
Bootstrap Introduction

Webpage designed with HTML have primary issue of context representation, webpage may look different in every browser or device (e.g. mobile, tablet, laptop). Hence, we may need to modify the code according to browser or device. Bootstrap can be easily resolved this problem.

Bootstrap is a free and open source front end development framework for the creation of websites and web apps. The Bootstrap framework is built on HTML, CSS, and JavaScript (JS) to facilitate the development of responsive, mobile-first sites and apps. Bootstrap includes several predefined classes for easy layouts e.g. dropdown buttons, navigation bar and alerts etc.

Responsive design makes it possible for a web page or app to detect the visitor's screen size and orientation and automatically adapt the display accordingly; the mobile first approach assumes that Smartphone's, tablets and task-specific Mobile apps are employees' primary tools for getting work done and addresses the requirements of those technologies in design.

Bootstrap includes user interface components, layouts and JS tools along with the framework for implementation. The software is available precompiled or as source code.

Bootstrap

CSS based front-end framework

faster and easier web development

easily create responsive web layout

1. Layout
2. Typography
3. Navigation Menu
4. Form Layout
5. Buttons
6. Pagination
7. Icon Fonts
8. Responsiveness

Website Name

[Home](#) | [About Us](#) | [Gallery](#) | [Contact Us](#)

Sub heading

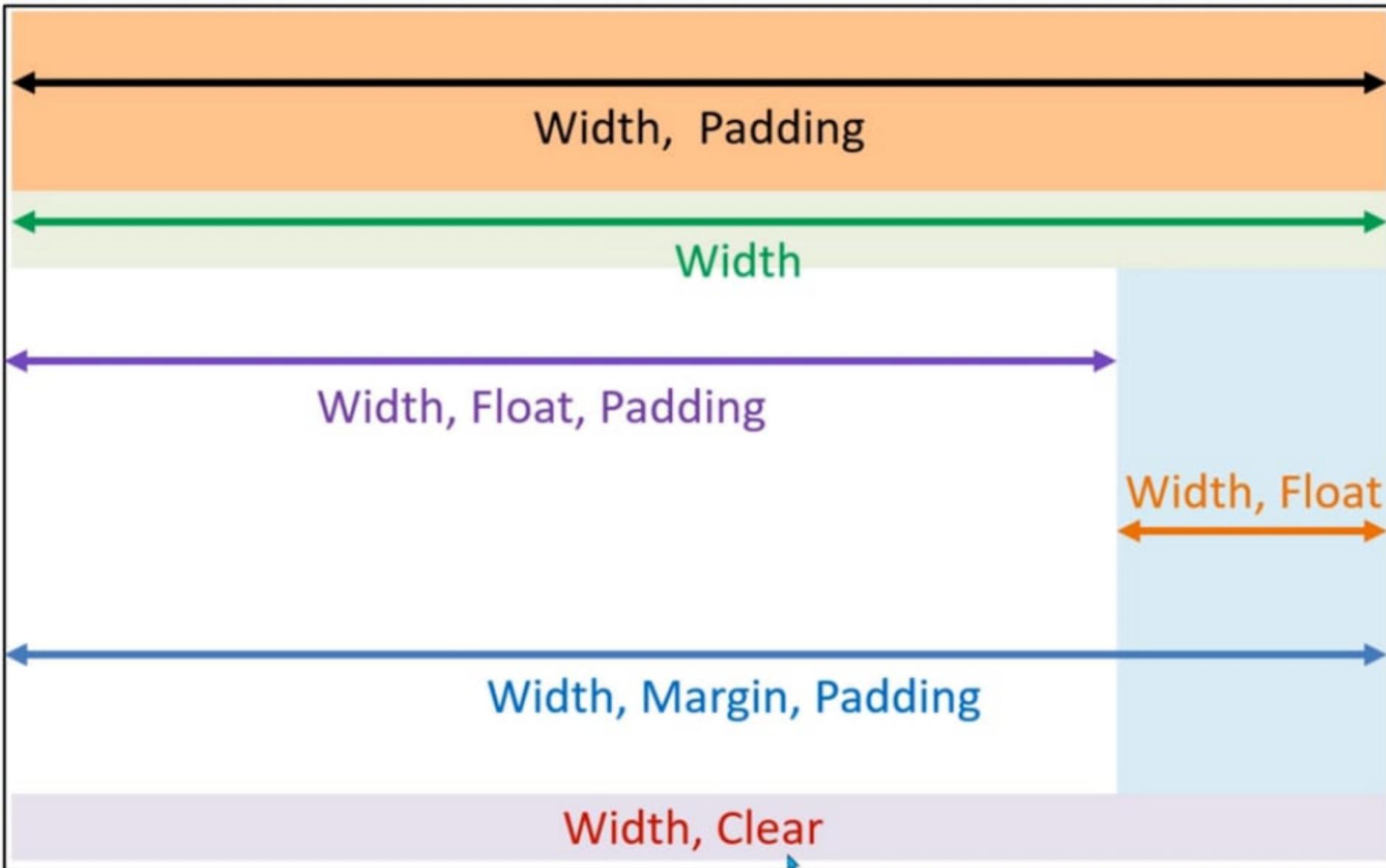
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Maecenas luctus porttitor libero, eget maximus augue efficitur non. Sed eros mauris, sollicitudin eget sapien vel, aliquet ultrices leo. Sed consectetur porta ultrices. In hac habitasse platea dictumst. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer faucibus pulvinar accumsan. Fusce consequat porttitor nisl, at interdum diam ullamcorper sit amet. Cras porttitor gravida volutpat.

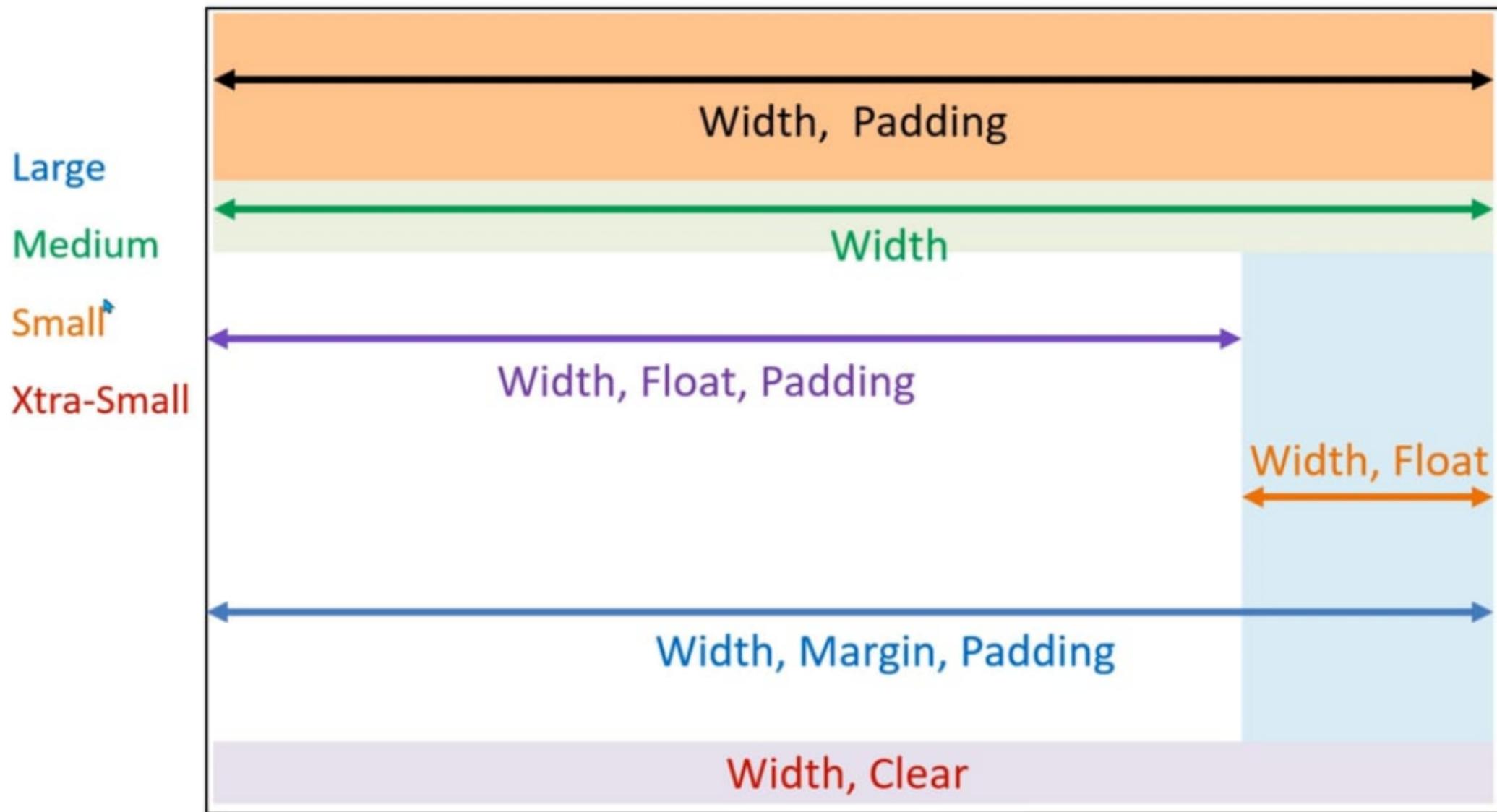
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- [Home](#)
- [About Us](#)
- [Gallery](#)
- [Contact Us](#)









