready for use by web developers and designers. The stylesheets are prepped for standard web design functions: setting colors, layout, fonts, navbars, etc. Generally, stylesheets are supported and expanded by other scripting technologies like SASS and JavaScript.”

“With a CSS framework, the user has a completed CSS stylesheet, and they only have to code the HTML with accurate classes, structure, and IDs to set up a web page. The framework already has classes built-in for common website elements – footer, slider, navigation bar, hamburger menu, column-based layouts, etc.” Source: <https://www.browserstack.com/guide/top-css-frameworks>

1. “Bootstrap is a widely-used open-source front-end framework for web development, providing a collection of HTML, CSS, and JavaScript components and tools that enable developers to build responsive, mobile-first websites with ease.” Source: <https://www.geeksforgeeks.org/bootstrap/>

# Using Bootstrap

The preferred way to use Bootstrap is to use a CDN (content delivery network) by linking to the required files. Thus, simply add these lines to the *head* section of your HTML file or web form:

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

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle.min.js"></script>

To use Bootstrap, you simply apply pre-defined style rules to elements. For example, the div below has a number of rules applied. We will learn what they mean as we go along.

<div class="container-fluid mb-4 border border-3 border-dark bg-primary bg-opacity-10">

In VSCode, IntelliSense works when specifying style rules, find a blank space in the string and start typing/

You can also download Bootstrap and reference it locally.

# Utilities

There are a number of utility type rules that, in many cases, can be applied to any element. Follow the W3Schools page below. The sections to cover are in the table below.

<https://www.w3schools.com/bootstrap5/bootstrap_utilities.php>

|  |  |
| --- | --- |
| **Rule Groups** | **Comment** |
| Borders, Border Width, Color, Radius | Cover |
| Float & Clearfix, Responsive Floats | Skip |
| Center Align, Width, Height | Scan |
| Spacing (margins & padding) | Cover |
| Shadows | Skip |
| Vertical Align | Cover |
| Aspect Ratio, Visibility, Close icon, Screenreaders | Skip |
| (Text) Colors, Background Colors | Cover |

# Layout

These are rules that are mostly focused on layout.

|  |  |
| --- | --- |
| **Rule Groups** | **Comment** |
| [Containers](https://www.w3schools.com/bootstrap5/bootstrap_containers.php) | Cover |
| [Grids](https://www.w3schools.com/bootstrap5/bootstrap_grid_basic.php) | Cover |
| [Typography](https://www.w3schools.com/bootstrap5/bootstrap_typography.php) | Cover |
| [Colors](https://www.w3schools.com/bootstrap5/bootstrap_colors.php) | Cover |
| [Tables](https://www.w3schools.com/bootstrap5/bootstrap_tables.php) | Scan |

# Components

|  |  |
| --- | --- |
| **Resource** | **Comment** |
| [Component Examples](https://bootswatch.com/default/) | [bootswatch.com] Examples of all components with code. |
| [Explain the Components of Bootstrap](https://www.geeksforgeeks.org/explain-the-components-of-bootstrap/) | [geeksforgeeks] Some of the demo require login |
| [Bootstrap Components](https://demo.zenxtech.com.au/docs/components-bootstrap.html) | [zenxtech.com.au] Shows demo of each plugin. No code. |
| [Bootstrap CSS Components Library](https://bootstrapexamples.com/) | [bootstrapexamples.com] Lots of free examples. Choose an example which leads to a page with lots of examples that are related. Choose one, and then there is a code tab. |

Appendix

1. Bootstrap Resources

*These need to be incorporated into the appendices below.*

Bootstrap – all CSS classes:

* <https://www.w3schools.com/bootstrap4/bootstrap_ref_all_classes.asp>
* <https://getbootstrap.com/docs/5.0/getting-started/introduction/>
* <https://bootstrapcreative.com/resources/bootstrap-5-cheat-sheet-classes-index/>
* <https://bootstrapcreative.com/resources/bootstrap-4-css-classes-index/>
* <https://hackerthemes.com/bootstrap-cheatsheet/>

Simpler references:

* <https://getbootstrap.com/docs/5.0/examples/cheatsheet/>
* <https://www.rotamaxima.com/en/bootstrap-4-reference-guide-of-the-most-used-elements/> - Good summary of classes, shows examples of each.
1. Video Resources

1. [Learn Bootstrap in 20 minutes](https://www.youtube.com/watch?v=eow125xV5-c) (len: 18:39) – Great introduction.

