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| Day 3 ( Bootstrap ) |

**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

**Why use Bootstrap?**

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**
* 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:

<!-- Latest compiled and minified CSS -->  
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css">  
  
<!-- jQuery library -->  
<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.1.1/jquery.min.js"></script>  
  
<!-- Latest compiled JavaScript -->  
<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/js/bootstrap.min.js"></script>

**How to create Web Page With Bootstrap**

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).

**Here is bootstrap basic layout :**

<!DOCTYPE html>  
<html lang="en">  
<head>  
  <title>Website</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://ajax.googleapis.com/ajax/libs/jquery/3.1.1/jquery.min.js"></script>  
  <script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/js/bootstrap.min.js"></script>  
</head>  
<body>  
<div class="container-fluid">  
  
<div class="container">  
  <h1>My First Bootstrap Page</h1>  
  <p>This is some text.</p>   
</div>

</div>  
  
</body>  
</html>

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.

**Bootstrap Grid System**

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.

**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-sm-4"> Box 1 </div>  
  <div class="col-sm-4"> Box 2 </div>  
  <div class="col-sm-4"> Box 3 </div>  
</div>

**Media Queries**

**What is a Media Query?**

Media query is a CSS technique introduced in CSS3.

It uses the @media rule to include a block of CSS properties only if a certain condition is true.

If the browser window is smaller than 500px, the background color will change to lightblue:

@media only screen and (max-width: 480px) {  
    body {  
        background-color: lightblue;  
    }  
}

**Media Queries**

/\* Smartphones (portrait and landscape) ----------- \*/

@media only screen

and (min-device-width : 320px)

and (max-device-width : 480px) {

/\* Styles \*/

}

/\* Smartphones (landscape) ----------- \*/

@media only screen

and (min-width : 321px) {

/\* Styles \*/

}

/\* Smartphones (portrait) ----------- \*/

@media only screen

and (max-width : 320px) {

/\* Styles \*/

}

/\* iPads (portrait and landscape) ----------- \*/

@media only screen

and (min-device-width : 768px)

and (max-device-width : 1024px) {

/\* Styles \*/

}

/\* iPads (landscape) ----------- \*/

@media only screen

and (min-device-width : 768px)

and (max-device-width : 1024px)

and (orientation : landscape) {

/\* Styles \*/

}

/\* iPads (portrait) ----------- \*/

@media only screen

and (min-device-width : 768px)

and (max-device-width : 1024px)

and (orientation : portrait) {

/\* Styles \*/

}

/\* Desktops and laptops ----------- \*/

@media only screen

and (min-width : 1224px) {

/\* Styles \*/

}

/\* Large screens ----------- \*/

@media only screen

and (min-width : 1824px) {

/\* Styles \*/

}

/\* iPhone 4 ----------- \*/

@media

only screen and (-webkit-min-device-pixel-ratio : 1.5),

only screen and (min-device-pixel-ratio : 1.5) {

/\* Styles \*/

}

/\* iPhone 6 landscape \*/

@media only screen and (min-device-width: 375px)

and (max-device-width: 667px)

and (orientation: landscape)

and (-webkit-min-device-pixel-ratio: 2)

{ }

/\* iPhone 6 portrait \*/

@media only screen

and (min-device-width: 375px)

and (max-device-width: 667px)

and (orientation: portrait)

and (-webkit-min-device-pixel-ratio: 2)

{ }

/\* iPhone 6 Plus landscape \*/

@media only screen

and (min-device-width: 414px)

and (max-device-width: 736px)

and (orientation: landscape)

and (-webkit-min-device-pixel-ratio: 3)

{ }

/\* iPhone 6 Plus portrait \*/

@media only screen

and (min-device-width: 414px)

and (max-device-width: 736px)

and (orientation: portrait)

and (-webkit-min-device-pixel-ratio: 3)

{ }

/\* iPhone 6 and 6 Plus \*/

@media only screen

and (max-device-width: 640px),

only screen and (max-device-width: 667px),

only screen and (max-width: 480px)

