1. **What are the advantages of Bootstrap?**

**Ans.** Bootstrap offers many advantages for web designers and developers, such as saving time and effort by providing ready-made components and styles that can be customized and combined. It also ensures consistency and compatibility, as it follows a standard design and coding convention, and uses a mobile-first approach.

* It is Faster and Easier way for Web-Development. It creates Platform-independent web-pages. It creates Responsive Web-pages. It designs responsive web pages for mobile devices too.

1. **What is a Bootstrap Container, and how does it work?**

**Ans. Bootstrap Containers** are the most basic layout element in Bootstrap. Bootstrap **Containers**are very essential and basic building blocks of bootstrap that wrap a page’s content. It’s responsible for setting and aligning content within it according to viewport or given device. Containers are defined within the container class **(.container)**. In other words, we can say that containers are established the width for the layout to give the content. Elements and content are added within the container.

**Containers are used for many purposes such as –**

* It requires use with the default grid system.
* To establish width for the layout to give web content.
* To provide responsive fixed behavior of any web project.
* To sets the content margin dealing with the responsive behavior of your layout.

1. **What are the default Bootstrap text settings?**

**Ans. Typography** is a feature of Bootstrap for styling and formatting the text content. It is used to create customized headings, inline subheadings, lists, paragraphs, aligning, adding more design-oriented font styles, and much more. Bootstrap support global settings for the font stack, Headings and Link styles to be used in the web app for every type of OS and Device to deliver the best user interface.

**Typography can be used to create:**

* Headings
* Subheadings
* Text and Paragraph font color, font type, and alignment
* Lists
* Other inline elements

**Some classes and Tags to implement the typography feature of bootstrap:**

* **h1 – h6:**To match the font styling of a heading but cannot use the associated HTML element.
* **text-muted**: It is used for text color, text-muted fades the text. i.e. text greyed out.
* **display**: It is used to create better headings.
* **lead**: It is used to make a paragraph stand out i.e. Visually better.
* **mark**: It is used to highlight the text.
* **small**: It is used to create secondary subheadings.
* **initialism**: It is used to render abbreviations in slightly small text size.
* **blockquote**: It is used to quote content.
* **blockquote-footer**: It is the footer details for identifying the source of the Quote.
* **text-center**: It is used to align the text to the center.
* **list-inline**: It is used to make the element of the list inline.
* **text-truncate**: It is used to shorten the longer text by truncating with an ellipsis.
* **text-uppercase**: It is used to transform text to uppercase.
* **text-lowercase**: It is used to transform text to lowercase.
* **text-capitalize**: It is used to transform text to capitalize the first letter of each word leaving other letters in lowercase.
* **pre-scrollable**: Makes a **<pre>** element scrollable
* **dl-horizontal:** Lines up the terms(<dt>) and descriptions (<dd>) elements side-by-side.
* **list-unstyled:** the default list-style and left margin on list items are removed.
* **text-right**: Depicts right-aligned text.
* **text-left:** Depicts left-aligned text.

1. **What do you know about the Bootstrap Grid System?**

**Ans.**  Bootstrap Grid System allows up to 12 columns across the page. You can use each of them individually or merge them together for wider columns. You can use all combinations of values summing up to 12. You can use 12 columns each of width 1, or use 4 columns each of width 3 or any other combination.

1. **What is the difference between Bootstrap 4 and Bootstrap 5?**

**Ans. Difference between Bootstrap 4 and Bootstrap 5** :-

| **BASIS OF** | **BOOTSTRAP 4** | **BOOTSTRAP 5** |
| --- | --- | --- |
| **Grid System** | It has 5 tier (xs, sm, md, lg, xl). | It has 6 tier (xs, sm, md, lg, xl, xxl). |
| **Color** | It has limited colors. | Extra colors added with the looks, A card improved color palette. there are various shades available to choose. |
| **Jquery** | It has jquery and all related plugins. | Jquery is removed and switched to vanilla JS with some working plugins |
| **Internet Explorer** | Bootstrap 4 supports both IE 10 and 11. | Bootstrap 5 doesn’t support IE 10 and 11. |
| **Form elements** | Radio buttons, checkboxes have different look in different OS and browsers. The form uses whatever default browsers provide. | The look of form elements will not change, on different OS or browser. The forms can be customized and form controls can be added, they would not depend on browser. |
| **Utilities API** | We cannot modify utilities in bootstrap 4 | Bootstrap 5 gave freedom to modify and also create our own utility |
| **Gutter** | We use .glutter with fontsize in px | We use .g\* with fontsize in rem |
| **Vertical Classes** | Columns can be positioned relative | Columns cannot be positioned relative |
| **Bootstrap Icons** | Bootstrap 4 doesn’t have its own SVG icons, we have to use font-awesome for icons. | Bootstrap 5 have its own SVG icons |
| **Jumbotron** | It supports. | It doesn’t support jumbotron. |
| **Card deck** | The card deck is used to create a set of cards with equal width and height. | Card deck class in removed in bootstrap |
| **Navbar** | We have inline-block property and we will get white dropdown as default for dropdown-menu-dark class. | Inline-block property is removed and we will get black dropdown as default for dropdown-menu-dark class. |
| **Static Site Generator** | Bootstrap 4 uses Jekyll software. | Bootstrap 5 uses Hugo software as it is fast static site generator. |
| **flexbox grid** | this makes easier to implement vertical designs, and the columns and rows can easily be implemented. the classes justify-center-content can directly be used to align according to the requirement. | advanced grid system is made available , also columns don’t have relative positions. |
| **RTL Support** | It does not enable RTL(Right to Left) switching. | It enables RTL(Right to Left) switching. |
| **Offcanvas Component** | It does not support Offcanvas Component. | It supports Offcanvas Component(that is it is available now). |

1. **What is a Button Group, and what is the class for a basic Button Group?**

**Ans.** “Button Groups” in [Bootstrap](https://www.geeksforgeeks.org/bootstrap/) is a class of name “btn-group” which is used to create a series of buttons in groups (without spaces) vertically or horizontally.

