

Bootstrap



Bootstrap

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Build fast, responsive sites with Bootstrap

Quickly design and customize responsive mobile-first sites with Bootstrap, the world's most popular front-end open source toolkit, featuring Sass variables and mixins, responsive grid system, extensive prebuilt components, and powerful JavaScript plugins.



What is Responsive Web Design?

- Responsive web design is about creating web sites which automatically adjust themselves to look good on all devices, from small phones to large desktops.
- Bootstrap is the most popular HTML, CSS, and JavaScript framework for developing responsive, mobile-first web sites.
- Bootstrap is completely free to download and use!
- Other free web development frameworks?
 - Laravel, Django, ASP.NET, Spring Web MVC, Cake PHP, Ruby on Rails, Code Igniter, Symfony and many more...

What is Bootstrap?

- Bootstrap is a free front-end framework for faster and easier web development
- Bootstrap includes HTML and CSS based design templates for typography, forms, buttons, tables, navigation, modals, image carousels and many other, as well as optional JavaScript plugins
- Bootstrap also gives you the ability to easily create responsive designs

Bootstrap History

- Bootstrap was developed by Mark Otto and Jacob Thornton at Twitter, and released as an open source product in August 2011 on GitHub.
- Advantages of Bootstrap:
 - **Easy to use:** Anybody with just basic knowledge of HTML and CSS can start using Bootstrap
 - **Responsive features:** Bootstrap's responsive CSS adjusts to phones, tablets, and desktops
 - **Mobile-first approach:** In Bootstrap 3, mobile-first styles are part of the core framework
 - **Browser compatibility:** Bootstrap is compatible with all modern browsers (Chrome, Firefox, Internet Explorer, Safari, and Opera)

Where to Get Bootstrap?

- There are two ways to start using Bootstrap on your own web site.
 - Download Bootstrap from getbootstrap.com
 - If you want to download and host Bootstrap yourself, go to getbootstrap.com, and follow the instructions there.
 - Include Bootstrap from a CDN
 - If you don't want to download and host Bootstrap yourself, you can include it from a CDN (Content Delivery Network).
 - MaxCDN provides CDN support for Bootstrap's CSS and JavaScript. You must also include jQuery.

Bootstrap CDN

- You must include the following Bootstrap's CSS, JavaScript, and jQuery from MaxCDN into your web page.

```
<!-- Latest compiled and minified Bootstrap CSS -->
```

```
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css">
```

```
<!-- Latest compiled Bootstrap JavaScript -->
```

```
<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/js/bootstrap.min.js"></script>
```

```
<!-- latest jQuery library -->
```

```
<script src="https://code.jquery.com/jquery-latest.js"></script>
```

- Advantage of using the Bootstrap CDN:
 - Many users already have downloaded Bootstrap from MaxCDN when visiting another site. As a result, it will be loaded from cache when they visit your site, which leads to faster loading time. Also, most CDN's will make sure that once a user requests a file from it, it will be served from the server closest to them, which also leads to faster loading time.

Create Web Page with Bootstrap (1)

- Add the HTML5 doctype
 - Bootstrap uses HTML elements and CSS properties that require the HTML5 doctype.
 - Always include the HTML5 doctype at the beginning of the page, along with the lang attribute and the correct character set:

```
<!DOCTYPE html>  
<html lang="en">  
  <head>  
    <meta charset="utf-8">  
  </head>  
</html>
```


Create Web Page with Bootstrap (2)

- Bootstrap is mobile-first
 - Bootstrap 3 is designed to be responsive to mobile devices. Mobile-first styles are part of the core framework.
 - To ensure proper rendering and touch zooming, add the following <meta> tag inside the <head> element:

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

- The width=device-width part sets the width of the page to follow the screen-width of the device (which will vary depending on the device).
- The initial-scale=1 part sets the initial zoom level when the page is first loaded by the browser.

