

Bootstrap: Week 1

Workshop Presentation





Today's Agenda

Activity	Estimated Duration
Set-Up	15 mins
Instructor & Student Introductions / Ice Breakers	30 mins
Your Bootcamp Checklist	30 mins
Review	75 mins
Break	15 mins
Workshop Assignment	60 mins
Check-Out (Feedback & Wrap-Up)	15 mins



Your Learning Experience for this Bootcamp

- Next week's content is unlocked at the end of the week (Fridays)
- Daily tasks **every day (2+ hours)**:
 - View videos and follow along with the exercises
 - Any Code Challenges and Quiz toward end of week
 - Additional exploration
 - Prepare for workshop assignment
 - Help other classmates via class forums or Slack
- **4-hour workshop every weekend**
 - Read the assignment instructions prior to Saturday



**IT WILL BE HARD
IT WILL IMPACT
YOUR ROUTINE**



The 20 minutes rule

If you ask for help too soon:

- You will not learn how to tackle problems or remove obstacles, which is core to coding.

- Remember the process or path that resolved the issue is more important than the solution.

If you ask for help too late:

- You will get frustrated and tired.

- You will miss an opportunity to go deeper on the same topic (time is limited).

10 minutes rule during workshops

- During the week, go by the 20 minutes rule.

- During workshops, go by a 10 minutes rule – try to solve the issue yourself (or with your classmate, if working together) for 10 minutes before asking your instructor for help.

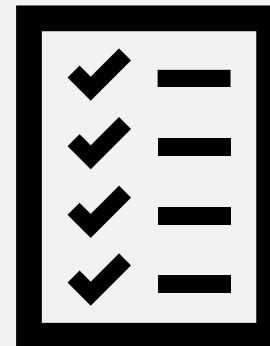


20 minutes, then ask for help!



Bootcamp Checklist

- Daily Emails
- VS Code
- Chrome / Firefox
- Installed Moodle App on phone
- Nucamp Folders
- Terminal / Command Prompt
- Git & Node (npm)
- Slack (introduced yourself)
- Codepen (created an account)
- Time Commitment Pledge (more on next Slide)
- Read and agree to the Code of Conduct
- Workshop





About Your Time Commitment Pledge

- **Time Commitment Pledge:**
 - 14 to 20 hours of focused time every week
- **Weekly Commitment Pledge:**
 - Attend every Saturday workshop,
 - Spend one to three hours every day learning and performing the weekly exercises
 - Publish your workshop assignment on Saturday or Sunday (avoid late submissions)
- **Talk to your Friends and Relatives:**
 - Have a conversation with your family, explain to them your commitment pledge and seek their support.
 - Similarly, reach out to your friends and seek their support.
 - Don't underestimate the importance of communicating your intentions to those around you!



Week 1 Review

- Assuming you are on schedule currently (1 hour 15 minutes in) you should have 75 minutes to review what you learned this week, starting with the next slide.
- Make sure to keep an eye on the clock, or even set a timer for 60 minutes from now, so you know when to start wrapping up and get ready to start on the Workshop Assignment.
- You have a shorter than usual Workshop Assignment this week, so we have reserved 60 minutes to complete it. It should be doable within that time.



Review: Bootstrap Course Overview

- Bootstrap is a free and open-source front-end UI framework for developing websites, originally developed by Twitter in 2011.
- Bootstrap and other front end UI frameworks provide tools to build the front end without writing every component from scratch.
- Bootstrap is the most popular. Alternatives: MaterialUI, SemanticUI, Pure.

