



Chapter 10 (2.1)

Basics of Bootstrap



Objectives

At the end of this session, you will be able to:

- Describe Bootstrap
- Explain the basic concepts of Bootstrap
- Describe the process of setting up Bootstrap
- Outline the file structure and the default source code in Bootstrap
- Use Bootstrap with CSS and JS
- Describe the significance of Bootstrap templates



Introduction (1-2)

- Bootstrap is an open-source framework
- It is easy to use and understand
- It is also known as front-end Framework
- Used to make responsive Websites and Web applications
- It includes JS (JavaScript), CSS (Cascading Style Sheets), and HTML (Hyper Text Mark-up Language).
- It designs variety of components – forms, layout, navigation, and JavaScript Extensions.



Introduction (2-2)

- Bootstrap is:

CSS
Framework

Templating
System

JS Toolkit



Benefits of Bootstrap (1-4)

Easy and Flexible

- It is easy, adaptable and quick to use
- It can be used with CSS, LESS, or SASS (Syntactically Awesome Style Sheets)

100% Responsive Designs

- Adaptive to each Internet-enabled devices – tablets, smartphones, and laptops
- Fluid Grid Layout readjusts dynamically to the screen resolution

Great Grid System

- Implements 12 columns responsive grid
- Supports offset and nested elements



Benefits of Bootstrap (2-4)

Better Development Speed

- It has readymade blocks of code for designing
- Developers are not required to know HTML and CSS coding

Browser Compatibility

- Resolves many cross-browser compatibility issues
- Web applications runs smoothly in Web browsers – Chrome, Safari, IE (Internet Explorer), and Firefox

Customization

- It can be customized by selecting required aspects available on the Bootstrap customize page



Benefits of Bootstrap (3-4)

Consistency

- Mark Otto released first open-source Bootstrap version
- He also described framework expansion through single core concept of merging designers and developers

Big Support

- Web developers can get can kind of help from a big supportive community of Bootstrap
- It is hosted and updated on GitHub with 500 contributors

Bundled JavaScript Components

- A pre-defined set of JS components are used for different functionalities of User Interface components
- Examples – tooltips, alerts, and modal windows



Benefits of Bootstrap (4-4)

Simple Integration

- Bootstrap can be integrated with other frameworks and platforms, also for existing Websites

Extensive Pre-styled Components

- Bootstrap has different pre-styled components for Drop-downs, alerts, and navigation bars



Setting Up Bootstrap

- Easy to download, install, and set up
- Two ways to start:

Download from
getbootstrap.com

Include it from
Content Delivery
Network (CDN)



Download Bootstrap

- Download bootstrap latest version 3.3.7
- Follow the steps to download:

Go to homepage of
getbootstrap.com



Click the 'Download
Bootstrap' button



Select the option from
download page – Download
bootstrap, download source,
and download Sass



Content Delivery Network (CDN)

- Content Delivery Network (CDN) is a network of distributed servers
- Delivers Webpages or Web content to various user locations
- It is for those developers who do not want to host the framework
- Closer the server, faster the network
- Benefit of fast and quick loads



File Structure and Source Code

- A ZIP file contains the directories and files
- Extracted files are: structured CSS, JavaScript, and font directories
- Web developers uses desired components and plugins by drag-drop on a Webpage
- **Bootstrap.*.maps** contains CSS source maps
- Includes Glyphicon fonts and bootstrap theme (optional)

File Structure of Precompiled Bootstrap Version

```
bootstrap/
+-- css/
|   +-- bootstrap.css
|   +-- bootstrap.css.map
|   +-- bootstrap.min.css
|   +-- bootstrap.min.css.map
|   +-- bootstrap-theme.css
|   +-- bootstrap-theme.css.map
|   +-- bootstrap-theme.min.css
|   +-- bootstrap-theme.min.css.map
+-- js/
|   +-- bootstrap.js
|   +-- bootstrap.min.js
+-- fonts/
    +-- glyphicon-halfings-regular.eot
    +-- glyphicon-halfings-regular.svg
    +-- glyphicon-halfings-regular.ttf
    +-- glyphicon-halfings-regular.woff
    +-- glyphicon-halfings-regular.woff2
```



