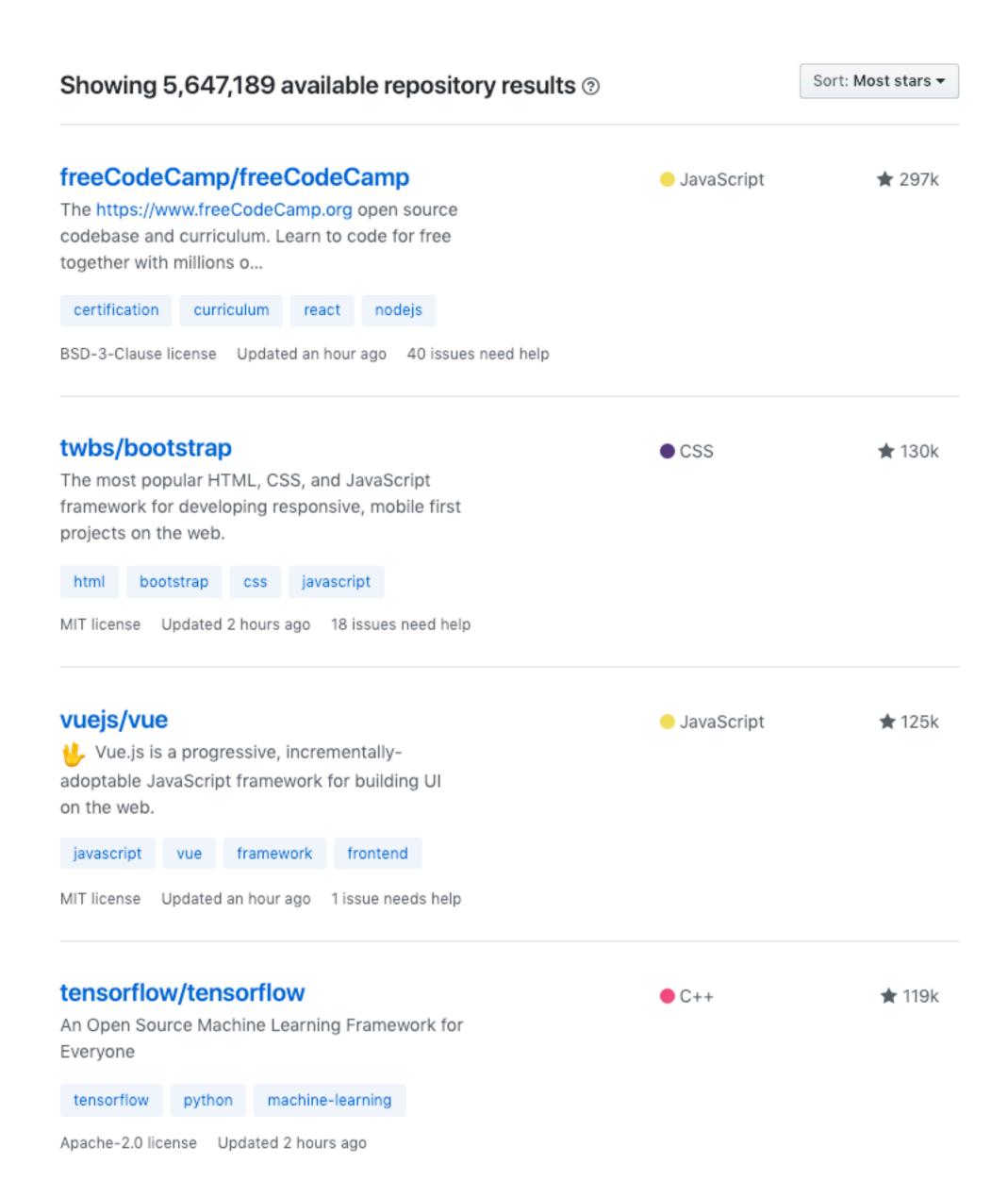


# Bootstrap

Build responsive, mobile-first projects on the web with the world's most popular front-end component library. Bootstrap is an open source toolkit for developing with HTML, CSS, and JS.



# Bootstrap

Build responsive, mobile-first projects on the web with the world's **most popular front-end component library.**Bootstrap is an open source toolkit for developing with HTML, CSS, and JS.

