



# Bootstrap 4.1

Office of Academic Resources and Information Technology  
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## Bootstrap ?

Build responsive, **mobile-first** projects on the web with the world's most popular **front-end component library**.

CSS Framework

CSS Library

## Other CSS Libraries

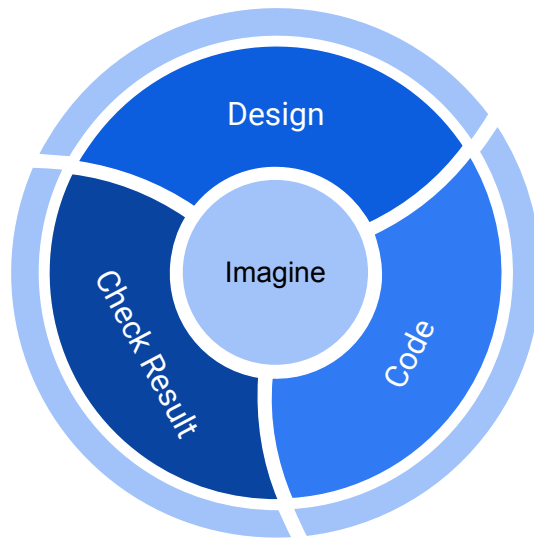
- **Materialize** (Material Design concept)
- **W3Schools**
- **Bulma** (base on Flexbox)
- **Pure.css** (minimal, css only)

## Why Bootstrap ?

Answer = **The world's most popular framework**

- More google results
- More integrate/support plugin
- More stable

## Front-end Development



## Front-end Components

1. **HTML (v.5)**
2. **CSS (v.3)**
3. **JavaScript (Not Java)**
  - a. JavaScript Libraries (jQuery)
  - b. JavaScript Framework (Angular, React, Vue)
  - c. TypeScript (Superset of JavaScript)

## Code Editor for Developer 2018

- Visual Studio Code (vs code)
- Sublime Text
- Atom
- Brackets

\* Order by most recommend

## Install [VS Code](#) & some ext.

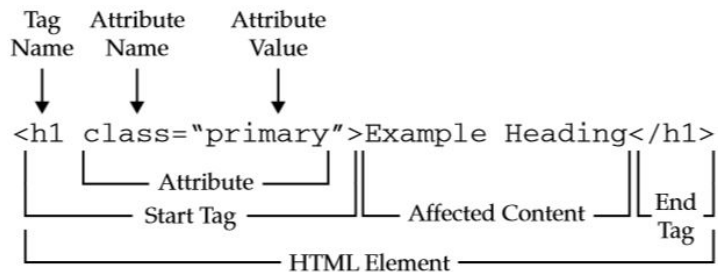
- Google / Search / Download & Install
- Install extension
  - Bootstrap 4 & Font awesome snippets for Visual studio code
  - Live Server
- Done !

## Create “Your-name” folder for today

- a-z (**lower case** recommend)
- 0-9
- Place on your desktop (recommend)

## HTML

A graphical overview of the HTML markup syntax shown so far is presented here:



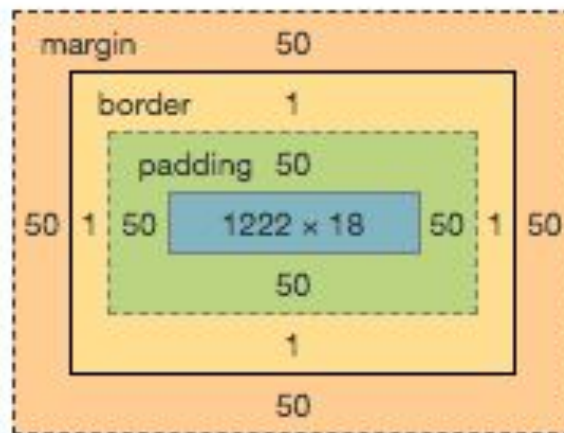
from : <https://tutorial.techaltum.com/htmlTags.html>