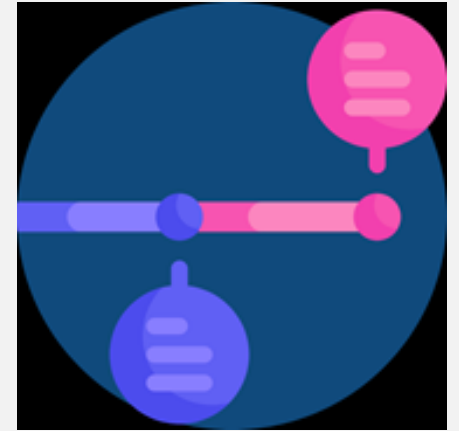


Review: Bootstrap Course Overview

- This is a 5-week course. You will work on two projects throughout this course:
 1. The in-person weekly workshop project, the "nucampsite" project.
 2. A portfolio project of your choice, as part of a team or solo. You will build this project with Bootstrap in this course, then with React in the React course, and you will also use it in the rest of your bootcamp.



Review: Weekly Objectives



- Week 1:
 - Introduction to Bootstrap and the Bootstrap Grid.
- Week 2:
 - Learn about Bootstrap components such as navbars, buttons, forms, tables, cards, and media objects. Begin your Portfolio Project.
- Week 3:
 - Learn about more Bootstrap components and how to access the functionality of Bootstrap JavaScript plugins. Begin to review JavaScript and continue working on your Portfolio Project.
- Week 4:
 - Learn about jQuery, CSS preprocessors, and preparing your files for deployment using NPM scripts. Continue your JavaScript review and work on your Portfolio Project.
- Week 5:
 - Focus on completing your Portfolio Project this week, as well as learning more JavaScript in order to prepare for your transition to the React course.



Review: Git

- Git is a free distributed version control system for **tracking changes** in **source code** during software development
- You can use version control :
 - to revert files back to a previous state
 - revert the entire project back to a previous state
 - compare changes over time (view history)
- Every time you commit (save the state of your file) in Git, it "takes a picture" of what all your files look like at that point in time and stores a reference to that snapshot.
- NOTE: While you should complete the initial exercises/lessons on Git for this week, **Git is optional to use for the rest of your bootcamp**. If on Windows, you will be using Git Bash for your command line interface.



Review: Node/NPM

- NPM (Node Package Manager) is installed with Node.js.
- It allows you to download JavaScript packages for use in your project.
- When you configure your project to work with NPM, it will install a `package.json` file which contains settings for your project as well as its dependencies.



Review: VS Code Integrated Terminal

- Is everyone able to access the integrated terminal and (for Windows users) set it to use bash as the default shell? (macOS users should already have bash set as the default.)
- Does everyone know how to toggle the view of the terminal on and off?
- Does everyone know how to open parallel shell sessions, and switch between them?
- Does anyone have other questions on using it?



Review: Bash Commands

- Basic commands you should know (same in Terminal and Git Bash):
 - **cd** to change directory: *cd <dirname>*
 - **cd ..** to move up (back) a directory
 - **ls** to list the contents of a directory
 - **mkdir** to make a new directory: *mkdir <new directory name>*



Review: Front End/Back End/Full Stack

- The **front end** is where we deliver content to the user, typically, in a browser where they access the information.
 - Utilize technologies like HTML, CSS, JavaScript, and libraries/frameworks built using these technologies (Bootstrap, React, etc) to render the content for to the user.
- The delivery of this information is supported behind the scenes by a **back end**, typically implemented these days using technologies like PHP, Java, ASP.NET, Ruby, Python, or NodeJS.
- **Full stack simply means both front and back end.**



Review: Mobile-First, Responsive Web Design

Discuss together:

- What does **mobile-first design** mean?
- What does **responsive web design** mean?



Review: HTML Page Setup for Bootstrap

- Inside the head element of your page
 - Bootstrap requires the use of the viewport meta tag:

```
<meta name="viewport" content="width=device-width, initial-scale=1" />
```
 - You will also need to link the Bootstrap CSS file:

```
<link rel="stylesheet" href="node_modules/bootstrap/dist/css/bootstrap.min.css" />
```
- For some of the components in Bootstrap to work, link the following JS files (in this exact order) to the end of the body element, just before the closing `</body>` tag

```
<script src="node_modules/jquery/dist/jquery.slim.min.js"></script>
```

```
<script src="node_modules/popper.js/dist/umd/popper.min.js"></script>
```

```
<script src="node_modules/bootstrap/dist/js/bootstrap.min.js"></script>
```



