

- 1.What is bootstrap
- 2.Ways of inclusion of files or Where to Get Bootstrap 4
- 3.Containers
4. Grid system
- 5.Bootstrap 4 Text/Typography
- 6.Colors
- 7.Tables
- 8.Images
- 9.Jumbotron
- 10.Utilities like borders,padding, margin,Width,height,Vertical Align,Display,Visibility,Position, Close icon,colors,background-colors.

- 11.Alerts
- 12.Buttons
- 13.Badges
- 14.Progress Bars
- 15.Spinner
- 16.Pagination
- 17.List Groups
- 18.Cards

- 19.Dropdowns
- 20.Collapse
- 21.Navs
- 22.Navigation Bar

- 23.Forms
- 24.Form Inputs,Input Groups ,Custom Forms

- 25.Bootstrap 4 Carousel
- 26.Bootstrap 4 Modal
- 27.Bootstrap 4 Tooltip
- 28.Bootstrap 4 Popover
- 29.Bootstrap 4 Toast
- 30.Bootstrap 4 Scrollspy
- 31.Bootstrap 4 Flex
- 32.Bootstrap 4 Misc like Media Objects

- 1.What is Bootstrap?
- 

Bootstrap is a free front-end framework for faster and easier web development, ability to easily create responsive designs

#What is Responsive Web Design?

Responsive web design is about creating web sites which automatically adjust themselves to look good on all devices, from small phones to large desktops.

- 2.Ways of inclusion of files or Where to Get Bootstrap 4

-----  
There are two ways to start using Bootstrap 4 on your own web site.

You can:

Include Bootstrap 4 from a CDN (Content Delivery Network).

Download Bootstrap 4 from [getbootstrap.com](https://getbootstrap.com)

### 3.Containers

-----

Containers are a fundamental building block of Bootstrap that contain, pad, and align your content within a given device or viewport.

#Bootstrap comes with three different containers:

.container, which sets a max-width at each responsive breakpoint

.container-fluid, which is width: 100% at all breakpoints

.container-{breakpoint}, which is width: 100% until the specified breakpoint

#Breakpoints :

Bootstrap includes six default breakpoints, sometimes referred to as grid tiers, for building responsively

Breakpoint Class infix Dimensions

X-Small None <576px

Small sm ≥576px

Medium md ≥768px

Large lg ≥992px

Extra large xl ≥1200px

Extra extra large xxl ≥1400px

Extra small

<576px Small

≥576px Medium

≥768px

Large

≥992px X-Large

≥1200px

XX-Large

≥1400px

.container 100% 540px 720px 960px 1140px 1320px

.container-sm 100% 540px 720px 960px 1140px 1320px

.container-md 100% 100% 720px 960px 1140px 1320px

.container-lg 100% 100% 100% 960px 1140px 1320px

.container-xl 100% 100% 100% 100% 1140px 1320px

.container-xxl 100% 100% 100% 100% 100% 1320px

.container-fluid 100% 100% 100% 100% 100% 100%

### 4.Grid System

-----

.Bootstrap's grid system is built with flexbox and allows up to 12 columns across the page.

.The grid system is responsive, and the columns will re-arrange automatically depending on the screen size.

.Make sure that the sum adds up to 12 or fewer (it is not required that you use all 12 available columns).

## #Grid Classes

The Bootstrap 4 grid system has five classes:

- .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)

## 5.Bootstrap 4 Text/Typography

-----

Bootstrap 4 Default Settings :

- . default font-size of 16px, and its line-height is 1.5.
- . default font-family is "Helvetica Neue", Helvetica, Arial, sans-serif.

#In addition, all <p> elements have margin-top: 0 and margin-bottom: 1rem (16px by default).

.h1 through .h6 classes are also available, for when you want to match the font styling of a heading but cannot use the associated HTML element.

h1 to h6

#Display Headings:

- .display-1,
- .display-2,
- .display-3,
- .display-4

#Lead

Make a paragraph stand out by adding .lead class.

