

🏠 Courses (/student) / 📁 Web Development 1 (Wien) (/student/course/5727275479728128)  
/ 📁 5) Bootstrap

## 5) Bootstrap

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### Agenda

- What is a framework
- What is Bootstrap
- Responsive design

Bootstrap 4 (<https://getbootstrap.com>) is a CSS framework, which means that it has a lot of pre-written CSS code that you can use in your HTML project. Bootstrap was created by two software developers at Twitter and it soon became the most popular CSS framework.

Websites that use Bootstrap look beautiful and modern (<http://expo.getbootstrap.com/>) and are able to adapt to different screen sizes (even to small mobile screens). This ability is called **responsive design** (<https://www.youtube.com/watch?v=AkPrczmw9cU>).

### How to add Bootstrap to our project?

We can find Bootstrap here: <https://getbootstrap.com> (<https://getbootstrap.com>). There are many ways of how to include it to our project. One way is to download Bootstrap files and save them in our project folder. Another way is to use a link to a Bootstrap file that is hosted somewhere else on the Web. I will show you both ways and then it's up to you to decide which one to use.

Option 1 (saving to the project folder):

- Go to <https://getbootstrap.com/docs/4.1/getting-started/download/> (<https://getbootstrap.com/docs/4.1/getting-started/download/>), find **Compiled CSS and JS** section and click on **Download** button. You'll get a ZIP file which you have to unzip.
- In the unzipped folder you'll find two folders: `css` and `js`. From the `css` folder take `bootstrap.css` and from the `js` folder take `bootstrap.js`. Move both files into your project folder (also create `css` and `js` folder there).
- Add a path to Bootstrap CSS and JS file in your HTML file (see an example below).

Example:

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <!-- The above 3 meta tags *must* come first in the head; any other head content must c

    <title>My new website with Bootstrap</title>

    <!-- Bootstrap CSS -->
    <link href="css/bootstrap.css" rel="stylesheet">

    <!-- JavaScript files -->
    <script src="https://ajax.googleapis.com/ajax/libs/jquery/1.11.2/jquery.min.js"></scrip
    <script src="js/bootstrap.js"></script>
  </head>

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

## Option 2:

In this case you don't have to download anything, just use this **Starter template**:

<https://getbootstrap.com/docs/4.1/getting-started/introduction/#starter-template>

(<https://getbootstrap.com/docs/4.1/getting-started/introduction/#starter-template>).

*As you can see, we added some JavaScript files (in `<script>` tags). You can learn more about JavaScript in the **Web development 2** course.*

## How to use Bootstrap in our HTML?

As we said before - Bootstrap is just a bunch of pre-written CSS code that we can use in our HTML. That means that we can use classes from the Bootstrap CSS file and include them into our HTML elements. Let's see some examples:

### Bootstrap buttons:

```
<button class="btn btn-default">Default</button>
<button class="btn btn-primary">Primary</button>
<button class="btn btn-info">Info</button>
<button class="btn btn-success">Success</button>
<button class="btn btn-danger">Danger</button>
```

### Alert:

```
<div class="alert alert-success" role="alert">Well done!</div>
<div class="alert alert-info" role="alert">some info</div>
<div class="alert alert-warning" role="alert">Warning!!!</div>
<div class="alert alert-danger" role="alert">Alert!</div>
```

### Progress bar:

```
<div class="progress">
  <div class="progress-bar" role="progressbar" style="width: 25%;" aria-valuenow="25" aria-valu
</div>
```

### Navigation bar:

```
<nav class="navbar navbar-expand-lg navbar-light bg-light">
  <a class="navbar-brand" href="#">Navbar</a>
  <button class="navbar-toggler" type="button" data-toggle="collapse" data-target="#navbarSuppo
    <span class="navbar-toggler-icon"></span>
  </button>

  <div class="collapse navbar-collapse" id="navbarSupportedContent">
    <ul class="navbar-nav mr-auto">
      <li class="nav-item active">
        <a class="nav-link" href="#">Home <span class="sr-only">(current)</span></a>
      </li>
      <li class="nav-item">
        <a class="nav-link" href="#">Link</a>
      </li>
      <li class="nav-item dropdown">
        <a class="nav-link dropdown-toggle" href="#" id="navbarDropdown" role="button" data-tog
          Dropdown
        </a>
        <div class="dropdown-menu" aria-labelledby="navbarDropdown">
          <a class="dropdown-item" href="#">Action</a>
          <a class="dropdown-item" href="#">Another action</a>
          <div class="dropdown-divider"></div>
          <a class="dropdown-item" href="#">Something else here</a>
        </div>
      </li>
      <li class="nav-item">
        <a class="nav-link disabled" href="#">Disabled</a>
      </li>
    </ul>
    <form class="form-inline my-2 my-lg-0">
      <input class="form-control mr-sm-2" type="search" placeholder="Search" aria-label="Search"
      <button class="btn btn-outline-success my-2 my-sm-0" type="submit">Search</button>
    </form>
  </div>
</nav>
```

