Learn "Mobile First" Web Design Using

Twitter Bootstrap 3
(Complete Practical Approach)

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Chapter 1 Bootstrap Essentials

1. Who can Learn Bootstrap?

Bootstrap is mostly for people who have a basic knowledge on HTML/CSS and optional knowledge of JavaScript, and are curious about building their own responsive sites, adding the Bootstrap JavaScript plugins, or building sites faster by using this popular open source framework.

2. Why to Learn Bootstrap?

It is essential to know why we are going to learn "Bootstrap". First thing I want to tell about Bootstrap is, it is a "Mobile First" technology to build responsive websites. You may have this question why we should design "Mobile First" site, the answer is simple because 60-65% of internet users are from mobile or tablets. We build HTML websites in college or in workplaces which is non-responsive that means you have to Scroll-in, scroll-out , Zoom In/Out regularly to view contents of site on mobile devices. That will make irritation to mobile/tablet user because it is not user friendly site for them. So they will use your site less or may not use it at all. And it is super flop idea to build mobile app for each mobile platform Or to code HTML for each device. That may downgrade your value in market in the sense of reputation and money. So that's why you should learn Bootstrap and if you aren't in love with some of the bootstrap default interface elements, they can be overwritten easily or you can just strip out the associated tags. If you are looking for an easy way to build fast, responsive websites, Bootstrap is a great way to get going. I use it on all of my projects, and I'm really happy with it. Let, we know more about what is bootstrap and how to download it.

3. What is Bootstrap?

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 Hack week. By the end of Hack week, we had reached a stable version that engineers could use across the company.

— Mark Otto
https://twitter.com/mdo

Since Bootstrap launched in August 2011, it has taken off in popularity. It has evolved from being an entirely CSS-driven project to include a host of JavaScript plugins and icons that go hand in hand with forms and buttons. At its base, it allows for responsive web design and features a robust 12-column, 940px-wide grid.

One of the highlights is the build tool on *Bootstrap's website*, where you can customize the build to suit your needs, choosing which CSS and JavaScript features you want to include on your site. All of this allows frontend web development to be catapulted forward, building on a stable foundation of forward-looking design and development. Getting started with Bootstrap is as simple as dropping some CSS and JavaScript into the root of your site.

For someone starting a new project, Bootstrap comes with a handful of useful elements. Normally, when I start a project, I start with tools like *Sublime Text* OR *Abode Dreamweaver* and get going on my responsive web project.

4. Bootstrap File Structure

```
bootstrap/
├── css/
│       ├── bootstrap.css
│       ├── bootstrap.css.map
│       ├── bootstrap.min.css
│       ├── bootstrap-theme.css
│       ├── bootstrap-theme.css.map
│       └── bootstrap-theme.min.css
├── js/
│       ├── bootstrap.js
│       └── bootstrap.min.js
└── fonts/
        ├── glyphicons-halflings-regular.eot
        ├── glyphicons-halflings-regular.svg
        ├── glyphicons-halflings-regular.ttf
        ├── glyphicons-halflings-regular.woff
        └── glyphicons-halflings-regular.woff2
```

This is the most basic form of Bootstrap: precompiled files for quick drop-in usage in nearly any web project. Bootstrap provide compiled CSS and JS (bootstrap.*), as well as compiled and minified CSS and JS (bootstrap.min.*). CSS Source Maps (bootstrap.*.map) are available for use with certain browser's developer tools. Fonts from Glyphicons are included, as is the optional Bootstrap theme.

Chapter 1.1 Getting Started

Basic HTML Page:

Generally, basic HTML code look like this

```
<!DOCTYPE html>
<html>
   <head>
          <title>Unlinked Template 1</title>
   </head>
    <body>
           <h1>Hello, bootstrap!</h1>
      </body>
</html>
```

To link this template with boostrap you have to write just one <link> and <script> tag as follows.

