

## Chapter 1 – What's hard about CSS?

[Demo here.](#) It shows the different cases of CSS needed to create a polaroid frame with a box-shadow that is compatible to all browsers.

You've seen quite a bit of CSS now; it all seems quite straightforward – you write some css, tweak it 'til it looks good and you're done! In theory this is exactly how CSS works and is why CSS is brilliant.

Unfortunately, the realities are not quite so straightforward. Different browsers will render CSS with subtle differences. Take a look at the cat picture. The styling is relatively simple – all we've done is add a border and a shadow.

**Just because your site looks good in Chrome, doesn't mean it will look good in Internet Explorer.** Making your site look good (or even presentable) in multiple browsers takes time, effort and experience.

### What else is hard about CSS?

About 5 years ago, 'all' you would have had to worry about is the cross-browser display issues. Since then, the mobile web has exploded and you have another (far more important) concern: how will your site look when viewed on a mobile?

Making web pages that look good when viewed at multiple different sizes is a whole new level of complexity.

## Twitter Bootstrap

[Twitter Bootstrap](#) is a **Web Application Framework**; set of CSS (& Javascript) files, released by the makers of Twitter, and maintained by some of its developers.

Bootstrap provides a set of **ready-made CSS files** that provide pre-built **functions** for **common web development requirements**, and pre-built **solutions** to **common presentation requirements** in a **cross-browser and responsive** way.

To make use of Twitter Bootstrap, you need to do two things:

1. Link to the Twitter Bootstrap stylesheet in the **head** of your html page.
2. Attach the relevant Twitter Bootstrap class to your html element.

To understand how to use Bootstrap, or any framework for that matter, it is **vital to read the documentation** (it's basically a guidebook). The documentation for it is [here](#).

[Here are some basic examples](#) for using Bootstrap, take a look.

## An example: making a stripy table

Suppose you want a Zebra-esque table like [this fine specimen](#).

Have a look at the [Twitter Bootstrap table documentation](#) and you'll discover that you need to add the `table table-striped` class to the `<table>` tag:

```
<table class="table table-striped">
  ...
</table>
```

This will apply the relevant CSS rules from the bootstrap CSS file. If you're interested, you can go into Developer Tools and view the rules that apply e.g.

```
/* from line 1950 of bootstrap.css */
.table-striped tbody tr:nth-child(odd) td,
.table-striped tbody tr:nth-child(odd) th {
  background-color: #f9f9f9;
}
```

## Responsive design

**Responsive design** means designing your sites so that they look good on **all screen sizes**.

Twitter Bootstrap promotes a 'mobile first' philosophy, encouraging you to design your site so that it looks **good at all sizes from the very beginning**. It provides a lot of useful CSS that helps you to do this.

Bootstrap includes a **responsive, mobile first fluid grid system** that lets you split the screen up into 12 columns and lets you customise the size of your HTML element as a fraction of 12. [See this example for a easy layout option](#), and [look at this example](#) for responsive design – [change the size of your browser](#) to see the difference between the "xs", "sm" and "md" classes. Can you tell what they mean?

### Task:

The aim of the rest of this session will be to create the website for ["Sam's Sarnies"](#) using Twitter Bootstrap.

1. Go to the github repository for the [bootstrap exercise](#). Download the code into your `coding_course` folder (by clicking 'Download ZIP' in the bottom right).
2. Open `bootstrap_exercise/index.html` in your browser.
3. Go to the [Bootstrap](#) website (it's hosted at github, like your `first_site`) and click the [Download Bootstrap](#) button (not the Download Source).

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4. Unzip and copy the `dist` folder into the `bootstrap_exercise` folder.

5. Open `index.html` in Sublime Text and Chrome.

6. Add a link to the twitter bootstrap stylesheet into `index.html`

```
<link href='NAME_OF_BOOTSTRAP_FOLDER/css/bootstrap.css' rel='stylesheet'>
```

Note that you're using a document-relative link to a file two subfolders down.

7. Refresh the page in Chrome. Notice how the fonts have changed.

8. Add the following line to the `head` section:

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

as suggested in the [CSS / Overview](#) section of the [Bootstrap docs](#).

## Chapter 3 – Bootstrap layout

Bootstrap gives you several options on how to layout your page. To find out more take a look at the [Grid system docs](#) on the Bootstrap site. Some of these options will work out-of-the-box with *responsive design* – so that you can create a single html page which will look good whether viewed on a laptop, tablet or phone.

