Unit 11: Tooltips

CONTENTS

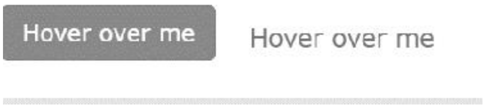
Objectives

- After studying this unit, you will be able to:
- Understand concept of bootstrap tooltip.
- Create the Tooltips with Bootstrap.
- Understand Documentation and examples for adding Bootstrap popovers.
- show a collection of items one at a time using Carousels.

Introduction

The Tooltip plugin is small pop-up box that appears when the user moves the mouse pointer over an element:

Hover over me



Tooltips can be very helpful for the new visitors of your website because they enable the user to know the purpose of icons and links by placing the mouse pointer over them.

11.1 Overview

Tooltips rely on the 3rd party library Popper.js for positioning. You must include popper.min.js before bootstrap.js or use bootstrap.bundle.min.js / bootstrap.bundle.js which contains Popper.js in order for tooltips to work!

If you're building our JavaScript from source, it requires util.js.

Tooltips are opt-in for performance reasons, so you must initialize them yourself.

Tooltips with zero-length titles are never displayed.

Specify container: 'body' to avoid rendering problems in more complex components (like our input groups, button groups, etc).

Triggering tooltips on hidden elements will not work.

Tooltips for .disabled or disabled elements must be triggered on a wrapper element.

When triggered from hyperlinks that span multiple lines, tooltips will be centered. Use white-space: nowrap; on your <a>s to avoid this behavior.

Tooltips must be hidden before their corresponding elements have been removed from the DOM.

11.2 Implementation of tooltip

Step 1: Adding the Tooltip Markup

To create a tooltip, you need to add the data-bs-toggle="tooltip" attribute to an element. Tooltip text that would display on hover can be specified using the title attribute.

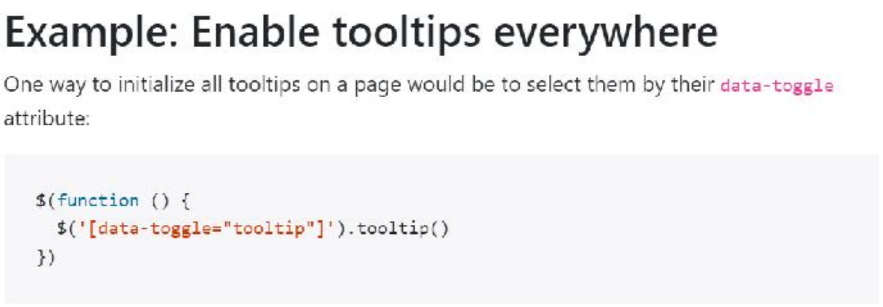
Here is the standard markup for adding a tooltip to a hyperlink.

<a href="#" data-bs-toggle="tooltip" title="Some text">Hover over me</a>

Similarly, you can add tooltips to the other elements such as buttons, icons, etc.

Step 2: Enabling the Tooltips

Tooltips can be enabled via JavaScript — just call the tooltip() Bootstrap method with the id, class or any CSS selector of the target element in your JavaScript code.



Example: Enable tooltips everywhere

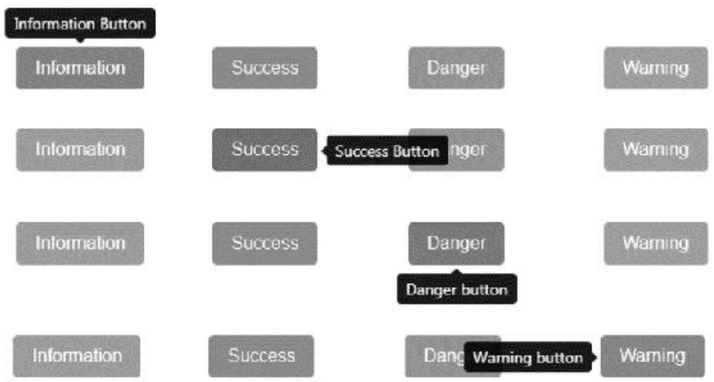
One way to initialize all tooltips on a page would be to select them by their `data-toggle` attribute:

```
$(function () {
  $('[data-toggle="tooltip"]').tooltip()
})
```

We can even customize this tool-tip according to our requirement, let's explore different ways in which we can customize the tool-tip.