You must save following file in your extracted bootstrap directory otherwise the code will not work

```
<!DOCTYPE html>
<html>
   <head>
          <title>Linked Template 1</title>
          <link href="css/bootstrap.min.css" rel="stylesheet">
   </head>
    <body>
           <h1>Hello, bootstrap!</h1>
           <script src="js/bootstrap/min.js"></script>
      </body>
</html>
```

Disabling Responsiveness

Bootstrap automatically adapts your pages for various screen sizes. Here's how to disable this feature so your page works like this
http://getbootstrap.com/examples/non-responsive/

Steps to disable page responsiveness:

Omit the viewport <meta> mentioned in the CSS docs

> 1. *Override the width on the .container for each grid tier with a single width, for example width: 970px !important; Be sure that this comes after the default Bootstrap CSS. You can optionally avoid the !important with media queries or some selector-fu.*
>
> 2. *If using navbars, remove all navbar collapsing and expanding behavior.*
>
> 3. *For grid layouts, use .col-xs- classes in addition to, or in place of, the medium/large ones. Don't worry, the extra-small device grid scales to all resolutions.*

You'll still need Respond.js for IE8 (since our media queries are still there and need to be processed). This disables the "mobile site" aspects of Bootstrap.

Browser And Device Support

Bootstrap is built to work best in the latest desktop and mobile browsers, meaning older browsers might display differently styled, though fully functional, renderings of certain components.

Supported browsers

Specifically, bootstrap support the **latest versions** of the following browsers and platforms. On Windows, **bootstrap support Internet Explorer 8-11**. More specific support information is provided below.
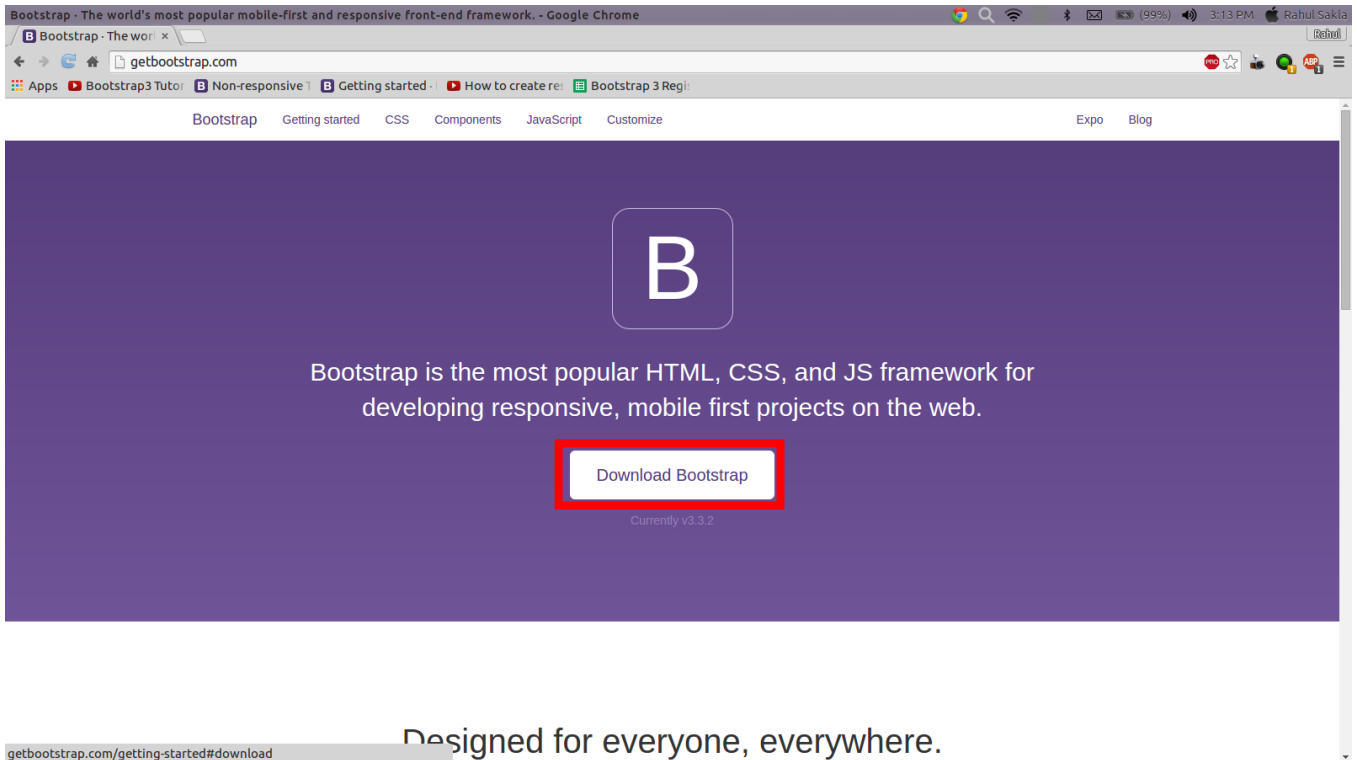
	Chrome	Firefox	Internet Explorer	Opera	Safari
Android	Supported	Supported		Not Supported	N/A
iOS	Supported	N/A	N/A	Not Supported	Supported
Mac OS X	Supported	Supported		Supported	Supported
Windows	Supported	Supported	Supported	Supported	Not Supported

