

Bootstrap

1. Explain what is Bootstrap?

Bootstrap is a HTML, CSS, and JS framework for building the rich web applications with minimal effort. This framework emphasis more on building mobile web applications.

2. Explain why to choose Bootstrap for building the websites?

There are few reasons why we choose Bootstrap for building websites

- **Mobile Support:** For mobile devices it provides full support in one single file rather than in separate file. It supports the responsive design including adjusting the CSS based on the different types of devices, size of the screen etc. It reduces extra effort for developers.
- **Easy to Learn:** Writing application in bootstrap is easy if you know CSS and HTML
- **Browser Support:** It supports all the popular browsers like Firefox, Opera, Safari, IE etc.

3. What are the key components of Bootstrap?

The key components of Bootstrap are

- **CSS :** It comes with plenty of CSS files
- **Scaffolding :** It provides a basic structure with Grid system , link styles and background
- **Layout Components :** List of layout components
- **JavaScript Plugins :** It contains many jQuery and JavaScript plugins
- **Customize :** To get your own version of framework you can customize your components

4. What are Responsive websites?

Responsive means a website can be used on any platform with all types of screen size. A platform like it may be a desktop, laptop, tablet, or smartphones. It automatically adjusts with changing the width and height of the screen.

In today's era, people, as well as business, follow the smartphones for their personal and professional use. So, bootstrap is the best choice to make the website one time and it supports all kinds of devices.

5. What are the default Bootstrap text settings?

The default font size in Bootstrap 4 is 16px, with a line-height of 1.5.

The default font family is "Helvetica Neue," which includes Helvetica, Arial, and other sans-serif fonts.

Margin-top: 0 and margin-bottom: 1rem are also set on all <p> elements (16px by default).

6. What do you know about the Bootstrap Grid System?

The Bootstrap Grid System is a mobile-first, responsive grid system that scales up to 12 columns as the device or viewport size grows. Predefined classes for quick layout options and powerful mix-ins for creating successful semantic layouts are included in the system.

There are five classes in the Bootstrap 4 grid system:

- .col- for extra small devices, whose screen width is less than 576px.
- .col-sm- small devices, whose screen width is equal to or greater than 576px.
- .col-md- medium devices, whose screen width is equal to or greater than 768px.
- .col-lg- large devices, whose screen width is equal to or greater than 992px.
- .col-xl- extra large devices, whose screen width is equal to or greater than 1200px.

The classes listed above can be combined to build layouts that are more dynamic and adaptable.

7. What are the types of layouts available in Bootstrap?

In Bootstrap there are two types of Layouts available-

Fluid Layout: Fluid layout is used when you want to create an app that is 100% wide and use up all the width of the screen

Fixed Layout: For a standard screen you will use fixed layout (940 px) option.

8. What function you can use to wrap a page content?

To wrap a page content, you can use .container and using that you can also center the content.

9. Explain what pagination in bootstrap is and how they are classified?

Pagination is the handling of an unordered list by bootstrap. To handle pagination bootstrap provides following classes

- .pagination: To get pagination on your page you have to add this class
- .disabled, .active: Customize links by .disabled for unclickable links and .active to indicate the current page
- .pagination-lg, .pagination-sm: Use these classes to get different size item

10. What is the use of Jumbotron in Bootstrap?

In bootstrap, Jumbotron is generally used for content that you want to highlight like some slogan or marketing headline etc. in other words it is used to enlarge the size of the headings and to add a margin for landing page content

To use the Jumbotron in Bootstrap

- Create a container <div> with the class of .jumbotron

11. Explain what is Bootstrap Container?

Bootstrap container is a class which is useful and creates a centred area within the page where our site content can be put within. The advantage of the bootstrap .container is that it is responsive and will place all our other HTML code.

12. Explain what is the use of Bootstrap Carousel plugin?

The Carousel plugin is used to add a slider to your site. It is useful in condition where you want to display huge amount of contents within a small space on the web pages. Some of the standard carousel includes

- .carousel (options)
- .carousel ('cycle')
- .carousel ('pause')
- .carousel ('number')
- .carousel ('prev')
- .carousel ('next')

13. How can you make an image round in Bootstrap 4?

You can use the .rounded class to make an image round.

14. What is the fluid layout?

The fluid layout is useful when you need to make an app that involves the full width of the screen. The fluid layout adjusts itself according to the browser size.

15. What is the fixed layout?

The fixed layout is the default layout type and it also responsive and easy to use. Unlike the fluid layout, it cannot adjust itself according to the browser size. The fixed layout should be 940px in most cases.