We'll just look at a few of the most important layout options here:

### Page margins

Bootstrap makes it easy to center content on your page and provide sensible page margins. To do this make use of the `container` class:

```
<body>
  <div class="container">

    <!-- page content goes here -->

  </div>
</body>
```

### Columns

Bootstrap works on a grid layout, with 12 columns (by default). [See a demo here](#). You can create a column layout with the `row` and `span` classes:

```
<div class='row'>
  <div class='col-sm-4'>
    <!-- First column content -->
  </div>
  <div class='col-sm-4'>
    <!-- Second column content -->
  </div>
  <div class='col-sm-4'>
    <!-- Third column content -->
  </div>
</div>
```

The number after the `col-sm-` determines how many of the 12 grid columns that page column takes up. The `sm` bit determines the width at which the columns will collapse on top of each other, and in this case, it represents a “small” viewport, e.g. when viewing your site on a phone. Again, for more information see the [Grid system docs](#).

**Task:**

- Add a `div class='container'` around the page content.
- Create a row at the top of the page, with two columns, with the left twice as wide as the right. Put the `h1` in the left column and the `img src='images/sandwich.png'` on the right.
- Create a row with three equal columns to hold each of 'The Buzz' divs.

## Chapter 4 – More Bootstrap

### Typography

Skim through the [typography section](#) of the bootstrap docs.

**Task:**

1. Change the quotes in 'The Buzz' to use blockquotes. (Don't worry about the vertical grey lines – we'll remove those later.)
2. Change the paragraphs in 'Our mission' to be lead body copy.

### Badges and Buttons

Check out the [buttons section](#) (CSS > Buttons).

**Task:**

1. Change the 'Send' button to a success button:

```
<button class='btn btn-success'>Send</button>
```

You might also need `btn-sm` in the Recent Activity section.

2. Make the social links at the bottom into large buttons (we'll colour them later):

```
<button class='btn btn-lg'>Send</button>
```

### Images

Have a look at the [image section](#) of the Bootstrap docs (CSS > Images).

**Task:**

1. Make the images in 'The Buzz' round, by adding the `img-circle` class.
2. You can center the image by adding the alignment class `text-center`.
3. Change the main sandwich image into an `img-responsive`, as described in the responsive images section. Try resizing your browser and see how it changes size.

## Chapter 5 – Modifying Bootstrap

### Modifying Bootstrap

**Warning:** Bootstrap has been designed and heavily tested for good cross-browser compatibility. Unless you know what you're doing or have a lot of time, it's probably best to stick with their layout and tweak small things e.g. fonts and colours. Just because it looks great in your browser doesn't mean it will look great in everyone's!

If you're going to modify Bootstrap **don't touch the Bootstrap files**. Instead create a new css file of your own to overwrite anything you don't want.

This means when a new version of Bootstrap comes out you can upgrade by dragging the new version over the top of the old, without losing any modifications.

#### Task:

1. Create a file called `main.css` and write the following CSS:

```
#social-buttons button {  
  color: white;  
}  
  
.btn-twitter {  
  background-color: #00acee;  
  border-color: #009ad5;  
}  
  
.btn-facebook {  
  background-color: #4868ac;  
  border-color: #314776;  
}  
  
.btn-pinterest {  
  background-color: #b62f26;  
  border-color: #b62f26;  
}
```

2. Link this file into the head of `index.html` underneath your link to bootstrap.
3. What happens? Notice how in the first rule we've selected only those buttons that exist inside an element with `id=social-buttons`.

## Changing the background

### Task:

1. Change the background of the jumbotron to be the image `fruit-and-veg.png` by adding the css

```
.jumbotron {  
  min-height: 600px;  
  background-image: url('images/fruit-and-veg.jpg');  
  background-size: cover;  
  background-attachment: fixed;  
}
```

2. This doesn't look quite right. The problem is that the jumbotron is inside the `div class='container'`. You can change this by moving it inside:

```
<div class="jumbotron">  
  <div class="container">  
  
  </div>  
</div>
```

Similarly you will now need to create new containers inside the `div id='buzz'` and `div id='mission'`.

3. Change the background color of the mission section to `rgba(32, 35, 41, 0.9)` and the font colour to `#ddd`

## Navbar

Browse through the [navbar section](#) of the Bootstrap docs.

### Task:

1. Look at the html for the [basic starter template](#).
2. Use it to add a navbar to your site.
3. Make it a `navbar-fixed-top`. You will need to add

```
body { padding-top: 70px; }  
to main.css.
```

4. Add a search box to the navbar. Use the `pull-right` class to put it on the right hand side.

## Other things

There are various other changes you will need to make your site look like the example. Try and figure out what these are by examining the html in the Developer tools.

### Task:

1. Make any other changes necessary to make your site look like [the example](#)
2. If you get stuck check by looking at the [gh-pages branch](#) on the github repo.

## Homework

### Finishing off

#### Task:

Finish off the bootstrap\_exercise from class

### Personal site

#### Task:

Continue work on your personal site. Use Twitter Bootstrap to make it **responsive!**

### Preparation for next week

#### Task:

[Try jQuery on Code School.](#)