{ }

/\* Apple Watch \*/

@media

(max-device-width: 42mm)

and (min-device-width: 38mm)

{ }

**Simple queries for all devices:**

@media only screen and (max-width : 1280px) { your code }

@media only screen and (max-width : 1200px) { your code }

@media only screen and (max-width : 992px) { your code }

@media only screen and (max-width : 800px) { your code }

@media only screen and (max-width : 768px) { your code }

@media only screen and (max-width : 640px) { your code }

@media only screen and (max-width : 585px) { your code }

@media only screen and (max-width : 480px) { your code }

@media only screen and (max-width : 414px) { your code }

@media only screen and (max-width : 370px) { your code }

@media only screen and (max-width : 360px) { your code }

@media only screen and (max-width : 320px) { your code }

}

**How to create a simple responsive web page**

Learn more about bootstrap framework from **http://getbootstrap.com**

Here is one of the simple responsive layout

<!DOCTYPE html>

<html lang="en">

<head>

<title>Bootstrap 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://ajax.googleapis.com/ajax/libs/jquery/3.1.1/jquery.min.js"></script>

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

<style>

.navbar {

margin-bottom: 0;

border-radius: 0;

}

footer {

background-color: #f2f2f2;

padding: 25px;

}

</style>

</head>

<body>

<nav class="navbar navbar-inverse">

<div class="container-fluid">

<div class="navbar-header">

<button type="button" class="navbar-toggle" data-toggle="collapse" data-target="#myNavbar">

<span class="icon-bar"></span>

<span class="icon-bar"></span>

<span class="icon-bar"></span>

</button>

<a class="navbar-brand" href="#">Portfolio</a>

</div>

<div class="collapse navbar-collapse" id="myNavbar">

<ul class="nav navbar-nav">

<li class="active"><a href="#">Home</a></li>

<li><a href="#">About</a></li>

<li><a href="#">Gallery</a></li>

<li><a href="#">Contact</a></li>

</ul>

<ul class="nav navbar-nav navbar-right">

<li><a href="#"><span class="glyphicon glyphicon-log-in"></span> Login</a></li>

</ul>

</div>

</div>

</nav>

<div class="jumbotron">

<div class="container text-center">

<h1>My Portfolio</h1>

<p>Some text that represents "Me"...</p>

</div>

</div>

<div class="container-fluid bg-3 text-center">

<h3>Some of my Work</h3><br>

<div class="row">

<div class="col-sm-3">

<p>Some text..</p>

<img src="https://placehold.it/150x80?text=IMAGE" class="img-responsive" style="width:100%" alt="Image">

</div>

<div class="col-sm-3">

<p>Some text..</p>

<img src="https://placehold.it/150x80?text=IMAGE" class="img-responsive" style="width:100%" alt="Image">

</div>

<div class="col-sm-3">

<p>Some text..</p>

<img src="https://placehold.it/150x80?text=IMAGE" class="img-responsive" style="width:100%" alt="Image">

</div>

<div class="col-sm-3">

<p>Some text..</p>

<img src="https://placehold.it/150x80?text=IMAGE" class="img-responsive" style="width:100%" alt="Image">

</div>

</div>

</div><br>

<div class="container-fluid bg-3 text-center">

<div class="row">

<div class="col-sm-3">

<p>Some text..</p>

<img src="https://placehold.it/150x80?text=IMAGE" class="img-responsive" style="width:100%" alt="Image">

</div>

<div class="col-sm-3">

<p>Some text..</p>

<img src="https://placehold.it/150x80?text=IMAGE" class="img-responsive" style="width:100%" alt="Image">

</div>

<div class="col-sm-3">

<p>Some text..</p>

<img src="https://placehold.it/150x80?text=IMAGE" class="img-responsive" style="width:100%" alt="Image">

</div>

<div class="col-sm-3">

<p>Some text..</p>

<img src="https://placehold.it/150x80?text=IMAGE" class="img-responsive" style="width:100%" alt="Image">

</div>

</div>

</div><br><br>

<footer class="container-fluid text-center">

<p>Footer Text</p>

</footer>

</body>

</html>

It will produce the following result:

