

**Bootstrap**

**Data Boot Camp**  
Lesson 11.3



# Class Objectives

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**By the end of today's class you will be able to:**



Discuss media queries, the technology that is used to create the responsive Bootstrap grid.



Cover the Bootstrap Grid, and discover how to utilize it to position the elements on the page.



Discover how to quickly and easily build web pages using pre-built Bootstrap components.



## Activity: Styling Classes and IDs

In this activity, you will try your best to create a CSS layout from this image already supplied in the given folder.

**Suggested Time:**  
20 Minutes



# Activity: Styling Classes and IDs

## Instructions:

- Open the [Unsolved Folder](#). **11-Web/3/Activities/01-Stu\_ReviewActivity/Unsolved/**
- For this activity, you are adding CSS styles to the index.html file in this folder.
- Take a moment to study the [01-CSS-Review.png](#) image. The provided HTML file has all of the required elements included to create the web page described, but none of the CSS.



- Add styles to the `styles.css` file to make `index.html` look like the web page in `01-CSS-Review.png`.
- Try to get your styles as close to the image as possible.



**Time's Up!** Let's Review.



# Instructor Demonstration

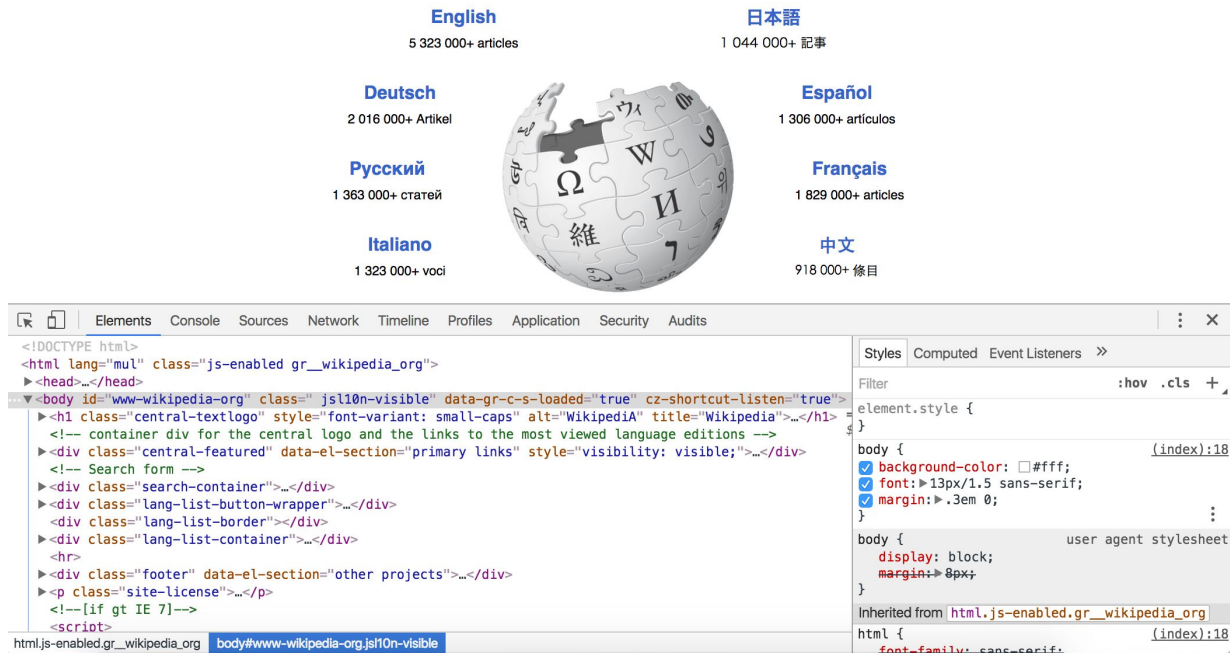
## Chrome DevTools

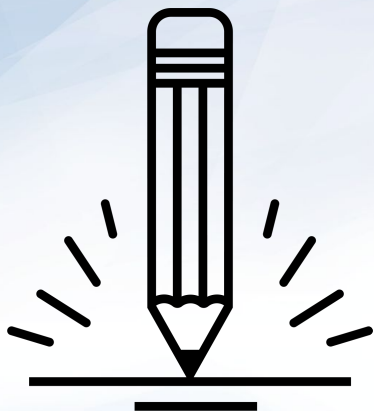
# Chrome DevTools

- Chrome DevTools is a set of web developer tools built directly into the [Google Chrome](#) browser.
- DevTools can help you edit pages on-the-fly and diagnose problems quickly, which ultimately helps you build better websites, faster.

- **Open DevTools**

- **Mac:** Cmd + Option + I
- **PC:** Ctrl + Shift + I





## Activity: Chrome Devtools

In this activity, you will be modifying a website of their choice using Chrome Devtools. Take a screenshot of the website they modified and post it in the class's slack channel.

**Suggested Time:**  
10 Minutes





# Activity: Styling Classes and IDs

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## Instructions:

- Navigate to the website of your choice and open Chrome Devtools. In particular, you want to open the element inspector.
  - You can open launch Devtools with `Cmd + Option + I` on a Mac and `Ctrl + Shift + I` on a PC. Alternatively, just right-click the web page and select the "inspect" option. Make sure the Elements tab is selected.
- From here, modify the web page inside of the element inspector. Examples of possible modifications include:
  - Edit the text inside the HTML tags.
  - Change the HTML tags. e.g. turn all the `<p>` tags into `<h1>` or `<strong>` tags.
  - Alter an element's CSS, e.g. make all of the text green or give the HTML document a background image.
  - Insert brand new HTML into the DOM.
  - Delete a few HTML elements.
- Try and have fun here, get creative!
- Once you're happy with your modification, take a screenshot of the modified page and slack it out in the class channel.



**Time's Up!** Let's Review.



# Instructor Demonstration

## Introduce Media Queries

# Introduce Media Queries

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**Media queries** are useful when you want to modify your site or app depending on a device's general type (such as print vs. screen) or specific characteristics and parameters (such as screen resolution or browser [viewport](#) width).

Media queries are used for the following:

- To conditionally apply styles with the [CSS @media](#) and [@import at-rules](#).
- To target specific media for the `<style>`, `<link>`, `<source>`, and other [HTML](#) elements with the `media=` attribute.
- To [test and monitor media states](#) using the `Window.matchMedia()` and `MediaQueryList.addListener()` [JavaScript](#) methods.

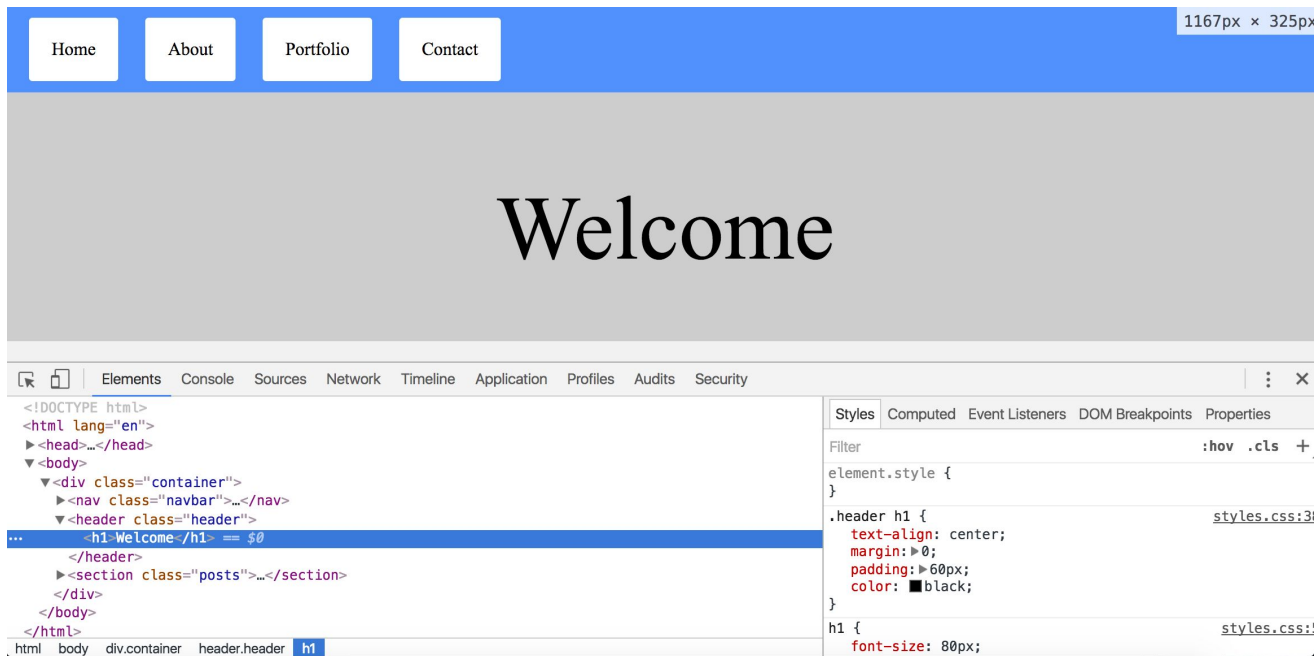
# Introduce Media Queries

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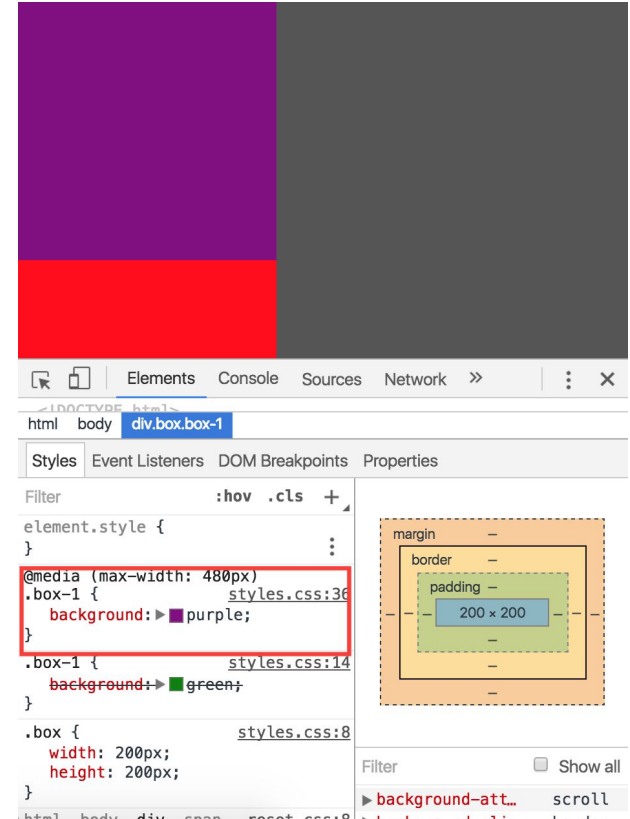
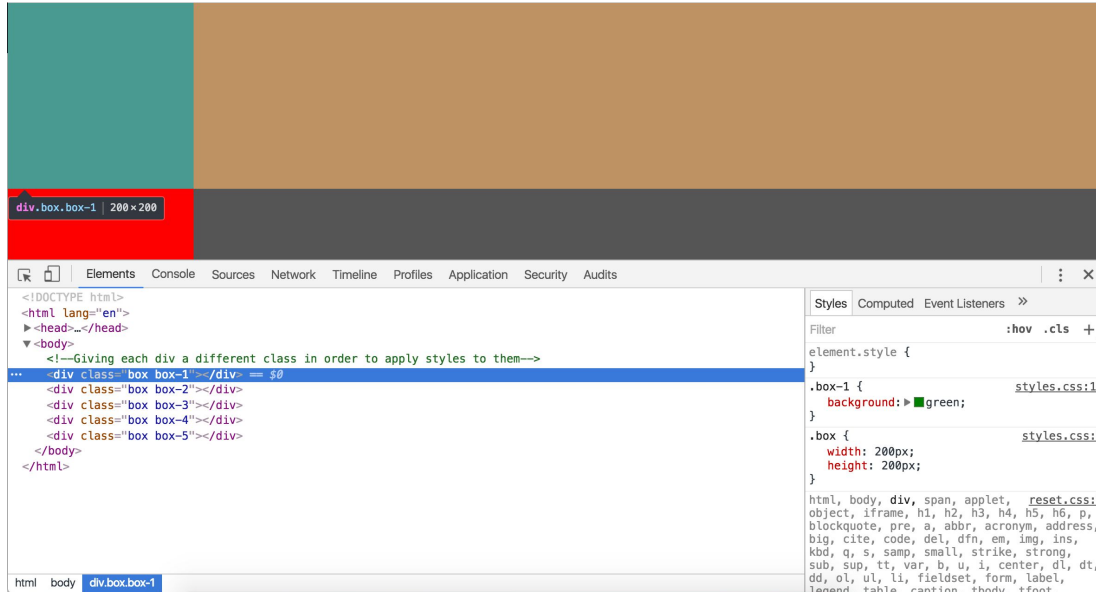
```
35 @media (max-width: 480px) {  
36     /*.box-1 {  
37         background: purple;  
38     }*/  
39  
40     /*.box-2 {  
41         background: yellow;  
42         width: 200px;  
43         height: 200px;  
44         border-radius: 50%;  
45         border: solid 2px black;  
46     }*/
```

# Introduce Media Queries

- An easy way to tell at what size we need to add a media query is to resize our Chrome window with inspector open.
- The browser window dimensions will be displayed at the top right corner.



# Introduce Media Queries





## Activity: Media Queries

In this activity, you will be modifying the solution to the CSS review activity to be more mobile responsive using media queries.

**Suggested Time:**  
10 Minutes





# Instructions:

## Activity: Styling Classes and IDs

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- Open the [Unsolved Folder](#) and add media queries to decrease the size of the `li` tags inside the `navbar` so they fit when we shrink the screen size. We can probably do this by reducing each `li` element's padding.
- Also reduce the padding along each side of the `article` with a class of `post`.
- **Bonus:**
  - Try making the `li` elements inside the `navbar` disappear entirely in place of a drop-down menu with all of the same options.
- **Hints:**
  - A reference for media query syntax can be found at [MDN Docs](#).
  - You can create a drop-down menu using the `select` and `option` elements. See [MDN Docs](#) for select elements.
  - You can show and hide elements on a web page with the visibility property. See [MDN Docs](#)





**Time's Up!** Let's Review.



Instructor Demonstration

Introduce

Bootstrap

# Introduce Bootstrap

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**Bootstrap** is the most popular **CSS Framework** for developing responsive and mobile-first websites.

```
bootstrap/  
├── css/  
│   ├── bootstrap-grid.css  
│   ├── bootstrap-grid.css.map  
│   ├── bootstrap-grid.min.css  
│   ├── bootstrap-grid.min.css.map  
│   ├── bootstrap-reboot.css  
│   ├── bootstrap-reboot.css.map  
│   ├── bootstrap-reboot.min.css  
│   ├── bootstrap-reboot.min.css.map  
│   ├── bootstrap.css  
│   ├── bootstrap.css.map  
│   ├── bootstrap.min.css  
│   └── bootstrap.min.css.map  
├── js/  
│   ├── bootstrap.bundle.js  
│   ├── bootstrap.bundle.js.map  
│   ├── bootstrap.bundle.min.js  
│   ├── bootstrap.bundle.min.js.map  
│   ├── bootstrap.js  
│   ├── bootstrap.js.map  
│   ├── bootstrap.min.js  
│   └── bootstrap.min.js.map
```





# Instructor Demonstration

## Bootstrap Grid

# Bootstrap Grid

## BootstrapCDN - Content Delivery Network

- In order to quickly add **Bootstrap** to your project you can simply navigate to the **Bootstrap Getting started Page** and copy-paste the stylesheet `<link>` into the `<head>` of your HTML project file.

```
<!DOCTYPE html>
<html lang="en-us">

<head>

  <meta charset="UTF-8">
  <title>Bootstrap Demo</title>

  <!-- Bring in our bootstrap stylesheet -->
  <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css" integrity="sha384-ggOyR0iXCbMQv3Xipma34MD+dH/1fQ784/j6"
  <link rel="stylesheet" href="style.css">
</head>
```

- **CDN** stands for **Content Delivery Network**. Created with the mission to handle large amounts of traffic and deliver content to users according to their geographic location using their network of distributed servers. This also allows us to quickly add Bootstrap without having to download the whole framework.

# Bootstrap Grid

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## Grid System

- The **Grid System** permits you to group by up to 12 columns across the page, forming a row.
- The System is responsive depending on the screen size rearranging the columns accordingly.
- There are four **Grid Classes**: `xs`, `sm`, `md` and `lg`.

**ROW**

Span 1	Span 1	Span 1	Span 1	Span 1	Span 1	Span 1	Span 1	Span 1	Span 1	Span 1	Span 1
--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------

**ROW**

Span 4				Span 4				Span 4			
--------	--	--	--	--------	--	--	--	--------	--	--	--

**ROW**

Span 4				Span 8							
--------	--	--	--	--------	--	--	--	--	--	--	--

**ROW**

Span 6						Span 6					
--------	--	--	--	--	--	--------	--	--	--	--	--

**ROW**

Span 12											
---------	--	--	--	--	--	--	--	--	--	--	--



## Activity: Lorem Grids

In this activity, you will be given an image of a simple web page layout created using the Bootstrap grid. They will attempt to recreate this layout from scratch.

**Suggested Time:**  
20 Minutes





# Instructions:

## Activity: Loren Grid

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- Open [04-Lorem-Grid.png](#) file located within the [Images](#) folder.
- Take a moment to study the image and create this layout using Bootstrap grid.
- You can use [lorem ipsum](#) for the text.
- You can read about the grid system here: <http://getbootstrap.com/css/#grid>

- **Hints:**



- Container > Row > Column



**Time's Up!** Let's Review.

# Take a Break!

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## Activity: Bootstrap Components

In this activity, you and your partner will create a basic web page using Bootstrap components.