|  |  |
| --- | --- |
| **Time** | **Description** |
| 2:19 | Containers |
| 3:30 | Grid – based on Flexbox |
| 4:10 | Breakpoints |
| 9:46 | Offset |
| 15:36 | Components-Button, Modal |
| 18:08 | Utilities – Borders |

1. [How to Make a Landing Page using Bootstrap 5](https://raddy.dev/blog/how-to-make-a-landing-page-using-bootstrap-video-tutorial/) (len: 1:36:00) – Only watched one short clip.

|  |  |
| --- | --- |
| **Time** | **Description** |
| 8:57 | Change Bootstrap defaults |

1. [Bootstrap 5 Crash Course](https://www.youtube.com/watch?v=4sosXZsdy-s) (1:18:00) – Excellent.
2. Web Pages

 Most of the links below are to getbootstrap.com.

|  |
| --- |
| Layout |
| [Breakpoints](https://getbootstrap.com/docs/5.1/layout/breakpoints/) |
| [Containers](https://getbootstrap.com/docs/5.1/layout/containers/) |
| [Grid](https://getbootstrap.com/docs/5.1/layout/grid/) |
| Content |
| [Typography](https://getbootstrap.com/docs/5.1/content/typography/) |
| [Images](https://getbootstrap.com/docs/5.1/content/images/) |
| [Tables](https://getbootstrap.com/docs/5.1/content/tables/), [Tables](https://www.w3schools.com/bootstrap5/bootstrap_tables.php) |
| Utilities |
| [Spacing](https://getbootstrap.com/docs/5.1/utilities/spacing/) |
| [Borders](https://getbootstrap.com/docs/5.1/utilities/borders/) |
| [Background](https://getbootstrap.com/docs/5.1/utilities/background/) |
| [All Utilities](https://getbootstrap.com/docs/5.1/utilities/api/), [All Utilites](https://www.w3schools.com/bootstrap5/bootstrap_utilities.php) |
| Components |
| [Accordian](https://getbootstrap.com/docs/5.0/components/accordion/) |
| [Navigation & Tabs](https://getbootstrap.com/docs/5.0/components/navs-tabs/)  |
| [Scrollspy,](https://getbootstrap.com/docs/5.0/components/scrollspy/) [Scrollspy](https://www.w3schools.com/bootstrap5/bootstrap_scrollspy.php) |

1. Tutorials

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| --- |
| Tutorials |
| [TutorialRepublic](https://www.tutorialrepublic.com/twitter-bootstrap-tutorial/)  |
| [W3Schools](https://www.w3schools.com/bootstrap5/index.php) |
| [TutorialsPoint](https://www.tutorialspoint.com/bootstrap/index.htm) |
| [GeeksForGeeks](https://www.geeksforgeeks.org/bootstrap/) |
| [BootstrapCreative](https://bootstrapcreative.com/resources/flexbox-cheat-sheet/) – Compares CSS Flexbox and Bootstrap. Very thorough, step-by-step guide.  |

1. Examples & Templates

These pages have templates and/or examples of commonly used techniques.

|  |  |
| --- | --- |
| **Resource** | **Description** |
| [Examples](https://getbootstrap.com/docs/5.3/examples/) | [getbootstrap.com] Skip first section, “Starters”. Everything below is good. |
| [TutorialRepublic](https://www.tutorialrepublic.com/twitter-bootstrap-examples.php) | [tutorialrepublic.com]  |
| [Bootstrap Examples](https://www.w3schools.com/bootstrap/bootstrap_examples.asp) | [w3schools] Focused on techniques |
| [Bootstrap Examples](https://freefrontend.com/bootstrap-code-examples/) | [freefrontend.com] Lots of examples for download. |
| [Bootstrap Examples](https://www.geeksforgeeks.org/bootstrap-examples/) | [geeksforgeeks.org] Organized by use case, i.e. text |
| [Templates](https://www.w3schools.com/bootstrap5/bootstrap_templates.php) | [w3schools] One basic template. |
| [Bootstrap Index](https://www.tpointtech.com/bootstrap-tutorial) | [tpointtech.com] See “Bootstrap Examples” section on main page. Example code for lots of components also. However, doesn’t appear to show what they look like. |

1. Free Bootstrap Editors
* [Codeply](https://www.codeply.com/) – Search for samples, has editor and live display. Also shows the Bootstrap CSS
* [Layoutit](https://www.layoutit.com/) – Drag and drop. Can’t edit the code, but can download it.
* [StyleBootstrap](http://stylebootstrap.info/) – Haven’t used
* [Bootstrap Magic](https://pikock.github.io/bootstrap-magic/index.html) – Haven’t used
* [Bootstrap Builder](https://bootstrap.build/) – Haven’t used