The `bootstrap.css` file

- If you have not yet accessed it yourself, take a moment to locate it in the Explorer tab of VS Code and open it.
- Do **not** edit this file, but it's good for you to get used to accessing and looking at source code, even if you don't understand it yet.
- Also find and look at the **bootstrap.js** file, and optionally, any of the other files you are using.
 - Can you locate the main source code for **lite-server** inside the `node_modules` folder, for example?
- Just look, do not edit :)



Review: Breakpoints

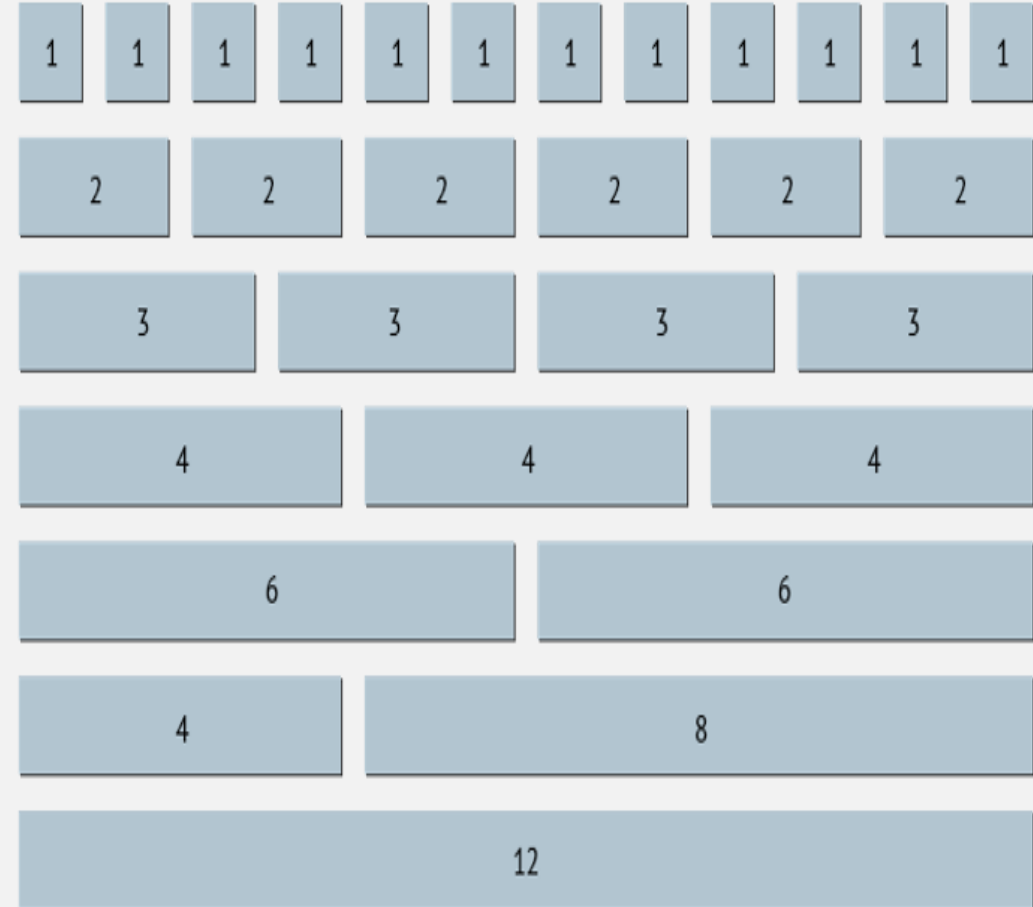
Discuss:

- What is a **media query**, and what is a **breakpoint**?
- Remember, you will not have to write any media queries/define breakpoints yourself to use Bootstrap. You simply access the breakpoints by using responsive classes that let you specify **sm**, **md**, **lg**, **xl**.
- However, it's good to have some understanding of how the code works under the hood.



