



TASK

CSS Bootstrap

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Introduction

WELCOME TO THE CSS BOOTSTRAP TASK!

Until now, you have had to write all your HTML and CSS from scratch. This can be very time-consuming! In this task, you will be introduced to Bootstrap, a framework which allows you to create attractive, responsive websites more quickly.



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Connect for support

Remember that with our courses, you're not alone! You can contact an expert code reviewer to get support on any aspect of your course.

The best way to get help is to login to Discord at <https://discord.com/invite/hyperdev> where our specialist team is ready to support you.

Our team is happy to offer you support that is tailored to your individual career or education needs. Do not hesitate to ask a question or for additional support!



WHAT IS BOOTSTRAP?

Bootstrap is a front-end framework used to build pages faster using HTML and CSS. Bootstrap provides a lot of useful CSS and HTML templates that you can use and modify. The templates provide well-designed pages with attractive layouts, fonts, colours, objects etc. that have already been designed and which you can reuse and modify to save yourself a lot of time and effort. Another great benefit of using Bootstrap is that it helps you to create websites that automatically adjust based on the device which they are being used on. In other words, your site will automatically adjust to look good on tablets, phones and desktops. This is known as a *responsive website*. Additionally, Bootstrap is free of charge!

ADVANTAGES OF BOOTSTRAP:

- Easy to use: Anybody with just basic knowledge of HTML and CSS can start using Bootstrap.
- Responsive features: Bootstrap's responsive CSS adjusts to phones, tablets, and desktops.
- Mobile-first approach: In Bootstrap, mobile-first styles are part of the core framework.
- Browser compatibility: Bootstrap is compatible with all modern browsers (Chrome, Firefox, Internet Explorer, Edge, Safari, and Opera).

HOW DO YOU USE IT?

To use Bootstrap in a web page, you need to link to it from your HTML files. It's similar to what you're accustomed to when you use external CSS but you won't have the stylesheet file in your folder. Instead, it will load from an online source. This is done as follows:

```
<head>
<link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.6/css/bootstrap.min.css"
integrity="sha384-1q8mTJOASx8j1Au+a5WDVnPi2lkFfwwEAa8hDDdjZlpLegxhjVME1fgjWPGmkz
s7" crossorigin="anonymous">
<link rel="stylesheet" href="main.css">
</head>
```

Notice that in the example above, there are links to 2 stylesheets. The order of the CSS files matter:

The browser sees that the Bootstrap CSS should be included from a CDN and applies those styles to the page. A CDN is a content delivery network, i.e. a network

of servers that work together to provide fast delivery of Internet content including stylesheets. You will notice that the link to the Bootstrap CSS file points to a CDN:

```
https://maxcdn.bootstrapcdn.com/
```

Then the browser then sees main.css and applies those custom styles to the page. The custom styles override the Bootstrap styles.

The order of the CSS files tells the browser that your styles in main.css are more important than the styles in bootstrap.css, so the final page that loads is the customised web page.

HOW DOES BOOTSTRAP WORK?

Bootstrap has predefined contexts which automatically format a selection, allowing you to customise the finer details of the formatting. Bootstrap makes using CSS more efficient by wrapping some CSS properties into fewer lines of code. This wrapped CSS code is stored "online" in the Bootstrap repository, hence the need to reference Bootstrap either from an online source, or by saving the CSS file to your website folder. To illustrate the difference between using Bootstrap and writing your own CSS, let's consider an arbitrary example. If you wanted to style a border around a paragraph, you could write the following CSS rule:

```
.pBorder {  
    border: 1px dotted red;  
    padding: 10px;  
    margin: 10px;  
}
```

Libraries such as Bootstrap already include style rules for adding borders to elements. Instead of writing your own style rules each time you want to add a border therefore, you would instead add an appropriate Bootstrap class (called .pBorder in this example) to your HTML code and the above properties would be looked for in the Bootstrap library and applied. For example, inside your HTML you would have the following, without any additional CSS:

```
<p class="pBorder">This is my paragraph text</p>
```

Linking the Bootstrap library allows you to use some predefined CSS rules that you don't need to duplicate inside your own CSS file. Thus, in your own custom CSS file, you would only add non-Bootstrap styles.

EXAMPLES OF HOW TO USE BOOTSTRAP

The Bootstrap Grid System

Like any grid system, the Bootstrap grid is a library of HTML/CSS components that allow you to structure a website and place a website's content in desired locations easily. It allows you to create rows and columns and then place content in the intersecting areas. Bootstrap allows you to create up to **12 columns** and **unlimited rows** — hence the name 12-Grid System. See examples of Bootstrap grids [here](#).