# 무엇을 만들 수 있는지 봅시다.

# Quick start

## Quick start

#### CDN 활용을 통해 Bootstrap에 작성된 CSS, JS를 활용하자!

#### Quick start

Looking to quickly add Bootstrap to your project? Use BootstrapCDN, provided for free by the folks at StackPath. Using a package manager or need to download the source files? Head to the downloads page.

#### **CSS**

Copy-paste the stylesheet link> into your <head> before all other stylesheets to load our CSS.

Copy
clink rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.2.1/css/bootstrap.min.css" integrity="sha384-GJzZqFGwb1QTTN6wy5"

#### JS

Many of our components require the use of JavaScript to function. Specifically, they require jQuery, Popper.js, and our own JavaScript plugins. Place the following <script>s near the end of your pages, right before the closing </body> tag, to enable them. jQuery must come first, then Popper.js, and then our JavaScript plugins.

We use jQuery's slim build, but the full version is also supported.

copy
<script src="https://code.jquery.com/jquery-3.3.1.slim.min.js" integrity="sha384-q8i/X+965Dz00rT7abK41JStQIAqVgRVzpbzo5smXKp4YfRvH+8abtTE1F
<script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.6/umd/popper.min.js" integrity="sha384-wHAiFfRlMFy6i5SRaxvf0CifBUQy1xHdJ
<script src="https://stackpath.bootstrapcdn.com/bootstrap/4.2.1/js/bootstrap.min.js" integrity="sha384-B0UglyR+jN6CkvvIC0B2joaf5I4l3gm9GU6F</pre>

Curious which components explicitly require jQuery, our JS, and Popper.js? Click the show components link below. If you're at all unsure about the general page structure, keep reading for an example page template.

Our bootstrap.bundle.js and bootstrap.bundle.min.js include Popper, but not jQuery. For more information about what's included

## Quick start

CDN 활용을 통해 Bootstrap에 작성된 CSS, JS를 활용하자!

Content Delivery(Distribution) Network 컨텐츠(CSS, JS, Image, Text 등)을 효율적으로 전달하기 위해 여러 노드에 가진 네트워크에 데이터를 제공하는 시스템.

개별 end-user의 가까운 서버를 통해 빠르게 전달 가능(지리적 이점) 외부 서버를 활용함으로써 본인 서버의 부하가 적어짐. CDN은 보통 적절한 수준의 캐시 설정으로 빠르게 로딩할 수 있음.

# 시작하기 전에,

01\_bootstrap\_intro.html





#### h1. Non Bootstrap heading

#### hi 418×38.5 Ion Bootstrap heading

h3. Non Bootstrap heading

h4. Non Bootstrap heading

h5. Non Bootstrap heading

h6. Non Bootstrap heading

### h1. Bootstrap heading

nz. Bootstrap heading

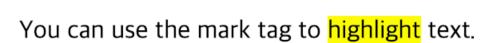
h3. Bootstrap heading

h4. Bootstrap heading

h5. Bootstrap heading

h6. Bootstrap heading





This line of text is meant to be treated as deleted text.

This line of text is meant to be treated as no longer accurate.

This line of text is meant to be treated as an addition to the document.

This line of text will render as underlined

This line of text is meant to be treated as fine print.

This line rendered as bold text.

This line rendered as italicized text.



You can use the mark tag to highlight text.

This line of text is meant to be treated as deleted text.

This line of text is meant to be treated as no longer accurate.

This line of text is meant to be treated as an addition to the document.

This line of text will render as underlined

This line of text is meant to be treated as fine print.

This line rendered as bold text.

This line rendered as italicized text.

```
You can use the mark tag to <mark>highlight</mark> text.
<del>This line of text is meant to be treated as deleted text.</del>
<ins>This line of text is meant to be treated as no longer accurate.
<ins>This line of text is meant to be treated as an addition to the document.
<u>This line of text will render as underlined</u>
<small>This line of text is meant to be treated as fine print.</small>
<strong>This line rendered as bold text.</strong>
<em>This line rendered as italicized text.</em>
```

# 같은 듯 다른 Bootstrap!

## 1. Utilities

CSS짜느라 고생한 우리, 편하게 클래스로 적용시켜보자!

# 1.1 Spacing

편-안하게 공간 확보하자.