#Inline text elements

.Styling for common inline HTML5 elements.

- .<mark>
- .<del>,<s>
- .<ins>,<u>
- .<small>
- .<strong>
- .<em>

.mark and .small classes are also available to apply the same styles as <mark> and <small> while avoiding any unwanted semantic implications that the tags would bring.

#Blockquotes

.For quoting blocks of content from another source within your document.

Wrap <blockquote class="blockquote"> around any HTML as the quote.

.Add a <footer class="blockquote-footer"> for identifying the source.

Wrap the name of the source work in <cite>.

Inline

Remove a list's bullets and apply some light margin with a combination of two classes, .list-inline and

.list-inline-item.

#More Typography Classes are

.font-italic

.font-weight-normal

.font-weight-light

.font-weight-lighter

.font-weight-bold

.font-weight-bolder

.text-decoration-none

.text-left

.text-right

.text-center

.text-justify

.text-`{break-point}` -left/right/center

.text-nowrap

.text-reset        Resets the color of a text or a link

.text-break

.text-lowercase

.text-uppercase

.text-capitalize

.list-unstyled    Removes the default list-style

.list-inline       Places all list items on a single line

.initialism       Displays the text inside an `<abbr>` element in a slightly smaller font size

## 6.Colors

-----

Bootstrap 4 has some contextual classes

.primary        (blue)

.success        (green)

.info            (light-blue)

.warning        (orange)

.danger         (red)

.secondary     (gray)

.light           (light-gray)

.dark           (dark-gray)

.white          (white)

->if you want text to colored...then we can use like these below

syntax : text-`{one of contextual classes}`

ex :text-primary

->Contextual text classes can also be used on links like ...

eg :<a href="#" class="text-danger">Danger link.</a>

->if you want background to colored...then we can use like these below

syntax :bg-{one of contextual classes}

eg :bg-secondary

## 7.Bootstrap 4 Tables

-----

.table                   ->horizontal dividers.  
.table-striped       ->zebra-stripes  
.table-bordered       ->borders on all sides of the table and cells.  
.table-hover           -> hover effect (grey background color) on table rows.  
  
.table-dark           ->black background to the table.  
.table-borderless   -> removes borders from the table.

->Contextual classes we can use like these

.table-{contextual-class}

eg :table-primary

table-active (grey Applies the hover color to the table row or table cell)

->Table Head Colors :

.thead-dark  
.thead-light

->small table

.table-sm

#Responsive tables

.table-responsive class adds a scrollbar to the table when needed  
.table-responsive-sm  
.table-responsive-md  
.table-responsive-lg  
.table-responsive-xl

## 8.Bootstrap 4 Images

-----

.rounded               -->rounded corners to an image  
.rounded-circle       -->shapes the image to a circle  
.img-thumbnail       --->shapes the image to a thumbnail (bordered)  
.img-fluid           ---> Responsive images automatically adjust to fit the size of the screen.

Aligning Images :

.float-right  
.float-left

#Centered Image :

.mx-auto (margin:auto) and  
.d-block (display:block) to the image.

## 9.Bootstrap 4 Jumbotron

-----

.A jumbotron indicates a big grey box for calling extra attention to some special content or information.

.jumbotron

.jumbotron-fluid                   ->full-width jumbotron without rounded borders,

## 10.Utilities

-----

like borders,

padding, margin,

Width,height,

Vertical Align,

Display,Visibility,

Float and Clearfix,

Position,

Close icon,

colors,background-colors.

### i)Colors

Bootstrap 4 has some contextual classes

.primary           (blue)

.success           (green)

.info               (light-blue)

.warning           (orange)

.danger             (red)

.secondary         (gray)

.light               (light-gray)

.dark                (dark-gray)

.white               (white)

->if you want text to colored...then we can use like these below

syntax : text-{one of contextual classes}

ex :text-primary

->Contextual text classes can also be used on links like ...

eg :<a href="#" class="text-danger">Danger link.</a>

### ii)background-colors

->if you want background to colored...then we can use like these below

syntax :bg-{one of contextual classes}

eg :bg-secondary

### iii)Borders

Use border utilities to quickly style the

border and

border-radius of an element. Great for images, buttons, or any other element.