Create Web Page with Bootstrap (3)

- Containers
 - Bootstrap also requires a containing element to wrap site contents.
 - There are two container classes to choose from:
 - The .container class provides a responsive **fixed width container**.
 - The .container-fluid class provides a **full width container**, spanning the entire width of the viewport.
- **Note:** Containers are not nestable (you cannot put a container inside another container).

[Check the working example](#)

1. Create an HTML Page

As a first step, we will create a simple **HTML** template as a base where we will use Bootstrap.

For that, the first thing you want to do is create a **folder** on your computer for the project files.

In this case, we will simply call it **bootstrap**.

Here, create a new text file and call it **index.html**. Open it with a text editor of your choice (e.g. Notepad++) and then use the code.

```
!DOCTYPE html>
<html lang="en">
  <head>
    <title>Bootstrap Tutorial Sample Page</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">

  </head>

  <body>
  </body>

</html>
```

2a. Load Bootstrap via CDN

```
<link rel="stylesheet"  
href="https://cdn.jsdelivr.net/npm/bootstrap@4.5.3/dist/css/bootstrap.min.css"  
integrity="sha384-TX8t27EcRE3e/ihU7zmQxVncDAy5uIKz4rEkgIXeMed4M0JlfIDPvg6uqKI2xXr2"  
crossorigin="anonymous">
```

<https://getbootstrap.com/docs/3.3/getting-started/>

2b. Host Bootstrap Locally

```
<link rel="stylesheet" href="bootstrap/css/bootstrap.min.css">
```

3. Include jQuery

- download jQuery, unzip, and put it into the project folder. Then, include it in the same place of your file in this way:

```
<script src="jquery-3.6.0.min.js"></script>
```

You can use it to load the library into your page by putting the line of code below right before where it says `</body>` on your page.

4. Load Bootstrap JavaScript

- The last step in setting up Bootstrap is to load the Bootstrap JavaScript library. However, we will load it in a different place than the style sheet. Instead of the header, it goes into the page footer, right after the call for jQuery.

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

Put it All Together

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <title>Bootstrap Tutorial Sample Page</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="bootstrap/css/bootstrap.min.css">
  </head>

  <body>
    <script src="jquery-3.6.0.min.js"></script>
    <script src="bootstrap/js/bootstrap.min.js"></script>
  </body>
</html>
```

5. Add a Navigation Bar

You can start by posting this just after the `<body>` tag:

```
<nav class="navbar navbar-expand-md">
  <a class="navbar-brand" href="#">Logo</a>
  <button class="navbar-toggler navbar-dark" type="button" data-toggle="collapse" data-target="#main-navigation">
    <span class="navbar-toggler-icon"></span>
  </button>
  <div class="collapse navbar-collapse" id="main-navigation">
    <ul class="navbar-nav">
      <li class="nav-item">
        <a class="nav-link" href="#">Home</a>
      </li>
      <li class="nav-item">
        <a class="nav-link" href="#">About</a>
      </li>
      <li class="nav-item">
        <a class="nav-link" href="#">Contact</a>
      </li>
    </ul>
  </div>
</nav>
```

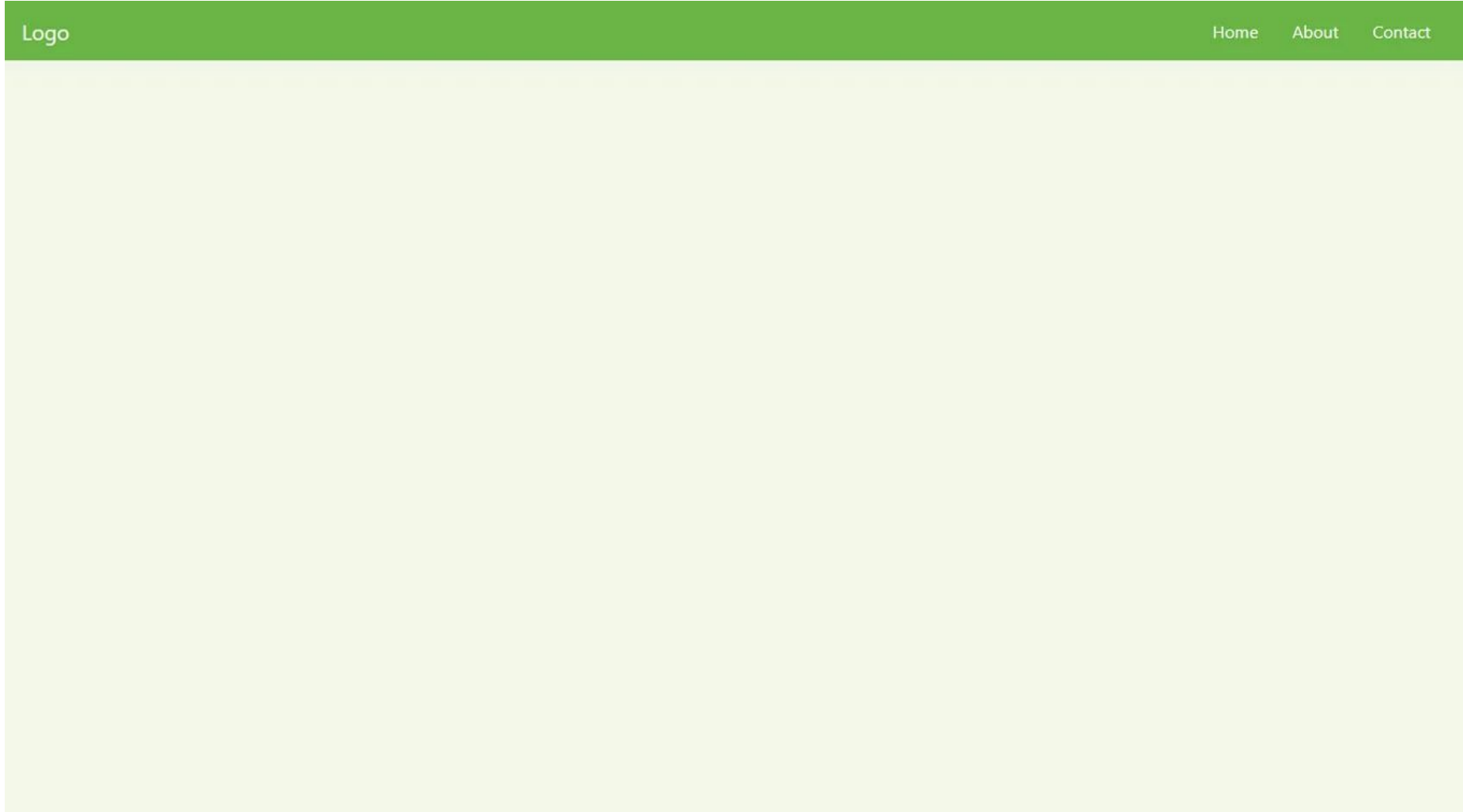

6. Include Custom CSS

- For that, simply create a blank file with your text editor and call it *main.css*. Save it, then add it to the head section of your Bootstrap site like this:

<link rel="stylesheet" type="text/css" href="main.css">

```
body {  
    padding: 0;  
    margin: 0;  
    background: #f2f6e9;  
}  
.navbar {  
    background: #6ab446;  
}  
.nav-link,  
.navbar-brand {  
    color: #fff;  
    cursor: pointer;  
}  
.nav-link {  
    margin-right: 1em !important;  
}  
.nav-link:hover {  
    color: #000;  
}  
.navbar-collapse {  
    justify-content: flex-end;  
}
```

The output



7. Create a CTA Button

- we add the following markup right below the page content inside the <description> container:

<button class="btn btn-outline-secondary btn-lg">Tell Me More!</button>

- In addition to that, we add this CSS to main.css:

```
.description button {  
  border:1px solid #6ab446;  
  background:#6ab446;  
  border-radius: 0;  
  color:#fff;  
}  
.description button:hover {  
  border:1px solid #fff;  
  background:#fff;  
  color:#000;  
}
```

8. Set Up a Three-Column Section

```
<div class="container features">
  <div class="row">
    <div class="col-lg-4 col-md-4 col-sm-12">
      <h3 class="feature-title">Lorem ipsum</h3>
      
      <p>text for sample para1</p>
    </div> /* 1st column */
```



9. Add a Contact Form


Add in 3rd div of last slide...