Advantages of using BootStrap

- 1. save lots of time
- 2. Responsive features
- 3. Consistent design
- 4. Easy to use
- 5. Compatible with browsers
- 6. Open Source

Features & Components

- 1. multi-column layouts
- 2. form layout
- 3. Button groups
- 4. Button dropdowns
- 5. Input groups
- 6. Navs
- 7. Navbar
- 8. Dropdowns

- Pagination
- Labels
- Badges
- Jumbotron
- Pageheaders
- Thumbnails
- Alerts
- Progress bars
- Listgroup
- Panels
- Responsive embed
- icons

Bootstrap 3 vs. Bootstrap 4

- Flexbox layout
- New Components
- Faster
- More responsiveness

Bootstrap 4 Compatibility

- Supports all major browsers and platforms
- Internet Explorer 9 and down are not supported

Things to learn before learning bootstrap

- HTML
 - CSS
 - jQuery
-
- Html editor
 - Web browser

Bootstrap Installation

		container width
Extra Large	$\geq 1200\text{px}$	1140px
large	$\geq 992\text{px}$	960px
Medium	$\geq 768\text{px}$	720px
small	$\geq 576\text{px}$	540px
extra Small	$< 576\text{px}$	Auto

Bootstrap

Container

Row

col

.container



1140px

Page Center

.container-fluid



100%

.container

.row →

Website Name

.row →

Home | About Us | Gallery | Contact Us

.row →

Sub heading

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Maecenas luctus porttitor libero, eget maximus augue efficitur non. Sed eros mauris, sollicitudin eget sapien vel, aliquet ultrices leo. Sed consectetur porta ultrices. In hac habitasse platea dictumst. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer faucibus pulvinar accumsan. Fusce consequat porttitor nisl, at interdum diam ullamcorper sit amet. Cras porttitor gravida volutpat.

- Home
- About Us
- Gallery
- Contact Us

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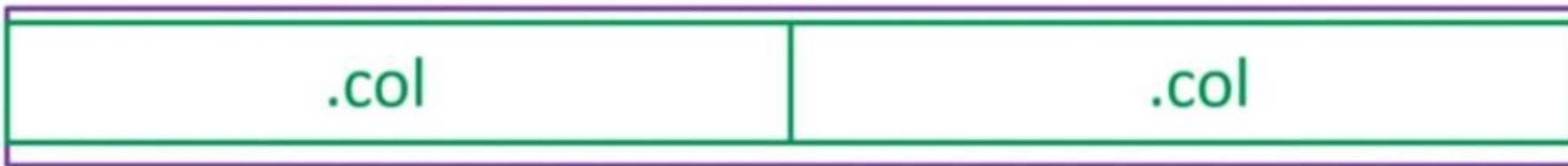
.row →



Website name@copyright.