.border,

.border-0,

.border-top-0,

.border-right-0,

.border-bottom-0,  
.border-left-0

#COLOR to the border with any of the contextual border color classes

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

#Border Radius

Add rounded corners to an element with the rounded classes

.rounded  
.rounded-sm  
.rounded-lg  
.rounded-top  
.rounded-right  
.rounded-bottom  
.rounded-left  
.rounded-circle/pill  
.rounded-0

iv)Spacing

Bootstrap 4 has a wide range of responsive margin and padding utility classes.

They work for all breakpoints: xs (<=576px),  
sm (>=576px),  
md (>=768px),  
lg (>=992px) ,  
xl (>=1200px)):

The classes are used in the format:

{property} {sides} - {size} for xs,  
{property} {sides} - {breakpoint} - {size} for sm, md, lg, and xl.

eg :

|                        |                         |
|------------------------|-------------------------|
| .m-# / m-*-# /         | {# -size,* -breakpoint} |
| .m(l/b/r/t)-#          |                         |
| .m(x/y)-# / m(x/y)-*-# | {x,y-axis}              |
|                        |                         |
| .p-# / p-*-# /         | {# -size,* -breakpoint} |
| .p(l/b/r/t)-#          |                         |
| .p(x/y)-# / p(x/y)-*-# | {x,y-axis}              |

Where property is one of:

m - sets margin  
p - sets padding

Where sides is one of:

t - sets margin-top or padding-top  
b - sets margin-bottom or padding-bottom  
l - sets margin-left or padding-left  
r - sets margin-right or padding-right  
x - sets both padding-left and padding-right or margin-left and margin-right  
y - sets both padding-top and padding-bottom or margin-top and margin-bottom  
blank - sets a margin or padding on all 4 sides of the element

Where size is one of:

0 - sets margin or padding to 0  
1 - sets margin or padding to .25rem (4px if font-size is 16px)  
2 - sets margin or padding to .5rem (8px if font-size is 16px)  
3 - sets margin or padding to 1rem (16px if font-size is 16px)  
4 - sets margin or padding to 1.5rem (24px if font-size is 16px)  
5 - sets margin or padding to 3rem (48px if font-size is 16px)  
auto - sets margin to auto

Note: margins can also be negative, by adding an "n" in front of size:

n1 - sets margin to -.25rem (-4px if font-size is 16px)  
n2 - sets margin to -.5rem (-8px if font-size is 16px)  
n3 - sets margin to -1rem (-16px if font-size is 16px)  
n4 - sets margin to -1.5rem (-24px if font-size is 16px)  
n5 - sets margin to -3rem (-48px if font-size is 16px)

v)Sizing

.Easily make an element as wide or as tall (relative to its parent) with our width and height utilities.

.Width  
.height

.Width : w-\* classes  
.w-25,  
.w-50,  
.w-75,  
.w-100,  
.mw-100

.height : h-\* classes  
.h-25,  
.h-50,  
.h-75,  
.h-100,  
.mh-100

vi)Display & Visibility

The classes are named using the format:

.d-{value} for xs  
.d-{breakpoint}-{value} for sm, md, lg, and xl.

Where value is one of:



none  
inline  
inline-block  
block  
table  
table-cell  
table-row  
flex  
inline-flex

## #Visibility

.Control the visibility. The classes are

.visible  
.invisible

## vii)Float and Clearfix

.Float an element to the right with the .float-right class or  
to the left with .float-left, and  
clear floats with the .clearfix class.

.float- {left/right/none}  
.float- {breakpoint}- {left/right/none}  
.clearfix

## viii)Position

.Quick positioning classes are available, though they are not responsive.

