

Bootstrap

Core

Shadi Lahham - Programmazione web - Frontend - HTML e CSS

Bootstrap

What is Bootstrap

- Layout and grid system
- Mobile first
- Responsive
- Consistent cross-browser style
- Several useful UI components
- Good defaults for many HTML elements

Why Bootstrap

- Great grid system
- Supports major browsers and adds CSS compatibility fixes
- Lightweight and customizable
- Many free and professional templates for UI elements
- Good documentation and community support
- Open-source and free to use
- Support for
 - JavaScript plugins
 - Usability and web accessibility

Why not Bootstrap

- Bootstrap sites look the same unless heavily customized
- Customizing Bootstrap
 - Requires lots of style overrides
 - Rewriting core classes
- Bootstrap core and utility classes verbose
 - Leads to long, illegible, difficult to manage HTML files
 - No separation of concerns: HTML used as a presentation layer
- Not perfectly compliant with standards
- v4 requires jQuery which is quite heavy

Why not Bootstrap

- Bootstrap makes developers lazy
- Creating custom non-Bootstrap components from zero
 - Difficult and requires a lot of skill and time
 - Complete control over the components
 - Easy to modify and add functionality
 - Makes sites and apps standout
 - Better developer with improved CSS and HTML skills
- When to use Bootstrap
 - Quick prototypes for client feedback
 - Basic front-end interface for back-end focused applications

Bootstrap 5

- Removed jQuery
- Removed IE10 and IE11 support
- Better grid system
- New and improved components
- Added [Bootstrap Icons](#)
- Support for [CSS custom properties](#)
- RTL support
- [Bootstrap 4 vs 5 differences](#)

Installing Bootstrap

Install Bootstrap - jsDelivr CDN

```
<head>
  <!-- Bootstrap CSS -->
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.1.1/dist/css/bootstrap.min.css"
rel="stylesheet"
  integrity="sha384-F3w7mX95PdgyTmZZMECAngseQB83DfGTowi0iMjiWaeVhAn4FJkqJByhZMI3AhiU"
crossorigin="anonymous">
</head>

<body>
  <!-- end of body -->
  <!-- Bootstrap Bundle & Popper -->
  <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.1.1/dist/js/bootstrap.bundle.min.js"
  integrity="sha384-/bQdsTh/da6pkI1MST/rWKFNjaCP5gBSY4sEBT38Q/9RBh9AH40zEOg7H1q2THRZ"
  crossorigin="anonymous"></script>
</body>
```

Install Bootstrap - Compiled CSS and JS

```
<head>
  <!-- Bootstrap CSS -->
  <link href="./assets/dist/css/bootstrap.min.css" rel="stylesheet">
</head>

<body>
  <!-- end of body -->
  <!-- Bootstrap Bundle & Popper -->
  <script src="./assets/dist/js/bootstrap.bundle.min.js"></script>
</body>
```

Note

Download compiled Bootstrap files to /assets/dist

Install Bootstrap - references

[Introduction](#)

[Download](#)

Bootstrap layout

Bootstrap grid

- Bootstrap uses a grid system [\(example\)](#)
- The Bootstrap grid is a 12 column system
- Bootstrap [breakpoints](#)
 - **xs** <576px
 - **sm** ≥576px
 - **md** ≥768px
 - **lg** ≥992px
 - **xl** ≥1200px
 - **xxl** ≥1400px

Bootstrap containers

- Containers
 - Center and horizontally pad content
 - Fully responsive
- Breakpoints determine container **max-width**
 - **xs** auto
 - **sm** 540px
 - **md** 720px
 - **lg** 960px
 - **xl** 1140px
 - **xxl** 1320px

Container, rows and columns

```
<div class="container">  
  <div class="row">  
    <div class="col">  
      Column  
    </div>  
    <div class="col">  
      Column  
    </div>  
    <div class="col">  
      Column  
    </div>  
  </div>  
</div>
```

Bootstrap columns

Important column concepts

- Equal-width columns
 - `<div class="col">`
- Fixed width columns
 - `<div class="col-6">`
- Variable width column
 - `<div class="col-auto">`
- Nesting
- Responsive columns
 - `<div class="col-md-8">`
- Row columns
 - `<div class="row row-cols-3">`

Additional column concepts

- Vertical and horizontal alignment
- Breaking and wrapping
- Column ordering
- Offset and margin classes
- Standalone columns
- Gutters

Bootstrap content

Bootstrap reboot

Bootstrap reboots HTML element styles to create a consistent starting point

It is a similar concept to:

- [Reset CSS](#)
- [Normalize.css](#)
- [Destyle.css](#)

It is important to understand what [Bootstrap reboot](#) does because it will affect all HTML elements of the website or application

Bootstrap content

Bootstrap provides utility classes for the following content

- [Typography](#)
- [Images](#)
- [Tables](#)
- [Figures](#)

In general, content containers are responsive by default and very customizable

Bootstrap utilities

Bootstrap utilities

Bootstrap has many utility classes, especially

- [Utilities for layout](#)
- [Spacing](#)
- [Colors](#)
- [Background](#)
- [Borders](#)
- [Text](#)

Bootstrap forms

Bootstrap forms

Bootstrap improves some form elements and provides consistent UI across browsers

- [Form controls](#)
- [Checks and radios](#)
- [Input group](#)
- [Complex grid based form layouts](#)
- [Select](#)
- [Range](#)
- [Floating labels](#)
- [Improve from validation](#)

Important form concepts

- Styled checkboxes and radios with consistent UI using [form-check](#)
- [Indeterminate checkboxes](#)
 - More details about [:indeterminate](#)
- [Switches](#)
 - Basically checkboxes, just styled differently
- [Input groups](#)
 - Which can also have [buttons with dropdowns](#)
- Grid based forms
 - [vertical](#) and [horizontal](#)
- Form validation
 - [Custom styles](#) and [tooltips](#)

Your turn

1.Information

- Study all the external links in the presentation
- Create a complex bootstrap form that should
 - Contain at least 15 different input types
 - Use custom style validation or tooltips
 - Connected to and tested on [RequestBin](#)
 - Validation should include at least the following
 - Validation methods: Required, minlength and maxlength for text input, min and max for number input, pattern
 - Types: number, an email, date
- Include your **html**, **css** and **js** files in the delivery