Equal Width Div Tag

.row



.row



.container

↳ .row

↳ .col

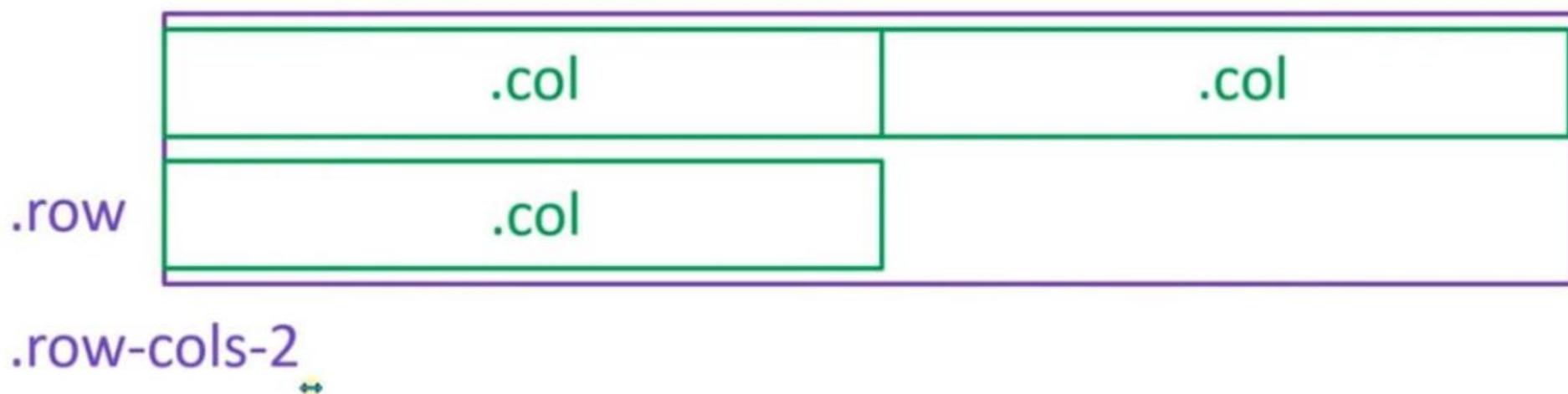
.container

.row

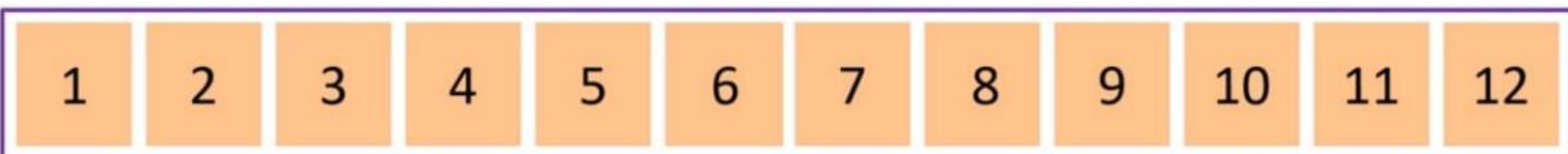
.col

.col

.col

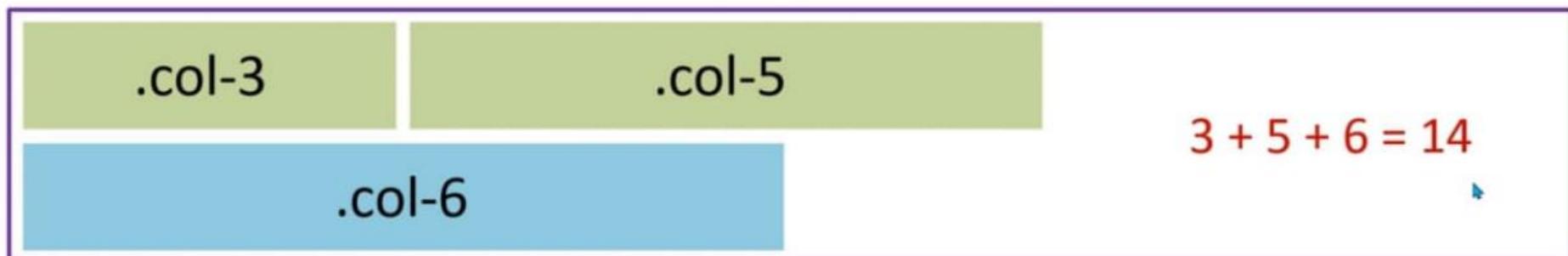


.row

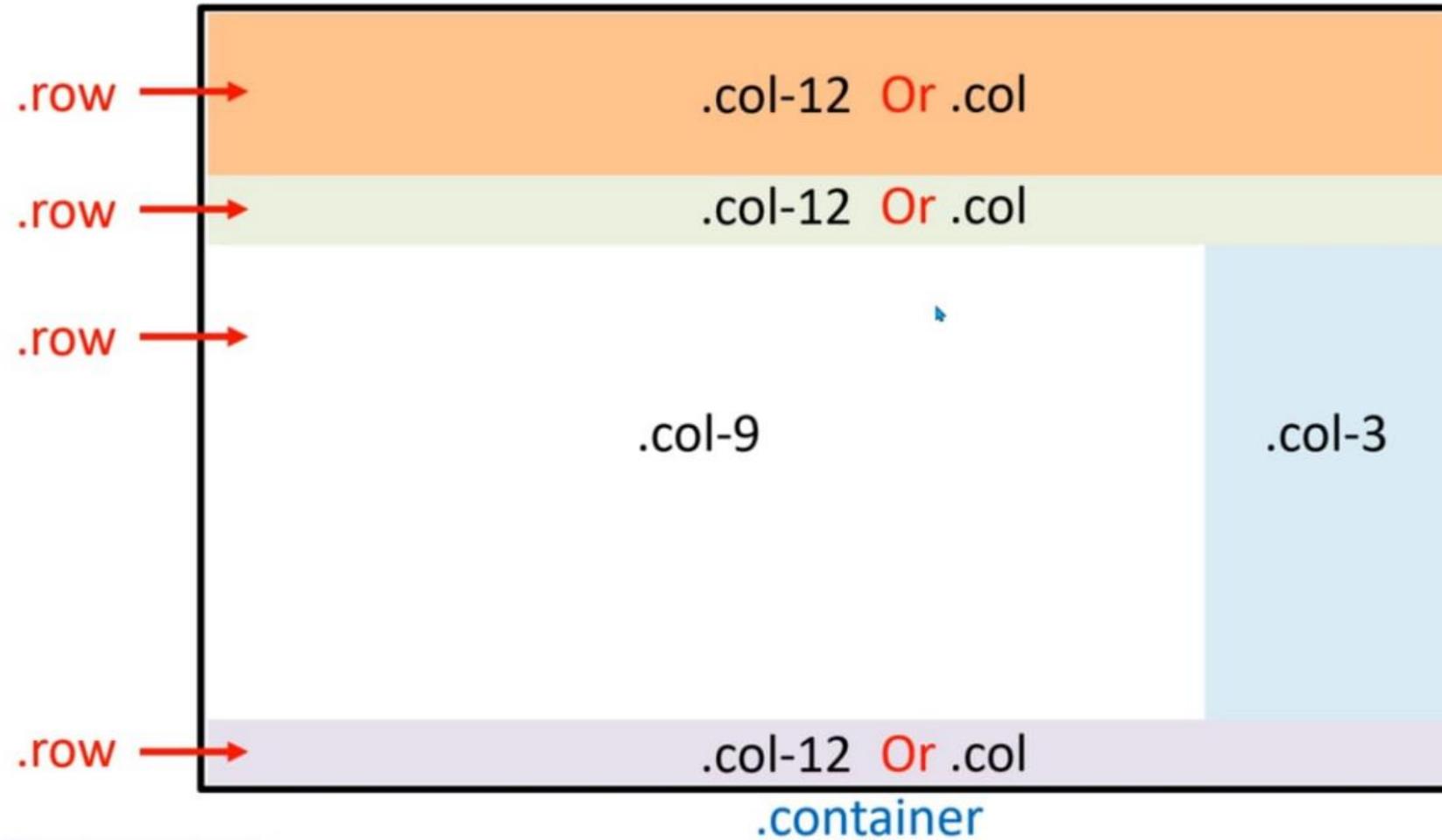


Col-1 Col-2 Col-3 Col-4 Col-5 Col-6 Col-7 Col-8 Col-9 Col-10 Col-11 Col-12

.row



$$3 + 5 + 6 = 14$$



Grid Col Class for different Break Points

Extra Large col-xl-*

Large col-lg-*

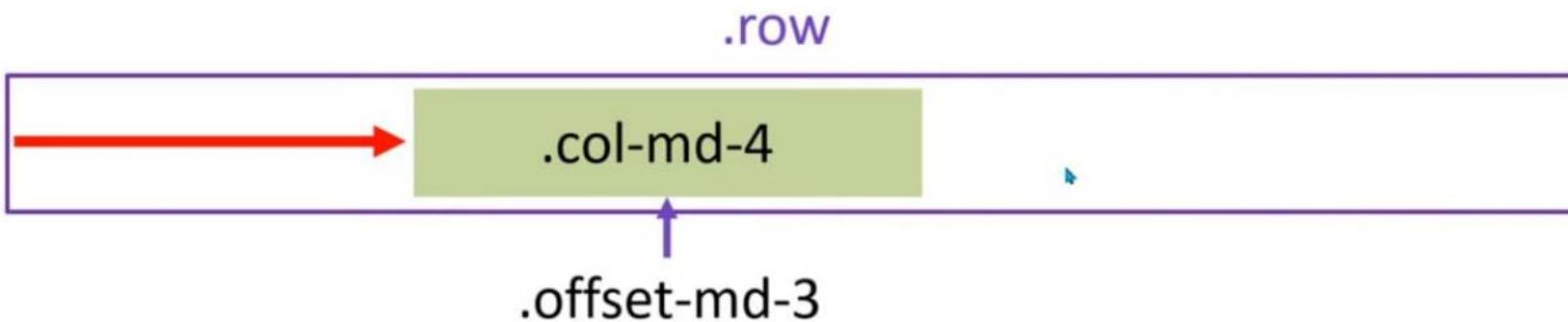
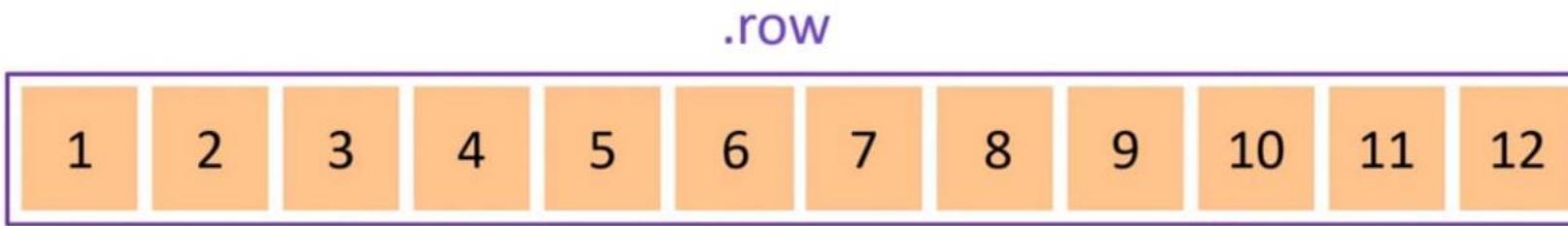
Medium col-md-*

