

Bootstrap

Introduction to Bootstrap



- **Introduction to Bootstrap**
- **Why Bootstrap?**
- **Bootstrap Advantages**
- **SCSS Introduction**
- **Creating Bootstrap page**





- Bootstrap is the most popular, open source HTML, CSS, JavaScript framework for developing responsive, mobile first projects on the web.(static website as well as dynamic web application)
- Bootstrap 4 is the newest version of Bootstrap and it's 4.0.0 beta version was released in August 2017.
- Mobile-first approach is at it's core of Bootstrap 4 development similar to prior version i.e. version 3.
- Bootstrap was developed by Mark Otto and Jacob Thornton at Twitter. It was released as an open source product in August 2011 on GitHub.
- *getbootstrap.com* is the Official Website of Twitter Bootstrap.



- We can design the front end for a website with a little knowledge of HTML and CSS. i.e. Developers can easily create professional WebPages like a web designers
- Bootstrap's responsive design adjusts to range of screen sizes such as Desktops, Tablets and Mobiles.
- Bootstrap provides scaffolding feature by providing a basic structure with Grid System, link styles, background.
- Provides a clean and uniform solution for building an interface for developers.



- Bootstrap contains a dozen built-in reusable components and to provide iconography, dropdowns, navigation, alerts, popovers, and much more
- It also provides custom jQuery plugins
- It is supported by all popular browsers.



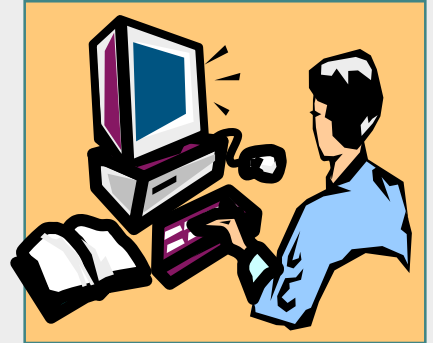
- **Speed of Development**
- **Responsiveness**
- **Consistency**
- **Customizable**
- **Support**



- SASS stands for Syntactically awesome style sheets.
- It is a pre-processor scripting language that is compiled into Cascading Style Sheets (CSS).
- The official implementation of SASS is open-source and coded in Ruby. Other implementations also exist which include Dart, PHP, and a high-performance implementation in C called libSass.
- SASS is fully CSS-compatible and it comes with a wide range of useful features that are not available in traditional CSS, such as variables, mixins, nested rules, functions, and operators.
- The easiest way to compile LESS files is to install Node.js and use its package manager NPM to install SASS.
- We can also compile SASS online via <https://www.sassmeister.com/>



➤ Online SASS Compiler using sassmeister.com





- Revamped grid tiers(to add a fifth option)
- Flexbox is enabled by default
- Dropping support for IE9 and iOS 6 , Supporting IE 10 and higher
- Dropping support for Glyphicons (Font-Awesom or other icon libraries can be used)
- Source CSS file format changed from Less to Sass
- Primary CSS unit, Switched from px to rem
- Non-responsive usage of Bootstrap is no longer supported



- Bootstrap 4 is too mobile first in the sense that the code for Bootstrap starts by targeting smaller screens like mobile devices, tablets, and then "expands" components and grids for larger screens such as laptops, desktops.
- Following points need to be considered for mobile first strategy
 - **Content** : Determine what is most important.
 - **Layout** : Design to smaller widths first. i.e. Base CSS address mobile device first. media queries address for tablet and desktops
 - **Progressive Enhancement** : Add elements as screen size increases

1.2: Getting Started with Bootstrap

Bootstrap home page



The screenshot shows the Bootstrap website in a web browser. The browser's address bar displays 'https://getbootstrap.com'. The website's navigation bar is dark purple with a 'B' logo, links for 'Home', 'Documentation', 'Examples', 'Themes', 'Expo', and 'Blog', the version 'v4.2', social media icons, and a 'Download' button. The main content area features the 'Bootstrap' title, a description of the framework, a detailed paragraph about its features, two call-to-action buttons ('Get started' and 'Download'), and the current version 'v4.2.1'. On the right, there is a large graphic of three stacked purple diamonds with a white 'B' logo on the top one.

Bootstrap · The most popular HTML CSS JS framework for developing responsive, mobile-first projects on the web

Home Documentation Examples Themes Expo Blog v4.2 Download

Bootstrap

Build responsive, mobile-first projects on the web with the world's most popular front-end component library.

Bootstrap is an open source toolkit for developing with HTML, CSS, and JS. Quickly prototype your ideas or build your entire app with our Sass variables and mixins, responsive grid system, extensive prebuilt components, and powerful plugins built on jQuery.