Review: The Bootstrap Grid System

- Bootstrap's grid system uses a series of containers, rows, and columns to layout and align content. It's built with flexbox and media queries/breakpoints to be fully responsive.
- Rows are wrappers for columns.
- Content **must** be placed within columns, and only columns may be immediate children of rows.
- There are 12 maximum columns to each row.





Review: The Bootstrap Grid System

- Column classes indicate the number of columns you'd like to use out of the possible 12 per row.
 - Example: If you want a column to use up 4 of the possible 12 in a row, you can use `.col-4`.
- To make the grid responsive, apply one of the Bootstrap 4 breakpoints to the column class: small, medium, large, and extra large (sm, md, lg, xl). If you leave out the breakpoint, the column class you use will apply to all viewport sizes.
 - Example: `<div class="col-sm-4">` will cause this div to use 4 columns for viewports that are size **sm** and up.
- Thanks to flexbox, grid columns without a specific number will use **Auto-layout** to create equal width columns.
 - Example: Four divs with classes of `.col-sm` in the same row will create 4 evenly spaced columns that are each 25% wide for small viewports and up.
- If you use grid columns without a specific number in a row along with other columns that do have a specific number, they will automatically divide up whatever columns remain, equally.
 - Example: If you have a div with `.col-sm-6` in the same row with two other divs with `.col-sm`, then the `.col-sm` divs will take up 3 columns each (because 12 minus 6, divided by two = 3).



Review: The Bootstrap Grid System

Discuss:

- What does `col-md-6` do?
- What does `col-12` do?
- What will this row look like in a Bootstrap grid, and why?

```
<div class="row">  
  <div class="col">  
    1 of 3  
  </div>  
  <div class="col">  
    2 of 3  
  </div>  
  <div class="col">  
    3 of 3  
  </div>  
</div>
```



Review: Bootstrap Online Documentation

- Bonus points* for the first person to look through the Bootstrap online documentation (at <https://getbootstrap.com/docs/4.0>) and say out loud the name of the class used to create a **Button component with a yellow outline**.
- The importance of getting used to reading code documentation cannot be overstated. **It's very difficult to memorize everything**, there's too much information, and it's constantly evolving! Instead, ***practice finding the information when you need it.***
- Luckily, Bootstrap's documentation is quite thorough and well maintained.
- Be forewarned. Not all documentation will be this friendly! You will often have to 'connect the dots' to make up for poorly written or missing documentation.
- So when there is good documentation on a project, appreciate it and use it to the full extent.

**no actual bonus points will be awarded; good job though*



Review: Bootstrap Order-* Classes

- Bootstrap's responsive **order-*** classes can be used with the Bootstrap grid to change the order of columns.
- You can use them with breakpoints to specify that they should only apply within certain viewport sizes, or leave them out to apply to all.
- You can set the order of the column by number from 1-12. For example, to make a column appear first in a row, you can give it the class **order-1**.
- You can also use **order-*-first** and **order-*-last** (where the * indicates an optional breakpoint size).



Review: Bootstrap Offset-* Classes

- Use the responsive `offset-*` classes to force a column to move to the right in a row
- You can optionally add a breakpoint, such as `offset-sm-4`
- If you leave out the breakpoint, it will apply to all viewport sizes



Review: Adding Custom Styles

- If adding custom styles, create an external stylesheet and link it ***below*** the link to the *bootstrap.css* file.
- You can write rules for existing Bootstrap classes (as you did with .jumbotron), and it will override the Bootstrap rules where there is any conflict, and keep the Bootstrap rules where there is no conflict -- as long as your custom stylesheet is linked ***below*** the Bootstrap css link.



Review: Bootstrap Alignment Classes

- Bootstrap has many different classes to help with alignment.
- In this week, you learned about `align-items-center` and `align-self-center` to help with vertical alignment.
- You also learned about `text-center` to help with horizontal text alignment.
- **Discuss:** How would you make `text-center` into a responsive class that will only apply to LG viewports and up? (Answer in next slide.)



