Web Application Development

Bootstrap

Outline

- Concepts of Bootstrap
- Installing Bootstrap
- Using Bootstrap
- Developing Websites with Bootstrap

Introduction

- Bootstrap is a front-end framework for fast and easy web development

- Bootstrap is currently the most popular HTML/CSS/JavaScript framework for developing responsive websites

- Bootstrap is compatible with all modern web browsers such as Chrome, Firefox, Safari, Internet Explorer, and Opera

Installing Bootstrap

- Bootstrap can be installed using off-line method or on-line method
- In off-line method, bootstrap is downloaded from getbootstrap.com and is added to the HTML <link> and <script> tags:

```
<head>
   <link rel="stylesheet" href="bootstrap.min.css">
   <script src="jquery-3.1.0.min.js"></script>
   <script src="bootstrap.min.js"></script>
</head>
```

- In on-line method, bootstrap is included from a Content Delivery Network (CDN)

Installing Bootstrap

- Example of bootstrap provided by MaxCDN:

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

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

Using Bootstrap

- Bootstrap is used on top of HTML/CSS/ JavaScript/jQuery
- Bootstrap functions and styling are called by declaring the appropriate "Bootstrap class" to the HTML element. The syntax is similar to CSS syntax

```
<div class="container">
   <h1>My First Bootstrap Page</h1>
   <p>Some text here</p>
</div>
```

Using Bootstrap

```
<div class="jumbotron text-center">
  <h1>
    My First Bootstrap Page
  </h1>
  <p>
    My First Bootstrap Page
  </p>
</div>
```

```
<div class="container">
  <div class="row">
    <div class="col-sm-4">
      <h3>Column 1</h3>
      <p>Some text here</p>
    </div>
    <div class="col-sm-4">
      <h3>Column 2</h3>
      <p>Some text here</p>
    </div>
    <div class="col-sm-4">
      <h3>Column 3</h3>
      <p>Some text here</p>
    </div>
  </div>
</div>
```

Using Bootstrap

My First Bootstrap Page

Welcome to my website

Column 1

Some text here

Column 2

Some text here

Column 3

Some text here

Developing Websites with Bootstrap

- Step 1: identify type of website and understand required functions of the website

- Step 2: choose and download a bootstrap theme from existing repositories. For example:

  - https://startbootstrap.com

  - https://www.bootstrapzero.com

- Step 3: customize downloaded bootstrap theme to meet the required functions of the website

Demonstrating Example

- Topic: design and develop a personal website for freelancer
- Step 1: type of website: personal blog
  - Core information:
    - Personal information
    - Working experiences
    - Skills
    - Languages

Demonstrating Example

- Step 2: choose and download bootstrap theme from https://startbootstrap.com

- Example of a downloaded theme link:

  https://blackrockdigital.github.io/ startbootstrap-freelancer/

Demonstrating Example

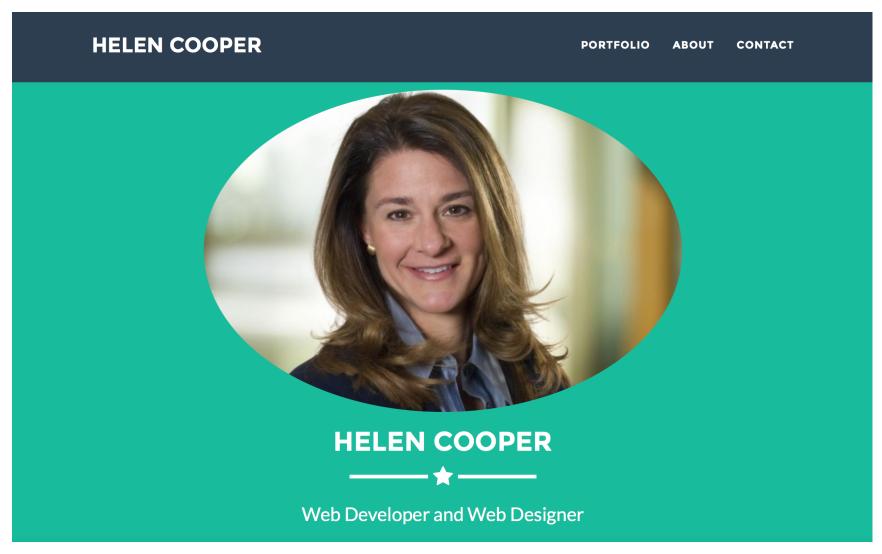

Example of a downloaded bootstrap theme

Demonstrating Example

- Step 3: customize downloaded theme using HTML/CSS/JavaScript/jQuery/Bootstrap
- Examples of customizable parts:
  - Modify navigation bar
  - Modify the header
  - Modify the body sections
  - Modify the footer
  - etc.

Demonstrating Example

Example of customized navigation bar and header

Demonstrating Example

- Examples of customized navigation bar:
  - **From "START BOOTSTRAP" to "HELEN COOPER"**

```html
<!-- Navigation -->
    <nav id="mainNav" class="navbar navbar-default navbar-fixed-top navbar-custom">
        <div class="container">
            <!-- Brand and toggle get grouped for better mobile display -->
            <div class="navbar-header page-scroll">
                <button type="button" class="navbar-toggle" data-toggle="collapse" data-target="#bs-example-navbar-collapse-1">
                    <span class="sr-only">Toggle navigation</span> Menu <i class="fa fa-bars"></i>
                </button>
                <a class="navbar-brand" href="#page-top">Helen Cooper</a>
            </div>
```

Demonstrating Example

- Examples of customized header:
  - **The change of profile image and job information**

```
<!-- Header -->
  <header>
    <div class="container">
      <div class="row">
        <div class="col-lg-12">
          <img class="img-responsive img-circle" src="img/helen.jpg" alt="">
          <div class="intro-text">
            <h1>Helen Cooper</h1>
            <hr class="star-light">
            <span class="skills">Web Developer and Web Designer</span>
```