Unofficially, Bootstrap should look and behave well enough in Chromium and Chrome for Linux, Firefox for Linux, and Internet Explorer 7, though they are not officially supported.
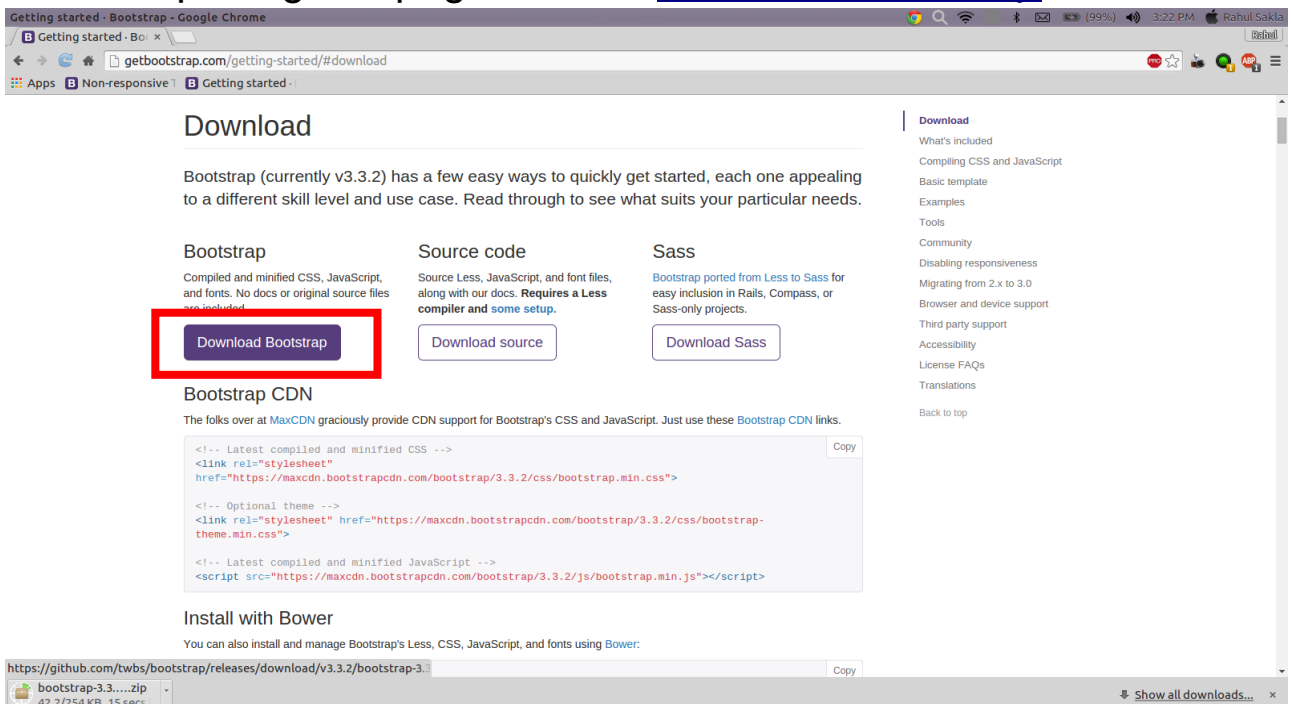
Chapter 1.2 Download And Configure Bootstrap