```
<h3 class="feature-title">Get in Touch!</h3>
<div class="form-group">
  <input type="text" class="form-control" placeholder="Name" name="">
</div>
<div class="form-group">
  <input type="email" class="form-control" placeholder="Email Address" name="email">
</div>
<div class="form-group">
  <textarea class="form-control" rows="4"></textarea>
</div>
<input type="submit" class="btn btn-secondary btn-block" value="Send" name="">
```

```
.features .form-control,
.features input {
  border-radius: 0;
}
.features .btn {
  background-color: #589b37;
  border: 1px solid #589b37;
  color: #fff;
  margin-top: 20px;
}
.features .btn:hover {
  background-color: #333;
  border: 1px solid #333;
}
```


10. Include a Team Section (Card layouts)

LOREM IPSUM



Lorem ipsum dolor sit amet, consectetur adipiscing elit. Quisque interdum quam odio, quis placerat ante luctus eu. Sed aliquet dolor id sapien rutrum, id vulputate quam iaculis.


LOREM IPSUM




Lorem ipsum dolor sit amet, consectetur adipiscing elit. Quisque interdum quam odio, quis placerat ante luctus eu. Sed aliquet dolor id sapien rutrum, id vulputate quam iaculis.

GET IN TOUCH!


Send




JANE DOE
Job Description




JOHN DOE
Job Description




JANE DOE
Job Description




JOHN DOE
Job Description




JANE DOE
Job Description



JOHN DOE
Job Description



JANE DOE
Job Description



JOHN DOE
Job Description

Bootstrap

Step1

- we first include another <div> element as its background. Inside, there is another container with a custom class for more customizability, followed by a row.

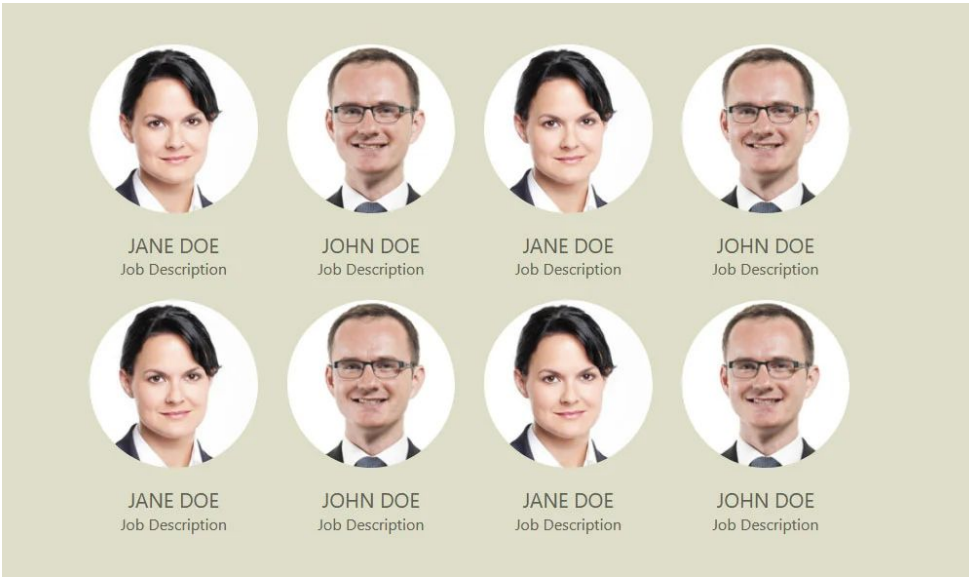
```
<div class="background">  
  <div class="container team">  
    <div class="row">  
  
      </div>  
    </div>  
  </div>
```

step2

- Cards can contain different elements. In our case, we want an image at the top, followed by a title (the name of the person) and a description that says what they do.