Placement of a tool tip : We can place a tool tip at top, bottom, left and right of an element.

Example:



Code for the above example:

- HTML

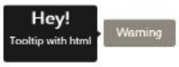
```
<!-- Tooltips on simple buttons -->
<!-- Placement of tooltips -->
<divclass="row"style="margin:30px">
  <divclass="col-2">
    <buttontype="button"class="btnbtn-info"
      data-toggle="tooltip"data-placement="top"
      title="Information Button">
      Information
    </button>
  </div>
  <divclass="col-2">
    <buttontype="button"class="btnbtn-success"
      data-toggle="tooltip"data-placement="right"
      title="Success Button">
      Success
    </button>
  </div>
  <divclass="col-2">
    <buttontype="button"class="btnbtn-danger"
      data-toggle="tooltip"data-placement="bottom"
      title="Danger button">
      Danger
    </button>
  </div>
  <divclass="col-2">
    <buttontype="button"class="btnbtn-warning"
      data-toggle="tooltip"data-placement="left"
      title="Warning button">
      Warning
    </button>
  </div>
```

```
</div>
```

In the above code we have used the data-placement attribute in order to set the placement of tool tip, we have also used row and col classes provided by bootstrap grid system

Html within a tooltip: We can add html as a content of a tooltip.

Example:



Code for the above example:

```
<!-- Tooltip with html -->
<divclass="row"style="margin:40px">
  <buttontype="button"class="btnbtn-warning"
    data-toggle="tooltip"data-placement="left"
    data-html="true"title=
    "<h4>Hey!</h4>
<p>Tooltip with html</p>
">
    Warning
  </button>
</div>
```

In the above code we have used the data-html attribute in order to add an html within a tool tip.

Offset for a Tooltip: We can set the offset of the tool-tip relative to the target.

11.3 Options

Options can be passed via data attributes or JavaScript. For data attributes, append the option name to data-, as in data-animation="".

Name	Type	Default	Description
animation	boolean	true	Apply a CSS fade transition to the tooltip
container	string | element | false	false	Appends the tooltip to a specific element. Example: container: 'body'. This option is particularly useful in that it allows you to position the tooltip in the flow of the document near the triggering element - which will prevent the tooltip from floating away from the triggering element during a window resize.
delay	number | object	0	Delay showing and hiding the tooltip (ms) - does not apply to manual trigger type

Name	Type	Default	Description
			If a number is supplied, delay is applied to both hide/show Object structure is: delay: { "show": 500, "hide": 100 }
html	boolean	false	Allow HTML in the tooltip. If true, HTML tags in the tooltip's title will be rendered in the tooltip. If false, jQuery's text method will be used to insert content into the DOM. Use text if you're worried about XSS attacks.
placement	string | function	'top'	How to position the tooltip - auto | top | bottom | left | right. When auto is specified, it will dynamically reorient the tooltip. When a function is used to determine the placement, it is called with the tooltip DOM node as its first argument and the triggering element DOM node as its second. The this context is set to the tooltip instance.
selector	string | false	false	If a selector is provided, tooltip objects will be delegated to the specified targets. In practice, this is used to enable dynamic HTML content to have popovers added. See this and an informative example.
template	string	'<div class="tooltip" role="tooltip"><div class="arrow"></div><div class="tooltip-inner"></div></div>'	Base HTML to use when creating the tooltip. The tooltip's title will be injected into the .tooltip-inner. .arrow will become the tooltip's arrow. The outermost wrapper element should have the .tooltip class and role="tooltip".
title	string | element | function	''	Default title value if title attribute isn't ***present***. If a function is given, it will be called with its this reference set to the element that the tooltip is attached to.
trigger	string	'hover focus'	How tooltip is triggered - click | hover | focus | manual. You may pass multiple triggers; separate them with a space. 'manual' indicates that the tooltip will be triggered programmatically via the .tooltip('show'), .tooltip('hide') and .tooltip('toggle') methods; this value cannot be combined with any other trigger. 'hover' on its own will result in tooltips that cannot be triggered via the keyboard, and should only be used if alternative methods for conveying the same information for keyboard users is present.

