

ASP.NET Core BootStrap 4.x



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- ❑ <https://getbootstrap.com/>
- ❑ Bootstrap HTML + CSS + JavaScript (by Twitter)
- ❑ Hệ thống các class đáp ứng hầu hết yêu cầu thiết kế web
- ❑ Đơn giản dễ sử dụng
- ❑ Tương thích nhiều loại thiết bị
- ❑ “Responsive, mobile-first”
- ❑ Phổ biến, rộng rãi -> dễ được support, mang tính hội nhập cao

Bootstrap

- ❑ Bootstrap 4 Grid System and Core Concept
 - **Responsive Layout** Framework
 - **Installation:** CDN vs Local
 - **Grid System** 12 columns
 - Core Concepts: **Containers**, **Rows** and **Columns**
 - **Columns:** col-SIZE-SPAN and Multiple Columns
- ❑ Component
 - Button, Form, Table, Button Dropdown
 - Tab
 - Navbar
 - Alert
 - Card
 - List group
 - Icons

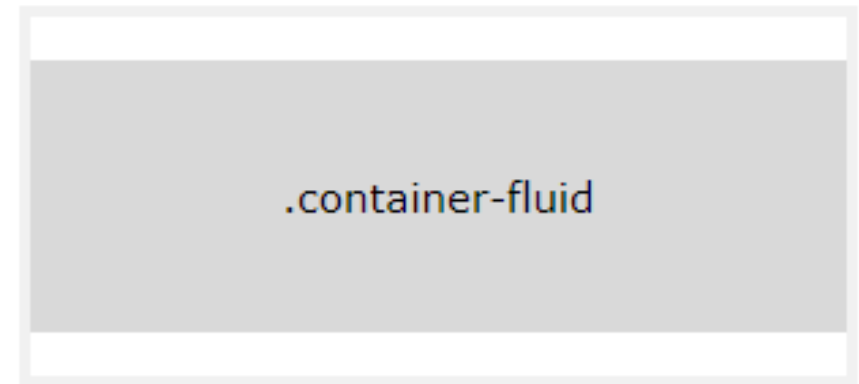
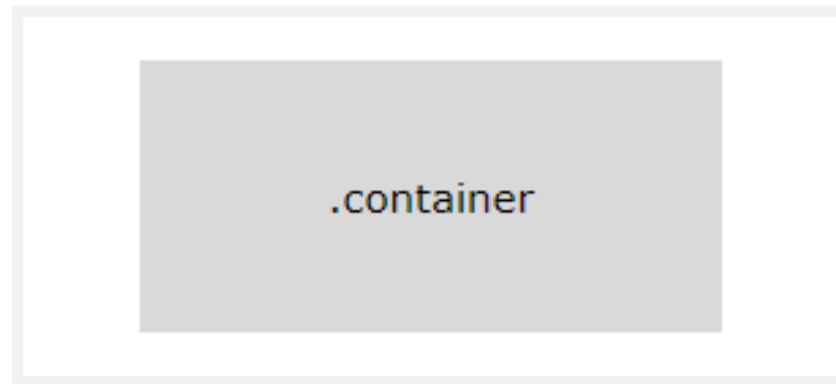


❑ **.container**

- Fixed-width
- Responsive, i.e. `max-width` changes based on screen size

❑ **.container-fluid**

- full-width



Grid system

- ❑ Bootstrap layout is based on a grid system with rows (`.row`) and columns (`.col`, `.col-<n>`, and `.col-<device>-<n>`)
- ❑ Each row has **12** columns
- ❑ Example: `grid.html`
 - Auto-width column
 - Total # of columns: 12, `<12`, `>12`

Make It Responsive ...