Small col-sm-*

Extra Small

1 - 12

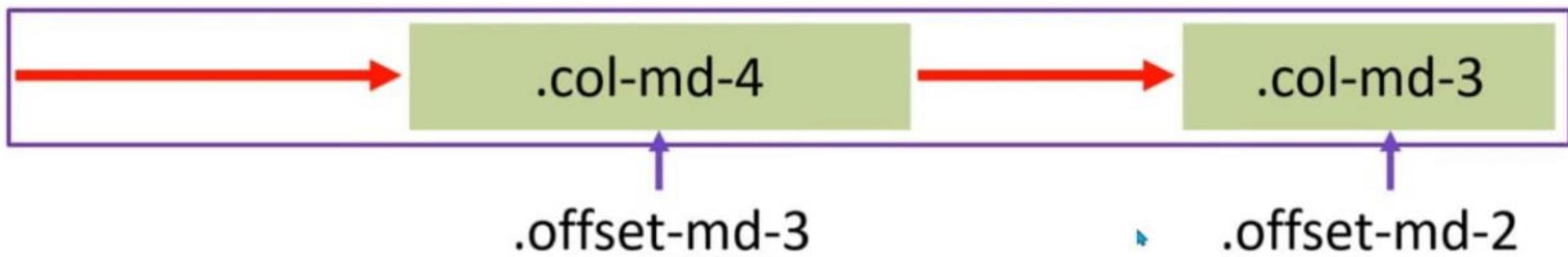
offset



.row



.row



Extra Large offset-xl-*

Large offset-lg-*

Medium offset-md-*

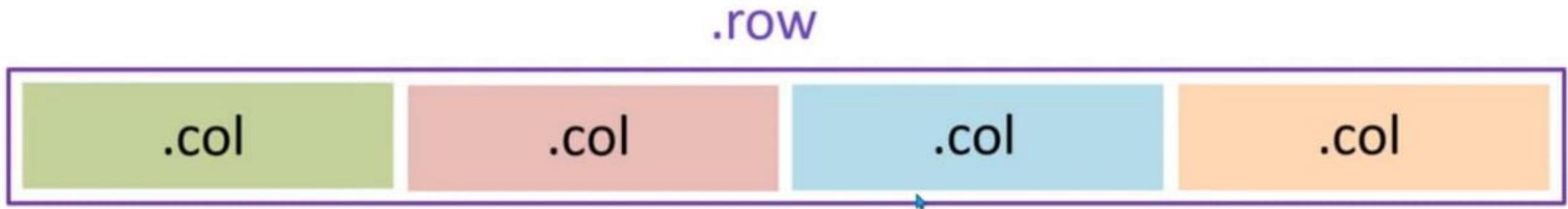
Small offset-sm-*

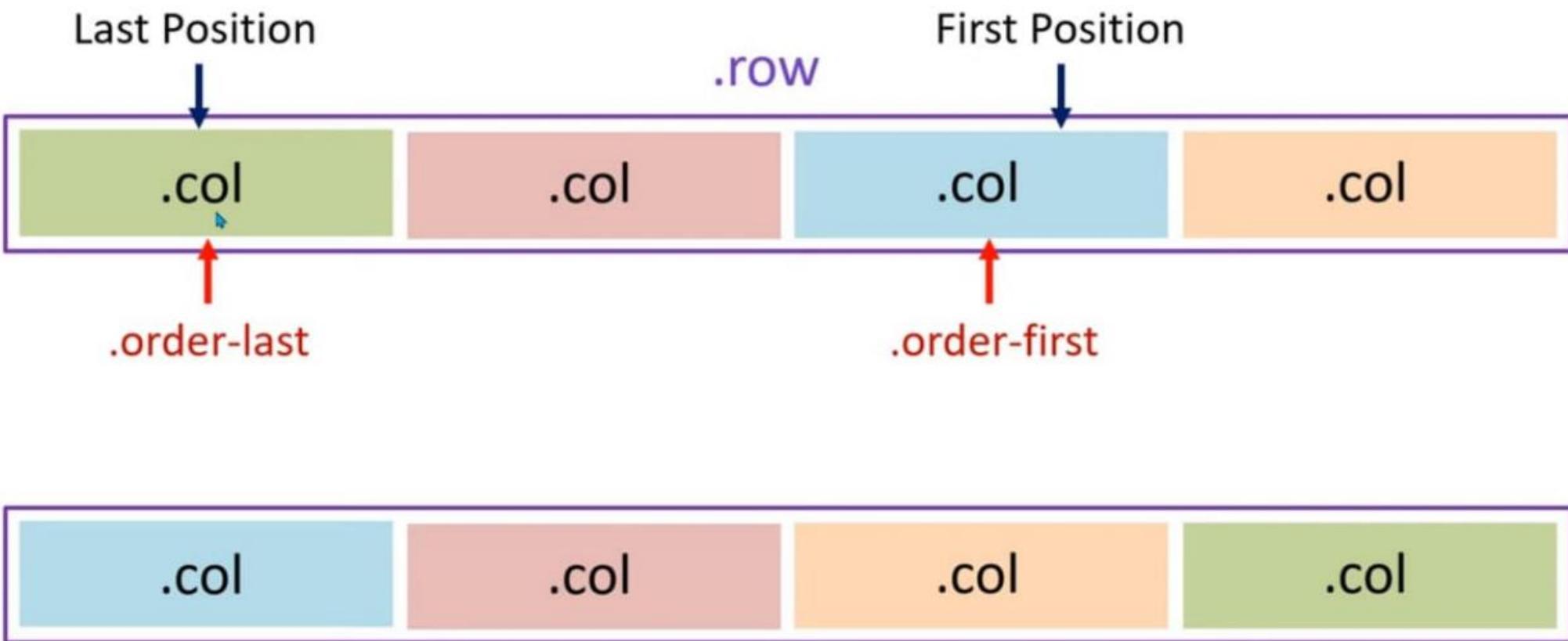
Extra Small



0 - 11

Re-Ordering

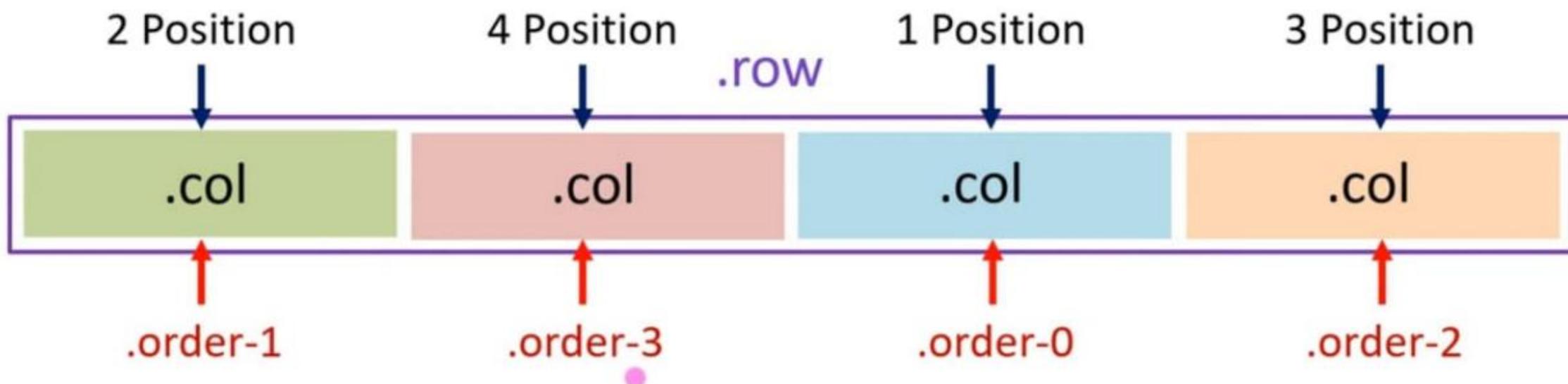


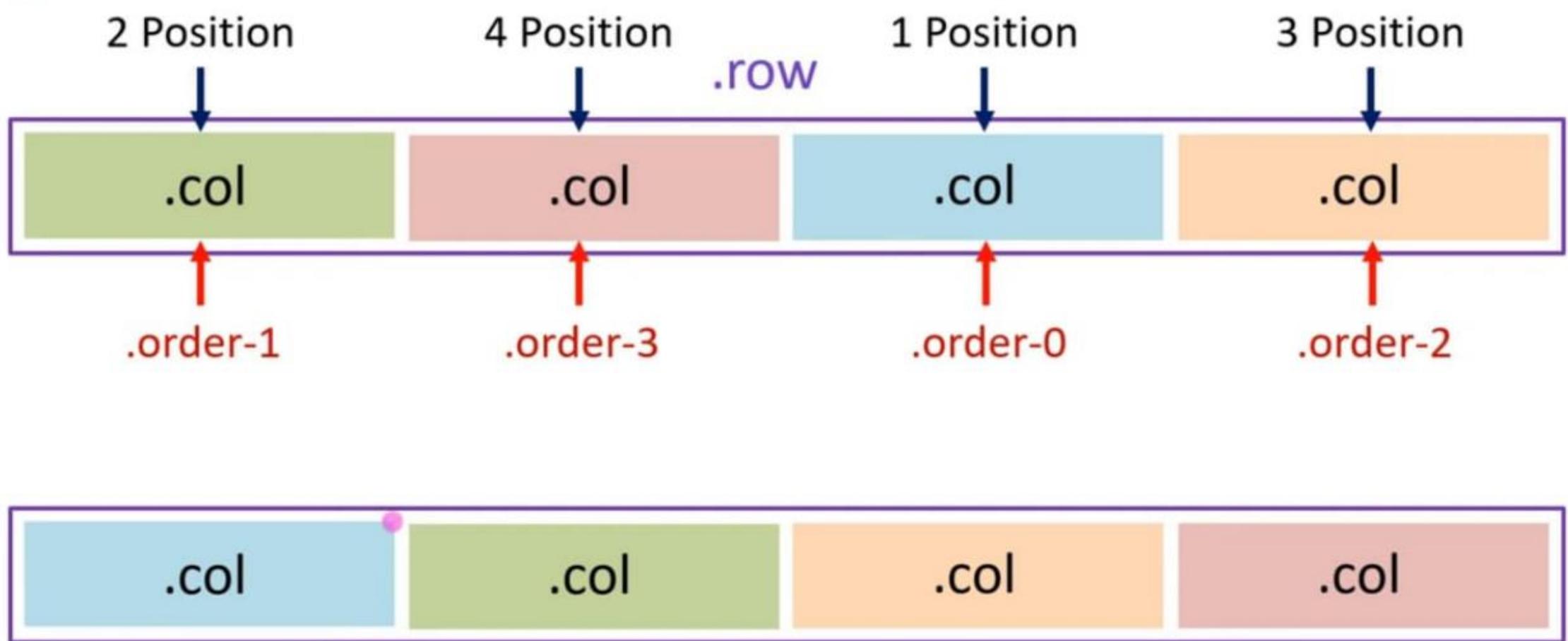


Extra Large	.order-xl-first , .order-xl-last
Large	.order-lg-first , .order-lg-last
Medium	.order-md-first , .order-md-last
Small	.order-sm-first , .order-sm-last
Extra Small	



Reordering with Grid Numbers





Nesting

.row

.col-md-8

.col-md-4

.col-md-6

.col-md-6

.col-md-4

.row

.col-md-8

.col-md-4

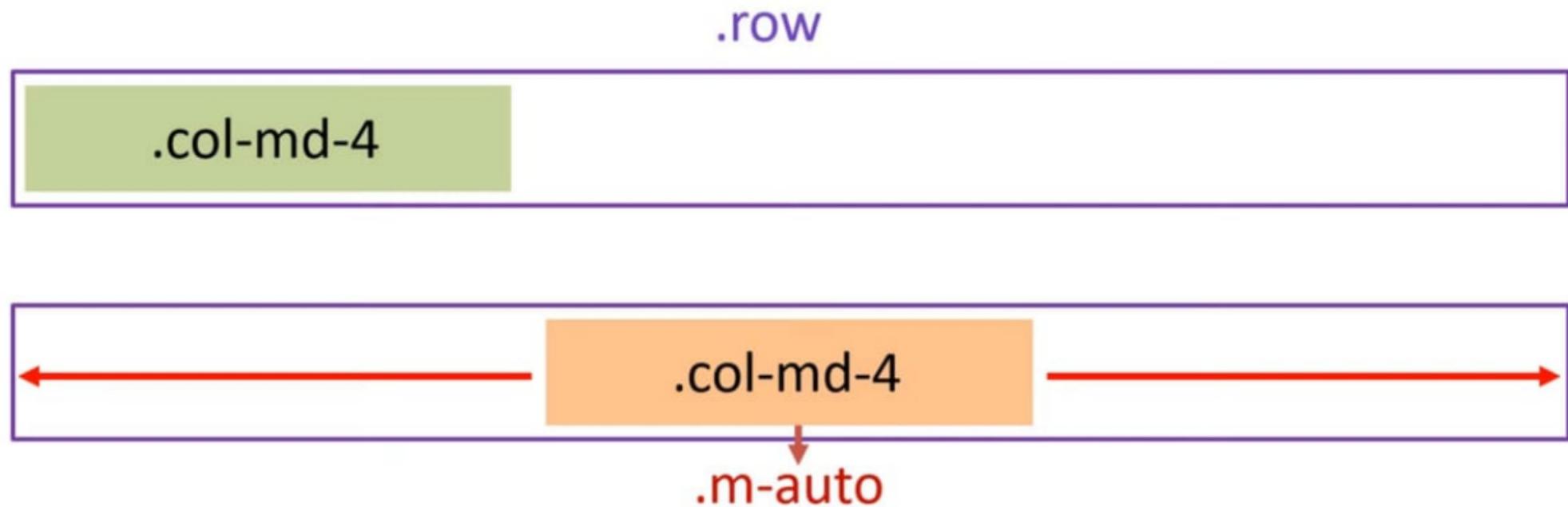


.col-md-6

.col-md-6

.row

Margin classes



.row

.col-md-4

.col-md-4

.m-auto

.col-md-4

.ml-auto

Margin Auto Classes for different Break Points