Name	Type	Default	Description
offset	number | string	0	Offset of the tooltip relative to its target. For more information refer to Popper.js's offset docs.
fallbackPlacement	string | array	'flip'	Allow to specify which position Popper will use on fallback. For more information refer to Popper.js's behavior docs
boundary	string | element	'scrollParent'	Overflow constraint boundary of the tooltip. Accepts the values of 'viewport', 'window', 'scrollParent', or an HTMLElement reference (JavaScript only). For more information refer to Popper.js's preventOverflow docs.

11.4 Event

Event Type	Description
show.bs.tooltip	This event fires immediately when the show instance method is called.
shown.bs.tooltip	This event is fired when the tooltip has been made visible to the user (will wait for CSS transitions to complete).
hide.bs.tooltip	This event is fired immediately when the hide instance method has been called.
hidden.bs.tooltip	This event is fired when the tooltip has finished being hidden from the user (will wait for CSS transitions to complete).
inserted.bs.tooltip	This event is fired after the show.bs.tooltip event when the tooltip template has been added to the DOM.

11.5 Popover Plugin

Things to know when using the popover plugin:

Popovers rely on the 3rd party library Popper.js for positioning. You must include popper.min.js before bootstrap.js or use bootstrap.bundle.min.js / bootstrap.bundle.js which contains Popper.js in order for popovers to work!

Popovers require the tooltip plugin as a dependency.

If you're building our JavaScript from source, it requires util.js.

Popovers are opt-in for performance reasons, so you must initialize them yourself.

Zero-length title and content values will never show a popover.

Specify container: 'body' to avoid rendering problems in more complex components (like our input groups, button groups, etc).

Triggering popovers on hidden elements will not work.

Popovers for .disabled or disabled elements must be triggered on a wrapper element.

When triggered from anchors that wrap across multiple lines, popovers will be centered between the anchors' overall width. Use white-space: nowrap; on your <a>s to avoid this behavior.

Popovers must be hidden before their corresponding elements have been removed from the DOM.

Keep reading to see how popovers work with some examples.

Example: Enable popovers everywhere

One way to initialize all popovers on a page would be to select them by their data-toggle attribute:

Copy

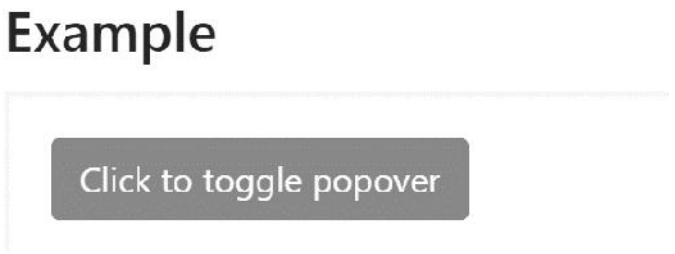
```
$(function () {
  $('[data-toggle="popover"]').popover()
})
```

Example: Using the container option

When you have some styles on a parent element that interfere with a popover, you'll want to specify a custom container so that the popover's HTML appears within that element instead.

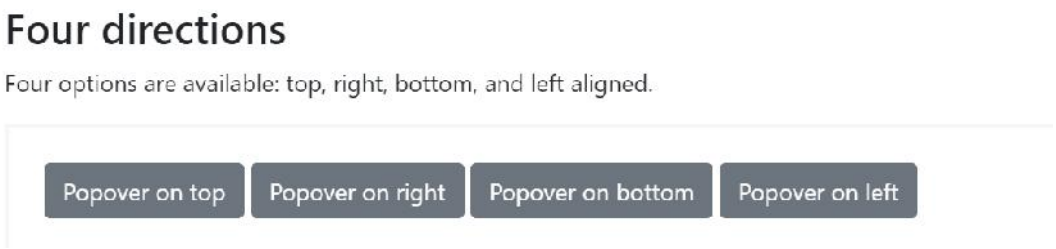
Copy

```
$(function () {
  $('.example-popover').popover({
    container: 'body'
  })
})
```



Example

```
<buttontype="button"class="btnbtn-lgbtn-danger"data-toggle="popover"title="Popover title"data-
content="And here's some amazing content. It's very engaging. Right?">Click to toggle
popover</button>
```



Four directions

Four options are available: top, right, bottom, and left aligned.

```
<buttontype="button"class="btnbtn-secondary"data-container="body"data-toggle="popover"data-
placement="top"data-content="Vivamussagittislacusvelauguelaoreetrutrumfaucibus.">
  Popover on top
</button>
```

```
<buttontype="button"class="btnbtn-secondary"data-container="body"data-toggle="popover"data-placement="right"data-content="Vivamussagittislacusvelauguelaoreetrutrumfaucibus.">
  Popover on right
</button>

<buttontype="button"class="btnbtn-secondary"data-container="body"data-toggle="popover"data-placement="bottom"data-content="Vivamus
sagittislacusvelauguelaoreetrutrumfaucibus.">
  Popover on bottom
</button>

<buttontype="button"class="btnbtn-secondary"data-container="body"data-toggle="popover"data-placement="left"data-content="Vivamussagittislacusvelauguelaoreetrutrumfaucibus.">
  Popover on left
</button>
```

Events

Event Type	Description
show.bs.popover	This event fires immediately when the show instance method is called.
shown.bs.popover	This event is fired when the popover has been made visible to the user (will wait for CSS transitions to complete).
hide.bs.popover	This event is fired immediately when the hide instance method has been called.
hidden.bs.popover	This event is fired when the popover has finished being hidden from the user (will wait for CSS transitions to complete).
inserted.bs.popover	This event is fired after the show.bs.popover event when the popover template has been added to the DOM.

11.6 Carousel

A slideshow component for cycling through elements—images or slides of te

xt—like a carousel

How it works

The carousel is a slideshow for cycling through a series of content, built with CSS 3D transforms and a bit of JavaScript. It works with a series of images, text, or custom markup. It also includes support for previous/next controls and indicators.

In browsers where the Page Visibility API is supported, the carousel will avoid sliding when the webpage is not visible to the user (such as when the browser tab is inactive, the browser window is minimized, etc.).

Please be aware that nested carousels are not supported, and carousels are generally not compliant with accessibility standards.

Lastly, if you're building our JavaScript from source, it requires util.js.

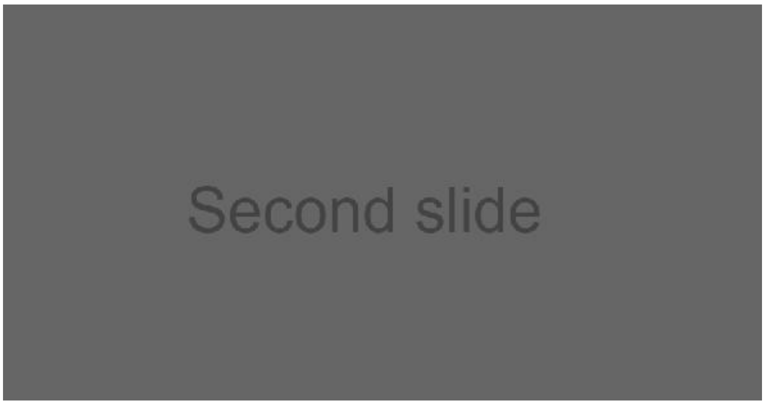
Example

Carousels don't automatically normalize slide dimensions. As such, you may need to use additional utilities or custom styles to appropriately size content. While carousels support previous/next controls and indicators, they're not explicitly required. Add and customize as you see fit.

Be sure to set a unique id on the .carousel for optional controls, especially if you're using multiple carousels on a single page.

Slides only

Here's a carousel with slides only. Note the presence of the .d-block and .img-fluid on carousel images to prevent browser default image alignment.

