



The Importance of Bootstrap in Front End Development

Nikhil Deshpande , Tejas Borade

MCA Department (Mumbai University), ASM Institute of Management & Computer Studies

ABSTRACT:

Bootstrap is nothing but a popular HTML, CSS and JavaScript framework for responsive and mobile website development. Bootstrap is a popular HTML, CSS and JavaScript framework for creating responsive and mobile friendly websites. Undoubtedly one of the great benefits of using Bootstrap is the speed of development. If you are looking to launch a new website or app immediately, you should consider using Bootstrap. Bootstrap has a great support community behind it so you can get help when you encounter problems. Moreover, Bootstrap itself is constantly being updated and the creators have been really good about releasing timely updates. The Bootstrap framework allows for fast, responsive development that is consistent and well supported by the development and design community.

Introduction:

Bootstrap is a free and open source device for making responsive websites and web applications. It is a famous HTML, CSS, and JavaScript structure for creating responsive, high level mobile websites. It takes care of a significant number of the issues we once had, one of which is the issue of similarity with programs. Today, websites are reasonable for all programs (IE, Firefox, and Chrome) as well as all screen sizes (Desktop, Tablets, Phablets, Phones). Thanks to all Bootstrap developers - Mark Otto and Twitter 's Thor Thornton, although it was later called an open source project.

Definition:

- Bootstrap is a flexible and dynamic front frame that provides a free collection of tools for creating websites and web applications.
- With HTML, CSS, and JavaScript components Bootstrap makes end-to-end web development faster and easier for responsive mobile startup projects.
- Bootstrap is a powerful advanced framework used to build modern websites and web applications. It is open source and free to use, however it includes many HTML and CSS templates for UI interactive elements such as buttons and forms.
- It is a free and open source; hosted, developed, and maintained on GitHub. Bootstrap and supports JavaScript extensions.

Bootstrap includes:

- Scaffolding: global styles, fluid grid system and structures, responsive design.
- Base CSS: Essential HTML elements for typing, tables, forms, buttons, images, etc. which can be organized and developed with the increase of classrooms.
- Extensive list of components: reusable components such as thumbnails, drop-downs, input groups, navigation bars, crumbs, labels and badges, alerts, media items, and much more.
- JavaScript plugins: jQuery plugin changes, slides, popovers, tabs, accordions, carousels, typeahead, models, etc.
- Custom Features: Developers can build their own version of Bootstrap components, SMALL variables, and jQuery plugins.

Importance of Bootstrap in front end development:

- Bootstrap is a framework that will help you design websites quickly and easily. Includes HTML and CSS based templates for typography, forms, buttons, tables, navigation, modals, image carousels, etc. It also gives you support for JavaScript plugins.
- Website designers and web developers like Bootstrap since it is adaptable and simple to work with. Its main advantages are that it responds with design, maintains wide browser compatibility, provides consistent design through usable components, and is very easy to use and quick to learn.

Advantages:

- Easy to start and use. Bootstrap uses two popular CSS pre processors, Less and Sass. For those who do not want or do not know how to use the framework provides a blank CSS file. After downloading the files from the Bootstrap website, the developer should open them and add them to the HTML file header. These simple steps provide access to the entire framework. The developer can use the default Bootstrap grid and any of the Bootstrap classes previously defined.
- Contrasting browser compatibility. Bootstrap aims to create a multi-purpose code in the middle and match the final result across all forums. It supports the latest versions of all major browsers and degrades to older browsers like IE 8. Software that uses Bootstrap ensures autonomous performance of the platform.
- The first mobile method. From version 2.0 the framework supports responsive web design, in which the web page layout is adjusted flexibly depending on the type and size of the device being viewed. Starting with version 3.0, Bootstrap uses the original mobile design styles throughout the library.
- Responsive Grid. Bootstrap installs a 12-column responsive grid system. These grids have categories xs, sm, md and lg each defined by device configuration. All the engineer had to do was use these classes while explaining the appearance of the object on the shells. Developing responsive websites has never been so easy.
- Rich feature set. Bootstrap offers a wide range of custom HTML and CSS components, JavaScript plugins, 12 responsive columns grids, typography, form controls, and a Web-based Customizer. Whether it is a modified or responsive grid, reset and reposition columns - it's a matter of a few simple changes. The developer has free access to any of the classes and sections and can easily apply those required features to certain packages without having to load too much code.
- Regular updates. Bootstrap is quite possibly of the most often updated framework that anyone could hope to find on the web. As soon as any problem arises, the Bootstrap development team resolves it and creates a new release. Users can always be confident that they are working with the latest and safest tool

Bootstrap 5 Grid System**The Grid System**

Bootstrap's framework is worked with flexbox and permits up to 12 columns across the page.

If you choose to not to use all 12 columns individually, you can combine columns together to create wider columns and use them:

span 1	span 1	span 1		span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1
	span 4				span 4				span 4			
	span 4				span 8							
	span 6						span 6					
	span 12											

This grid system is responsive, and the columns will re-arrange automatically depending on the current screen of the screen.

Make sure that the sum adds up to 12 or fewer (it's not mandatory that you should use all 12 available columns).

Grid Classes

The Bootstrap 5 grid system has six classes:

- **.col-** (extra small devices - screen width less than 576px)
- **.col-sm-** (small devices - screen width equal to or greater than 576px)
- **.col-md-** (medium devices - screen width equal to or greater than 768px)
- **.col-lg-** (large devices - screen width equal to or greater than 992px)

- `.col-xl`- (xlarge devices - screen width equal to or greater than 1200px)
- `.col-xxl`- (xxlarge devices - screen width equal to or greater than 1400px)

The classes above can be combined to create more dynamic, responsive and flexible layouts of web pages.

Conclusion:

Bootstrap allows for rapid, responsive improvement that is reliable and well supported by the development and design community. As the framework keeps on creating, the reasons to utilize Bootstrap continue to mount. In the event that you've ignored this framework, it's presumably time to check it out.

There are several benefits to using Bootstrap. The framework allows for rapid, responsive improvement that is steady and well supported by the development and design community.

Reference :

W3 Schools

Geeks for Geeks