□ 5 device categories (*grid breakpoints*) based on screen width

- Extra small → Phone (portrait)
- Small (**sm**) → Phone (landscape)
- Medium (**md**) → Tablet
- Large (**lg**) → Desktop
- Xlarge (**xl**) → Desktop

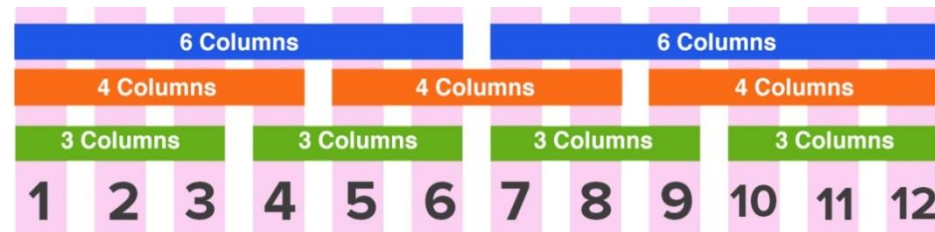
- **.col-** (extra small devices - screen width less than 576px)
- **.col-sm-** (small devices - screen width equal to or greater than 576px)
- **.col-md-** (medium devices - screen width equal to or greater than 768px)
- **.col-lg-** (large devices - screen width equal to or greater than 992px)
- **.col-xl-** (xlarge devices - screen width equal to or greater than 1200px)

... Make It Response

- ❑ `col-12`: 12-column wide when the device is extra small *or above*
- ❑ `col-12 col-md-4`: 4-column wide when the device is medium *or above*; 12-column wide otherwise
- ❑ `col-12 col-md-4 col-lg-3`: ??

Bootstrap 4 – Grid System and Core Concepts

- ❑ Grid System 12 columns https://www.w3schools.com/bootstrap4/bootstrap_grid_basic.asp
 - ❑ Easy to compute column width and gutter | Added predefined CSS classes
- ❑ Core Concepts: Containers, Rows and Columns
 - ❑ Container: controls layout and incl. 15px padding
 - ❑ Fixed: responds to media query break points (.container)
 - ❑ Fluid: responds to parent width (.container-fluid)
 - ❑ Rows: horizontal group of columns → placed in container and include columns
 - ❑ Remove padding using negative margins
 - ❑ Columns: Gutter = 30px = L = 15px + R = 15px
 - ❑ .col-SIZE-SPAN SIZE = break point becomes 1 column | SPAN = # columns to span
 - ❑ SIZE: (extra small) | sm | md | lg | xl
 - ❑ SPAN: needs to add up to 12
 - ❑ Multiple Columns: class="col-sm-6 col-md-4"



Bootstrap 4 – Grid System and Core Concepts

- ❑ Supports latest, stable releases of all major browsers (IE 9 < not supported)
- ❑ Default font-size of 16px = 1em and line-height is 1.5. [Typography](#)
- ❑ Bootstrap 4 Grid System [12 columns](#) and five classes:
 - ❑ .col- (extra small devices - screen width < 576px)
 - ❑ .col-sm- (small devices - screen width ≥ 576px)
 - ❑ .col-md- (medium devices - screen width ≥ 768px)
 - ❑ .col-lg- (large devices - screen width ≥ 992px)
 - ❑ .col-xl- (xlarge devices - screen width ≥ 1200px)
- ❑ Tips: Each class scales up – same widths for sm and md, only need to specify sm.
Easy way to create equal width columns for all devices: only use .col class.
- ❑ Difference between Bootstrap 3 and Bootstrap 4
 - ❑ Bootstrap 4 uses flexbox, instead of floats. [CSS Flexbox Tutorial](#)
 - ❑ Grid columns without a specified width will automatically layout as equal width

	Extra small	Small	Medium	Large	Extra Large
Class prefix Bootstrap 4	.col-	.col-sm-	.col-md-	.col-lg-	.col-xl-
Screen width	<576px	≥576px	≥768px	≥992px	≥1200px
Bootstrap 3	.col-xs-	.col-xs-	.col-sm-	.col-md-	.col-lg-
		Extra small	Small	Medium	Large

Bootstrap – Grid System and Core Concepts

❑ Columns: col-SIZE-SPAN https://www.w3schools.com/bootstrap4/bootstrap_grid_system.asp

❑ SIZE: extra small | sm | md | lg | xl

❑ SPAN: needs to add up to 12

❑ 1 Column → SPAN = 12

❑ 2 Column → SPAN = 6

❑ 3 Column → SPAN = 4

❑ 4 Column → SPAN = 3

❑ 6 Column → SPAN = 2

❑ 12 Column → SPAN = 1

❑ Multiple Columns: class="col-12 col-sm-6 col-md-4 col-lg-3 col-xl-2"

❑ 2 Items → class="col-xl-6"