First Way: Download Zip for minified version(Recommended)

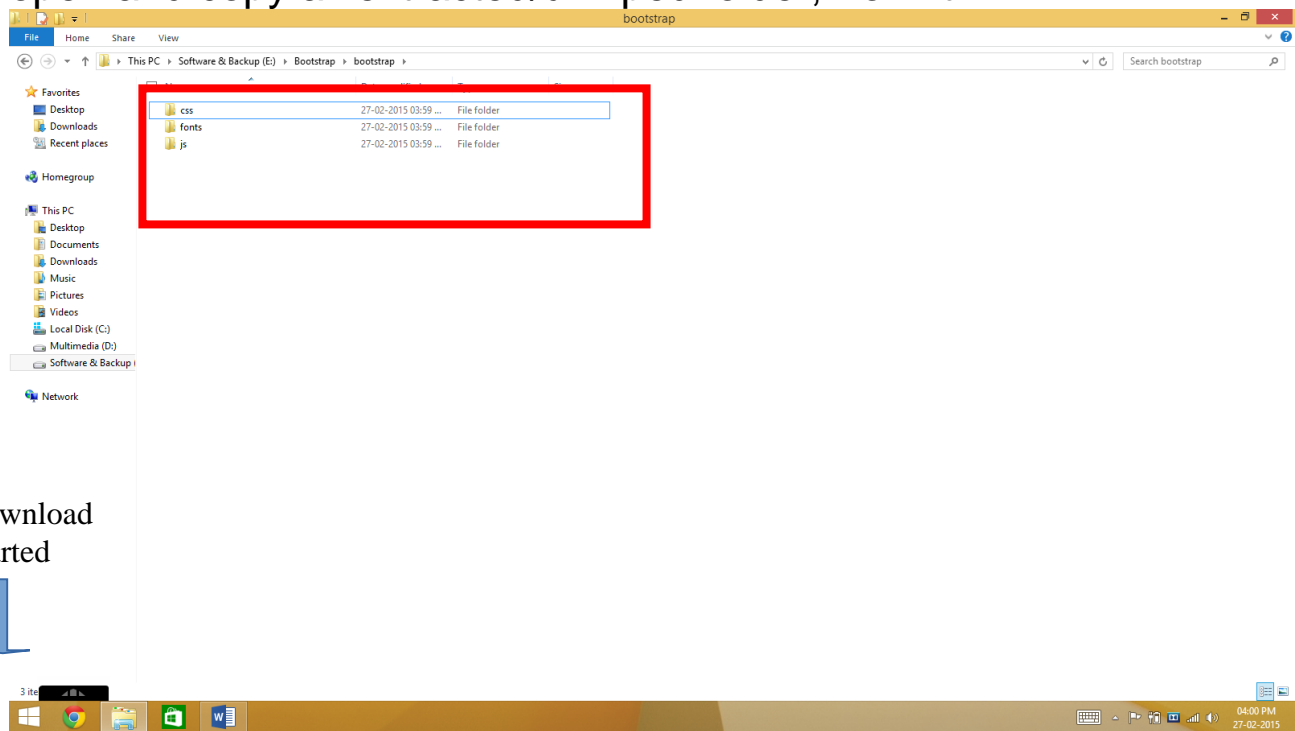1. Go to *http://getbootstrap.com/* and click on *Download Bootstrap*

2. After opening this page click on *Download Bootstrap*

3.After Download Open Download Location and Extratct zip and open and copy all extracted/unziped folder, from it.