Bootstrap File Structure

- Bootstrap File Structure has following categories:

Scaffolding	CSS	Components
<ul style="list-style-type: none">• Basic grid structure• Simple layouts• Background• Link Styles	<ul style="list-style-type: none">• Global CSS settings• Advanced Grid System• Basic HTML elements styles	<ul style="list-style-type: none">• Styles for reusable components• Alerts, tabs, and page headers
JavaScript Plugins		
<ul style="list-style-type: none">• Customs and interactive jQuery plugins• Modals, tooltips, and popovers		



Default Bootstrap Template

- Conversion from HTML file into Bootstrapped file
- Include JQuery library before Bootstrap library
- Template includes following files:

Bootstrap.min.css

Jquery.min.js

Bootstrap.min.js

Html5shiv.min.js

Respond.min.js



MaxCDN Code

```
<!-- Compiled and minified CSS -->
<link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css">

<!-- Optional theme -->
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap-theme.min.css">

<!-- Compiled and minified jQuery -->
<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.2.0/jquery.min.js"></script>

<!-- Compiled and minified JavaScript -->
<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/js/bootstrap.min.js"></script>
```

Bootstrap with CSS

- Bootstrap 2 had discretionary mobile-friendly styles
- Bootstrap 3 is mobile-friendly entirely
- A container element contains all the Website contents and grid system
- Two types of containers:

Fixed

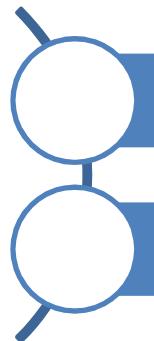
- Preset width of viewport
- Does not change the width
- Easy to use and personalize
- Width in pixels
- *.container* class in <div> tag

Fluid

- Covers the width of whole viewport
- Changes the width as per change in the screen size
- Width is in percentage
- *.container-fluid* class in <div> tag

Bootstrap with JavaScript (1-2)

- Include JavaScript Plugins by two ways:



Using *.js files



Using bootstrap.js or bootstrap.min.js files

- Two ways of using JavaScript plugins:



Data attributes



JavaScript



Bootstrap with JavaScript (2-2)

Events

- Handle distinct actions of plugins
- Infinitive form and past participle form

Transitions

- Include transition.js to apply transition effects
- To achieve sliding and fading effects



Templates in Bootstrap

- A mock Website designed using Bootstrap framework
 - Components – JS code, CSS code, HTML pages, fonts, and images
 - Used for – e-commerce site, corporate portal, blog, or static page
 - Blog Bootstrap template page:

Page Heading Secondary Text

Blog Post Title

By Start Bootstrap

© Posted on August 28, 2013 at 10:00 PM



Blog Categories

Category Name	Category Name

Side Widget Well

Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam, eaque ipsa quae ab illo inventore perpedita est, et accusamus



Summary (1-3)

- Bootstrap is an open-source Web framework for quickly developing front-end and responsive applications.
- Bootstrap uses CSS, HTML, JavaScript, and jQuery design interactive Webpages.
- Customization, browser compatibility, fully responsive pages, and an assortment of built-in components are the major benefits of Bootstrap.
- There are two ways to start using Bootstrap namely, downloading its files from getbootstrap.com or including them from a CDN.



Summary (2-3)

- The structure of the precompiled Bootstrap version includes the css, js, and fonts directories offering components and plugins for drag-n-drop usage.
- The basic HTML Bootstrapped template includes **bootstrap.min.css**, **jquery.min.js**, **bootstrap.min.js**, and the jQuery library prior to the Bootstrap library.
- The default Bootstrapped template contains the viewport meta tag to make a Webpage responsive.



Summary (3-3)

- Bootstrap 3 is mobile first, which means the mobile-friendly styles are present throughout the library rather than in isolated files.
- Bootstrap comes with two types of containers namely, fixed width and full width containers.
- There are two ways of using JavaScript plugins namely, through data attributes and via JavaScript.
- Bootstrap template are sample Webpages designed for using the bootstrap framework.



Q & A