**Suggested Time:**  
10 Minutes



# Instructions: Activity: Bootstrap Components

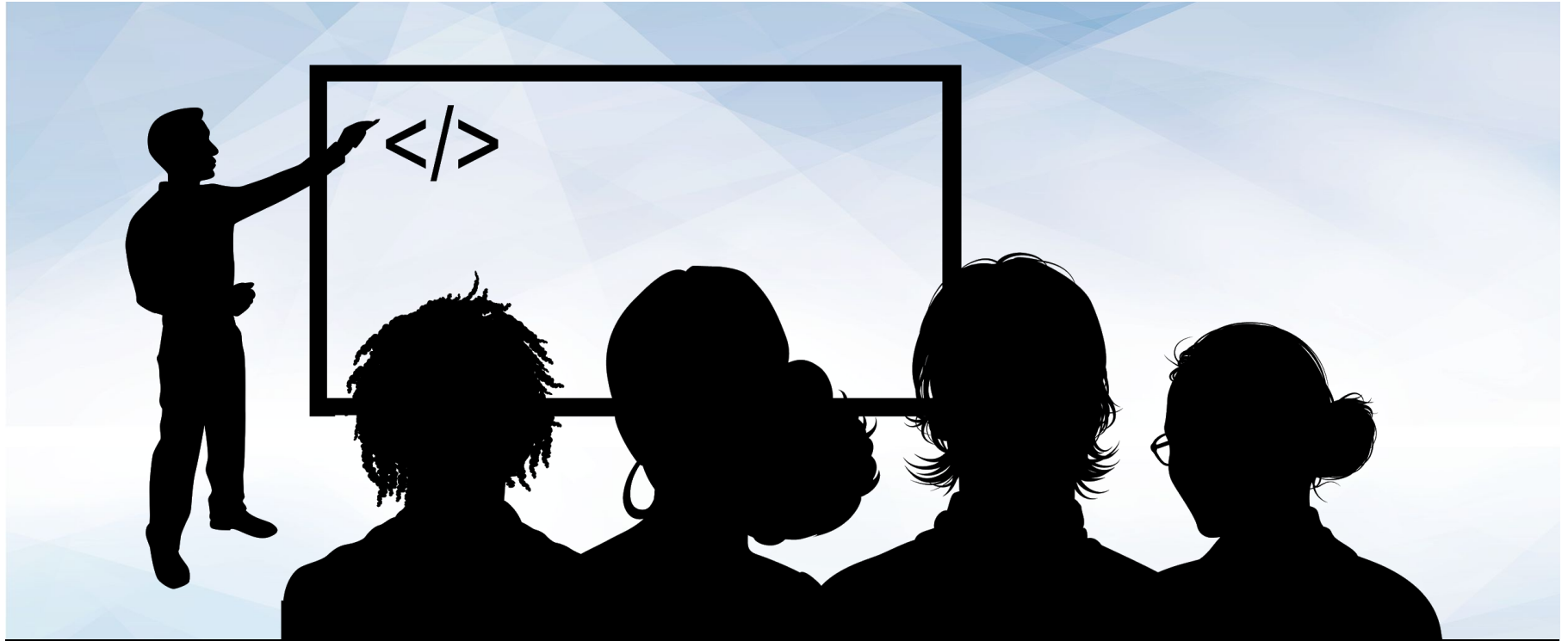
---

- With a partner, navigate to <http://getbootstrap.com/components/>
- Create a new HTML file, try to include at least 10 different Bootstrap components in this file, and be ready to discuss after the activity.
- You can add a Bootstrap component inside of your document by copying and pasting any of the examples on the Bootstrap Components page.



An overhead photograph of a group of people sitting around a dark wooden table. Several hands are visible, some holding smartphones and others typing on laptops. The scene suggests a collaborative work environment. The text 'Let's Discuss Bootstrap Components' is overlaid in the center of the image.

# Let's Discuss Bootstrap Components



# Instructor Demonstration

## Different Column Types

# Different Columns Types

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col-md-3

col-md-3

col-md-3

col-md-3

col-md-3 col-sm-6

col-md-3 col-sm-6

col-md-3 col-sm-6

col-md-3 col-sm-6

col-md-12 col-sm-6 col-xs-3

col-md-12 col-sm-6 col-xs-3

col-md-12 col-sm-6 col-xs-3

col-md-12 col-sm-6 col-xs-3





## Activity: Clone a Website

In this activity, you will attempt to recreate an existing website using the Bootstrap grid and Bootstrap components.

**Suggested Time:**  
25 Minutes



# Instructions: Activity: Clone a Website

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- For the remainder of class, you will be using Bootstrap to create a clone of one of the following websites:
  - <https://github.com/>
  - <http://stackoverflow.com/>
  - <https://twitter.com/>
  - <https://www.amazon.com/>
  - <https://www.microsoft.com/en-us/>
- Use the inspector to find color values for elements on the real website, along with any other values you may need.
- Use the Bootstrap grid to space the various components on your web page to roughly where they fall on the real site. Don't worry too much about being exact here!
- If you have another website you would like to try instead, run it by your instructor for approval.
- Note: You'll still need to include your own CSS file to add more specific custom styling to your web page. Make sure this is included in your index.html file after Bootstrap is included.

*The  
End*