Download
Started

4. Paste That Copied Folder in any new folder or in root of your websites folder.

Second Way: Use CDN

Just add this CDN link to your code
Or copy CDN from http://www.bootstrapcdn.com/

What is CDN?
*A **content delivery network** (**CDN**) is a system of distributed servers (network) that deliver webpages and other Web content to a user based on the geographic locations of the user, the origin of the webpage and a content delivery server.*

You Must be connected to internet while using this CDN otherwise your code will not work.

Always use CDN while you are developing real website which will be hosted on server because it will load faster.

Why site will be load faster?
The answer is simple if any user explored site which required bootstrap, the bootstrap JavaScript will be stored in cache and cookies of browser and while loading your site it will be previously available there for you.

```
<!-- Latest compiled and minified CSS -->
<link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.2/css/bootstrap.min.css">

<!-- Optional theme -->
<link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.2/css/bootstrap-theme.min.css">

<!-- Latest compiled and minified JavaScript -->
<script
src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.2/js/bootstrap.min.js"></script>
```

Third Way: Install with Bower

What is Bower?
Bower is a package manager for Javascript libraries that allows you to define, version, and retrieve your dependencies.

$ bower install bootstrap

Fourth Way: Install with npm

What is npm?
Npm is a package manager for JavaScript, and is the default for Node.js. As of Node.js version 0.6.3, **npm** is bundled and installed automatically with the environment. **Npm** runs through the command line and manages dependencies for an application.

$ npm install bootstrap

5. You Successfuly Downloaded and configured Bootstrap 3

6. Now you have to download and install any code editor such as Sublime Text. Or Adobe's Dreamweaver.

We will use Sublime Text Editor for entire tutorials in this book.

7. To download Sublime Text goto *http://www.sublimetext.com/2*
   And download compatible version.
Please, do not use beta version of Sublime as it may be unstable

8. Download JQuery v1.11.2 from JQuery.com and place it in js folder of
   Bootstrap.
   Please, always use JQuery CDN link if internet connection is available while
   Developing. Otherwise you must include CDN while you are hosting your
   site.

Basic Body of Bootstrap
Place example codes of this book, in the following body.

1) Without CDN

```
<!DOCTYPE HTML>
<html>
   <head>
      <meta charset="utf-8">
      <meta name="viewport" content="width=device-width, initial-scale=1.0">
      <title>Projects Bazaar's Tutorial</title>
      <link href="css/bootstrap.min.css" rel="stylesheet" type="text/css">
   </head>
<body>
<!—Write Your code below →



      <script src="js/jquery.min.js"></script>
      <script src="js/bootstrap.min.js"></script>
</body>
</html>
```

Always add java script files at the end of body because the size of java script may be long and it may take some time to load your page.

If you wrote it at start of body the page will not load until java script files are loaded, and user will not wait till loading of your java script files, he while just close site and may be never reopen it. Because he will the server of site is slow.

Always place jquery file before bootstrap java script file because bootstrap needed JQuery script files to load its content.
If you forget to include jQuery files then bootstrap will throw error.

2) With CDN

```
<!DOCTYPE HTML>
<html>
   <head>
      <meta charset="utf-8">
      <meta name="viewport" content="width=device-width, initial-scale=1.0">
      <title>Projects Bazaar's Tutorial</title>
      <link href
= "https://maxcdn.bootstrapcdn.com/bootstrap/3.3.2/css/bootstrap.min.css
" rel="stylesheet" type="text/css">

   </head>
<body>
 <!—Write Your Code Below →




<script src="http://code.jquery.com/jquery-1.11.2.min.js">
</script>
<script
src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.2/js/bootstrap.min.js">
</script>
</body>
</html>
```

Chapter 1.3 Bootstrap Overview

Overview

Get the lowdown on the key pieces of Bootstrap's infrastructure, including our approach to better, faster, stronger web development. Before getting started we have to know little bit about bootstrap components.