[Get started](#) [Download](#)

Currently v4.2.1



- We can work with Bootstrap using two ways
 - By downloading compiled and minified CSS, JavaScript, and fonts.
 - By using CDN(Content Delivery Network) links.
- We can also download Bootstrap source code which includes the latest Bootstrap SCSS, JavaScript source code and documentation files.
- Bootstrap 4 has dropped the online Customizer in favour of more extensive setup documentation and customized builds.
- Theming and component changes can be done with new built-in Sass variables for global style preferences.

Bootstrap 4 pre-compiled folder structure



```
bootstrap/  
├── css/  
│   ├── bootstrap-grid.css  
│   ├── bootstrap-grid.css.map  
│   ├── bootstrap-grid.min.css  
│   ├── bootstrap-grid.min.css.map  
│   ├── bootstrap-reboot.css  
│   ├── bootstrap-reboot.css.map  
│   ├── bootstrap-reboot.min.css  
│   ├── bootstrap-reboot.min.css.map  
│   ├── bootstrap.css  
│   ├── bootstrap.css.map  
│   ├── bootstrap.min.css  
│   └── bootstrap.min.css.map  
└── js/  
    ├── bootstrap.bundle.js  
    ├── bootstrap.bundle.js.map  
    ├── bootstrap.bundle.min.js  
    ├── bootstrap.bundle.min.js.map  
    ├── bootstrap.js  
    ├── bootstrap.js.map  
    ├── bootstrap.min.js  
    └── bootstrap.min.js.map
```

Bootstrap 4 source code folder structure



```
bootstrap/  
├── dist/  
│   ├── css/  
│   └── js/  
├── docs/  
│   └── examples/  
├── js/  
└── scss/
```



- Bootstrap provides us the following default styles to webpage which is included in the bootstrap.css file.
- Margin has been removed from the body, and content will snug up to the edges of the browser window.
- Background-color white is by default applied to `<body>`.
- Bootstrap 4 is using the `$font-family-base`, `$font-size-base`, and `line-height-base` attributes as our typographic base applied to the `<body>`. This allows the height of headings and other content around the site to maintain a similar line height.
- Bootstrap sets the global link color via `$link-color` and applies link underlines only on `:hover`



- To turn on the responsive features of Bootstrap, we need to add a `<meta>` tag to the `<head>` of your web page.
- It represents mobile specific meta data.

```
<!DOCTYPE html>
<html lang="en">
<head>
<title>Creating Sample website</title>
  <!-- Mobile Specific Meta -->
  <meta name="viewport" content="width=device-width, initial-
scale=1, maximum-scale=1">
  <!-- Latest compiled and minified CSS -->
  <link href="../bootstrap-4.2.1-dist/css/bootstrap.min.css"
rel="stylesheet">
</head>
<body></body>
</html>
```


1.2: Getting Started with Bootstrap

Bootstrap basic template

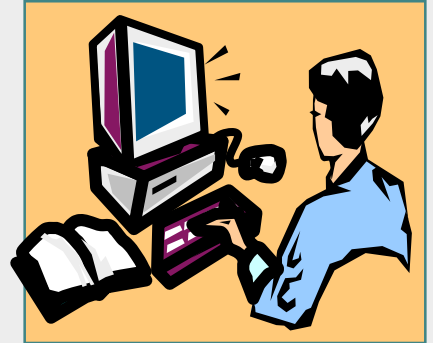


```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <title>Bootstrap Basic template</title>

    <!-- Bootstrap -->
    <link href="../../bootstrap-4.2.1-dist/css/bootstrap.min.css" rel="stylesheet">
  </head>
  <body>
    <div class="container">
      <h1>Hello, Capgemini!</h1>
    </div>
    <!-- jQuery (necessary for Bootstrap's JavaScript plugins) -->
    <script src="../../jQuery/jquery-3.3.1.slim.min.js"></script>
    <!-- popper.js (necessary for Bootstrap's JavaScript plugins) -->
    <script src="../../PopperJS/popper.min.js"></script>
    <!-- Include all compiled plugins (below), or include individual files as needed -->
    <script src="../../bootstrap-4.2.1-dist/js/bootstrap.min.js"></script>
  </body>
</html>
```



➤ Basics





- Using bootstrap we can design the front end for a website with a little knowledge of HTML and CSS.
- Bootstrap is supported by all popular browsers
- Like Bootstrap 3, Bootstrap 4 too has been build to have a mobile-first approach.
- SASS is a dynamic style sheet language that is compiled into CSS