Extra Large	.m-xl-auto		
Large	.m-lg-auto	Top	
Medium	.m-md-auto	Left	Right
Small	.m-sm-auto	Bottom	
Extra Small			•

Margin	.m-*
Margin-right	.mr-*
Margin-left	.ml-*
Margin-top	.mt-*
Margin-bottom	.mb-*

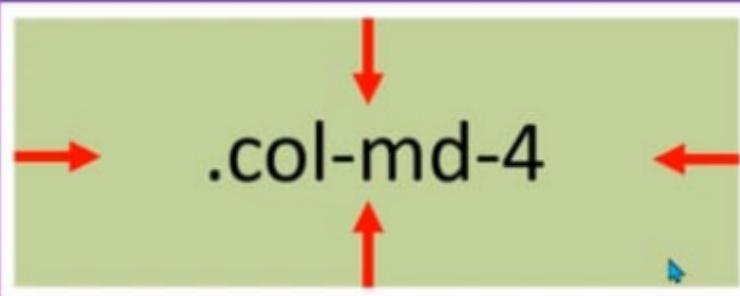
0	0px
1	0.25rem
2	0.50rem
3	1rem
4	1.5rem
5	3rem

0 - 5

Padding Classes

.row

.col-md-4



Padding	.p-*	0	0px
Padding-right	.pr-*	1	0.25rem
Padding-left	.pl-*	2	0.50rem
Padding-top	.pt-*	3	1rem
Padding-bottom	.pb-*	4	1.5rem
		5	3rem

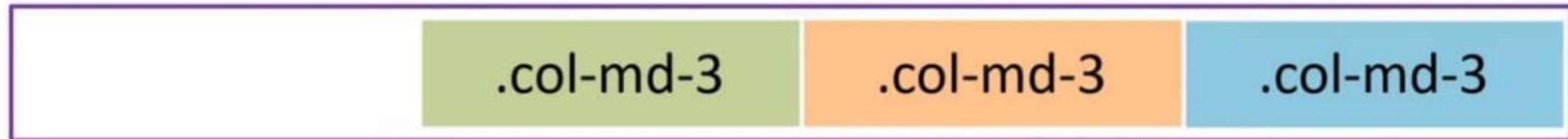
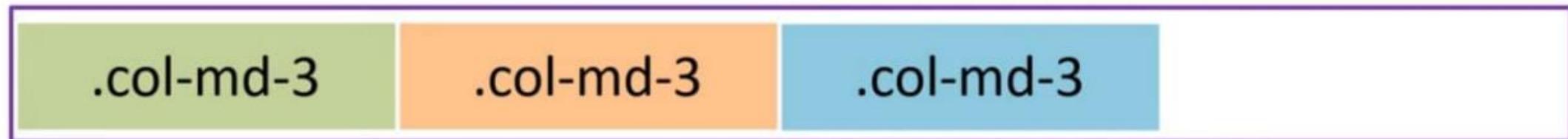
0 - 5

	Padding	Padding-right	Padding-left	Padding-top	Padding-bottom
Extra Large	.p-xl-*	.pr-xl-*	.pl-xl-*	.pt-xl-*	.pb-xl-*
Large	.p-lg-*	.pr-lg-*	.pl-lg-*	.pt-lg-* ↵	.pb-lg-*
Medium	.p-md-*	.pr-md-*	.pl-md-*	.pt-md-*	.pb-md-*
Small	.p-sm-*	.pr-sm-*	.pl-sm-*	.pt-sm-*	.pb-sm-*
Extra Small					