HTML5 Doctype

Bootstrap makes use of certain HTML elements and CSS properties that require the use of the HTML5 doctype. Include it at the beginning of all your projects.

```
<!DOCTYPE html>
<html lang="en">

  ...

</html>
```

Mobile First

With version 2, bootstrap added optional mobile friendly styles for key aspects of the framework. But in Bootstrap 3 they rewritten the project to be mobile friendly from the start. Instead of adding on optional mobile styles, they're baked right into the core. In fact, **Bootstrap is mobile first**. Mobile first styles can be found throughout the entire library instead of in separate files.

To ensure proper rendering and touch zooming, **add the viewport meta tag** to your <head>.

```
<meta name="viewport" content="width=device-width, initial-scale=1">
```

You can disable zooming capabilities on mobile devices by adding user-scalable=no to the viewport meta tag. This disables zooming, meaning users are only able to scroll, and results in your site feeling a bit more like a native application. Overall, we don't recommend this on every site, so use caution!

```
<meta name="viewport" content="width=device-width, initial-scale=1,
```

maximum-scale=1, user-scalable=no">

Typography and Links

Bootstrap sets basic global display, typography, and link styles. Specifically, we:

- Set background-color: #fff; on the body
- Use the @font-family-base, @font-size-base, and @line-height-base attributes as our typographic base
- Set the global link color via @link-color and apply link underlines only on :hover

These styles can be found within scaffolding.less.

Normalize.css

For improved cross-browser rendering, bootstrap use Normalize.css, a project by Nicolas Gallagher and Jonathan Neal.

You can download it from http://necolas.github.io/normalize.css/

And place it in root of your bootstrap directory.

Containers

Bootstrap requires a containing element to wrap site contents and house our grid system. You may choose one of two containers to use in your projects. Note that, due to padding and more, neither container is nestable.

Use .container for a responsive fixed width container.

```
<div class="container">
  ...
</div>
```

Use .container-fluid for a full width container, spanning the entire width of your viewport.

```
<div class="container-fluid">
  ...
</div>
```

Chapter 2 Grid System of Bootstrap

Bootstrap includes a responsive, mobile first fluid grid system that appropriately scales up to 12 columns as the device or viewport size increases. It includes predefined classes for easy layout options, as well as powerful mixins for generating more semantic layouts.

2.1 Introduction

Grid systems are used for creating page layouts through a series of rows and columns that house your content. Here's how the Bootstrap grid system works:

- Rows must be placed within a .container (fixed-width) or .container-fluid (full-width) for proper alignment and padding.

- Use rows to create horizontal groups of columns.

- Content should be placed within columns, and only columns may be immediate children of rows.

- Predefined grid classes like .row and .col-xs-4 are available for quickly making grid layouts. Less mixins can also be used for more semantic layouts.

- Columns create gutters (gaps between column content) via padding. That padding is offset in rows for the first and last column via negative margin on .rows.

- The negative margin is why the examples below are outdented. It's so that content within grid columns is lined up with non-grid content.

- Grid columns are created by specifying the number of twelve available columns you wish to span. For example, three equal columns would use three .col-xs-4.

- If more than 12 columns are placed within a single row, each group of extra columns will, as one unit, wrap onto a new line.

- Grid classes apply to devices with screen widths greater than or equal to the breakpoint sizes, and override grid classes targeted at smaller devices. Therefore, e.g. applying any .col-md-* class to an element will not only affect its styling on medium devices but also on large devices if a .col-lg-* class is not present.

Look to the examples for applying these principles to your code.

2.2 Grid Options:

	Extra small devicesPhones (<768px)	Small devices Tablets (≥768px)	Medium devices Desktops (≥992px)	Large devices Desktops (≥1200px)
Grid behavior	Horizontal at all times	Collapsed to start, horizontal above breakpoints		
Container width	None (auto)	750px	970px	1170px
Class prefix	.col-xs-	.col-sm-	.col-md-	.col-lg-
# of columns	12			
Column width	Auto	~62px	~81px	~97px
Gutter width	30px (15px on each side of a column)			
Nestable	Yes			
Offsets	Yes			
Column ordering	Yes			

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