Review: Bootstrap Alignment Classes

- Answer: `text-lg-center`



Review: Code Challenge

- Review and discuss the Bootstrap Grid code challenge together.

<https://codepen.io/minae/pen/NQKNom>



Review: Week 1 Quiz

- Note: If the class is running behind schedule according to the Agenda, then set aside reviewing the Quiz for now and return to it if there is time left over *after* all students have completed the Workshop Assignment.
 - It is important that students have ample time to complete the assignment during the workshop.
- Review and discuss the answers to the Week 1 Quiz together.



Break Time – You've earned it!





Week 1 Workshop Assignment

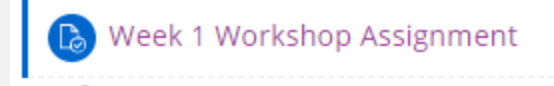
- All students should aim to finish and submit your assignment before you leave today.
- Work in pairs, or groups of three. Talk to each other and figure things out together!
- 10-minute rule during workshops: If you and your paired partner have spent more than 10 minutes trying to figure something out, ask your instructor for help.

Happy learning!



Submitting Your Assignment

- Go to <https://learn.nucamp.co>
 - Click "Week 1 Workshop Assignment"
 - Upload your work by clicking "Add Submission", select the file, and then click "save"



- Note that your work is in Draft status
 - Click "submit assignment" to submit it

Submission status	
Attempt number	This is attempt 1.
Submission status	Draft (not submitted)
Grading status	Not graded
Last modified	Sunday, June 2, 2019, 5:29 PM
File submissions	Week 1 Solution (Part 1+2+3).html
Make changes to your submission	
<input type="button" value="Submit assignment"/>	

Submission status	
Attempt number	This is attempt 1.
Submission status	No attempt
Grading status	Not graded
Last modified	-
<input type="button" value="Add submission"/>	



Week 1 Quiz – (If there is remaining time)

Question 1

Correct

1.00 points out of 1.00

Flag question

Front-end development is concerned with matters such as ✓, vs back-end development, which is concerned with matters such as ✓.

Your answer is correct. The user interface is the concern of the front end, and data storage and access the concerns of the back end.

Question 2

Correct

1.00 points out of 1.00

Flag question

The size of a viewport is always the same as the screen resolution.

Select one:

☐ True

☒ False ✓

Correct. Viewport sizes will not always be the same as screen resolution, especially on mobile devices.



Week 1 Quiz

Question 3

Correct

1.00 points out of 1.00

Flag question

Match each CLI command to its behavior.

Use this command to list the contents of your current directory.

LS or DIR ▼



Use this command to change the directory that you are in.

CD ▼



Use this command to make a new directory.

MKDIR ▼



Your answer is correct.

Question 4

Correct

1.00 points out of 1.00

Flag question

What Bootstrap class would you use to create a column that spans across 4 columns for viewports size large and up?

Answer: col-lg-4



Correct. This responsive column class would cause a column to span across 4 of the potential 12 columns in a row for large and up viewports.



Week 1 Quiz

Question 5

Correct

1.00 points out of 1.00

Flag question

The Bootstrap text utility class text-lg-left makes your text large and gives it left alignment.

Select one:

☐ True

☒ False ✓

True. It does left align your text, but the -lg- part of the class means it will only apply to viewports that are size large and above, not that it will make the text large.

Question 6

Correct

1.00 points out of 1.00

Flag question

```
<p class="text-left">Left aligned text on all viewport sizes.</p>
```

```
<p class="text-center">Center aligned text on all viewport sizes.</p>
```

```
<p class="text-right">Right aligned text on all viewport sizes.</p>
```

```
<p class="text-sm-left">Left aligned text on viewports sized SM (small) or wider.</p>
```

```
<p class="text-md-left">Left aligned text on viewports sized MD (medium) or wider.</p>
```

```
<p class="text-lg-left">Left aligned text on viewports sized LG (large) or wider.</p>
```

```
<p class="text-xl-left">Left aligned text on viewports sized XL (extra-large) or wider.</p>
```