```
<div class="card col-lg-3 col-md-3 col-sm-4 text-center">  
    
  <div class="card-body">  
    <h4 class="card-title">Jane Doe</h4>  
    <p class="card-text">Job Description</p>  
  </div>  
</div>
```


Step3: The CSS addition



```
.background {  
    background: #dedec8;  
    padding: 4em 0;  
}  
.team {  
    color: #5e5e55;  
    padding: 0 180px;  
}  
.team .card-columns {  
    -webkit-column-count: 4;  
    -moz-column-count: 4;  
    column-count: 4;  
}  
  
.team .card {  
    background: none;  
    border: none;  
}  
.team .card-title {  
    font-size: 1.3rem;  
    margin-bottom: 0;  
    text-transform: uppercase;  
}
```

11. Create a Two-Column Footer

```
<footer class="page-footer">
  <div class="container">
    <div class="row">
      <div class="col-lg-8 col-md-8 col-sm-12">
        <h6 class="text-uppercase font-weight-bold">Footer Section - I</h6>
        <p>Footer paragraph one. Footer paragraph one. Footer paragraph one.</p>
        <p>Footer paragraph two. Footer paragraph two. Footer paragraph two. </p>
      </div>
      <div class="col-lg-4 col-md-4 col-sm-12">
        <h6 class="text-uppercase font-weight-bold">Contact</h6>
        <p>NMIMS, Deemed to be University, Navi Mumbai<br/>
        School of Technology Management & Engg.<br/>
        info@mywebsite.com<br/>
        + 01 234 567 88<br/>
        + 01 234 567 89</p>
      </div>
    </div>
  </div>
```

```
.page-footer {
  background-color: #222;
  color: #ccc;
  padding: 60px 0 30px;
}
.footer-copyright {
  color: #666;
  padding: 40px 0;
}
```

FOOTER SECTION - I

This is example footer information. This is example footer information. This is example footer information. This is example footer information. This is example footer information.

This is example footer information. This is example footer information. This is example footer information. This is example footer information. This is example footer information. This is example footer information.

© 2020 Copyright: MyWebsite.com

CONTACT

NMIMS, Deemed to be University, Navi Mumbai
School of Technology Management & Engg.
info@nmims.com
+ 01 234 567 88
+ 01 234 567 89

```
<div class="footer-copyright text-center">© 2020 Copyright: MyWebsite.com</div>
</footer>
```

12. Create Additional Pages

Find the about in html, replace the line with this:

```
<a class="nav-link" href="about.html">About</a>
```

Bootstrap Grids

- Bootstrap's grid system allows up to 12 columns across the page.
- If you do not want to use all 12 columns individually, you can group the columns together to create wider columns:

```
<div class="col-md-12">Span 12 columns</div>
```

```
<div class="col-md-6">Span 6</div><div class="col-md-6">Span 6</div>
```

```
<div class="col-md-4">Span 4</div><div class="col-md-8">Span 8</div>
```

```
<div class="col-md-4">Span 4</div><div class="col-md-4">Span 4</div> <div class="col-md-4">Span 4</div>
```

- Bootstrap's grid system is responsive, and the columns will re-arrange automatically depending on the screen size.

Grid Classes

- The Bootstrap grid system has four classes:
 - xs (for phones)
 - sm (for tablets)
 - md (for desktops)
 - lg (for larger desktops)
- The classes above can be combined to create more dynamic and flexible layouts.

Basic Structure of a Bootstrap Grid