## Example 1 : HTML Basic

### Display

1. Block (div)
2. Inline (span)
3. Inline-block (button)
4. Flex ?

## Example 2 : Margin / Padding

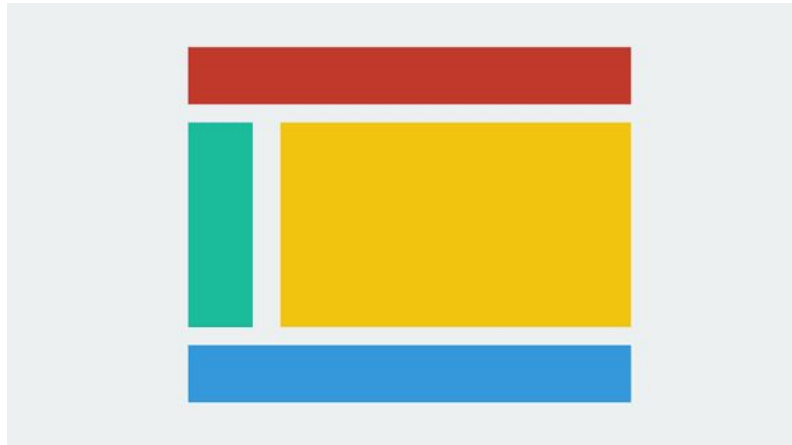


## Example 3 : Holy Grail Layout

Float

1. Left
2. Right
3. None

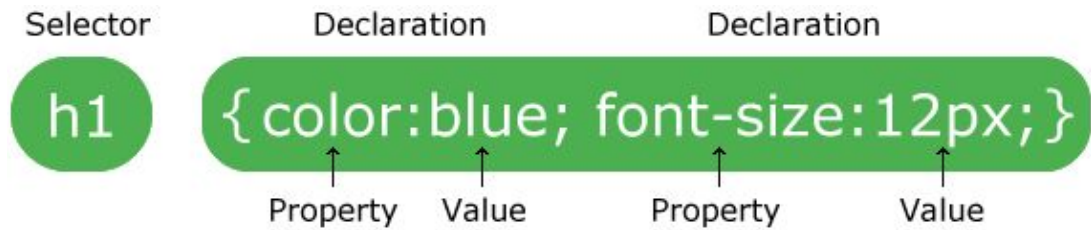
Clear



## CSS

- How to attach CSS
  - Inline style
  - `<style></style>`
  - `<link />`
- Selector
  - ID
  - Class
  - Tag Name
  - Pseudo Element (hover, focus)

# CSS Syntax



## Example 4 : Css Basic

- Inline Style attach CSS
- Tag Name as Selector



## Example 5: ID, Class & Pseudo

- # = ID (sharp)
- . = Class (dot)
- : = Pseudo (colon)
- Attach via `<link />`

## Bootstrap Getstart !

- Download from [getbootstrap.com](http://getbootstrap.com)
- Node.js (npm) Build tools
- Content Delivery Network (CDN)

## Bootstrap Setup

- Meta tag (viewport)
- CSS
- JavaScript (optional)
  - jQuery first,
  - then Popper.js,
  - then Bootstrap JS

## Example 6 Starter template

- Bootstrap 4 snippet
- Bootstrap Container Class
- Font Awesome 4
- Google Font

## Bootstrap Responsive Layout

- Responsive breakpoints
- Containers
- Grid
- Margin / Padding
- Display

## Responsive breakpoints

|                            | <b>Extra small</b><br><576px         | <b>Small</b><br>≥576px | <b>Medium</b><br>≥768px | <b>Large</b><br>≥992px | <b>Extra large</b><br>≥1200px |
|----------------------------|--------------------------------------|------------------------|-------------------------|------------------------|-------------------------------|
| <b>Max container width</b> | None (auto)                          | 540px                  | 720px                   | 960px                  | 1140px                        |
| <b>Class prefix</b>        | .col-                                | .col-sm-               | .col-md-                | .col-lg-               | .col-xl-                      |
| <b># of columns</b>        | 12                                   |                        |                         |                        |                               |
| <b>Gutter width</b>        | 30px (15px on each side of a column) |                        |                         |                        |                               |
| <b>Nestable</b>            | Yes                                  |                        |                         |                        |                               |
| <b>Column ordering</b>     | Yes                                  |                        |                         |                        |                               |