### Responsive images

Responsive images are images that can adapt to the screen size. We can achieve this by adding an `img-fluid` class to the `<img>` element:

```

```

Now try resizing your browser screen window ;)

## Grid

Grid helps you make your website responsive. Think of the grid as a sort of a table. It has rows and columns.

Let's see an example:

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

Also add some CSS so the divs are more visible:

```
.color {
  background-color: grey;
  margin: 10px;
}
```

Now resize your window so you can see how the divs behave on smaller screens.

Also try out other column options:

```
col-md
col-lg

col-md-4

col-md-3
col-md-5
col-md-3
```

## Even more examples

Here you can find even more Bootstrap examples:

<https://getbootstrap.com/docs/4.1/components> (<https://getbootstrap.com/docs/4.1/components>).

*Sites like this are called "documentation". So whenever someone tells you to look into Bootstrap documentation (or "docs"), this is where you look at :)*

## Q&A

Any question?

If there's enough time after Q&A, students can start working on their homework.

## Homework 5.1: Hair salon

Our company just got a new client - a hair salon. We have to build them a new website. They will pay us with free haircuts for the whole year :)

Here are the sketches for the website:

- Website sketch (<https://storage.googleapis.com/smartninja-org-assets/curriculum/wd1/img/hairdresser-hans.png>)
- Website sketch with a modal window (<https://storage.googleapis.com/smartninja-org-assets/curriculum/wd1/img/hairdresser-modal-hans.png>)

**Useful tip:** *Whenever you start building a website, make a sketch of it first. It can be a simple sketch on paper. This way you create a plan for yourself of what you have to build.*

Your assignment is to make a website for this hair salon. You can use Bootstrap to do this (or not - as you wish). You can also find some already made HTML&CSS template on the internet and tweak it according to your needs - it's up to you. Use your imagination! :)

The final product doesn't have to look exactly like the sketches. Use these resources for help:

- Modal (<https://getbootstrap.com/docs/4.1/components/modal/>)
- Accordion (<https://getbootstrap.com/docs/4.1/components/collapse/#accordion-example>)
- Carousel (<https://getbootstrap.com/docs/4.2/components/carousel/>)
- Table (<https://getbootstrap.com/docs/4.2/content/tables/>)

When you finish, paste your code to GitHub Gist (<https://gist.github.com/>) and share it on the forum.

*See a possible solution here: <https://github.com/smartninja/wd1-py3-exercises/blob/master/lesson-05/hair-salon/index.html> (<https://github.com/smartninja/wd1-py3-exercises/blob/master/lesson-05/hair-salon/index.html>).*

## Bonus homework 5.2: Final HTML&CSS quiz

- HTML quiz: <http://www.afterhoursprogramming.com/tests/practice/HTML/>  
(<http://www.afterhoursprogramming.com/tests/practice/HTML/>)
- CSS quiz: <http://www.afterhoursprogramming.com/tests/practice/CSS/>  
(<http://www.afterhoursprogramming.com/tests/practice/CSS/>)

## Bonus links

- (The Net Ninja) Bootstrap 4 tutorials: [https://www.youtube.com/playlist?list=PL4cUxeGkcC9jEcGvLLC60CPeF\\_24pvv](https://www.youtube.com/playlist?list=PL4cUxeGkcC9jEcGvLLC60CPeF_24pvv) ([https://www.youtube.com/playlist?list=PL4cUxeGkcC9jEcGvLLC60CPeF\\_24pvv](https://www.youtube.com/playlist?list=PL4cUxeGkcC9jEcGvLLC60CPeF_24pvv))
- Bootstrap on Codecademy: <https://www.codecademy.com/learn/make-a-website>  
(<https://www.codecademy.com/learn/make-a-website>)
- Website with free Bootstrap templates: <http://startbootstrap.com/>  
(<http://startbootstrap.com/>)
- Web service where you can host your website for free: <https://www.bitballoon.com/>  
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