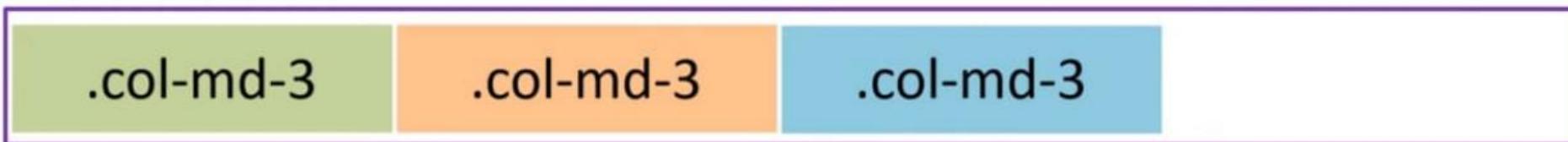
0 - 5

Horizontal Alignment

.row



.row

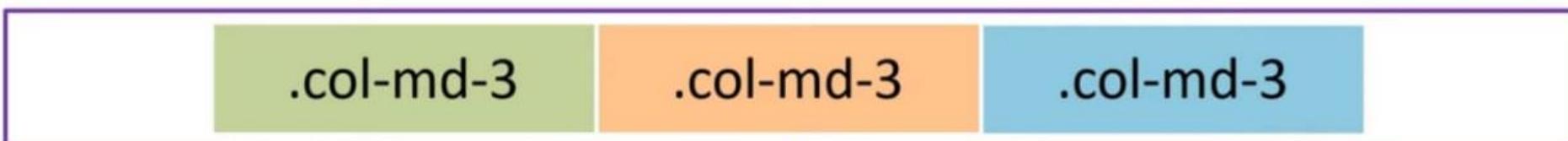


.col-md-3

.col-md-3

.col-md-3

.justify-content-end



.col-md-3

.col-md-3

.col-md-3

.justify-content-center

.col-md-3

.col-md-3

.col-md-3



.justify-content-between

.col-md-3

.col-md-3

.col-md-3



justify-content-around



Justify-Content Classes for different Break Points

	Start	End
Extra Large	.justify-content-xl-start	.justify-content-xl-end
Large	.justify-content-lg-start	.justify-content-lg-end
Medium	.justify-content-md-start	.justify-content-md-end
Small	.justify-content-sm-start	.justify-content-sm-end
Extra Small		

	Center	Between
Extra Large	.justify-content-xl-center	.justify-content-xl-between
Large	.justify-content-lg-center	.justify-content-lg-between
Medium	.justify-content-md-center	.justify-content-md-between
Small	.justify-content-sm-center	.justify-content-sm-between
Extra Small		

Around

Extra Large . justify-content-xl-around

Large . justify-content-lg-around

Medium . justify-content-md-around

Small . justify-content-sm-around

Extra Small



Vertical Alignment

Lore ipsum dolor sit
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Perferendis culpa
minus dolorem.

Lore ipsum dolor sit
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.row



Vertical Alignment

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amet, elit.

.row

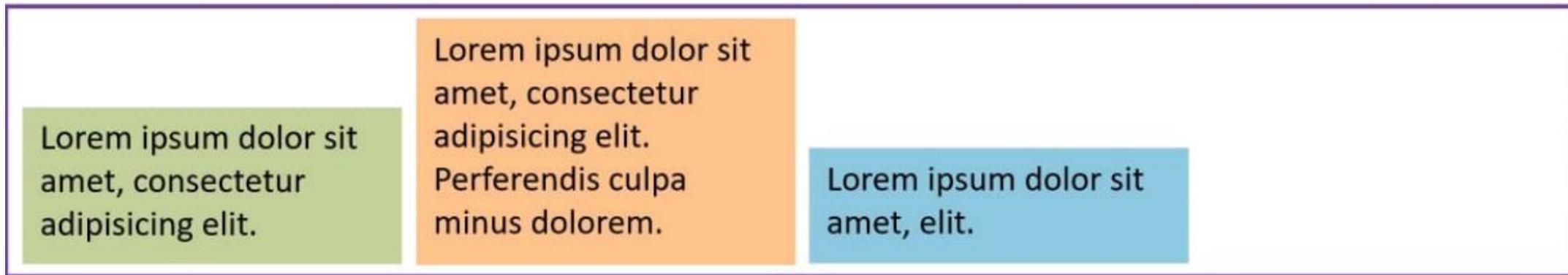
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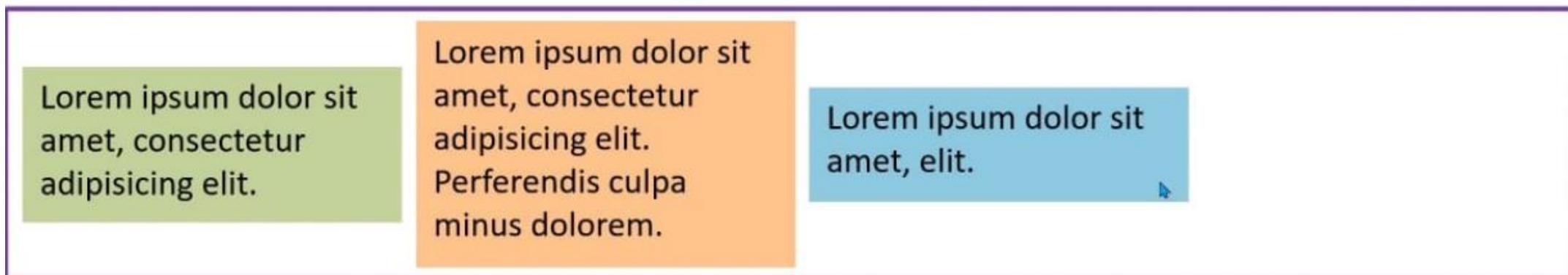
.row

. align-items-start



.row

. align-items-end



.row

. align-items-center

Lorem ipsum dolor sit amet, consectetur adipisicing elit.

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Perferendis culpa minus dolorem.

Lorem ipsum dolor sit amet, elit.

.row



. align-items-stretch

Lore ipsum dolor sit amet, consectetur adipisicing elit.

Lore ipsum dolor sit amet, consectetur adipisicing elit.
Pererendis culpa minus dolorem.

Lore ipsum dolor sit amet, elit.

.row

. align-items-stretch

**Lore ipsum
dolor sit amet,
consectetur
adipisicing elit.**

Lore ipsum dolor sit amet, consectetur adipisicing elit.
Pererendis culpa minus dolorem.

Lore ipsum dolor sit amet, elit.

.row

. align-items-baseline

.row

Lorem ipsum dolor sit amet, consectetur adipisicing elit.

Lorem ipsum dolor sit amet, consectetur adipisicing elit.
Perferendis culpa minus dolorem.

Lorem ipsum dolor sit amet, elit.

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Lorem ipsum dolor sit amet, elit.



`.row`

.col

`.row`

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Perferendis culpa minus dolorem.

Lorem ipsum dolor sit amet, elit.

Lorem ipsum dolor sit amet, consectetur adipisicing elit.

Lorem ipsum dolor sit amet, elit.

Lorem ipsum dolor sit amet, elit.

`.align-content-start`

. align-content-end



 Lorem ipsum dolor sit
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 adipisicing elit.

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 minus dolorem.

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 Lorem ipsum dolor sit
 amet, consectetur
 adipisicing elit.

 Lorem ipsum dolor sit amet, elit.

 Lorem ipsum dolor sit
 amet, elit.

.row

`.align-content-center`

row

```
.row {display: flex; align-items: center;}
```

The image shows a horizontal row of six rectangular boxes of varying colors: light green, orange, light blue, pink, teal, and olive green. Each box contains the same text: "Lorem ipsum dolor sit amet, consectetur adipisicing elit.". The boxes are arranged side-by-side within a larger container. The text is centered vertically within each box. A blue arrow points from the text ".align-content-center" above the row to the middle of the row, indicating the effect of the CSS property on the vertical alignment of the content.

Light green box:

Orange box:

Light blue box:

Pink box:

Teal box:

Olive green box:

Light green box:

Orange box:

Light blue box:

Light green box:

Pink box:

Teal box:

Olive green box:

lorem ipsum dolor sit amet, consectetur adipisicing elit.

lorem ipsum dolor sit amet, consectetur adipisicing elit.
Perferendis culpa minus dolorem.

lorem ipsum dolor sit amet, elit.

.align-content-between

lorem ipsum dolor sit amet, consectetur adipisicing elit.

lorem ipsum dolor sit amet, elit.

lorem ipsum dolor sit amet, elit.

.row

Lorem ipsum dolor sit amet, consectetur adipisicing elit.

Lorem ipsum dolor sit amet, consectetur adipisicing elit.
Perferendis culpa minus dolorem.

Lorem ipsum dolor sit amet, elit.

.align-content-around

Lorem ipsum dolor sit amet, consectetur adipisicing elit.

Lorem ipsum dolor sit amet, elit.

Lorem ipsum dolor sit amet, elit.