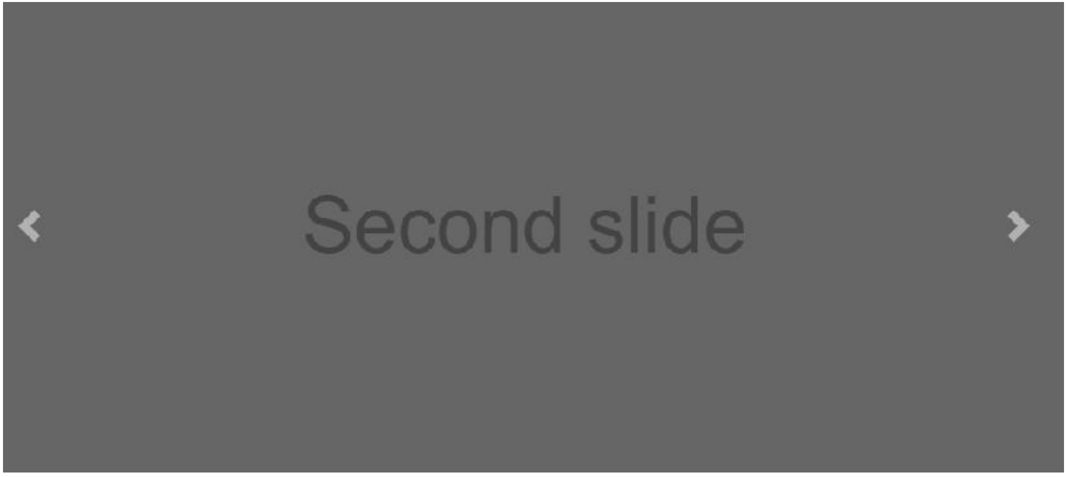


With controls

Adding in the previous and next controls:

```
<divid="carouselExampleSlidesOnly"class="carousel slide"data-ride="carousel">
<divclass="carousel-inner">
<divclass="carousel-item active">
<imgclass="d-block w-100"src="..."alt="First slide">
</div>
<divclass="carousel-item">
<imgclass="d-block w-100"src="..."alt="Second slide">
</div>
<divclass="carousel-item">
<imgclass="d-block w-100"src="..."alt="Third slide">
</div>
</div>
```

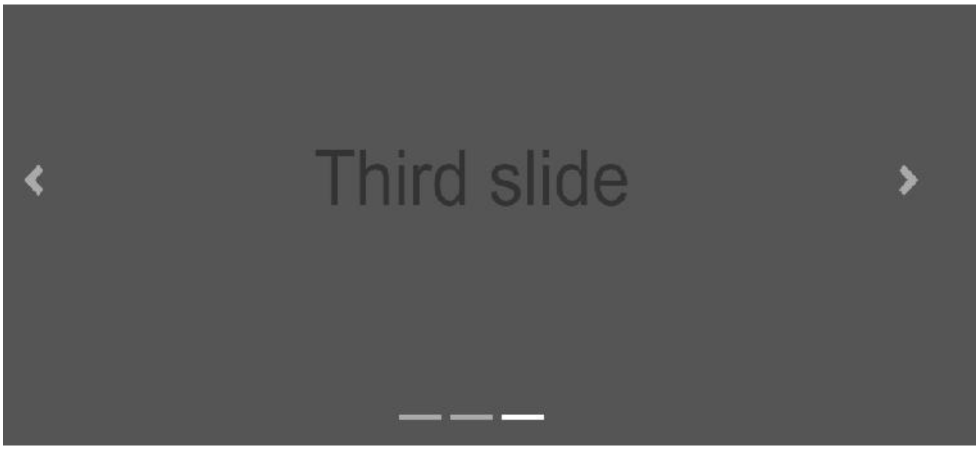
```
</div>
```



```
<divid="carouselExampleControls"class="carousel slide"data-ride="carousel">
<divclass="carousel-inner">
<divclass="carousel-item active">
<imgclass="d-block w-100"src="..."alt="First slide">
</div>
<divclass="carousel-item">
<imgclass="d-block w-100"src="..."alt="Second slide">
</div>
<divclass="carousel-item">
<imgclass="d-block w-100"src="..."alt="Third slide">
</div>
</div>
<aclass="carousel-control-prev"href="#carouselExampleControls"role="button"data-slide="prev">
<spanclass="carousel-control-prev-icon"aria-hidden="true"></span>
<spanclass="sr-only">Previous</span>
</a>
<aclass="carousel-control-next"href="#carouselExampleControls"role="button"data-slide="next">
<spanclass="carousel-control-next-icon"aria-hidden="true"></span>
<spanclass="sr-only">Next</span>
</a>
</div>
```

