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Highway 2 Code

Bootstrap

Liisa Auer, Oulu University of Applied Sciences



Bootstrap



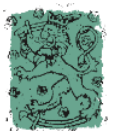
- Why Bootstrap?
- Structure of a Bootstrap page
- Different column widths in different screens
- To write content
- Bootstrap Utilities
- Bootstrap Components
- Bootstrap and JavaScript

Why Bootstrap?



- Bootstrap is a free and open-source CSS framework directed at **responsive, mobile-first** *front-end web development*. It contains HTML-, CSS- and (optionally) JavaScript-based design templates for typography, forms, buttons, navigation and other interface components.
- Mobile-first means that site is designed at first for mobile use
 - In mobile device things are mostly below each other
 - In bigger screens things can be set side-by-side. One can define at what screen width the elements will go next to each other.
 - One can also hide larger and “heavier” elements in mobile device.
- The result is that the same source code can be used to implement a site for a wide variety of devices.
- Bootstrap follows a 12-column grid system. The 12 columns can be divided as desired into either one-page wide column or, for example, four three-column-wide columns. In the latter case, the four columns will be displayed side by side, if resolution permits, and in the case of a narrow screen, facing down.

Read more: [https://en.wikipedia.org/wiki/Bootstrap_\(front-end_framework\)](https://en.wikipedia.org/wiki/Bootstrap_(front-end_framework))



Structure of a Bootstrap page

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Bootstrap ver 5</title>

  <!-- Bootstrap styles read from the net for the running version of the site -->
  <!-- <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.0-beta2/dist/css/bootstrap.min.css"
    rel="stylesheet" integrity="sha384-BmbxuPwQa2lc/FVzBcNJ7UAyJxM6wuqIj61tLrc4wSX0szH/Ev+nYRRuWlolflfl"
    crossorigin="anonymous"> -->

  <!-- Bootstrap styles in the local computer -->
  <link rel="stylesheet" href="css/bootstrap.css">
  <!-- You will need your own styles, too -->
  <link rel="stylesheet" href="css/tyylit.css">
</head>
<body>
  <main>

  </main>

  <!-- some Bootstrap components need popper.js library -->
  <script src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.6.0/dist/umd/popper.min.js"
    integrity="sha384-KsvD1yqQ1/1+IA7gi3P0tyJcT3vR+NdBTt13hSj2lInve8agRGXTTyNaBYmCR/Nwi" crossorigin="anonymous"></script>
  <!-- Bootstrap JavaScript -->
  <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.0-beta2/dist/js/bootstrap.min.js"
    integrity="sha384-nsg8ua9HAw1y0W1btsyWgBk1PnCUAFLuTMS2G72MMONqmOymq585AcH49TLBQObG" crossorigin="anonymous"></script>
  <!-- You may need also your own JavaScript code -->
  <script src="js/mycode.js"></script>
</body>
</html>
```

✓ BOOTSTRAP-RAKENNE

✓ CSS

bootstrap.css

bootstrap.css.map

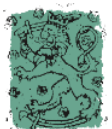
tyylit.css

✓ img

✓ js

JS mycode.js

<> index.html



Structure of a Bootstrap page

- The content of a page is written in a container
 - class="container" >> some empty space in the left and right
 - class="container-fluid" >> page fills the whole width
 - read [Bootstrap](#) >> Docs >> Layout >> Containers
 - see [container-esimerkki](#) ja [container-fluid-esimerkki](#)

```
<body>
  <div class="container">
<!-- sisältö tähän -->
  </div>
```

```
<body>
  <div class="container-fluid">
<!-- sisältö tähän -->
  </div>
```

div can be any layout element (div, main, article, section, aside, ...).

Structure of a Bootstrap page



- Inside a container there are rows (row) and in rows there are columns (col-...)
- The content of a page is in columns
- read [Bootstrap >> Docs >> Layout >> Grid](#)
- see [container-esimerkki](#) ja [container-fluid-esimerkki](#)
 - study the examples using Chrome developer tools devices