.row

<p>Lorem ipsum dolor sit amet, consectetur adipisicing elit.</p>	<p>Lorem ipsum dolor sit amet, consectetur adipisicing elit. Perferendis culpa minus dolorem.</p>	<p>Lorem ipsum dolor sit amet, elit.</p>
<p>Lorem ipsum dolor sit amet, consectetur adipisicing elit.</p>	<p>Lorem ipsum dolor sit amet, elit.</p>	<p>Lorem ipsum dolor sit amet, elit.</p>

.row

. align-content-stretch

Lorem ipsum dolor sit amet, consectetur adipisicing elit.

Lorem ipsum dolor sit amet, consectetur adipisicing elit.
Perferendis culpa minus dolorem.

Lorem ipsum dolor sit amet, elit.

.row

Lorem ipsum dolor sit amet, consectetur adipisicing elit.

Lorem ipsum dolor sit amet, consectetur adipisicing elit.
Perferendis culpa minus dolorem.

Lorem ipsum dolor sit amet, elit.

.align-self-start

.row

Lorem ipsum dolor sit
amet, consectetur
adipisicing elit.

Lorem ipsum dolor sit
amet, consectetur
adipisicing elit.
Perferendis culpa
minus dolorem.

Lorem ipsum dolor sit
amet, elit.

.row

.align-self-end

Lore ipsum dolor sit
amet, consectetur
adipisicing elit.

Lore ipsum dolor sit
amet, consectetur
adipisicing elit.
Perferendis culpa
minus dolorem.

Lore ipsum dolor sit
amet, elit.

.row

.align-self-end

Lore ipsum dolor sit
amet, consectetur
adipisicing elit.

Lore ipsum dolor sit
amet, consectetur
adipisicing elit.
Perferendis culpa
minus dolorem.

Lore ipsum dolor sit
amet, elit.

.row

.align-self-center

Lorem ipsum dolor sit
amet, consectetur
adipisicing elit.

Lorem ipsum dolor sit
amet, consectetur
adipisicing elit.
Perferendis culpa
minus dolorem.

Lorem ipsum dolor sit
amet, elit.

.row

. align-self-stretch

Lore ipsum dolor sit amet, consectetur adipisicing elit.

Lore ipsum dolor sit amet, consectetur adipisicing elit.
Perferendis culpa minus dolorem.

Lore ipsum dolor sit amet, elit.

.row

. align-self-stretch

~~Lore ipsum dolor sit amet, consectetur adipisicing elit.~~

Lore ipsum dolor sit amet, consectetur adipisicing elit.
Perferendis culpa minus dolorem.

Lore ipsum dolor sit amet, elit.

.row

.align-self-baseline

Lorem ipsum dolor sit
amet, consectetur
adipisicing elit.

Lorem ipsum dolor sit
amet, consectetur
adipisicing elit.
Perferendis culpa
minus dolorem.

Lorem ipsum dolor sit
amet, elit.

.row

.align-items-end

`Lorem ipsum dolor sit
amet, consectetur
adipisicing elit.`

`Lorem ipsum dolor sit
amet, consectetur
adipisicing elit.
Perferendis culpa
minus dolorem.`

`Lorem ipsum dolor sit
amet, elit.`

`.row`

`.align-items-end`

`. align-self-auto`



Flex Direction Classes



.row



.row



. flex-row-reverse

.row



.row

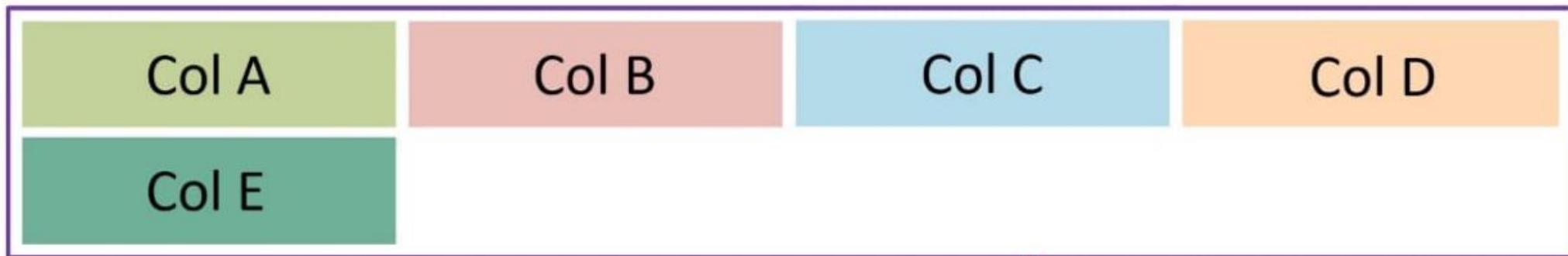
Col D

Col C

Col B

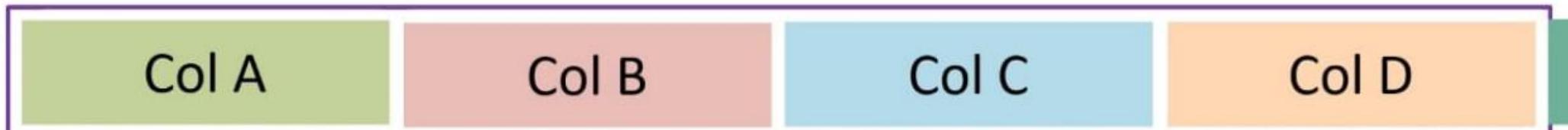
Col A

. flex-column-reverse



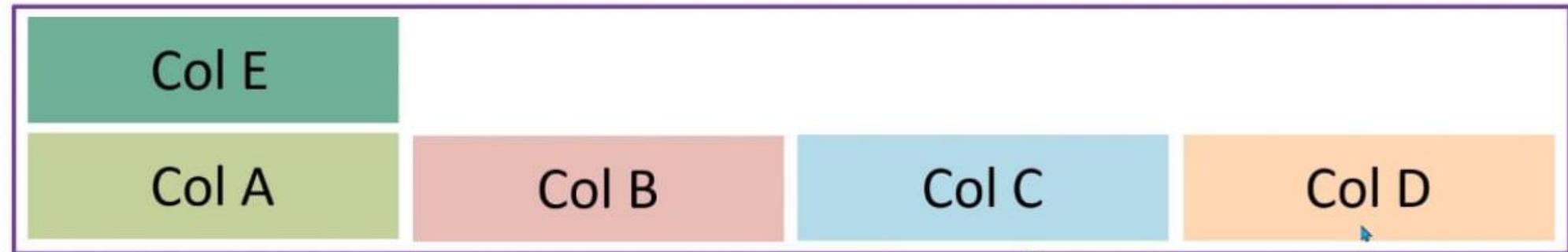
.row

.flex-wrap



.row

.flex-wrap



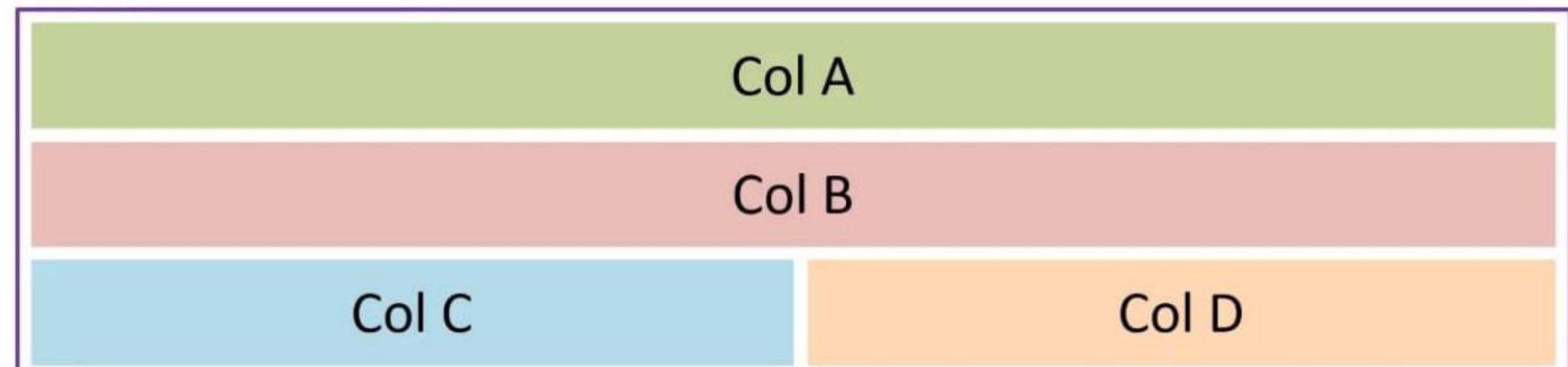
.row

.flex-wrap-reverse



.row

. flex-fill



.row

Display Utilities

display : none;	→	.d-none
display : inline;	→	.d-inline
display : inline-block;	→	.d-inline-block
display : block;	→	.d-block
display : table;	→	.d-table
display : table-cell;	→	.d-table-cell
display : table-row;	→	.d-table-row
display : flex;	→	.d-flex
display : inline-flex;	→	.d-inline-flex



Display Classes for different Break Points

	Display : none	Display : flex	Display : inline-block
Extra Large	.d-xl-none	.d-xl-flex	.d-xl-inline-block
Large	.d-lg-none	.d-lg-flex	.d-lg-inline-block
Medium	.d-md-none	.d-md-flex	.d-md-inline-block
Small	.d-sm-none	.d-sm-flex	.d-sm-inline-block
Extra Small	.d-none	.d-flex	.d-inline-block

Display Print Utilities

.d-print-none

.d-print-inline

.d-print-inline-block

.d-print-block

.d-print-table

.d-print-table-row

.d-print-table-cell

.d-print-flex

.d-print-inline-flex

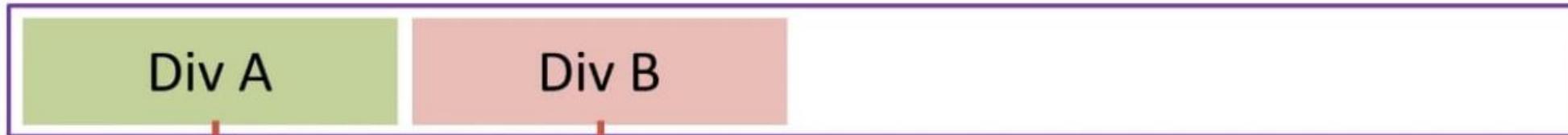
.d-print-none

.d-print-none

.d-none .d-print-block

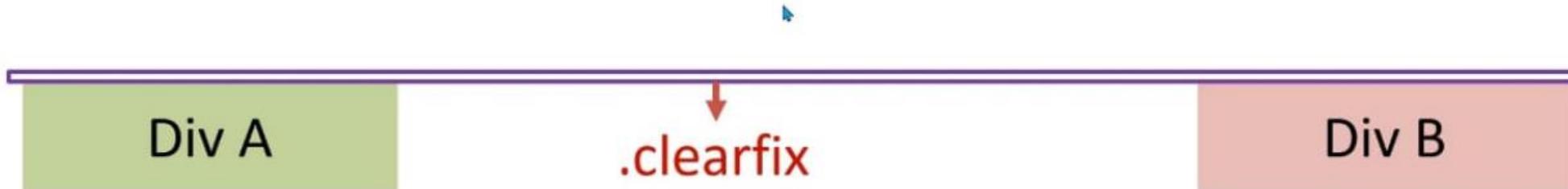


Float Classes



.float-left

.float-right



Div A

.clearfix

Div B



Float Classes for different Break Points

	Float : left	Float : right
Extra Large	.float-xl-left	.float-xl-right
Large	.float-lg-left	.float-lg-right
Medium	.float-md-left	.float-md-right
Small	.float-sm-left	.float-sm-right
Extra Small	.float-left	.float-right



Width Classes

w-25

Width 25%

w-50

Width 50%

w-75

Width 75%

w-100

Width 100%

w-auto

Width Auto



Height Classes

Height 25%

h-25

Height 50%

h-50

Height 75%

h-75

Height 100%

h-100

mh-100

Height Auto

h-auto



Viewport Height & Width Classes

vh-100

min-vh-100

vw-100

min-vw-100

Position Classes

position : relative; → .position-relative

position : absolute; → .position-absolute

position : static; → .position-static

position : fixed; → .position-fixed

position : sticky; → .position-sticky

.fixed-top

.fixed-bottom

.sticky-top



Overflow Classes

 Lorem ipsum dolor sit amet,
 consectetur adipisicing elit.
 Accusamus quibusdam
 obcaecati libero animi
 inventore fugiat beatae!
 Delectus impedit nihil,
 distinctio minus iusto
 maxime totam autem
 repellendus blanditiis
 provident.

Height : 200px

 Lorem ipsum dolor sit amet,
 consectetur adipisicing elit.
 Accusamus quibusdam
 obcaecati libero animi
 inventore fugiat beatae!
 Delectus impedit nihil,

.overflow-auto

 Lorem ipsum dolor sit amet,
 consectetur adipisicing elit.
 Accusamus quibusdam
 obcaecati libero animi
 inventore fugiat beatae!
 Delectus impedit nihil,

.overflow-hidden



Padding & Margin Classes

Padding .p-*

Padding-right .pr-*

Padding-left .pl-*

Padding-top .pt-*

Padding-bottom .pb-*

Margin .m-*

Margin-right .mr-*

Margin-left .ml-*

Margin-top .mt-*

Margin-bottom .mb-*

0 - 5



Padding Classes

.row

.col-md-4

Y-axis

.col-md-4

.py-*

0 - 5

X-axis

.col-md-4

.px-*

Padding & Margin Classes for Y-Axis & X-Axis

Y-Axis Padding

.py-*

X-Axis Padding

.px-*

Y-Axis Margin

.my-*

X-Axis Margin

.mx-*

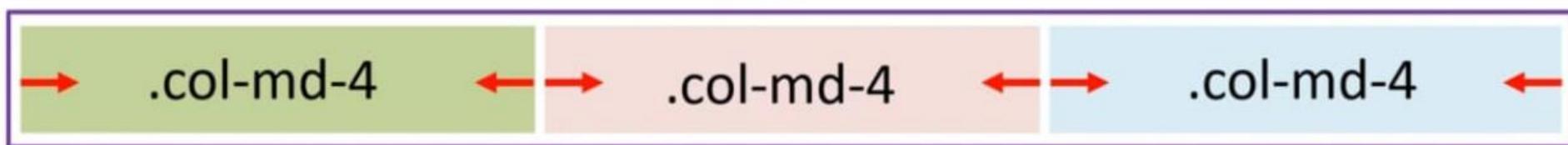
0 - 5

0	0px
1	0.25rem
2	0.50rem
3	1rem
4	1.5rem
5	3rem



No Padding & Margin Class

.row



.Col
padding-left : 15px;
padding-right : 15px;

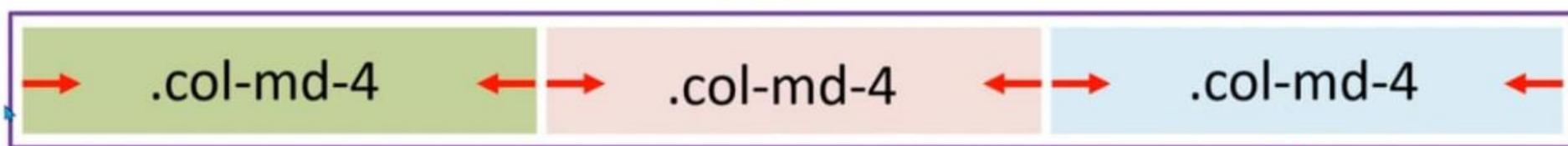
.row
margin-left : -15px;
margin-right : -15px;

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Aliquid corporis quas quod in, maiores similique cupiditate enim. Excepturi, rem aspernatur.

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Aliquid corporis quas quod in, maiores similique cupiditate enim. Excepturi, rem aspernatur.

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Aliquid corporis quas quod in, maiores similique cupiditate enim. Excepturi, rem aspernatur.

.row



.no-gutters

.Col padding-left : 15px;
 padding-right : 15px;

.row margin-left : -15px;
 margin-right : -15px;



Padding & Margin for different Break Points

	Padding Y	Padding X	Margin Y	Margin X
Extra Large	.py-xl-*	.px-xl-*	.my-xl-*	.mx-xl-*
Large	.py-lg-*	.px-lg-*	.my-lg-*	.mx-lg-*
Medium	.py-md-*	.px-md-*	.my-md-*	.mx-md-*
Small	.py-sm-*	.px-sm-*	.my-sm-*	.mx-sm-*
Extra Small				

0 - 5

Project using HTML, CSS and Bootstrap