```
<div class="row">  
  <div class="col-*-*"></div>  
</div>  
<div class="row">  
  <div class="col-*-*"></div>  
  <div class="col-*-*"></div>  
  <div class="col-*-*"></div>  
</div>  
<div class="row">  
  ...  
</div>
```

- First; create a row (<div class="row">). Then, add the desired number of columns (tags with appropriate .col-*-* classes). Note that numbers in .col-*-* should always add up to 12 for each row.

Three Equal Columns

- Three equal columns ([desktop version](#)):
- Three equal columns ([tablet version](#)):
- Three equal columns ([smart phone version](#)):

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Grid Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css">
  <script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/js/bootstrap.min.js"></script>
  <script src="https://code.jquery.com/jquery-latest.js"></script>
</head>
<body>

  <div class="container">
    <h1>Three Equal Columns</h1>
    <p>Desktops version: .col-md-4</p>

    <div class="row">
      <div class="col-md-4">.col-md-4</div>
      <div class="col-md-4">.col-md-4</div>
      <div class="col-md-4">.col-md-4</div>
    </div>
  </div>
</body>
</html>
```

Two Unequal Columns

- Two unequal columns ([desktop version](#)):
- Two unequal columns ([tablet version](#)):
- Two unequal columns ([smart phone version](#)):

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Grid Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css">
  <script
src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/js/bootstrap.min.js"></script>
  <script src="https://code.jquery.com/jquery-latest.js"></script>
</head>
<body>
<div class="container">
  <h1>Two Unequal Columns</h1>
  <p>Desktops version: .col-md-4 and .col-md-8</p>

  <div class="row">
    <div class="col-md-4">.col-md-4</div>
    <div class="col-md-8">.col-md-8</div>
  </div>
</div>
</body>
</html>
```


Bootstrap Tables

- A **basic** Bootstrap table has a light padding and only horizontal dividers.
 - The `.table` class adds basic styling to a table:
- **Striped Rows**
 - The `.table-striped` class adds zebra-stripes to a table:
- **Bordered Table**
 - The `.table-bordered` class adds borders on all sides of the table and cells:
- **Hover Rows**
 - The `.table-hover` class enables a hover state on table rows:
- **Responsive Tables**
 - The `.table-responsive` class creates a responsive table. The table will then scroll horizontally on small devices (under 768px). When viewing on anything larger than 768px wide, there is no difference:

```

<table class="table">
  <thead>
    <tr>
      <th scope="col">#</th>
      <th scope="col">First</th>
      <th scope="col">Last</th>
      <th scope="col">Handle</th>
    </tr>
  </thead>

```

```

<tbody>
  <tr>
    <th scope="row">1</th>
    <td>Mark</td>
    <td>Otto</td>
    <td>@mdo</td>
  </tr>
  <tr>
    <th scope="row">2</th>
    <td>Jacob</td>
    <td>Thornton</td>
    <td>@fat</td>
  </tr>

```

#	First	Last	Handle
1	Mark	Otto	@mdo
2	Jacob	Thornton	@fat
3	Larry	the Bird	@twitter

For dark theme, use class="table table-dark"

Bootstrap Images

- **Rounded Corners**
 - The `.img-rounded` class adds rounded corners to an image (IE8 does not support rounded corners):
- **Circle**
 - The `.img-circle` class shapes the image to a circle (IE8 does not support rounded corners):
- **Thumbnail**
 - The `.img-thumbnail` class shapes the image to a thumbnail:
- **Responsive Images**
 - Images comes in all sizes. So do screens. Responsive images automatically adjust to fit the size of the screen.
 - Create responsive images by adding an `.img-responsive` class to the `` tag. The image will then scale nicely to the parent element.
 - The `.img-responsive` class applies `display: block;` and `max-width: 100%;` and `height: auto;` to the image:

Bootstrap Buttons

- Button Styles
 - Bootstrap provides seven styles of buttons with the following classes:

.btn-default

.btn-primary

.btn-success

.btn-info

.btn-warning

.btn-danger

.btn-link