```
<body>
  <div class="container">
    <div class="row">
      <div class="col-12">
        <h2>Extra small < 576px : puhelimet</h2>
      </div>
      <div class="col-4 sininen">
        <p>Eka</p>
        <p>col-4</p>
      </div>
      <div class="col-5 pinkki">
        <p>Toka</p>
        <p>col-5</p>
      </div>
      <div class="col-3 vihrea">
        <p>Kolmas</p>
        <p>col-3</p>
      </div>
    </div>
  </div>

  <div class="row">
    <div class="col-12">
      <h2>Small ≥ 576px : puhelin vaakasuunnassa</h2>
    </div>
    <div class="col-sm-1 sininen">
      <p>Eka</p>
      <p>col-sm-1</p>
    </div>
    <div class="col-sm-3 pinkki">
      <p>Toka</p>
      <p>col-sm-3</p>
    </div>
    <div class="col-sm-8 vihrea">
      <p>Kolmas</p>
      <p>col-sm-8</p>
    </div>
  </div>
</div>
```

Different columns in different devices



- You write in the class attribute values starting from the smallest device
- Note. You can use also header, footer, section, not only div
- Note also the class attribute values to align center, middle or right
- see [esimerkki](#)

Ver4. text-md-left, text-md-right

Ver5. text-md-start, text-md-end

```
<body>
  <div class="container">
    <header class="row">
      <div class="col-12">
        <h1>Ylätunniste</h1>
      </div>
    </header>

    <div class="row">
      <section class="col-sm-5 col-md-4 pinkki">
        <p>joku teksti</p>
      </section>

      <section class="col-sm-7 col-md-3 vihrea">
        <p>joku teksti</p>
      </section>

      <section class="col-sm-12 col-md-3 sininen">
        <p>joku teksti</p>
      </section>
    </div>

    <footer class="row">
      <div class="col-12 col-md-5 pinkki">
        <p class="text-sm-center text-md-left">Alatunniste</p>
      </div>
      <div class="col-12 col-md-5 vihrea">
        <p class="text-sm-center text-md-right">2019</p>
      </div>
    </footer>
  </div>
```

To write content

- Fonts and their sizes:

- read [Bootstrap](#) >> Docs >> Content >> Typography

- Images:

- read [Bootstrap](#) >> Docs >> Content >> Images
 - read [Bootstrap](#) >> Docs >> Content >> Figures
 - note especially *class="img-fluid"*
 - in Bootstrap css file there is the default definition: `img {max-width: 100%; }`

- Tables:

- read [Bootstrap](#) >> Docs >> Content >> Tables

Bootstrap Components

- In Bootstrap there is pre-coded components (elements) and their layout to be used in the web page
- read [Bootstrap](#) >> Docs >> Components

Components

Alerts

Badge

Breadcrumb

Buttons

Button group

Card

Carousel

Collapse

Dropdowns

Forms

Input group

Jumbotron

Jumbotron

List group

Media object

Modal

Navs

Navbar

Pagination

Popovers

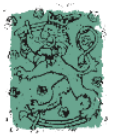
Progress

Scrollspy

Spinners

Toasts

Tooltips



Bootstrap Utilities

- Other design issues can be found under the Utilities title if you would like to use them
- read [Bootstrap](#) >> Docs >> Utilities

Utilities

Borders

Clearfix

Close icon

Colors

Display

Embed

Flex

Float

Image replacement

Overflow

Position

Screen readers

Shadows

Sizing

Spacing

Stretched link

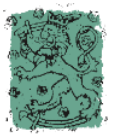
Text

Vertical align

Visibility



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Bootstrap and JavaScript



- Some Bootstrap components may require JavaScript to function.
- At the end of the html page, you copy-and-paste the references to the required JavaScript libraries in the internet service.
- You find the required code for example in [Bootstrap >> Get started \(or Docs\)](#)
- JavaScript libraries you write at the end of the html page, see structure of a Bootstrap page