With indicators

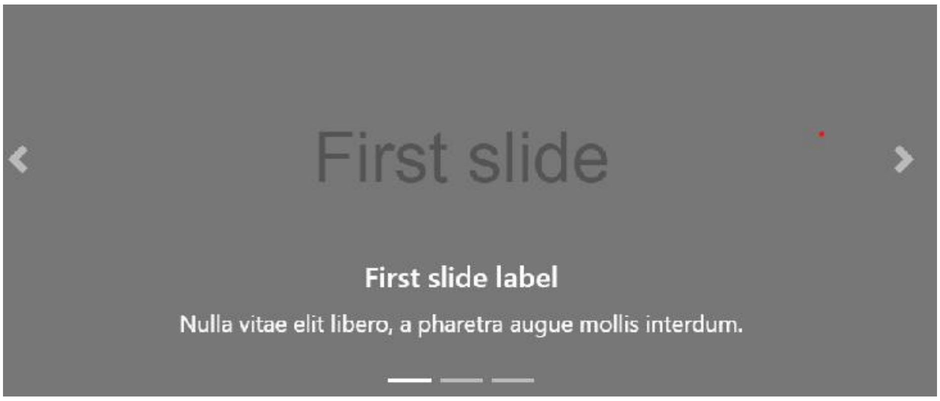
You can also add the indicators to the carousel, alongside the controls, too.



```
<divid="carouselExampleIndicators"class="carousel slide"data-ride="carousel">
<olclass="carousel-indicators">
<lidata-target="#carouselExampleIndicators"data-slide-to="0"class="active"></li>
<lidata-target="#carouselExampleIndicators"data-slide-to="1"></li>
<lidata-target="#carouselExampleIndicators"data-slide-to="2"></li>
</ol>
<divclass="carousel-inner">
<divclass="carousel-item active">
<imgclass="d-block w-100"src="..."alt="First slide">
</div>
<divclass="carousel-item">
<imgclass="d-block w-100"src="..."alt="Second slide">
</div>
<divclass="carousel-item">
<imgclass="d-block w-100"src="..."alt="Third slide">
</div>
</div>
<aclass="carousel-control-prev"href="#carouselExampleIndicators"role="button"data-slide="prev">
<spanclass="carousel-control-prev-icon"aria-hidden="true"></span>
<spanclass="sr-only">Previous</span>
</a>
<aclass="carousel-control-next"href="#carouselExampleIndicators"role="button"data-slide="next">
<spanclass="carousel-control-next-icon"aria-hidden="true"></span>
<spanclass="sr-only">Next</span>
</a>
</div>
```

With captions

Add captions to your slides easily with the .carousel-caption element within any .carousel-item. They can be easily hidden on smaller viewports, as shown below, with optional display utilities. We hide them initially with .d-none and bring them back on medium-sized devices with .d-md-block.



```
<divclass="carousel-item">
<imgsrc="..."alt="...">
<divclass="carousel-caption d-none d-md-block">
<h5>...</h5>
<p>...</p>
</div>
</div>
```

Events

Bootstrap's carousel class exposes two events for hooking into carousel functionality. Both events have the following additional properties:

- direction: The direction in which the carousel is sliding (either "left" or "right").
- relatedTarget: The DOM element that is being slid into place as the active item.
- from: The index of the current item
- to: The index of the next item

All carousel events are fired at the carousel itself (i.e. at the <div class="carousel">)

Summary

- Tooltips are useful when you need to describe a link. Tooltip will display a small pop-up box, when you hover the mouse on an element.
- You can add tooltip to an element by adding *data-toggle* = *"tooltip"* attribute to it. The *title* attribute indicates the text of a tooltip.
- Tooltips with zero-length titles are never displayed.
- Specify container: 'body' to avoid rendering problems in more complex components (like our input groups, button groups, etc).
- Triggering tooltips on hidden elements will not work.
- Tooltip can be displayed in four directions such as top, bottom, left or right side by using the data-placement attribute on the element.