.position-static  
.position-relative  
.position-absolute  
.position-fixed  
.position-sticky

.Use these shorthand utilities for quickly configuring the position of an element.

.fixed-top  
.fixed-bottom  
.sticky-top

## ix)Close icon

.Use the .close class to style a close icon.

## x)Vertical Align

.align-baseline  
.align-top  
.align-middle  
.align-bottom  
.align-text-top  
.align-text-bottom

## 11.Bootstrap 4 Alerts

-----  
.alert --->alert can created  
.alert-{contextual classes}  
.alert-link --->Add the alert-link class to any links inside the alert box  
.alert-heading ---->Adds color:inherit to the specified element

### #Closing Alerts

.alert-dismissible -> class to the alert container.  
.close  
.data-dismiss="alert" to link or button element.

### #Animated Alerts

.fade  
.show

close.bs.alert -->This event fires immediately when the close instance method is called.  
closed.bs.alert --->This event is fired when the alert has been closed

```
$('#myAlert').on('closed.bs.alert', function () {  
  // do something...  
})
```

## 12.Bootstrap 4 Buttons

-----  
The button classes can be used on <a>, <button>, or <input> elements:

.btn  
.btn-{contextual-classes}

### #Button Outline ::

.btn-{contextual-classes}

### #Button Sizes ::

.btn-lg  
.btn-md  
.btn-sm

### #Block Level Buttons ::

.btn-block

### Active/Disabled Buttons ::

The class .active makes a button appear pressed, and the disabled attribute makes a button unclickable.

Note :: that <a> elements do not support the disabled attribute and must therefore use the .disabled class to make it visually appear disabled.

### #Spinner Buttons ::

--You can also add "spinners" to a button.

.spinner-border  
.spinner-grow

## ii)Bootstrap 4 Button Groups :

-----

.It allows you to group a series of buttons together (on a single line) in a button group.  
.By default horizontal button groups

.btn-group  
.btn-group-{lg/sm}

#Vertical Button Groups ::  
.btn-group-vertical

#Nesting Button Groups & Dropdown Menus ::  
.dropdown-menu  
.dropdown-item  
.dropdown-toggle  
.dropdown-toggle-split  
data-toggle="dropdown"

### 13.Bootstrap 4 Badges

-----  
.badge  
.badge-{contextual-classes}  
.badge-pill --->class to make the badges more round.  
. we can make badge inside an button element .

### 14.Bootstrap 4 Progress Bars

-----  
.progress  
.progress-bar  
.progress-bar-striped  
.progress-bar-animated

### 15.Bootstrap 4 Spinners

-----  
.spinner-border /spinner-border-sm  
.spinner-grow /spinner-border-sm

You can also add spinners to a button, with or without text.

### 16.Bootstrap 4 Pagination /Breadcrumbs

-----  
.pagination  
.page-item  
.page-link  
.active  
.disabled  
.pagination-lg /.pagination-sm

Pagination Alignment by justify-content-{start/end/center}

#Breadcrumbs ::  
.breadcrumb  
.breadcrumb-item  
.active

## 17.Bootstrap 4 List Groups

-----  
.list-group  
.list-group-item  
.list-group-item-{contextual classes}  
.active  
.disabled  
.list-group-item-action - you want a grey background color on hover  
.list-group-flush -to remove some borders and rounded corners  
.list-group-horizontal

### #List Group with Badges ::

.badge  
.badge-{contextual-classes}  
.badge-pill --->class to make the badges more round.