16. Why Bootstrap is used for mobile application developments?

It is used for mobile application developments because it has several responsive features and design templates that are easy to use. In other terms, it uses a Mobile-first approach.

17. What are the main features of Bootstrap 4.

Its features include:

- Free and open-source.
- Compatible with almost all modern browsers like Google Chrome, Firefox, Safari, Opera, and Internet Explorer.
- Responsive features.
- Easy to use.
- Lightweight.
- Consists of several components and utilities.
- Support for jQuery plugins.
- Easily customizable.
- Mobile-friendliness.
- Simple integration.
- Good documentation support.
- Availability of a large number of templates, themes, and plugins.

18. How can you create a tabbed navigation menu?

We can create a tabbed navigation menu by making a basic unordered list with the `.nav` base class and the `.nav-tabs` class.

19. What is breadcrumb?

Breadcrumb is an efficient way to show hierarchy-based information for a site. This can show the information like published date, categories or tags in a blog, etc. It may also tell the user about the current page location within a navigational hierarchy.

We can use the `.breadcrumb` class to create a breadcrumb.

20. What are the dependencies required to work Bootstrap properly?

jQuery is the only dependency required to work Bootstrap properly.

21. What will be the output of the below code?

```
<div class="row">
  <div class="col-6 col-md-4">A</div>
  <div class="col-6 col-md-4">B</div>
  <div class="col-6 col-md-4">C</div>
</div>
```

According to the above code segment, the columns start at 50% of width on mobile devices and reduce up to 33.3% of width on desktop devices.

22. Explain the concept of creating a basic form in Bootstrap.

First, add a `<form>` element. Then, inside the form element, wrap labels and controls in a `<div>` element with the `.form-group` class. Next, the `.form-control` class to text input elements like `<input>`, `<textarea>` and `<select>` elements.

23. What are the different options for adding Bootstrap to your project?

There are several options to add Bootstrap to your project.

They are:

- Using ready-to-use compiled CSS and JS code.
- Using source files.
- Installing via Bootstrap CDN.
- Installing via package managers such as NPM, Yarn, RubyGems, Composer, etc.

24. What is flexbox in Bootstrap 4?

Flexbox is a flexible box layout module. You can easily build a flexible layout design using flexbox without using float or positioning.

25. What is a toast and what are the main components of a toast?

It is like an alert box that appears for a small time. The main components of a toast are the toast header and the toast body.

26. What is a bootstrap card and how would you create one?

In Bootstrap 4, a card is a bordered box with padding surrounding its content. It has options for headers, footers, content, and colors, among other things.

```
<div class="card">  
  
    <div class="card-header">Header</div>  
  
    <div class="card-body">Body</div>  
  
    <div class="card-footer">Footer</div>  
  
</div>
```

27. Discuss Bootstrap table and various classes that can change the appearance of the table.

A basic Bootstrap 4 table features horizontal divisions and light padding.

- The .table class gives a table some basic styling.
- The .table-striped class gives zebra stripes to the table.
- The .table-bordered class adds borders to the table and cells on all sides.
- On table rows, the .table-hover class adds a hover effect (grey background color).

28. How is tooltip different from popover?

When the user moves the mouse pointer over an element, the Tooltip component appears as a little pop-up box. The Popover component is a pop-up box that emerges when the user clicks on an element. The popover may hold a lot more information.

The popover will show on the right side of the element by default whereas the tooltip will show on the top of the element by default.

29. Why is bootstrap vital for mobile web development?

Bootstrap is vital for mobile web development for 3 reasons.

- It redesigns the elements to employ flat design and also the first approach of mobiles
- As the Bootstrap layout depends on percentage, it helps in keeping the mobile support in the front position.
- It offers grid systems to describe layouts. This system consists of 12 columns along with different sizes of various devices like mobiles, tablets, iPad, laptops, and desktops. All these devices have pre-decided sizes that are capable of taking the accountability of responsive components. Thus, you need not use CSS.

30. Is it possible to make the image responsive in Bootstrap?

Yes, you can make images responsive in Bootstrap. You can assign `.img-fluid`. `Max-width: 100%`; and `height: auto` to the image so as to balance it with the parent component.

31. What Is Normalize In Bootstrap?

Normalize.css is a modern, HTML5-ready alternative to CSS resets. It is a small CSS file that provides better cross-browser consistency in the default styling of HTML elements.

32. What Are Glyphicons?

Glyphicons are icon fonts which you can use in your web projects. Glyphicons Halflings are not free and require licensing, however their creator has made them available for Bootstrap projects free of cost.

