WELCOME TO CFG
YOUR INTRODUCTION TO WEB DEVELOPMENT

CODE
FIRST
GIRLS
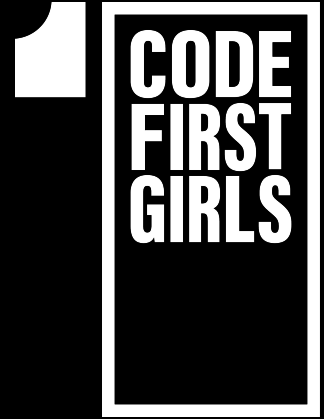
TECH SHOULDN'T JUST BE A BOYS CLUB.

COURSE JOURNEY

HTML	CSS	Recap Project design	**Bootstrap**	JavaScript	UI/UX Accessibility	Github Pages Project work	Project presentations
MODULE 01	MODULE 02	MODULE 03	MODULE 04	MODULE 05	MODULE 06	MODULE 07	MODULE 08

BOOTSTRAP

What is Bootstrap?

How to import Bootstrap

Bootstrap Grid and Container

Complete interesting practical exercises

04

WHAT IS BOOTSTRAP?

Bootstrap makes designing websites much easier for developers. It's one of the most popular ways to build front-end sites and applications...

- A CSS Framework, just like the Animate.css!

- Made by Twitter

- Aims for a Mobile-First Responsive Design

- Famous for its Grid System

- The beta of v5.2 is currently out

- The latest update was version 5.2.3 (check it out: click here!).

HOW TO LINK BOOTSTRAP TO HTML

For the first import, you will need wifi to acquire the CDN. CDN stands for Content Delivery Network.

In simple terms, a CDN is a download of the Bootstrap pages onto your browser.

After you use it for the first time, it's basically saved in your browser and ready for future use!

BootstrapCDN

The recommended CDN for Bootstrap, Font Awesome, Bootswatch and Bootstrap Icons

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HOW TO LINK BOOTSTRAP TO HTML

```html
<!doctype html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <title>Bootstrap demo</title>
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.3/dist/css/bootstra
  </head>
  <body>
    <h1>Hello, world!</h1>
    <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.3/dist/js/bootstra
  </body>
</html>
```

Just like the CSS, but for Bootstrap, we also need to add some JavaScript to make some components work. Make sure you have the Bootstrap import line BEFORE your local CSS stylesheet. You can find the appropriate link here.

NOW LET'S PRACTICE TOGETHER
BOOTSTRAP IMPORT

5 MINS

Exercise 1.0 - set up
Create HTML file and CSS file and link them.

Exercise 1.1
Import the Bootstrap starter template from here (Quick Start 2.)

Exercise 1.2
Add an h1 and add the class display-1 to it.

9 MINS

Exercise 1.3
Go into your CSS file and change the colour of the element with the display-1 class. Then, using the Bootstrap Utilities classes here, center your h1 and adding a top and bottom margin

Exercise 1.4
Import a Bootstrap Component from here – we'll import the accordion

Exercise 1.5
Bootstrap provides the according with 3 layers, let's add a 4th!

GROUP EXERCISE

BOOTSTRAP EXAMPLES

Codepen is a great place to learn about how code styling works. Here are just a few of the examples you can find about using the Bootstrap layout...

- https://codepen.io/eatsleepweb/pen/wNyGZw
- https://codepen.io/hvmiller/pen/pjWMdd
- https://codepen.io/mad-d/pen/pvjyzb

As you can see, these examples focus more on layout than complete styling – but this is an important first step for learning responsive design.
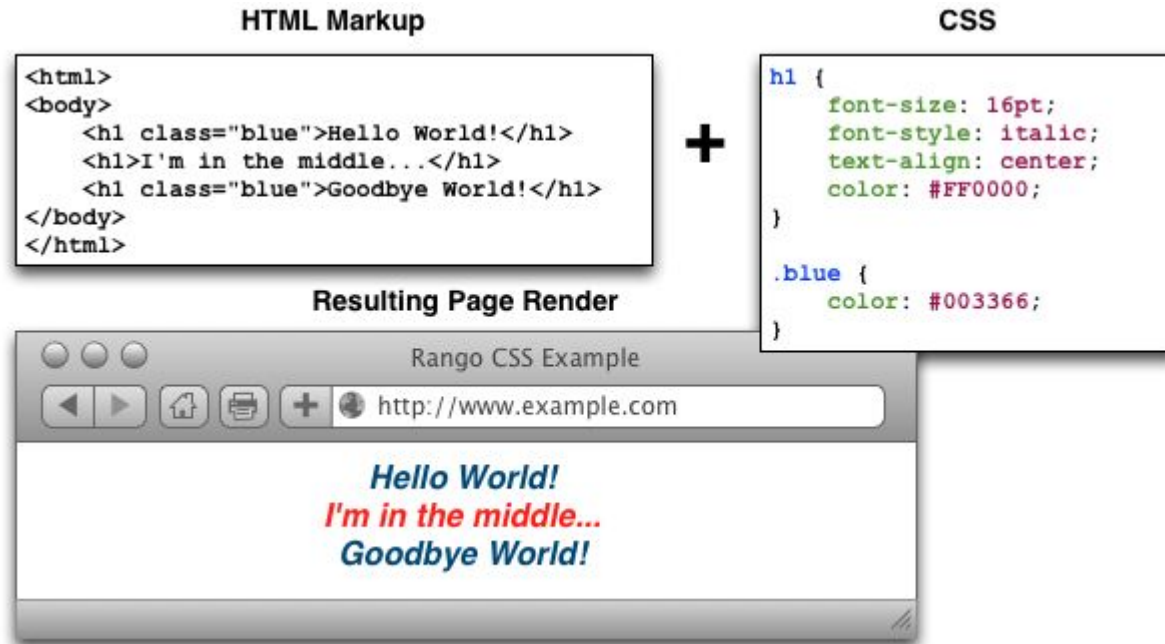In your free time, check out more examples of how to use Bootstrap.

BOOTSTRAP GRID SYSTEM

Bootstrap is famous for its grid system, which makes it much easier to build websites for both web and mobile. The grid system is made up of containers, rows and columns to make sure that everything is always in the right place! It uses a 12 column system and is made with flexbox, so it's fully responsive!

The Bootstrap grid relies on using classes. You've come across classes before when working with CSS. We assign these classes to elements we want to customize. Let's remind ourselves about classes...
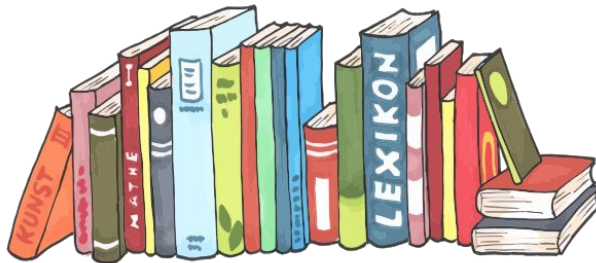
HTML Markup

```
<html>
<body>
    <h1 class="blue">Hello World!</h1>
    <h1>I'm in the middle...</h1>
    <h1 class="blue">Goodbye World!</h1>
</body>
</html>
```

+

CSS

```
h1 {
    font-size: 16pt;
    font-style: italic;
    text-align: center;
    color: #FF0000;
}

.blue {
    color: #003366;
}
```

Resulting Page Render

○ ○ ○   Rango CSS Example

◀ ▶ ⌂ 🖨 + 🌐 http://www.example.com

Hello World!
I'm in the middle...
Goodbye World!

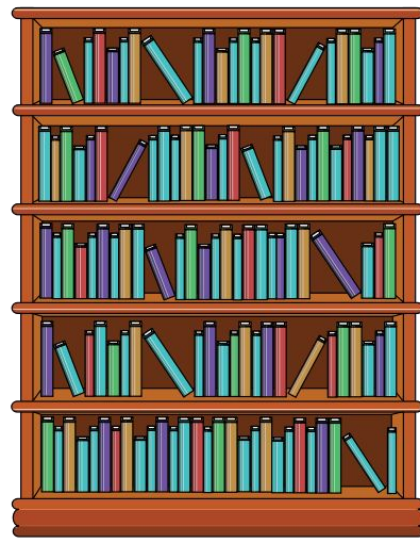# WHAT CLASSES MAKE UP THE BOOTSTRAP GRID?

Containers

Rows

Columns

Used to wrap and pad website elements

Used to create horizontal groups (—— this way)

Used to create vertical groups (|| this way)

Bootstrap Grid System

Below is an example of using the Bootstrap Grid System. As you can see, we are wrapping these elements together within a container div, and then we are creating one row. Within this one row, there are three different sections. Each of these sections are columns. Think about it like designing a building step by step!

One of three columns	One of three columns	One of three columns

```html
<div class="container">
  <div class="row">
    <div class="col-sm">
      One of three columns
    </div>
    <div class="col-sm">
      One of three columns
    </div>
    <div class="col-sm">
      One of three columns
    </div>
  </div>
</div>
```

Bootstrap Grid System

There are lots of different things we can do with this grid system, depending on what we hope to build and how we wish to style it. You can see a detailed list of example container uses column structure on the [bootstrap website](). This is an example of adapting styling for mobile and desktop devices.

.col-xs-12 .col-md-8		.col-xs-6 .col-md-4

.col-xs-6 .col-md-4	.col-xs-6 .col-md-4	.col-xs-6 .col-md-4

.col-xs-6	.col-xs-6

```html
<!-- Stack the columns on mobile by making one full-width and the other half-width -->
<div class="row">
  <div class="col-xs-12 col-md-8">.col-xs-12 .col-md-8</div>
  <div class="col-xs-6 col-md-4">.col-xs-6 .col-md-4</div>
</div>

<!-- Columns start at 50% wide on mobile and bump up to 33.3% wide on desktop -->
<div class="row">
  <div class="col-xs-6 col-md-4">.col-xs-6 .col-md-4</div>
  <div class="col-xs-6 col-md-4">.col-xs-6 .col-md-4</div>
  <div class="col-xs-6 col-md-4">.col-xs-6 .col-md-4</div>
</div>

<!-- Columns are always 50% wide, on mobile and desktop -->
<div class="row">
  <div class="col-xs-6">.col-xs-6</div>
  <div class="col-xs-6">.col-xs-6</div>
</div>
```

Copy

NOW LET'S PRACTICE TOGETHER
BOOTSTRAP IMPORT

5 MINS

Exercise 2.0 - set up
Create a new HTML file and import Bootstrap.

Exercise 2.1
Create three equal-width columns in your HTML doc. Name them column-one, column-two, and column-3.

Exercise 2.2
Use the row-columns class (`.row-cols-*`) to add two columns to each of these elements. Name the first three elements row-1, and the second three row-2.

9 MINS

Exercise 2.3
Now, let's add more detail to what we've built. For the first column to the left, add the title Inventory. For the two after, name them Stock and Price.

Exercise 2.4
Give the row-1 elements these values: Screwdriver, 12, £4.99.
Give the row-2 elements these values: AA Batteries, 35, £1.50.

GROUP EXERCISE

Bootstrap vs CSS?

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


    <head>
        <!-- Metas -->
        <meta charset="utf-8">
        <meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">

        <!-- Boostrap CSS -->
        <link rel="stylesheet"
            href="https://cdn.jsdelivr.net/npm/bootstrap@4.5.3/dist/css/bootstrap.min.css"
            integrity="sha384-TX8t27EcRE3e/ihU7zmQxVncDAy5uIKz4rEkgIXeMed4M0jlfIDPvg6uqKI2xXr2"
            crossorigin="anonymous">

        <!-- My CSS -->
        <link rel="stylesheet" type="text/css" href="css/styles.css">

        <!-- Website title and icon-->
        <title>Hello, world!</title>
        <link rel="icon" href="images/icon.png">
    </head>


    <body>
        <h1>Hello, world!</h1>

        <!-- Bootstrap JavaScript -->
        <script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"
                integrity="sha384-DfXdz2htPH0lsSSs5nCTpuj/zy4C+OGpamoFVy38MVBnE+IbbVYUew+OrCXaRkfj"
                crossorigin="anonymous"></script>
        <script src="https://cdn.jsdelivr.net/npm/bootstrap@4.5.3/dist/js/bootstrap.bundle.min.js"
                integrity="sha384-ho+j7jyWK8fNQe+A12Hb8AhRq26LrZ/JpcUGGOn+Y7RsweNrtN/tE3MoK7ZeZDyx"
                crossorigin="anonymous"></script>
    </body>
</html>
```

Knowing what we now know about utilising Bootstrap, does that mean we should no longer be using our own style sheets?

Absolutely not!

We can still apply elements of our own style by linking to our stylesheets as well as using Bootstrap, however, you need to be careful of overlapping styling or crowding your code.

The most important thing to remember is that Bootstrap makes sites a lot more responsive, meaning a more straightforward build for different screens and platforms.

Alternatives to Explore

While Bootstrap is definitely the most popular, there are other free, open-source frameworks to discover. Foundation by Zurb is one of the strongest competitors, used by Adobe and Amazon, and also works for HTML email structure. Bulma was built with a full flexbox grid and comes with stunning designs straight out of the box. But Bootstrap is still the choice for beginners and pros all over the world!
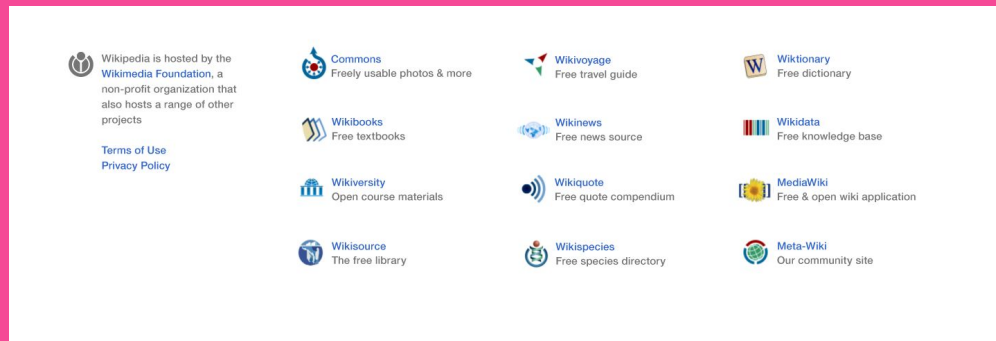
HOMEWORK
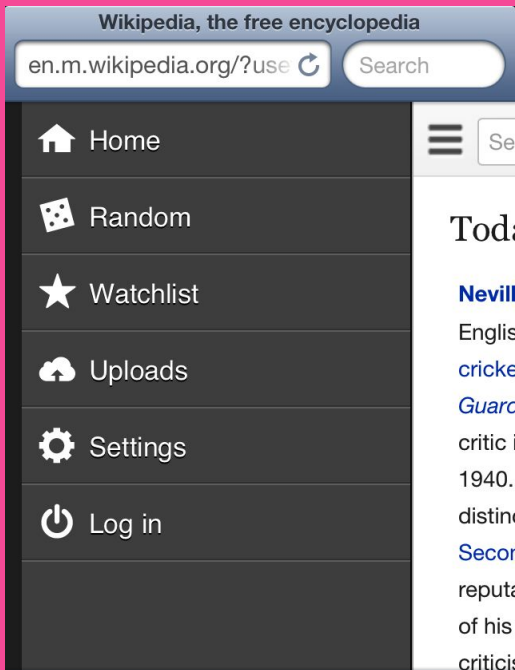
IT DOES NOT HAVE TO FOLLOW
THE ABOVE DESIGN AND CAN SIT
AT THE TOP OF THE PAGE

+ **Homework Task**

Create a homework tracker (it doesn't have to be functional). Style the index.html page using Bootstrap, with either a navbar or a footer.

THE FOOTER CAN BE
RELATIVELY SIMPLE: MADE-UP
CONTACT INFORMATION,
LOCATION ETC.

THANK YOU
HAVE A GREAT WEEK!

CODE
FIRST
GIRLS