## 18.Bootstrap 4 Cards

-----  
.card  
.card-header  
.card-body  
.card-footer

.card-title  
.card-text  
.card-link

### #Card Images ::

.card-img-top  
.card-img-bottom  
.card-img-overlay --->Turn an image into a card background .  
.stretched-link ---> class to a link inside the card, and it will make the whole card clickable and hoverable

### #Card Columns ::

.card-columns ----> class creates a masonry-like grid of cards  
.card-deck ----->class creates a grid of cards that are of equal height and width.  
.card-group ----->class removes left and right margins between each card

Note: The cards are displayed vertically on small screens (less than 576px):

## 19.Bootstrap 4 Dropdowns

-----  
.dropdown  
.dropdown-menu  
.dropdown-item  
.dropdown-toggle  
data-toggle="dropdown"  
.dropdown-divider -used to seperate links  
.dropdown-header - used to add headers inside the dropdown menu  
.active  
.disabled  
  
.dropright or .dropleft -alignment/position of dropdown

`.dropdown-menu-right` -To right-align the dropdown menu  
`.dropup` -If you want the dropdown menu to expand upwards instead of downwards  
`.dropdown-item-text` -is used to add plain text to a dropdown item

#### #Grouped Buttons with a Dropdown.

`.btn-group`  
`.btn-group-vertical`

#### #Split Button Dropdowns

`.dropdown-toggle-split`

#### #Via JavaScript ::

```
$('.dropdown-toggle').dropdown();
```

#### #Dropdown Events ::

`.show.bs.dropdown` Occurs when the dropdown is about to be shown.  
`shown.bs.dropdown` Occurs when the dropdown is fully shown  
`hide.bs.dropdown` Occurs when the dropdown is about to be hidden  
`hidden.bs.dropdown` Occurs when the dropdown is fully hidden

```
$(".dropdown").on("show.bs.dropdown", function(event){  
    var x = $(event.relatedTarget).text(); // Get the text of the element  
    alert(x);  
});
```

## 20.Bootstrap 4 Collapse

-----  
`.Collapsibles` are useful when you want to hide and show large amount of content:

`data-toggle="collapse"`  
`data-target="#id" or href="#"`  
`data-parent="#accordion"`  
`.collapse`  
`.collapse show`  
`.collapsing`

`.collapse(options)`  
where options :toggle,hide,show,dispose.

`show.bs.collapse` Occurs when the collapsible element is about to be shown  
`shown.bs.collapse` Occurs when the collapsible element is fully shown  
`hide.bs.collapse` Occurs when the collapsible element is about to be hidden  
`hidden.bs.collapse` Occurs when the collapsible element is fully hidden

Note: For `<a>` elements, you can use the href attribute instead of the data-target attribute:

## 21.Bootstrap 4 Navs

-----  
`.nav`  
`.nav-item`  
`.nav-link`

#Vertical Nav by using `.flex-column`

Alignment nav by using .justify-content-center ,.justify-content-end

#Tabs /Pills

.nav-tabs

.nav-pills

.nav-justified

#Pills/tabs with Dropdown

#Toggleable / Dynamic Tabs

data-toggle="tab"

href="#id"

For Tab panes

.tab-content

.tab-pane

.fade

#Toggleable / Dynamic Pills

data-toggle="pill"

href="#id"

For Pills Tab panes

.tab-content

.tab-pane

.fade

#Nav Events

show.bs.tab Occurs when the tab is about to be shown.

shown.bs.tab Occurs when the tab is fully shown

hide.bs.tab Occurs when the tab is about to be hidden

hidden.bs.tab Occurs when the tab is fully hidden

## 22.Bootstrap 4 Navigation Bar

-----  
A navigation bar is a navigation header that is placed at the top of the page.

.navbar

.navbar-expand

.navbar-nav

.nav-item

.nav-link

.navbar-dark

.navbar-light

.navbar-brand

.navbar-text

#Navbar With Dropdown

#Collapsing The Navigation Bar

.navbar-toggler

.data-toggle="collapse"

.data-target="#thetarget"

.navbar-toggler-icon

.collapse  
.navbar-collapse

## #Navbar Forms and Buttons

## #Position With Navigation Bar

.fixed-top  
.fixed-bottom  
.sticky-top

## 23.Bootstrap 4 Forms

---

.All textual <input>, <textarea>, and <select> elements with class .form-control have a width of 100%.