❑ 4 Items → class="col-lg-6 col-xl-3"

❑ 6 Items → class="col-md-6 col-lg-4 col-xl-2"

❑ 12 Items → class="col-md-6 col-lg-4 col-xl-3"

❑ 12 Items → class="col-sm-6 col-md-4 col-lg-3 col-xl-2"

❑ 12 Items → class="col-sm-4 col-md-3 col-lg-2 col-xl-1"

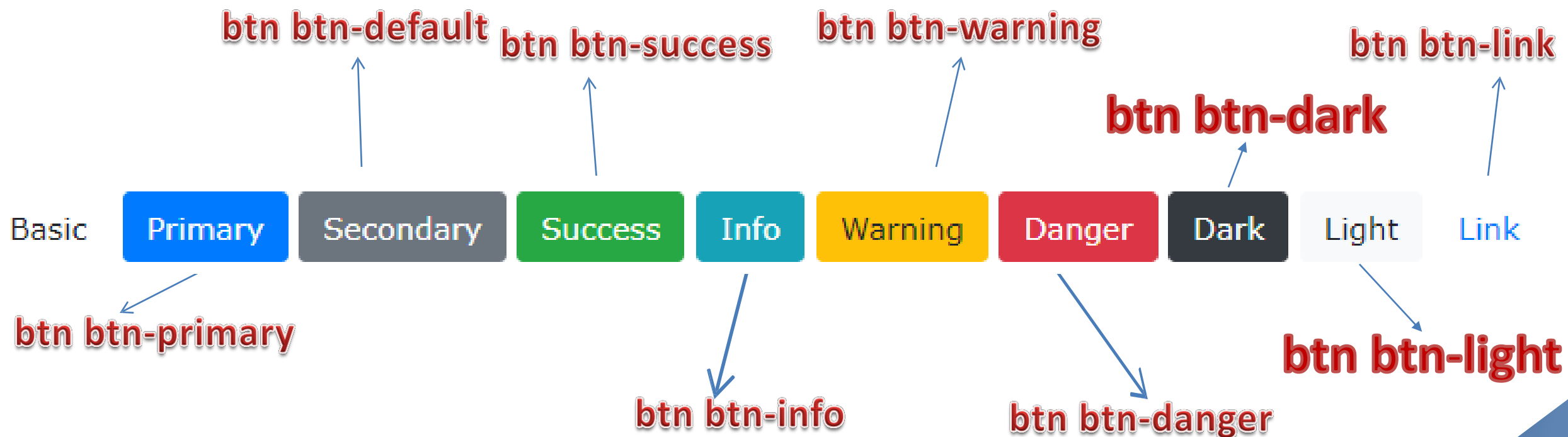
❑ Atom Editing: CTRL + / and ALT + F3

Bootstrap – Grid System and Core Concepts

- ❑ Offset Columns: col-SIZE-offset-SPAN
 - ❑ Remember to reset offset at greater screen widths
- ❑ Nesting Columns: gives more layout flexibility
 - ❑ https://www.w3schools.com/bootstrap4/bootstrap_grid_examples.asp
- ❑ Utility Classes
 - ❑ .h1h6 also as inline element
 - ❑ .small
 - ❑ .lead
 - ❑ Alignment: .text-left | .text-right | .text-center
 - ❑ Transformation: .text-lowercase | .text-capitalize | .text-uppercase
 - ❑ <blockquote><footer>: .blockquote | .blockquote-reverse
 - ❑ Lists: .list-unstyled | .list-inline
- ❑ Targets Some Built-In Elements
 - ❑ <mark> | <s> | | <ins> | | | <dl>, <dt>, <dd>
 - ❑ <code> | <kbd> | <var> | <samp> | <pre> | <pre class="pre-scrollable">
- ❑ Utilities without need for CSS https://www.w3schools.com/bootstrap4/bootstrap_utilities.asp

Button

```
<button class="btn btn-default">Default</button>
```



Form

```
<div class="form-group">  
  <label for="email">Email address</label>  
  <input type="email" class="form-control">  
</div>
```

Email address

Password

File input

Chọn tệp Không có tệp nào được chọn

Example block-level help text here.