**Syntax:**This is the basic syntax of the button group class where each button has its own class of “btn”**.**

<div class="btn-group">

<button type="button" class="btn">Click</button>

</div>

Buttons have a default border-radius on the first and last buttons of the group.

**Adding Styles on Buttons:**[Bootstrap](https://www.geeksforgeeks.org/bootstrap/) allows you to add styles to your buttons using the following classes:

* btn-default
* .btn-primary
* .btn-success
* .btn-info
* .btn-warning
* .btn-danger
* .btn-link

**Sizing of your Buttons:**Bootstrap provides 4 button sizes which you can add directly to your buttons by adding an additional class of “btn-group-\*” to your “btn-group” class. No need to add separate classes to each button.

**Vertical Button Groups:**Bootstrap also supports vertical button groups stacked in a vertical manner rather than horizontally. Use the class “btn-group-vertical” to create a vertical button group.

**Nesting of Buttons:**[Bootstrap](https://www.geeksforgeeks.org/bootstrap/) allows you to create dropdown menus under your buttons through nesting. Add a class of  “btn-group” within your main “btn-group” class to have a dropdown menu within your button.

1. **How can you use Bootstrap to make thumbnails?**

**Ans.** [Bootstrap](https://www.geeksforgeeks.org/bootstrap-tutorials/)helps web developers to create thumbnails that are used to show linked images in grids with the pre-defined classes which help to reduce codes length. Thumbnails are created to provide a quick preview of images with small images.

**Thumbnail Image:**A thumbnail is a small image that represents a larger image. Bootstrap has an easy way to do this with thumbnails. Bootstrap’s *.thumbnail*class is used to show linked images in grids ([grid system](https://www.geeksforgeeks.org/bootstrap-4-grid-system/)), a thumbnail is created using class *.thumbnail* within the element [<a>](https://www.geeksforgeeks.org/html-a-tag/" \l ":~:text=HTML Tag,-Difficulty Level : Basic&text=The tag (anchor,as its %E2%80%9Chref%E2%80%9D value.).  The class *.col-sm-\**and *.col-md-\** (where \* represent number ), it is used to create grids of the images.

**Step by step guide for the implementation:**

**Step 1:** Include Bootstrap and jQuery CDN into the <head> tag before all other stylesheets to load our CSS.

*<link rel=”stylesheet” href=”http://maxcdn.bootstrapcdn.com/bootstrap/3.3.6/css/bootstrap.min.css”>   
<script src=”https://ajax.googleapis.com/ajax/libs/jquery/1.12.0/jquery.min.js”></script>   
<script src=”http://maxcdn.bootstrapcdn.com/bootstrap/3.3.6/js/bootstrap.min.js”></script>*

**Step 2:** Add [<div>](https://www.geeksforgeeks.org/div-tag-html/" \l ":~:text=The div tag is used,, navigation bar, etc).&text=It is used to the,can be applied to them.) tag in the HTML body with class row. In that <div> create four *div*sections to create four images.

**Step 3:** Add “col-sm-6” and “col-md-3” to four *div* sections which creates webpage responsive.

**Step 4:** Add [<a>](https://www.geeksforgeeks.org/html-a-tag/) tag with class value *thumbnail*to define the link of the image in the next line.

<a href="#" class="thumbnail">

**Adding captions and buttons to the thumbnails :**

**Step 1:** We created *div*with class value as *thumbnail*and inserted image, after that add *div* with class*.caption* to define the description of the images <p>.

**Step 2:** Create buttons using <a> tag with class *. btn .btn-success*.

#### Supported Browser:

* Google Chrome
* Firefox
* Internet Explorer
* Safari
* Opera

1. **In Bootstrap 4, what is flexbox?**

**Ans.** Flexbox. The biggest difference between Bootstrap 3 and Bootstrap 4 is that Bootstrap 4 now uses flexbox, instead of floats, to handle the layout. The Flexible Box Layout Module, makes it easier to design flexible responsive layout structure without using float or positioning.

1. **How can one create an alert in Bootstrap?**

**Ans.** We often see certain **alerts**on some websites before or after completing an action. These alert messages are highlighted texts that are important to take into consideration while performing a process. Bootstrap allows showing these alert messages on the website using predefined classes.

The **.alert** class followed by contextual classes are used to display the alert message on website. The alert classes are: .alert-success, .alert-info, .alert-warning, .alert-danger, .alert-primary, .alert-secondary, .alert-light and .alert-dark.

**Syntax:**

<div class="alert> Contents... <div>

**Closing Alerts:** The .alert-dismissible class is used within .container class to close the alert message. Then use **class=”close”** and **data-dismiss=”alert”** to link a button element.

**Syntax:**

<div class="alert alert\_type alert-dismissible">

<button type="button" class="close" data-dismiss="alert">x</button>

Alert message

<div>

**Animated Alerts:** The .fade and .show classes are used to add the fading effect of animation when closing the alert message.

**Syntax:**

<div class="alert alert\_type alert-dismissible fade show">

<button type="button" class="close" data-dismiss="alert">x</button>

Alert message <div>

**Supported Browser:**

* Google Chrome
* Internet Explorer
* Firefox
* Opera
* Safari

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

**Ans.** A Bootstrap card is a flexible box containing some padding around the content. It includes the options for headers and footers, color, content, and powerful display options. It replaces the use of panels, wells, and thumbnails. It can be used in a single container called card.

