

Session 5

Web Page Generation

1

Reading & Reference

■ Reading

https://en.wikipedia.org/wiki/Responsive_web_design

https://www.w3schools.com/css/css_rwd_viewport.asp

https://en.wikipedia.org/wiki/Web_template_system

■ Bootstrap Tutorials

<https://getbootstrap.com/>

<https://www.w3schools.com/bootstrap/>

Lecture examples are taken
from W3Schools Tutorial

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2

Lecture Objectives

- Understand how to access html style libraries
- Understand the concepts used by html generation tools and libraries

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What is Bootstrap?

- Free front-end framework for faster and easier web development
- 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
- Gives you the ability to easily create responsive designs

Responsive web design is about creating web sites which automatically adjust themselves to look good on all devices, from small phones to large desktops

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4

Your First Bootstrap ...

```
<!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/3.3.1/jquery.min.js">
  </script>
  <script
src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/js/bootstrap.min.js">
  </script>
</head>
...
```

HTML5 element to allow the width to follow the device width

Uses Bootstrap css and JavaScript libraries

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... Your First Bootstrap

```
<body>
<div class="container">
  <h1>My First Bootstrap Page</h1>
  <p>This part is inside a .container class.</p>
  <p>The .container class provides a responsive fixed width container.
  </p>
</div>

</body>
</html>
```

My First Bootstrap Page

This part is inside a .container class.

The .container class provides a responsive fixed width container.

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6

Bootstrap Styles

- Bootstrap sets default styling for HTML5 elements
- For example, headings have a default style

h1 Bootstrap heading (36px)

h2 Bootstrap heading (30px)

h3 Bootstrap heading (24px)

h4 Bootstrap heading (18px)

h5 Bootstrap heading (14px)

h6 Bootstrap heading (12px)

Libraries of Visual Features

- Bootstrap includes a library of symbols (glyphicons) that provide a more interesting visual appearance to a GUI
- Bootstrap provides a library of badges (numerical indicators of the number of items associated with a link)

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Comments **10**
Updates **2**



Templates

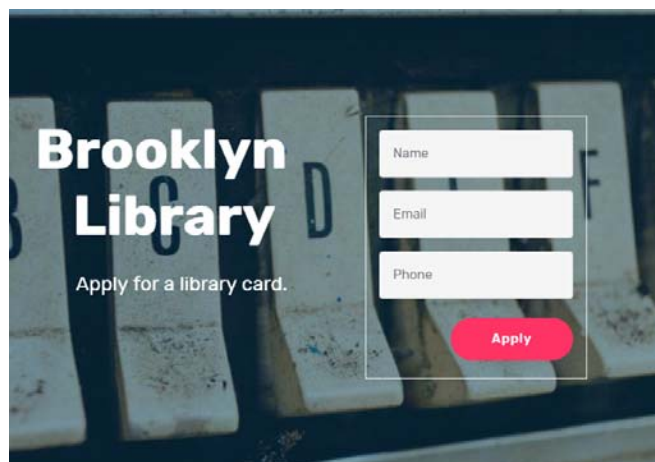
- A predefined Web page that let's authors customize with user specific content
- Bootstrap provides the code for some free templates
- You can just copy a template that is similar to your desired GUI appearance, then customize

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9

Site Builder Example - Mobirise

- Desktop tool that provides drag and drop generation of Bootstrap sites



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10

Example - Generated HTML

```
...  
<h1 class="mbr-section-title mbr-bold pb-3 mbr-fonts-style display-1">  
  Brooklyn Library&nbsp;  </h1>  
<p class="mbr-text pb-3 mbr-fonts-style display-5">  
  Apply for a library card. </p> </div>  
<div class="col-lg-4 col-md-5">  
  <div class="form-container">  
    <div class="media-container-column" data-form-type="formoid">  
      <div data-form-alert="" hidden="" class="align-center">  
        Thanks for filling out the form! </div>  
      <form class="mbr-form" action="https://mobirise.com/"  
method="post"  
...
```

Notice how it uses Bootstrap styling

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11

Approaches to HW2

- Use Bootstrap templates
- Use a page builder tool (e.g., Mobirise)
- Download the Brooklyn Library html, convert to HTML5 and clean
 - Convert to HTML5 - you can use a free tool or just convert the DOCTYPE tag
 - Remove blank lines
 - Remove JavaScript
 - | <script> elements
 - | Attributes - e.g., onclick="..."
 - Remove hidden form fields (<input type="hidden" ...)
 - Change action attribute value of form tag to any static page

Less than 400 lines of html if you take this option

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12

Are We on Track?

- Download the partial CSE336 project page at www3.cs.stonybrook.edu/~cse336/CSE336-Project-Track.html
- Apply default Bootstrap styles
- Compare visual appearance

Hint: Bootstrap
JavaScript library
not required

Library Card Application

Complete this application and click the Submit button. You may pick up your new card at any branch library or Central Library or have the card mailed to you. In order to activate your card, you must visit your library in person and provide acceptable ID.

* Required

Library Card

- * Card:
- Young Adults (Ages 13 - 16)
 - Adult (Ages 17 and over)
 - Seniors (Ages 62 and over)

Submit Library Card Application

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13

Were We on Track?

- Insert the following tag in the head element of your html

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

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14

Have You Satisfied the Lecture Objectives

- Understand how to access html style libraries
- Understand the concepts used by html generation tools and libraries