Keywords

- Tooltips rely on the 3rd party library Popper.js for positioning. You must include popper.min.js before bootstrap.js or use bootstrap.bundle.min.js / bootstrap.bundle.js which contains Popper.js in order for tooltips to work!
- If you're building our JavaScript from source, it requires util.js.
- Tooltips are opt-in for performance reasons, so you must initialize them yourself.
- Tooltips with zero-length titles are never displayed.
- Specify container: 'body' to avoid rendering problems in more complex components (like our input groups, button groups, etc).

SelfAssessment

1) Who developed the bootstrap?

A. James Gosling
B. Mark Jukervich
C. Dennis Ritchie
D. Mark Otto and Jacob Thornton

2) Is Bootstrap3 mobile-first?

A. True
B. False
C. Can't say
D. May be

3) Which of the following class in Bootstrap is used to provide a responsive fixed width container?

A. .container-fixed

B. .container-fluid

C. .container

D. All of the above

4) How many columns are allowed in a bootstrap grid system?

A. 2

B. 12

C. 3

D. 5

5) Which of the following class in bootstrap is used to create a big box for calling extra attention?

A. .box

B. .container

C. .container-fluid

D. .jumbotron

6) Appends the tooltip to a specific element

A. Container

B. Delay

C. Template

D. Title

7) Default title value if title attribute isn't present.

A. Container

B. Delay

C. Template

D. Title

8) _______showing and hiding the tooltip (ms) - does not apply to manual trigger type

A. Container

B. Delay

C. Template

D. Title

9) It is used as Base HTML to use when creating the tooltip.

A. Container

B. Delay

C. Template

D. Title

10) This event fires immediately when the show instance method is called.

A. show.bs.tooltip

B. shown.bs.tooltip

C. hide.bs.tooltip

D. hidden.bs.tooltip

11) This event is fired when the tooltip has been made visible to the user (will wait for CSS transitions to complete)

A. show.bs.tooltip

B. shown.bs.tooltip

C. hide.bs.tooltip

D. hidden.bs.tooltip

12) This event is fired immediately when the hide instance method has been called

A. show.bs.tooltip

B. shown.bs.tooltip

C. hide.bs.tooltip

D. hidden.bs.tooltip

13) This event is fired when the tooltip has finished being hidden from the user (will wait for CSS transitions to complete).

A. show.bs.tooltip

B. shown.bs.tooltip

C. hide.bs.tooltip

D. hidden.bs.tooltip

14) This event is fired after the show.bs.tooltip event when the tooltip template has been added to the DOM.

A. show.bs.tooltip

B. shown.bs.tooltip

C. hide.bs.tooltip

D. inserted.bs.tooltip

15 Allow to specify which position Popper will use on fallback

A. Fallback Placement

B. Delay

C. Template

D. Title

Answers for SelfAssessment

L.	D	2.	A	3.	C	4.	B	5.	D
6.	A	7.	D	8.	B	9.	C	10.	A
11.	B	12.	C	13.	D	14.	D	15.	A

Review Questions

1. How To Create and Use Tooltips?
2. Explain Bootstrap Tooltip Positions with example of implementing it?
3. What are various ways to pass options using data attributes and via JavaScript?
4. Where do you position tooltips?
5. How to change the tooltip position in Bootstrap?
6. What are Things to know when using the tooltip plugin?

Further Readings

- Bootstrap by Example, Silvio Morato
- Learning Bootstrap 4, Matt Lambart
- Bootstrap in 24 Hours, By Sams
- Jump Start Bootstrap,

Web Links

https://api.jquery.com/category/events/

https://api.jquery.com