.form-inline  
.form-group  
  
.form-control  
.form-check  
.form-check-label  
.form-check-input

.col  
.row  
.form-row

.was-validated        -before submitting the form  
.needs-validation    - After the form has been submitting.  
novalidate  
.valid-feedback  
.invalid-feedback

# For .needs-validation and novalidate.

```
<script>
// Disable form submissions if there are invalid fields
(function() {
  'use strict';
  window.addEventListener('load', function() {
    // Get the forms we want to add validation styles to
    var forms = document.getElementsByClassName('needs-validation');
    // Loop over them and prevent submission
    var validation = Array.prototype.filter.call(forms, function(form) {
      form.addEventListener('submit', function(event) {
        if (form.checkValidity() === false) {
          event.preventDefault();
          event.stopPropagation();
        }
        form.classList.add('was-validated');
      }, false);
    }, false);
  });
})();
</script>
```

## 24. Bootstrap 4 Form Inputs, Input Groups , Custom Forms

---

Bootstrap supports the following form controls:

- input
- textarea
- checkbox
- radio
- select

- .form-group
- .form-control

- #checkbox ,radio
- .form-check
- .form-check-label
- .form-check-input
- .form-check-inline

- .form-control-plaintext

- #range ,file
- .form-control-range
- .form-control-file

#Input Groups :

---

- .input-group
- .input-group-prepend
- .input-group-text
- .input-group-append

- #Input Group Sizing
- .input-group-sm
- .input-group-lg

- #Multiple Inputs and Helpers

- #Input Group with Checkboxes and Radios

- #Input Group Buttons

- #Input Group with Dropdown Button

- #Custom Forms -Inputs

- .custom-control
- .custom-control-input

- .custom-control-label
- .custom-checkbox
- .custom-switch
- .custom-radio
- .custom-select
- .custom-range



.custom-control-inline

#Custom Select Menu Size

.custom-select-sm

.custom-select-lg

.custom-file

.custom-file-input

.custom-file-label

## 25.Bootstrap 4 Carousel

---

.carousel

.slide

data-ride="carousel"

.carousel-inner

.carousel-item

.carousel-caption

#Left and right controls

.carousel-control-prev

data-slide="prev"

.carousel-control-prev-icon

.carousel-control-next

data-slide="next"

.carousel-control-next-icon

#indicators

.carousel-indicators

data-target="#id"

data-slide-to="0/1/2.."

.active

\$('.carousel').carousel({

interval: 2000,

pause : 'hover'

})

ride,wrap,keyboard [value=true/false]

#Events

slide.bs.carousel This event fires immediately when the slide instance method is invoked.

slid.bs.carousel This event is fired when the carousel has completed its slide transition.

## 26.Bootstrap 4 Modal

---

.The Modal component is a dialog box/popup window

data-toggle="modal"

data-target="#id"

.modal

.modal-{sm/lg/xl}

.modal-dialog  
.modal-dialog-centered  
.modal-dialog-scrollable  
.modal-content

.modal-header  
.modal-title  
.close  
data-dismiss="modal"

.modal-body  
.modal-footer  
.fade

data-backdrop="true/false/static"  
data-keyboard="true/false"  
data-show="true/false"

#Modal Methods :

.modal(options)  
.modal("toggle/show/hide")

#Modal Events :

show.bs.modal Occurs when the modal is about to be shown  
shown.bs.modal Occurs when the modal is fully shown  
hide.bs.modal Occurs when the modal is about to be hidden  
hidden.bs.modal Occurs when the modal is fully hidden

## 27.Bootstrap 4 Tooltip

---

data-toggle="tooltip"  
data-placement="top"

\$('[data-toggle="tooltip"]').tooltip();

#Tooltip Options:

animation="true/false"  
container  
delay: {show: 500, hide: 100}  
html="true/false" ->whether to accept HTML tags in the tooltip  
placement -"top/left/right/bottom"  
selector -Adds the tooltip to a specified selector  
title  
trigger-"click,hover,focus"

#Tooltip Methods

tooltip('show/hide/toggle');

#Tooltip Events

show.bs.tooltip Occurs when the tooltip is about to be shown  
shown.bs.tooltip Occurs when the tooltip is fully shown  
hide.bs.tooltip Occurs when the tooltip is about to be hidden

hidden.bs.tooltip Occurs when the tooltip is fully hidden

Note: Tooltips must be initialized with jQuery: select the specified element and call the tooltip() method.

