

Bootstrap Grid

A basic rundown

What is the Bootstrap Grid System?

- Used for responsive layout
- Made up of groupings of **Rows** & **Columns** inside 1 or more **containers**
- Can be used alone without the JavaScript and other CSS components. (you would use and reference the bootstrap-grid.css)

What is the Bootstrap Grid System?

RULES OF THE GRID

- 1. Container first**
- 2. Row next**
- 3. Col(s) after that**

**Always in this order.
No exceptions.**

What is the Bootstrap Grid System?

<https://getbootstrap.com/docs/5.1/examples/grid/>

Grid system broken down

Rows

- The `row` is the parent of the `column`
- Rows can be **horizontal or vertical**.
- **The sole purpose of the row is to contain 1 or more columns**
- **NEVER PUT CONTENT DIRECTLY INSIDE THE ROW**
- Columns — **only columns** are placed inside the row
- Content is placed inside the columns

Grid system broken down

Columns

- Columns create horizontal divisions across the viewport
- Columns can have different defined widths
- Columns can layout horizontally, then vertically
- Columns can “grow” or “shrink” in width
- Columns can automatically wrap or stack vertically as needed
- Columns can contain more rows and columns
- And more....

Grid system broken down

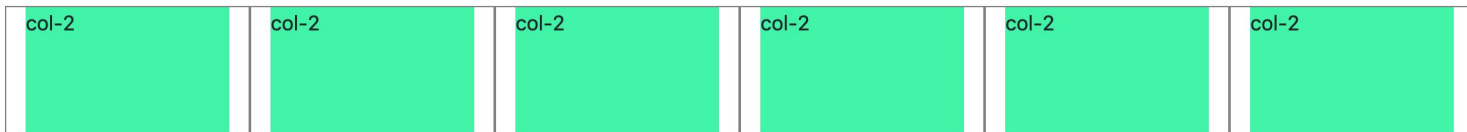
Bootstrap has a 12 column grid

This is 12 column units

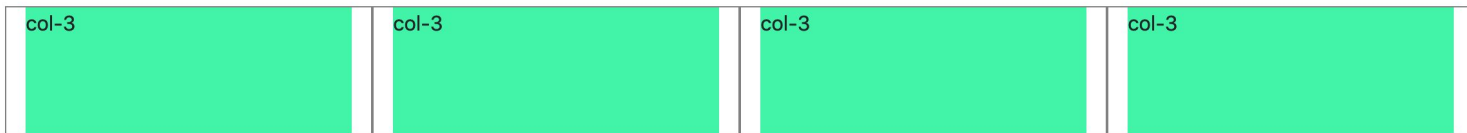
This is column 1 of 12	This is column 2 of 12	This is column 3 of 12	This is column 4 of 12	This is column 5 of 12	This is column 6 of 12	This is column 7 of 12	This is column 8 of 12	This is column 9 of 12	This is column 10 of 12	This is column 11 of 12	This is column 12 of 12
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There are many options

This is a 2 column layout ($12/6=2$)



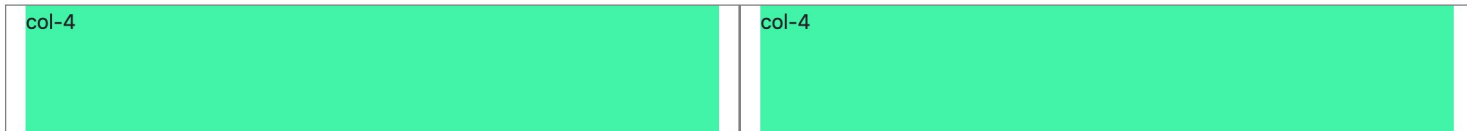
This is a 4 column layout ($12/4=3$)



This is a 3 column layout ($12/3=4$)



This is a 2 column layout ($12/6=2$)



How to Responsive Design with Bootstrap

- Bootstrap 5.1 has 5 responsive tiers
- They are known as breakpoints
- Bootstrap uses CSS media queries to establish these Responsive Breakpoints
- Breakpoints enable you to control column behaviour at different screen widths
- **Larger breakpoints, override Smaller breakpoints**

How to Responsive Design with Bootstrap

`xs` (default) >

overridden by `sm` >

overridden by `md` >

overridden by `lg` >

overridden by `xl`

Or, in reverse...

`xl` > overrides `lg` > overrides `md` > overrides `sm` > overrides (`xs`)

How to Responsive Design with Bootstrap

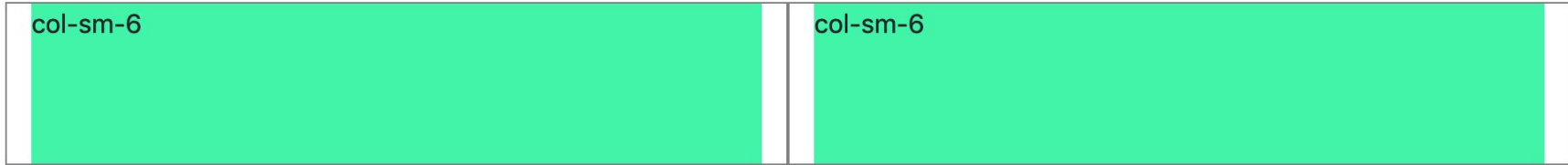
Responsive Breakpoints, based on screen width:

- (xs)—screen width $< 576\text{px}$ (This is the “default” tier)
- sm—screen width $\geq 576\text{px}$
- md—screen width $\geq 768\text{px}$
- lg—screen width $\geq 992\text{px}$
- xl—screen width $\geq 1200\text{px}$
- Xxl — screen width $\geq 1400\text{px}$

(xs is no longer used in bootstrap 5.1, it is the default breakpoint)

Take `.col-sm-6` for example:


This is a responsive 2 column using `.col-sm-6`



This means use 6 of 12 columns on a small device
(greater or equal to 768 px)

Take `.col-sm-6` for example:

This is a responsive 2 column
using `.col-sm-6`



col-sm-6

col-sm-6

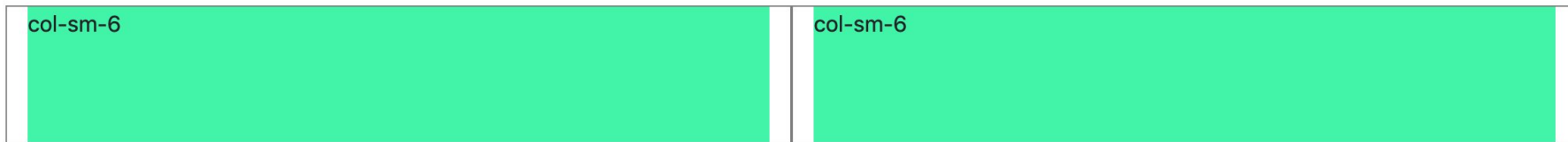
On **less than 768px**, the 2 columns become 100% width
and stack vertically:

There are many options

This is a responsive 4 column and 8 column layout

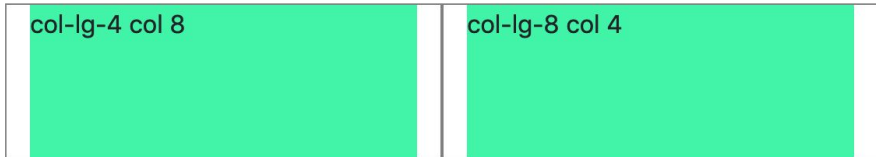


This is a responsive 2 column using `.col-sm-6`

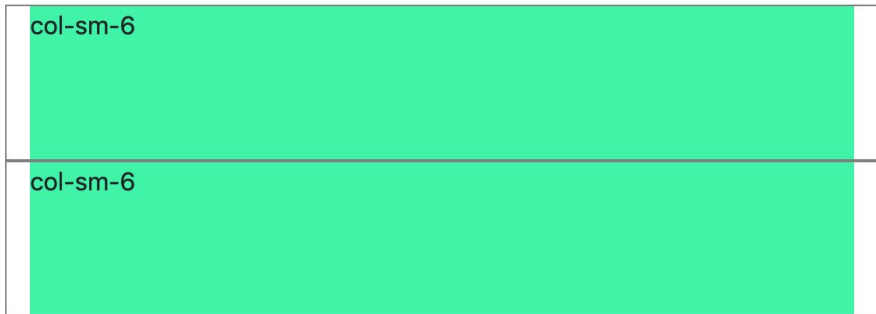


There are many options

This is a **responsive 4 column and 8 column layout**

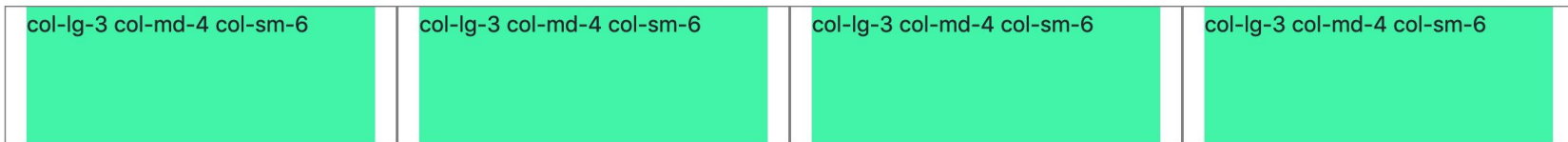


This is a **responsive 2 column**
using **.col-sm-6**



There are many options

This is a **responsive 2 column** using `.col-lg-3 col-md-4 col-sm-6`



LG

There are many options

`.col-lg-3 col-md-4 col-sm-6`

col-lg-3 col-md-4 col-sm-6	col-lg-3 col-md-4 col-sm-6	col-lg-3 col-md-4 col-sm-6
col-lg-3 col-md-4 col-sm-6		

MD

There are many options

This is a responsive 2
column using `.col-lg-3`
`col-md-4` `col-sm-6`

SM

col-lg-3 col-md-4 col-sm-6	col-lg-3 col-md-4 col-sm-6
col-lg-3 col-md-4 col-sm-6	col-lg-3 col-md-4 col-sm-6

There are many options

This is a responsive 2
column using `.col-lg-3`
`col-md-4` `col-sm-6`

col-lg-3 col-md-4 col-sm-6

col-lg-3 col-md-4 col-sm-6

col-lg-3 col-md-4 col-sm-6

col-lg-3 col-md-4 col-sm-6

(XS) default