.m-0?

```
.m-0 {
  margin: 0 !important;
}
```

margin: 0!

.mr-0?

```
mr-0 {
  margin-right: 0 !important;
}
```

```
margin-right: 0!
```

.mx-0?

```
.mr-0,
.mx-0 {
  margin-right: 0 !important;
}
```

```
.ml-0,
.mx-0 {
  margin-left: 0 !important;
}
```

margin-left: 0! margin-right: 0!

.py-0?

# padding-top: 0! padding-bottom: 0!

```
.pt-0,
.py-0 {
   padding-top: 0 !important;
}

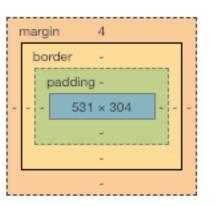
.pr-0,
.px-0 {
   padding-right: 0 !important;
}

.pb-0,
.py-0 {
   padding-bottom: 0 !important;
}
```

.mt-1?

```
.mt-1,
.my-1 {
  margin-top: 0.25rem !important;
}
```

margin-top: 0.25rem?



Filter	☐ Show all
▶ box-sizing	border-box
▶ color	■rgb(33, 37, 41)
▶ display	block
▶ font-family	-apple-system, system-ui, "Segoe UI", Roboto, "He
▶ font-size	16px
▶ font-weight	400
height	304px
▶ line-height	24px
▶ margin-top	4px
▶ text—align	left
▶ text-size-adjust	100%
width	531px
▶ -webkit-tap-highlight-color	□ rgba(0, 0, 0, 0)

# margin-top: 4px!

spacer(1rem) \* 0.25 16px \* 0.25 4px!

\*브라우저 기본 rem은 16px

mt-2?
mt-3?
mt-4?
mt-5?

```
mt-2? 0.5rem 8px!
mt-3? 1rem 16px!
mt-4? 1.5rem 24px!
mt-5? 3rem 48px!
```

# 정리해보자.

**.**py-0

**m** margin

p padding

τ	τορ	
b	bottom	
I	left	
r	right	
X	left, right	
У	top, bottom	

0	0	0px
1	0.25rem	4px
2	0.5rem	8px
3	1rem	16px
4	1.5rem	24px
5	3rem	48px

# 음수도 가능합니다!

-my-n0

**m** margin

t	top	
b	bottom	
I	left	
r	right	
X	left, right	
У	top, bottom	

U	U	upx
n1	-0.25	-4px
n2	-0.5	-8px
n3	-1	-16px
n4	-1.5	-24px
n5	-3	-48px

.mx-auto

까지 포함해서 활용하러 고고!

02\_bootstrap\_mp.html

# 1.2. Color

더이상 눈 아픈 파란색은 Never

노란색 빨간색
스트 초록색
<u> </u>

파란색 노란색 빨간색 초록색



# background-color: primary

느낌으로 맞춰보자!

.bg-primary
.bg-secondary
.bg-success
.bg-danger
.bg-warning
.bg-info
.bg-light
.bg-dark
.bg-white

.bg-transparent

활용법

.bg-primary

color: success

느낌으로 맞춰보자!

활용법

.text-success

A simple primary alert—check it out!

A simple secondary alert—check it out!

A simple danger alert—check it out!

A simple warning alert—check it out!

A simple info alert—check it out!

A simple light alert—check it out!

A simple dark alert—check it out!

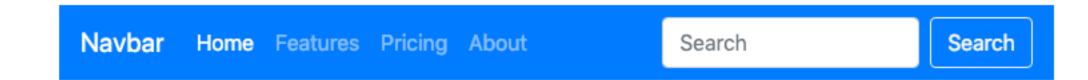


.alert-warning



# 활용법

# .btn-secondary



# 활용법

# .navbar-dark .bg-primary

# 여기저기에서 써보자!

03\_bootstrap\_color.html

## 1.3. border

Spacing을 활용하면 Box model 설정이 끝-

```
.border {
 border: 1px solid #dee2e6 !important;
.border-top {
 border-top: 1px solid #dee2e6 !important;
.border-right {
 border-right: 1px solid #dee2e6 !important;
.border-bottom {
 border-bottom: 1px solid #dee2e6 !important;
.border-left {
 border-left: 1px solid #dee2e6 !important;
```

## .border

## border-color: success

느낌으로 맞춰보자!

