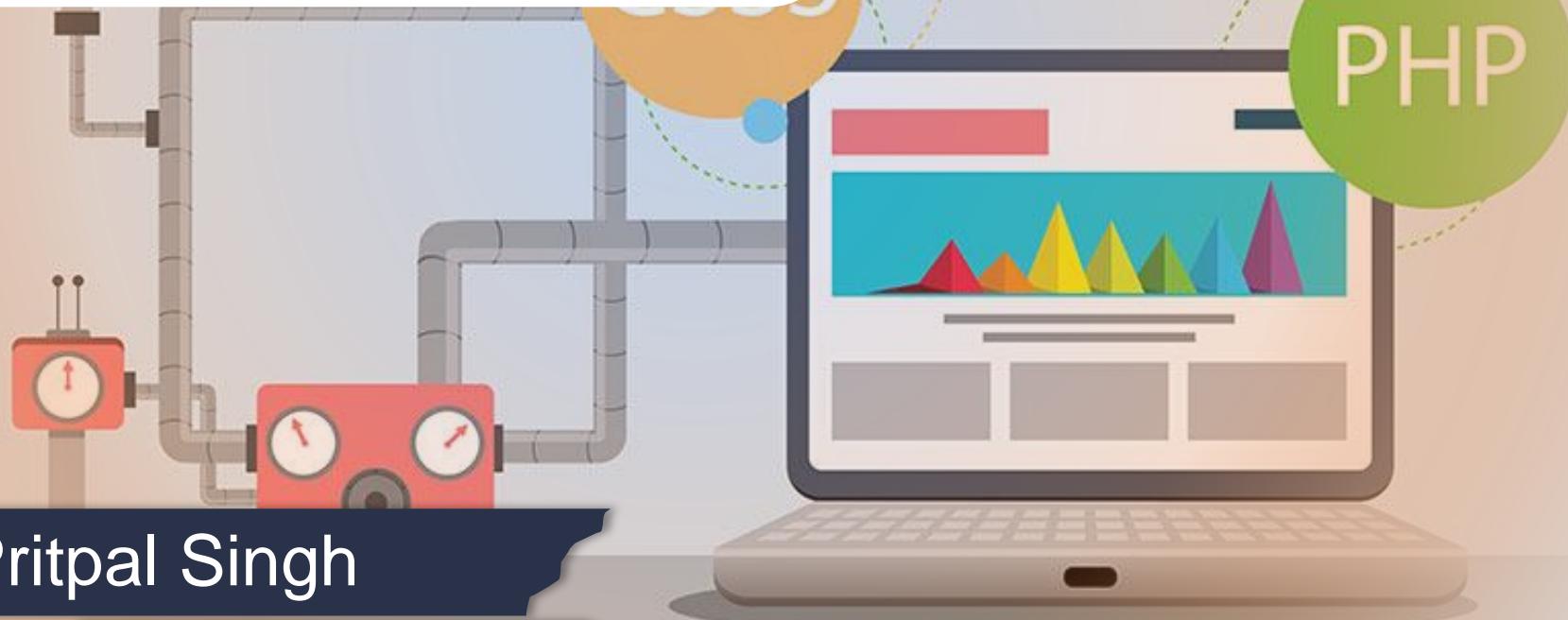


ECAP472

WEB TECHNOLOGIES



Dr. Pritpal Singh

Associate Professor

Learning Outcomes



After this lecture, you will be able to

- understand Bootstrap framework.
- use bootstrap in the project.

Responsive Web Design

- Responsive web design is about creating websites that 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 websites.
- Bootstrap is completely free to download and use!

What is Bootstrap?

- Bootstrap is a free front-end framework for faster and easier web development
- Also gives you the ability to easily create responsive designs



What is Bootstrap?

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.

Why to Learn Bootstrap?

Mobile first approach

Bootstrap 3, framework consists of Mobile first styles throughout the entire library instead them of in separate files.

Browser Support

It is supported by all popular browsers.

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Easy to Get Started

With just the knowledge of HTML and CSS, anyone can get started with Bootstrap. Also, the Bootstrap official site has good documentation.

Responsive design

Bootstrap's responsive CSS adjusts to Desktops, Tablets and Mobiles. More about the responsive design is in the chapter Bootstrap Responsive Design