33. Which Classes Can Be Applied To Button Group Instead Of Resizing Each Button?

`.btn-group-lg`, `.btn-group-sm`, `.btn-group-xs` classes can be applied to button group instead of resizing each button.

34. How Will You Customize Links Of Pagination?

You can customize links by using `.disabled` for unclickable links and `.active` to indicate the current page.

35. What Is Bootstrap Page Header?

The page header is a nice little feature to add appropriate spacing around the headings on a page. This is particularly helpful on a web page where you may have several post titles and need a way to add distinction to each of them. To use a page header, wrap your heading in a `<div>` with a class of `.page-header`.

jQuery

1. Can you explain what is jQuery?

jQuery is a fast, lightweight, and feature-rich JavaScript library. It is easy to use cross-browser compatible API for HTML document traversal & manipulation, event handling, adding animation effects to web pages and helps in Ajax interactions.

2. Can you differentiate between JavaScript and jQuery?

JavaScript is an open-source scripting language that makes static web pages into dynamic pages, that are used to validate form data before submitting it to a server.

jQuery is a lightweight, fast javascript library, browser compatible, used for HTML document traversal & manipulation, event handling, adding animation effects to web pages and helps in Ajax interactions.

3. Explain the various jQuery effects method.

jQuery effects method helps us to add some special effects to HTML elements present in DOM of web pages, and these methods can be grouped in fade, slide, hide, show and special effects.

4. Is jQuery a programming language?

jQuery is not a programming language but a well-written JavaScript code. It is used to traverse documents, event handling, Ajax interaction, and Animation.

5. Is jQuery replacement of JavaScript?

No, jQuery is not the replacement of JavaScript. jQuery is written on the top of JavaScript, and it is a different library. jQuery is a lightweight JavaScript library which is used to interact with JavaScript and HTML.

6. Why do we use jQuery?

- It is very easy to learn and use.
- It is used to develop browser compatible web applications.
- It improves the performance of an application.
- It is very fast and extensible.
- It facilitates you to write minimal lines of codes for UI related functions.
- It provides cross-browser support.

7. What is \$() in jQuery library?

The \$() function is an alias of jQuery() function. It is used to wrap any object into jQuery object which later facilitates you to call the various method defined jQuery object. You can pass a selector string to \$() function, and it returns a jQuery object which contains an array of all matched DOM elements.

Syntax:

```
$(document).ready(function() {  
  
    $("p").css("background-color", "pink");  
  
});
```

8. Why is jQuery known as a feature-rich library?

This is because jQuery has several features such as easy DOM manipulation, event handling, built-in animations, cross-browser compatibility, supports CSS3, and is lightweight.

9. In what scenarios jQuery can be used?

jQuery is used mainly to add animation effects, call functions on events, apply dynamic or static CSS, and manipulate purposes.

10. Can you select all elements using jQuery? How?

Yes, all elements can be selected using jQuery using \$('*') available in a DOM.

11. What are different selectors in jQuery used for?

There following selectors in jQuery is used as:

\$('div') is used for selection all div tags in the document, \$('#TextId') is used for selecting elements whose ID is TextId and \$('.myclass') is used for selecting all elements whose class is .myclass.

12. What is the purpose of jQuery AJAX?

AJAX stands for Asynchronous JavaScript and XML. It helps in loading and exchanging data without a browser page refresh and only via server. jQuery provides a rich set of AJAX methods to develop web applications.

13. how to get the text contents and set the text contents of an element using jQuery?

Text () method is used to get combined text contents of all matched elements, and text(Val) is used to set those text contents.

14. How is css('width') different from width() in jQuery?

These two are different methods available in jQuery to change the width of an element. The difference is that in CSS('width'), we have to add px in the width value while this is not required in width().

15. Does Bootstrap require jQuery?

jQuery is used for JavaScript plugins by Bootstrap. However, if we use the CSS part of Bootstrap, jQuery is not needed.

16. What are the advantages of jQuery?

- jQuery is easy to use and understand, even for people with limited programming experience.
- It simplifies common JavaScript tasks, such as traversing the Document Object Model (DOM), handling events, and creating animations.
- jQuery is cross-browser compatible, which works well in most major web browsers.

17. Is jQuery a JavaScript or JSON library file?

jQuery is a JavaScript library file.

18. Does jQuery work for both HTML and XML documents?

Yes, jQuery can work with both HTML and XML documents.

19. What is jQuery Mobile?

jQuery Mobile is a JavaScript framework that allows you to create mobile web applications with a consistent look and feel across different platforms and devices. It is based on the jQuery library and provides a set of UI widgets and tools for building mobile-friendly web pages and applications.

20. Explain \$(document).ready() function?

This function is used to ensure that the DOM is fully loaded before any jQuery code is executed. This function takes a function as an argument, and the function passed to it will be executed when the DOM is ready. This is useful for ensuring that elements on the page are available before interacting with them.

21. What is the exact difference between the methods onload() and document? ready()?

The onload() method is JavaScript when the page finishes loading. The document. a Ready () method is a jQuery method called when the DOM is ready. The main difference is that onload() waits for all assets on the page to be loaded, including images and other external resources, during the document. Ready () only remains for the DOM to be prepared.

22. What are events in jQuery?

Events in jQuery are actions or occurrences in the browser, such as a user clicking a button or hovering over an element.

23. How to iterate/loop through all p elements in jquery.

To iterate/loop through all p elements in jQuery, you can use the each() method like so:

```
var paragraphs = $("p"); for(var i = 0; i < paragraphs.length; i++) { var p = paragraphs[i]; // code to be executed }
```

24. What is the significance of jQuery.length?

jQuery.length is a property that returns the number of elements in the selected jQuery object.

25. What is jQuery click event?

The click event in jQuery is triggered when a user clicks on an element. It can perform a specific action when an element is clicked.

26. What is the purpose of JQuery's delay() method? Can you use this for different types of browsers like (Internet Explorer)?

The delay() method in jQuery is used to delay the execution of an animation or a function for a specified time. It can be used in different types of browsers, including Internet Explorer.

27. What is jquery.min.js?

It is a compressed version of jquery.js as shorter variable names are used to preserve bandwidth. It functions precisely similar to jquery.js. The compressed version is used to increase the efficiency of web pages.

28. Explain how CSS classes can be manipulated in HTML using jQuery.

jQuery allows for the manipulation of CSS classes in HTML through the use of the addClass(), removeClass(), and toggleClass() methods. The addClass() method is used to add a CSS class to an HTML element, while the removeClass() method is used to remove a CSS class from an HTML element.

29. State some different types of jQuery methods.

Some different types of jQuery methods include:

- Event methods: such as `click()`, `hover()`, and `focus()`
- Traversing methods: such as `children()`, `parent()`, and `siblings()`
- DOM manipulation methods: such as `append()`, `prepend()`, and `replaceWith()`
- CSS manipulation methods: such as `addClass()`, `removeClass()`, and `CSS()`
- Animation methods: such as `animate()`, `fadeIn()`, and `slideUp()`.

30. What is the advantage of method chaining in jQuery?

Multiple jQuery commands on a particular element can be executed in one go with chaining. It helps in implementing various actions on an element rather than one after the other.

31. Can a jQuery library be used for server scripting?

jQuery is designed with the functionality for client-side scripting. jQuery is not compatible with server-side scripting.

32. Differentiate among `.empty()` vs `.remove()` vs `.detach()` in jQuery.

`remove()`: removes the element as well as its child elements. Data from DOM can be restored; however, event handlers can't be restored.

`empty()`: does not remove the element; however, remove its content, and the associated child elements

`detach()`: removes the element and all the associated child elements, but retains the data and event handlers of the removed element to be reused later.

Example usage:

```
$("#div-element").remove();
```

```
$("#div-element").empty();
```

```
$("#div-element").detach();
```

33. What are all the ways to include jQuery on a page?

- You can use `<script>` to add the library in the HTML `<head>` or `<body>` tag: `<script src='jquery-3.2.1.min.js'></script>`
- Write the code within the HTML document inside the `<script>` tag, here we have used cdn link.

```
<script src='http://ajax.aspnetcdn.com/ajax/jquery/jquery-3.2.1.js'></script>
```

```
<script type = "text/javascript">
```

```
$(document)..... <jQuery code>
```

```
</script>
```

- Include the `.js` file, which has the jQuery code into the HTML document.

```
<script src='script.js' type="text/javascript"></script>
```

34. What is CDN?

CDN is the short form for Cloud Delivery Network. It is a system of servers on the network (distributed) that provide specific web content like graphics, images, text, etc. to the user based on their geographic locations, the origin of the page, and the content delivery server. CDN provides high availability and performance.

35. What special character is used as a shortcut for jQuery?

\$ is used in the place of jQuery,

Example: `jQuery(document).ready(function() ;` can be used as `$(document).ready(function()`