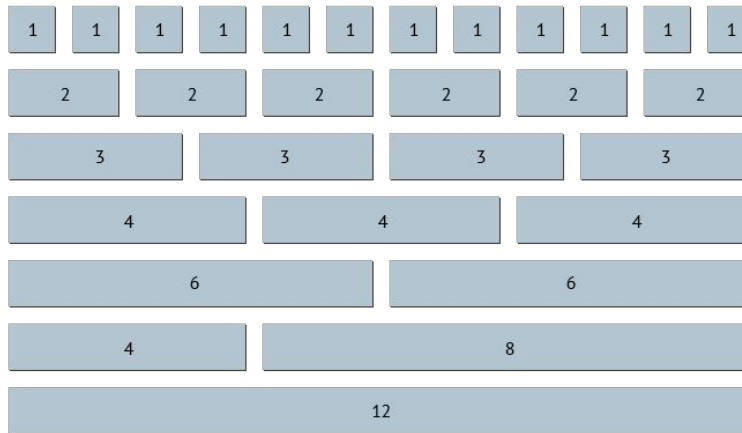
## Example 7 Responsive breakpoints

- Display Utilities
- Container
- Margin

## Bootstrap Container

- **.container**
  - responsive pixel width
- **.container-fluid**
  - Width 100% across all viewport and device

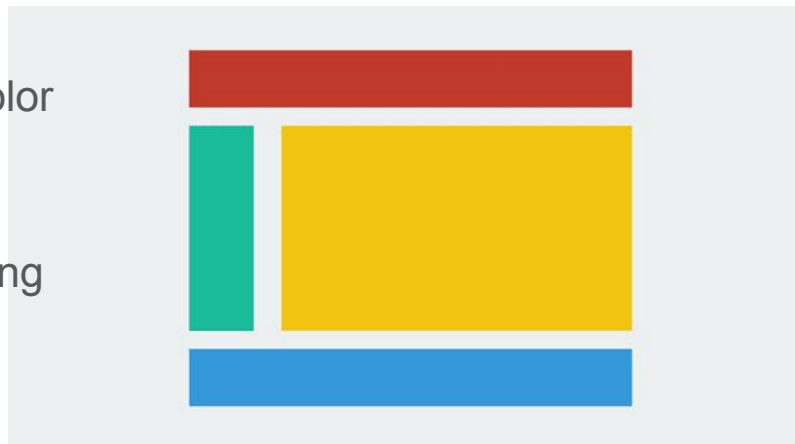
## Bootstrap Grid System



From <https://www.c-sharpcorner.com/article/bootstrap-grid-system/>

## Example 8 Holy Grail Layout by Bootstrap

- Grid System
- Background color
- Text color
- Reordering
- Margin / Padding



## Bootstrap Grid Property

- Base on 12 columns
- Auto-layout columns
- Setting one column width
- Variable width content
- Equal-width multi-row
- And more...

## Bootstrap Content

- Typography
- Images
- Tables

## Example 9 Image

- Grid
- Image-fluid (responsive)
- Image class
- Heading
- Paragraph
- List

## Example 10 Table

- Grid
- Table class
- Image-fluid (responsive)
- Heading with small tag

## Bootstrap Components

- Navigation
- Card
- Form
- Buttons
- Alerts
- Modal
- Carousel

## Example 11 Navigation

- Navbar class
- Set expand breakpoint
- Light/Dark schema
- Set background color
- Set fixed top



## Example 12 Card

- Card
- Card Image
- Card Title / Content
- Card Header / Footer
- Card Button
- Card List Group
- Grid

## Example 13 Form

- Grid
- Form
- Input box
- Select box
- Radio box
- Check box
- Button
- Alert
- Validation class

## Example 14 Modal

- Modal
- Modal Size
- Vertically centered

## Example 15 Carousel

- Carousel
- Carousel with control
- Carousel with indicators
- Carousel with captions

End, Thank you.