☐ Check me out

Submit

```
<div class="checkbox">  
  <label> <input type="checkbox"> Check me out </label>  
</div>
```

Table

#	First Name	Last Name	Username
1	Mark	Otto	@mdo
2	Jacob	Thornton	@fat
3	Larry the Bird		@twitter

<table class="**table table-hover**">...</table>

Class

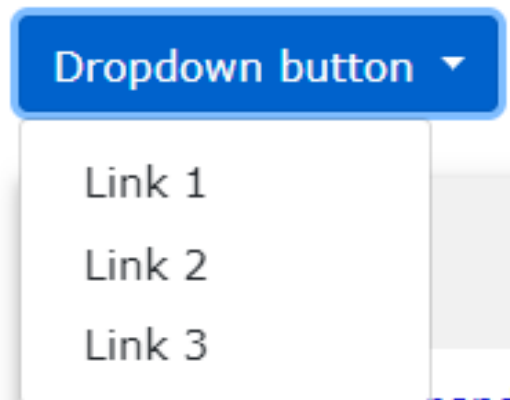
table **table-bordered**: có kẻ

table **table-striped**: thay đổi màu theo hàng

table **table-condensed**: cắt bỏ cellpadding

table **table-hover**: highlight hàng có chuột

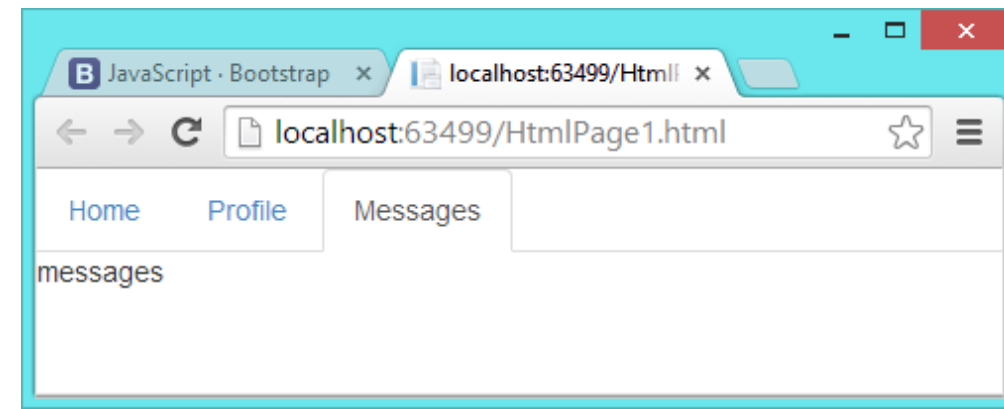
DropDown Button



```
<div class="dropdown">
  <button type="button" class="btn btn-primary
dropdown-toggle" data-toggle="dropdown">
    Dropdown button
  </button>
  <div class="dropdown-menu">
    <a class="dropdown-item" href="#">Link 1</a>
    <a class="dropdown-item" href="#">Link 2</a>
    <a class="dropdown-item" href="#">Link 3</a>
  </div>
</div>
```

Tab

```
<ul class="nav nav-tabs" role="tablist">  
<li class="active"><a href="#home" role="tab" data-  
toggle="tab">Home</a></li>  
<li><a href="#profile" role="tab" data-toggle="tab">Profile</a></li>  
<li><a href="#messages" role="tab" data-  
toggle="tab">Messages</a></li>  
</ul>  
<div class="tab-content">  
<div class="tab-pane active" id="home">...</div>  
<div class="tab-pane" id="profile">...</div>  
<div class="tab-pane" id="messages">...</div>  
</div>
```