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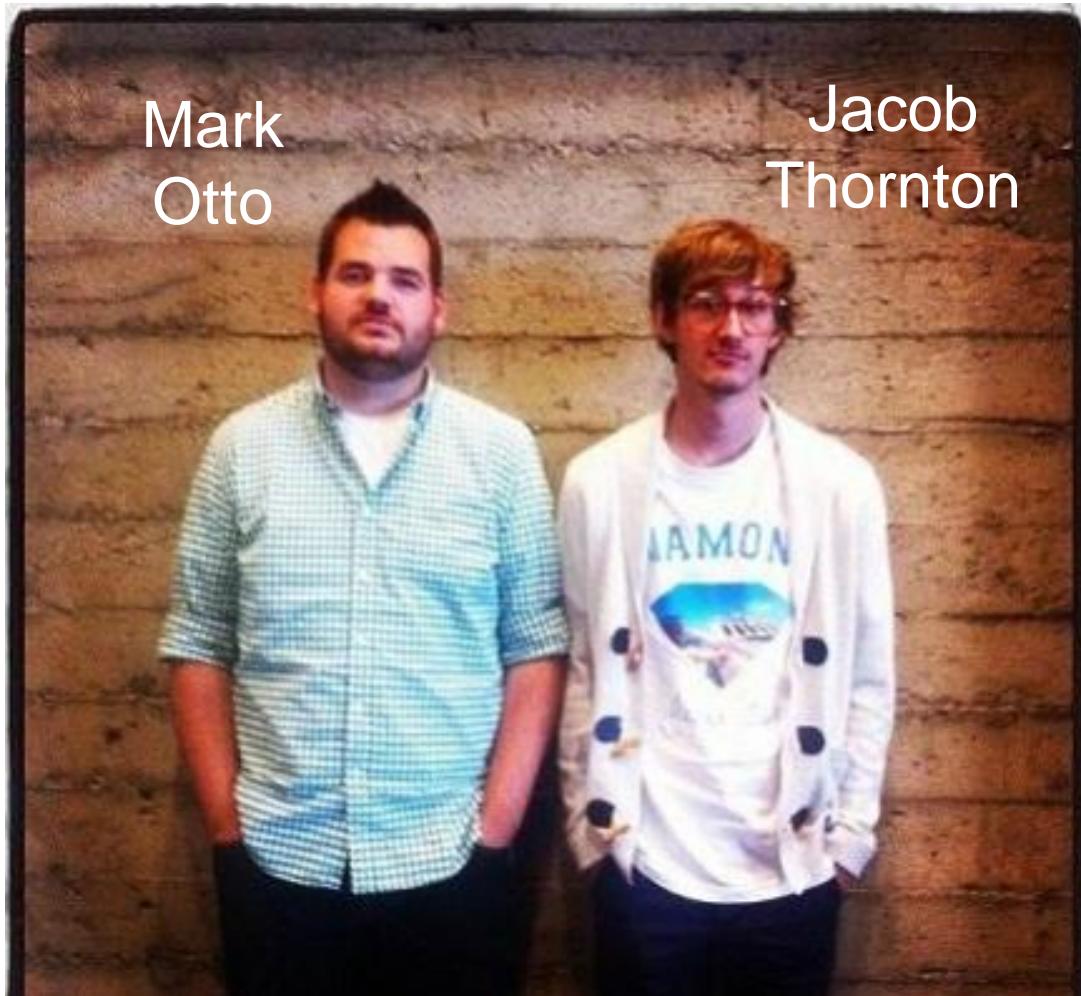
Responsive design

Bootstrap's responsive CSS adjusts to Desktops, Tablets and Mobiles. More about the responsive design is in the chapter Bootstrap Responsive Design

Why to Learn Bootstrap?

- Provides a clean and uniform solution for building an interface for developers.
- It contains beautiful and functional built-in components which are easy to customize.
- It also provides web-based customization.
- And best of all it is open-source.

The Developers...



Bootstrap History

Developed by Mark Otto and Jacob Thornton at Twitter and released as an open-source product in August 2011 on GitHub.

Advantages of Bootstrap

1

Easy to use

Anybody with just basic knowledge of HTML and CSS can start using Bootstrap

2

Responsive features

Bootstrap's responsive CSS adjusts to phones, tablets, and desktops.

Advantages of Bootstrap

3

Mobile-first approach

In Bootstrap 3, mobile-first styles are part of the core framework

4

Responsive features

Bootstrap is compatible with all modern browsers (Chrome, Firefox, Internet Explorer, Safari, and Opera)

Applications of Bootstrap

- **Scaffolding:** Bootstrap provides a basic structure with Grid System, link styles, and background.
- CSS: Bootstrap comes with the feature of global CSS settings, fundamental HTML elements styled and enhanced with extensible classes, and an advanced grid system.
- Components: Bootstrap contains over a dozen reusable components built to provide iconography, dropdowns, navigation, alerts, pop-overs, and much more.

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Where to Get Bootstrap?

EITHER:

Download Bootstrap from getbootstrap.com

- If you want to download and host Bootstrap yourself, go to getbootstrap.com, and follow the instructions there.

Where to Get Bootstrap?

OR:

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 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:

Create Web Page with Bootstrap (1)

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- 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.

Create Web Page with Bootstrap (2)

Bootstrap is mobile-first

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">
```

Create Web Page with Bootstrap (2)

Bootstrap is mobile-first

- 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.

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).

Bootstrap Grids

Bootstrap's grid system allows up to 12 columns across the page.

Bootstrap Grids

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 Grids

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.

First Bootstrap Example

```
<!DOCTYPE html>
<html lang="en">
<head><meta http-equiv="Content-Type"
content="text/html; charset=windows-1252">
<title>Any title</title>
</head>
<body>
//write code
</body>
</html>
```

First Bootstrap Example

Add the HTML 5 doctype:

Bootstrap uses HTML elements and CSS properties, so you have to add the HTML 5 doctype at the beginning of the page with lang attribute and correct character set.

Bootstrap is mobile friendly

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

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

Bootstrap is mobile friendly

- **Note:** The "width=device-width" part is used to set the width of the page to follow the screen-width of the device (vary according to the devices).
- The initial-scale=1 part is used to set the initial zoom level when the page is first loaded by the browser.

That's all for
now...