## 색상과 조합도 가능합니다!

.border .border-primary

남은게 뭐지?

## radius!

```
.rounded {
   border-radius: 0.25rem !important;
}

.rounded-top {
   border-top-left-radius: 0.25rem !important;
   border-top-right-radius: 0.25rem !important;
}

.rounded-right {
   border-top-right-radius: 0.25rem !important;
   border-bottom-right-radius: 0.25rem !important;
}

.rounded-bottom {
   border-bottom-right-radius: 0.25rem !important;
   border-bottom-left-radius: 0.25rem !important;
}

.rounded-left {
   border-top-left-radius: 0.25rem !important;
   border-bottom-left-radius: 0.25rem !important;
}
```

## .rounded-

## rounded-circle

04\_bootstrap\_border.html

# 1.4. display

Box model...display까지?

display: block

느낌으로 맞춰보자!

## .d-block

## .d-inline

## .d-none

```
.d-none {
 display: none !important;
.d-inline {
 display: inline !important;
.d-inline-block {
 display: inline-block !important;
.d-block {
 display: block !important;
.d-table {
 display: table !important;
```

반응형 맛보기?!

.d-sm-none

	Extra small <576px	Small ≥576px	<b>Medium</b> ≥768px	<b>Large</b> ≥992px	Extra large ≥1200px
Max container width	None (auto)	540px	720px	960px	1140px
Class prefix		sm	md	lg	xl

#### \* break point들은 앞으로 여기저기서 사용될 겁니다!

Screen Size	Class	
Hidden on all	.d-none	
Hidden only on xs	.d-none .d-sm-block	
Hidden only on sm	.d-sm-none .d-md-block	
Hidden only on md	.d-md-none .d-lg-block	
Hidden only on Ig	.d-lg-none .d-xl-block	
Hidden only on xl	.d-xl-none	
Visible on all	.d-block	
Visible only on xs	.d-block .d-sm-none	
Visible only on sm	.d-none .d-sm-block .d-md-none	
Visible only on md	.d-none .d-md-block .d-lg-none	
Visible only on Ig	.d-none .d-lg-block .d-xl-none	
Visible only on xl	.d-none .d-xl-block	

05\_bootstrap\_display.html

# 1.5. position

Box model...위치까지?

position: static

느낌으로 맞춰보자!

# .position-static

```
.position-static {
 position: static !important;
.position-relative {
 position: relative !important;
.position-absolute {
 position: absolute !important;
.position-fixed {
 position: fixed !important;
```



```
.fixed-top {
 position: fixed;
 top: 0;
 right: 0;
 left: 0;
 z-index: 1030;
.fixed-bottom {
 position: fixed;
 right: 0;
 bottom: 0;
 left: 0;
 z-index: 1030;
```

## 1.6. Text

글자변경도 자유롭게!

text-align: center

느낌으로 맞춰보자!

```
.text-left {
    text-align: left !important;
}

.text-right {
    text-align: right !important;
}

.text-center {
    text-align: center !important;
}
```

## .text-center

# font-weight: bold

느낌으로 맞춰보자!

```
.font-weight-light {
 font-weight: 300 !important;
.font-weight-lighter {
 font-weight: lighter !important;
.font-weight-normal {
 font-weight: 400 !important;
.font-weight-bold {
 font-weight: 700 !important;
.font-weight-bolder {
 font-weight: bolder !important;
.font-italic {
 font-style: italic !important;
```

# .font-weight-bold

06\_bootstrap\_text.html

# 컴포넌트는 공식문서로 확인

앞으로도 많이 활용할 것이고, 직접 들어가서 코드를 찾아야하기 때문!