## 28.Bootstrap 4 Popover

-----

The Popover component is similar to tooltips; it is a pop-up box that appears when the user clicks on an element. The difference is that the popover can contain much more content.

data-toggle="popover"  
title --->header text of the popover,  
data-content ----> popover's body:  
data-placement  
data-trigger="focus/hover/click"

Note: Popovers must be initialized with jQuery: select the specified element and call the popover() method.

```
 $('[data-toggle="popover"]').popover();
```

### #Popover Options

animation="true/false"  
container  
content  
delay: {show: 500, hide: 100}  
html ="true/false" ->whether to accept HTML tags in the tooltip  
placement -"top/left/right/bottom  
selector -Adds the tooltip to a specified selector  
title  
trigger-"click,hover,focus"

### #Popover Methods

.popover(options)  
options :show,hide,toggle,dispose

### #Popover Events

show.bs.popover Occurs when the popover is about to be shown  
shown.bs.popover Occurs when the popover is fully shown  
hide.bs.popover Occurs when the popover is about to be hidden  
hidden.bs.popover Occurs when the popover is fully hidden

## 29.Bootstrap 4 Toast

-----

The toast component is like an alert box that is only shown for a couple of seconds when something happens

.toast,  
.toast-header  
.toast-body  
data-autohide="false"  
data-dismiss="toast"

Note: Toasts must be initialized with jQuery: select the specified element and call the toast() method.

```
$('.toast').toast('show');
```

#### #Toast Options

For data attributes, append the option name to data-, as in data-placement="".

animation

autohide

delay

#### #Toast Methods

.toast(options)

options :show,hide

#### #Toast Events

show.bs.toast Occurs when the toast is about to be shown

shown.bs.toast Occurs when the toast is fully shown

hide.bs.toast Occurs when the toast is about to be hidden

hidden.bs.toast Occurs when the toast is fully hidden

### 30.Bootstrap 4 Scrollspy

-----

Scrollspy is used to automatically update links in a navigation list based on scroll position.

data-spy="scroll"

data-target="#id /.class"

data-offset="number">

.scrollspy("refresh/dispose")

#### Scrollspy Events

activate.bs.scrollspy      Occurs when a new item becomes activated by the scrollspy

### 31.Bootstrap 4 Flex

-----

Here \* can be replaced with sm, md, lg or xl.

#### #Flex Container

.d-\*-flex

.d-\*-inline-flex

#### #Wrap

.flex-\*-nowrap

.flex-\*-wrap

.flex-\*-wrap-reverse

#### #Direction

.flex-\*-row

.flex-\*-row-reverse

.flex-\*-column

.flex-\*-column-reverse

#### #Justified Content

.justify-content-\*-{start/end/center/between/around}

## #Align Content

.align-content-\*-{start/end/center/around/ stretch}

## Align Items

.align-items-\*-{start/end/center/stretch/baseline}

## #Child Items :

.flex-\*-fill            -Force flex items into equal widths on different screens

## #Grow

.flex-\*-grow-0

.flex-\*-grow-1

## #Shrink

.flex-\*-shrink-0

.flex-\*-shrink-1

## #Order

.order-\*-{0-12}

## #Align Self

.align-self-\*-{start/end/center/stretch/baseline}

## 32.Bootstrap 4 Misc like Media Objects

-----  
Bootstrap provides an easy way to align media objects (like images or videos) together with content. Media objects are often used to display blog comments, tweets and so on:

.media

.media-body

For alignment Img we can use .align-self-{star/end/center}

-----0-----



