

BOOTSTRAP



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TUTORIAL

A PRESENTATION BY

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What is Bootstrap?



Bootstrap is a free and open-source CSS framework widely used. It is used for responsive, mobile-first front-end web development. Bootstrap is written in HTML, CSS, Less (v3), Sass (v4) and JavaScript.

Bootstrap was originally named Twitter Blueprint and it was developed by Mark Otto and Jacob Thornton at Twitter as a framework to encourage consistency across internal tools.



Build fast, responsive sites with Bootstrap

Powerful, extensible, and feature-packed frontend toolkit. Build and customize with Sass, utilize prebuilt grid system and components, and bring projects to life with powerful JavaScript plugins.

```
$ npm i bootstrap@5.3.2
```



 [Read the docs](#)

Currently **v5.3.2** · [Download](#) · [All releases](#)

Comprehensive set of plugins

Bootstrap features a dozen plugins that you can drop into any project. Drop them in all at once, or choose just the ones you need.

Alert

Show and hide alert messages to your users.

Button

Programmatically control the active state for buttons.

Carousel

Add slideshows to any page, including support for crossfade.

Collapse

Expand and collapse areas of content, or create accordions.

Dropdown

Create menus of links, actions, forms, and more.

Modal

Add flexible and responsive dialogs to your project.

Offcanvas

Build and toggle hidden sidebars into any page.

Popover

Create custom overlays. Built on Popper.

Scrollspy

Automatically update active nav links based on page scroll.

Tab

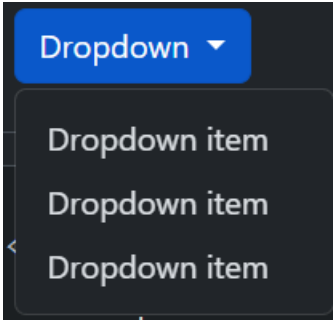
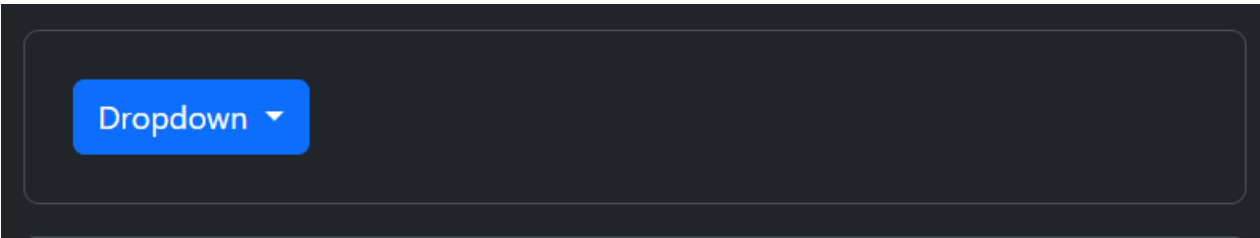
Allow Bootstrap nav components to toggle contents.

Toast

Show and hide notifications to your visitors.

Tooltip

Replace browser tooltips with custom ones. Built on Popper.



```
<div class="dropdown">
  <button class="btn btn-primary dropdown-toggle" type="button" data-b
    Dropdown
  </button>
  <ul class="dropdown-menu">
    <li><button class="dropdown-item" type="button">Dropdown item</but
    <li><button class="dropdown-item" type="button">Dropdown item</but
    <li><button class="dropdown-item" type="button">Dropdown item</but
  </ul>
</div>
```

ADVANTAGE

- **Rapid Development:** Bootstrap accelerates the development process by providing a set of pre-designed components and styles. This can save developers a significant amount of time when building responsive and visually appealing interfaces.
- **Consistency:** Bootstrap ensures consistency across different browsers and devices, offering a standardized look and feel. This is particularly useful for projects where maintaining a uniform user experience is important.
- **Responsive Design:** Bootstrap is built with a mobile-first approach, making it easy to create responsive and mobile-friendly designs without a lot of additional effort.

DISADVANTAGE

- File Size: Including the entire Bootstrap framework in a project can lead to larger file sizes. This might impact page load times, especially for projects where performance is a critical concern.
- Overhead: Projects that do not require the extensive features provided by Bootstrap may have unnecessary overhead. If a simple website or application is being developed, using a smaller, more specialized framework or starting from scratch might be more efficient.
- Dependency on JavaScript: Some of Bootstrap's components rely on JavaScript. If a project has strict requirements regarding the use of JavaScript, this could be considered a disadvantage.

LIBRARY OF BOOTSTRAP

- **bootstrap Icons:**

Description: A library of free, high-quality SVG icons that can be easily integrated into Bootstrap projects.

Syntax: Icons are usually added using HTML and the appropriate Bootstrap Icons classes.
For example:

`<i class="bi bi-heart"></i>`

Where to Include:

The Bootstrap Icons library provides instructions for adding the necessary files to your project. Typically, you include them in the `<head>` section of your HTML file.

- **Font Awesome:**

Description: A popular icon library providing a wide range of scalable vector icons. It can be used with Bootstrap for additional icon options.

Syntax: Icons are added using HTML and Font Awesome classes.

For example:

`<i class="fas fa-heart"></i>`

Where to Include:

Include the Font Awesome CSS file in the `<head>` section of your HTML file.

- **jQuery:**

Description: While Bootstrap has moved towards native JavaScript in recent versions, some older versions (such as Bootstrap 3) rely on jQuery for certain components. Make sure to check the version and requirements.

Syntax: jQuery syntax varies based on the specific functionality you are implementing. Here's a basic example:

```
<script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
<script>
  $(document).ready(function(){
    // Your jQuery code here
  });
</script>
```

Where to Include:

Typically, include jQuery before the Bootstrap JavaScript file in the <head> section of your HTML file.

USE OF BOOTSTRAP

- **Responsive Web Design:** Bootstrap is known for its mobile-first approach, making it a go-to choice for creating responsive websites. It provides a responsive grid system and fluid typography, allowing developers to design interfaces that adapt seamlessly to different screen sizes and devices.
- **Front-End Development Efficiency:** Bootstrap simplifies front-end development by providing a set of ready-to-use components, such as navigation bars, buttons, forms, and more. This can significantly reduce the amount of manual coding and styling required.
- **Cross-Browser Compatibility:** Bootstrap takes care of many cross-browser compatibility issues, reducing the need for extensive testing and ensuring a consistent experience for users across various browsers.
