**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
* Bootstrap also gives you the ability to easily create responsive designs

Bootstrap is an open source product from Mark Otto and Jacob Thornton who, when it was initially released, were both employees at Twitter. There was a need to standardize the frontend toolsets of engineers across the company. In the launch blog post, Mark Otto introduced the project like this:

In the earlier days of Twitter, engineers used almost any library they were familiar with to meet front-end requirements. Inconsistencies among the individual applications made it difficult to scale and maintain them. Bootstrap began as an answer to these challenges and quickly accelerated during Twitter’s first Hackweek. By the end of Hackweek, we had reached a stable version that engineers could use across the company.

— Mark Otto

*https://dev.twitter.com/*

**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.

It allows for responsive web design and features a robust 12-column, 940px-wide grid.

**Bootstrap Versions**

Bootstrap 5 (released 2021) is the newest version of Bootstrap (released 2013); with new components, faster stylesheet and more responsiveness.

Bootstrap 5 supports the latest, stable releases of all major browsers and platforms. However, Internet Explorer 11 and down is not supported.

The main differences between Bootstrap 5 and Bootstrap 3 & 4, is that Bootstrap 5 has switched to vanilla JavaScript instead of jQuery.

Note: Bootstrap 3 and Bootstrap 4 is still supported by the team for critical bugfixes and documentation changes, and it is perfectly safe to continue to use them. However, new features will NOT be added to them.

**Why Use Bootstrap?**

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, mobile-first styles are part of the core framework
* **Browser compatibility**: Bootstrap 5 is compatible with all modern browsers (Chrome, Firefox, Edge, Safari, and Opera). Note that if you need support for IE11 and down, you must use either BS4 or BS3.

**Where to Get Bootstrap 5?**

There are two ways to start using Bootstrap 5 on your own web site.

You can:

* Include Bootstrap 5 from a CDN
* Download Bootstrap 5 from getbootstrap.com

**Bootstrap 5 CDN**

If you don't want to download and host Bootstrap 5 yourself, you can include it from a CDN (Content Delivery Network).

jsDelivr provides CDN support for Bootstrap's CSS and JavaScript:

***MaxCDN:***

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

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

*<!-- Latest compiled JavaScript -->*

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

**One advantage of using the Bootstrap 5 CDN:**

Many users already have downloaded Bootstrap 5 from jsDelivr 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.

**JavaScript?**

Bootstrap 5 uses JavaScript for different components (like modals, tooltips, popovers etc). However, if you just use the CSS part of Bootstrap, you don't need them.

**Downloading Bootstrap 5**

If you want to download and host Bootstrap 5 yourself, go to https://getbootstrap.com/, and follow the instructions there.

**Bootstrap File Structure**

bootstrap/

├── css/

│   ├── bootstrap.css

│   ├── bootstrap.min.css

├── js/

│   ├── bootstrap.js

│   ├── bootstrap.min.js

├── img/

│   ├── glyphicons-halflings.png

│   ├── glyphicons-halflings-white.png

└── README.md

**Create Your First Web Page With Bootstrap 5**

1. Add the HTML5 doctype

Bootstrap 5 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 title and character set:

*<!DOCTYPE html>*

*<html lang="en">*

*<head>*

*<title>Bootstrap 5 Example</title>*

*<meta charset="utf-8">*

*</head>*

*</html>*

2. Bootstrap 5 is mobile-first

Bootstrap 5 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.

3. Containers

Bootstrap 5 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
* The .container-fluid class provides a full width container, spanning the entire width of the viewport

**Two Basic Bootstrap 5 Pages**

* The following example shows the code for a basic Bootstrap 5 page (with a responsive fixed width container):

Container Example

*<!DOCTYPE html>*

*<html lang="en">*

*<head>*

*<title>Bootstrap Example</title>*

*<meta charset="utf-8">*

*<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>*

*</head>*

*<body>*

*<div class="container">*

*<h1>My First Bootstrap Page</h1>*

*<p>This part is inside a .container class.</p>*

*<p>The .container class provides a responsive fixed width container.</p>*

*</div>*

*</body>*

*</html>*

* The following example shows the code for a basic Bootstrap 5 page (with a full width container):

**Container Fluid Example**

*<!DOCTYPE html>*

*<html lang="en">*

*<head>*

*<title>Bootstrap Example</title>*

*<meta charset="utf-8">*

*<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>*

*</head>*

*<body>*

*<div class="container-fluid">*

*<h1>My First Bootstrap Page</h1>*

*<p>This part is inside a .container-fluid class.</p>*

*<p>The .container-fluid class provides a full width container, spanning the entire width of the viewport.</p>*

*</div>*

*</body>*

*</html>*