#### 색깔이랑 breakpoint는 component에서도 많이 쓰일 예정이니 다시 확인해보자!

	Extra small <576px	Small ≥576px	<b>Medium</b> ≥768px	<b>Large</b> ≥992px	Extra large ≥1200px
Max container width	None (auto)	540px	720px	960px	1140px
Class prefix		sm	md	lg	xl

.bg-primary
.bg-secondary
.bg-success
.bg-danger
.bg-warning
.bg-info
.bg-light
.bg-dark
.bg-white
.bg-transparent

07\_bootstrap\_component.html

## 2. Grid System

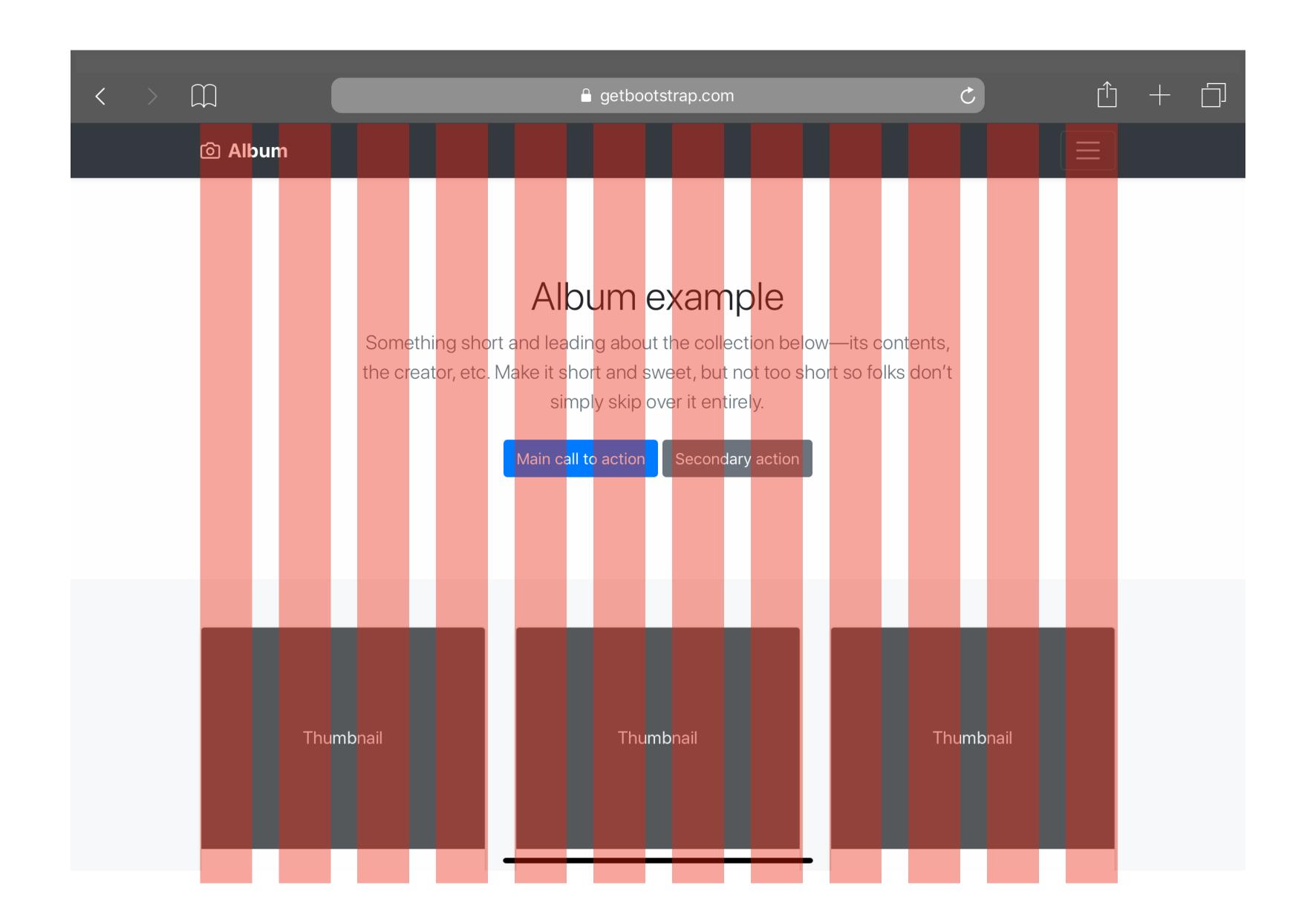
12 Columns

#### Grid?

격자, 모눈

#### 디자인 요소를 일렬 배열할 수 있는 패턴을 만드는

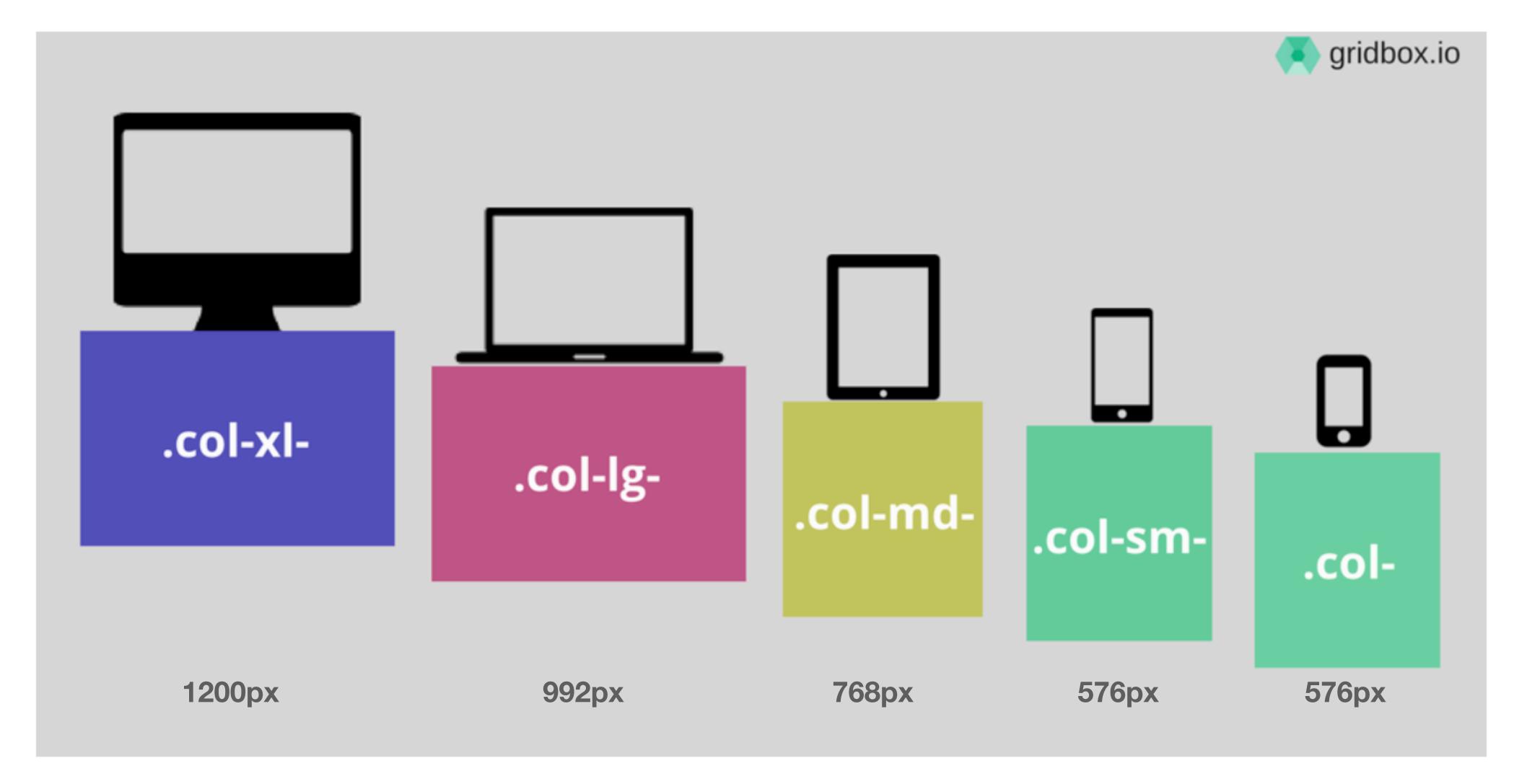
가로 및 세로 선 컬렉션



### 12개의 열을 한줄에 표현할 때 몇개씩 차지하게 할거냐!

COL-3	COL-3				COL-3		COL-3				
COL-4			COL-4			COL-4					
COL-6					COL-6						
COL-2		COL-2		COL-2		COL-2		COL-2			
COL-1											

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



Aspects of the Bootstrap grid system work across multiple devices

```
<div class="container">
  <div class="row">
    <div class="col-4">
      One of three columns
    </div>
    <div class="col-4">
      One of three columns
    </div>
    <div class="col-4">
      One of three columns
    </div>
  </div>
</div>
```

08\_bootstrap\_grid.html