Bootstrap's Grid System is made up of 3 things:

- *A container*
Bootstrap's grid system needs a container to hold rows and columns. A container is a simple `<div>` element with a class named **.container**. The container is used to provide a proper width for the layout, acting as a wrapper for the content. It also has different fixed widths in different sized devices. You can choose a fluid container instead of a fixed layout. To do this, you use the class **.container-fluid**. A fluid container has no fixed width; its width will always be the width of the device.
- *Rows*
A row spans from the left edge to the right edge of the container element. It is created by adding the class **.row** to a block level element inside the container.
- *Columns*
Bootstrap uses different column class prefixes for different-sized devices. These prefixes are shown in the table below:

Class Prefix	Device Size
.col-xs-	<768px
.col-sm-	768px to 991px
.col-md-	992px to 1199px
.col-lg-	>= 1200px

Here's how to implement a grid in Bootstrap:

```
<div class = "container">
  <div class = "row"
    <div class = "col-md-4">
      ...
    </div>
    <div class = "col-md-4">
      ...
    </div>
    <div class = "col-md-4">
      ...
    </div>
  </div>
</div>
```

Remember that Bootstrap's grid is 12 columns. If you do not want to use all 12 columns individually, you can group the columns together to create wider columns. Therefore, to create three equal-sized columns, they each need to span 4 grid columns.

Bootstrap Thumbnails

Bootstrap provides the **.img-thumbnail** class to easily display an image with a rounded 1px border appearance. Here's how to create a thumbnail:

```
<div class="container">
  <h2>Thumbnail</h2>
  <p>The .img thumbnail class creates a thumbnail of the image:</p>
  
</div>
```

An **img** element is wrapped in a div container with the class **.img-thumbnail**. Bootstrap also defines other image classes such as **.rounded** and **.circle** to create images with rounded corners and shaped like a circle, respectively. To find out more about styling images using Bootstrap, see [here](#).

OTHER BOOTSTRAP FORMATS

To see details on all Bootstrap formatting, visit Bootstrap for code demos and visualisations (this will aid you in completing your task below).

SPOT CHECK 1

Let's see what you can remember from this section.

1. What are the four advantages of using Bootstrap?

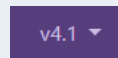
Instructions

Open all the example files for this task and read through the comments before attempting this task.

Compulsory Task

Follow these steps:

- Create a catalogue page for an online store. The catalogue page lists the items which are for sale.
 - Your catalogue page should have at least 10 items for sale. Include an image and a brief description of each item.
 - Your page should include a form (don't worry about functionality at this stage).
 - Style this page using Bootstrap. Copy and paste the link to the Bootstrap stylesheet into the head of your HTML pages. The link can be found [here](#). Choose a Bootstrap version at your discretion (currently on version 4.1). You should be able to select the version of Bootstrap from the top right-hand corner of the [Bootstrap page](#).



Note: Be creative. You can style your page however you like as long as all the requirements below are implemented with the use of the Bootstrap framework.

- Use a grid.
- Change your images to thumbnails. Add a comment that explains what a thumbnail is according to Bootstrap.
- Format your images to have a responsive image attribute. Add a comment that explains what a responsive image is.
- Create a table for your web page and format it as a hover table.
- Migrate your form to a horizontal form.
- Customise any implemented buttons.

- Customise multiple image/thumbnail shapes.
- Change all borders to have rounded edges and implement shadows for the boxes.
If using Bootstrap version 3, you can use CSS to implement this task requirement.

If you are having any difficulties, please feel free to contact our specialist team [on Discord](#) for support.

Bonus Optional Task

Follow these steps:

- Find a published webpage that you particularly like (not something you've already made). It could be from Netflix, takealot, ucook, or any other website you like.
- Create an HTML file called **copy-cat.html**.
- Using HTML and CSS, try to recreate the webpage as best you can.
- Add the URL of the webpage you are recreating as a link at the bottom of your webpage.
- You may want to do some research on more CSS elements for greater functionality.

Completed the task(s)?

Ask an expert to review your work!

[Review work](#)

Things to look out for:

1. Make sure that you have installed and set up all programs correctly. You have set up **Dropbox** correctly if you are reading this, but **Visual Studio Code** may not be installed correctly.



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SPOT CHECK 1 ANSWERS:

1. It's easy to use, has responsive features, is designed with a mobile-first approach, and is compatible with most browsers.