NavBar

Brand Link Link Dropdown ▾ Search Submit Link Dropdown ▾

Brand ☰

Brand ☰

Link

Link

Dropdown ▾

Search

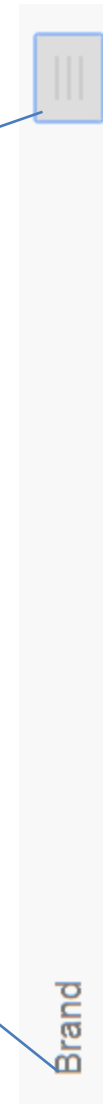
Submit

Link

Dropdown ▾

NavBar

```
<nav class="navbar navbar-default" role="navigation">
  <div class="container-fluid">
    <!-- Tên doanh nghiệp và nút mở rộng -->
    <div class="navbar-header">
      <button type="button" class="navbar-toggle"
        data-toggle="collapse" data-target="#bs-abc">
        <span class="sr-only">Toggle navigation</span>
        <span class="icon-bar"></span>
        <span class="icon-bar"></span>
        <span class="icon-bar"></span>
      </button>
      <a class="navbar-brand" href="#">Brand</a>
    </div>
    <!-- Thanh menu -->
    <div class="collapse navbar-collapse" id="bs-abc">
      <ul class="nav navbar-nav">...</ul>
      <form class="navbar-form navbar-left">...</form>
      <ul class="nav navbar-nav navbar-right">...</ul>
    </div>
  </div>
</nav>
```



Component: Navbar ...

□ <nav>

- .navbar
- .navbar-expand-<device>
- [Color Scheme](#)

□ Brand

- Link, image, and/or text
- .navbar-brand

... Component: Navbar

□ Menu

- `` with `.navbar-nav`
- `` with `.nav-item`
- `<a>` with `.nav-link`

□ Menu button and collapse behavior

- `<button>` with `.navbar-toggler` and an icon
- A collapsible element with `.collapse` and `.navbar-collapse`

BS4 Alert

Success! This alert box indicates a successful or positive action. ×

.alert-success

Info! This alert box indicates a neutral informative change or action. ×

.alert-info

Warning! This alert box indicates a warning that might need attention. ×

.alert-warning

Danger! This alert box indicates a dangerous or potentially negative action. ×

.alert-danger

Primary! This alert box indicates an important action. ×

.alert-primary

Secondary! This alert box indicates a less important action. ×

.alert-secondary

Dark! Dark grey alert box. ×

.alert-dark

Light! Light grey alert box. ×

.alert-light

BS4 Card

Header
Content
Footer

```
<div class="card">  
  <div class="card-header">Header</div>  
  <div class="card-body">Content</div>  
  <div class="card-footer">Footer</div>  
</div>
```

BS4 List Group

Active item
Second item
Third item

```
<ul class="list-group">  
  <li class="list-group-item active">Active item</li>  
  <li class="list-group-item">Second item</li>  
  <li class="list-group-item">Third item</li>  
</ul>
```

Utilities: Border and Color

- ❑ Border: <https://getbootstrap.com/docs/4.0/utilities/borders/>
- ❑ Color: <https://getbootstrap.com/docs/4.0/utilities/colors/>
 - Color theme

Utilities: Margin and Padding

❑ See <https://getbootstrap.com/docs/4.0/utilities/spacing/>
`{property} {sides} - {size}`

or

`{property} {sides} - {breakpoint} - {size}`

Utility: Display

- ❑ <https://getbootstrap.com/docs/4.0/utilities/display/>
- ❑ `.d-<value>, .d-<device>-<value>`
- ❑ Value could be `none`, `inline`, `block`, and so on

Show/Hide Elements Responsively

- ❑ `d-none`: hide on extra small *or above* (i.e. always hide)
- ❑ `d-none d-md-block`: display as a block element on medium *or above*; hide otherwise
- ❑ `d-none d-md-block d-lg-none`: ??

Using Font Awesome Icons

❑ <https://fontawesome.com/get-started>

❑ Include Font Awesome JavaScript code in HTML

```
<i class="<style prefix> <icon name> [additional styling]"></i>
```

See <https://fontawesome.com/how-to-use/svg-with-js> for more details

Icon – using Font Awesome 5

https://www.w3schools.com/icons/fontawesome5_intro.asp

```
<h1>fab fa-bitcoin</h1>
```

```
<i class='fab fa-bitcoin'></i>
```

```
<i class='fab fa-bitcoin' style='font-size:24px'></i>
```

```
<i class='fab fa-bitcoin' style='font-size:36px'></i>
```

```
<i class='fab fa-bitcoin' style='font-size:48px;color:red'></i>
```

```
<br>
```

```
<p>Used on a button:</p>
```

```
<button style='font-size:24px'>Button <i class='fab fa-bitcoin'></i></button>
```

```
<p>Unicode:</p>
```

```
<i style='font-size:24px' class='fab'>&#xf379;</i>
```

fab fa-bitcoin



Used on a button:



Unicode:



