# (Q-1) : What are the advantages of Bootstrap?

## Advantages of Bootstrap :

- Fewer cross-browser bugs  
- A consistent framework that supports major of all browsers and CSS compatibility fixes  
- Lightweight and customizable  
- Responsive structures and styles  
- Several JavaScript plugins using the jQuery  
- Good documentation and community support  
- Loads of free and professional templates, WordPress themes and plugins  
- Great grid system

# (Q-2) : What is a Bootstrap Container, and how does it work?

- 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.  
- Bootstrap has the default class or predefined class is “.container” & “.container-fluid” class for layout.  
- Containers are used to contain, pad, and (sometimes) center the content within them.  
- While containers can be nested, most layouts do not require a nested container.

# (Q-3) : What are the default Bootstrap text settings?

- Bootstrap is a popular front-end framework that provides a set of CSS and JavaScript components for building responsive web applications.

## The default text settings in Bootstrap are as follows:

- Font family: The default font family in Bootstrap is “Helvetica Neue”, Helvetica, Arial, sans-serif.  
- Font size: The default font size for the body element in Bootstrap is 16px.  
- Font weight: The default font weight for headings in Bootstrap is bold.  
- Line height: The default line height for text in Bootstrap is 1.5.  
- Text color: The default text color in Bootstrap is black (#000).  
- Text alignment: The default text alignment in Bootstrap is left-aligned.  
- Text decoration: The default text decoration in Bootstrap is none.  
- Text transform: The default text transform in Bootstrap is none.

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## Grid Classes :

### The Bootstrap grid system has four classes:

- xs (for phones - screens less than 768px wide)  
- sm (for tablets - screens equal to or greater than 768px wide)  
- md (for small laptops - screens equal to or greater than 992px wide)  
- lg (for laptops and desktops - screens equal to or greater than 1200px wide)

## Grid System Rules :

### Some Bootstrap grid system rules :

- Rows must be placed within a .container (fixed-width) or .container-fluid (full-width) for proper alignment and padding  
- Use rows to create horizontal groups of columns  
- Content should be placed within columns, and only columns may be immediate children of rows  
- Predefined classes like .row and .col-sm-4 are available for quickly making grid layouts  
- Columns create gutters (gaps between column content) via padding. That padding is offset in rows for the first and last column via negative margin on .rows  
- Grid columns are created by specifying the number of 12 available columns you wish to span. For example, three equal columns would use three .col-sm-4  
- Column widths are in percentage, so they are always fluid and sized relative to their parent element

# (Q-5) : What is the 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). |

# (Q-6) : What is a Button Group, and what is the class for a basic Button Group?

- “Button Groups” in Bootstrap is a class of name “btn-group” which is used to create 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:

- .btn-default

- .btn-primary

- .btn-success

- .btn-info

- .btn-warning

- .btn-danger

- .btn-link

# (Q-7) : How can you use Bootstrap to make thumbnails?

- Bootstrap provides an easy way to create thumbnails using the .thumbnail class.

- You can use this class to show linked images in grids.

- Here is an example of how to create a thumbnail using the .thumbnail class within the < a > element:

<a href="#">

<img src="your-image-source" alt="your-image-alt" class="thumbnail">

</a>

- You can also use the .img-thumbnail class to give an image a rounded 1px border appearance.

- Here is an example of how to create an image thumbnail using the .img-thumbnail class:

<img src="your-image-source" alt="your-image-alt" class="img-thumbnail">

# (Q-8) : In Bootstrap 4, what is flexbox?

- Flexbox is a layout module that makes it easier to design flexible responsive layout structure without using float or positioning.

- Bootstrap 4 uses flexbox to handle the layout of its components and grid system.

- Flexbox helps to create space between containers and elements as per device screen size and user's requirement.

- Flexbox also controls the height, width, and size of the elements.

## Syntax :

- <div class = "d-flex"> Bootstrap flexbox items <div>

### The bootstrap inline flexbox syntax is below.

- The d-inline-flex class is useful for equal space between elements and containers.  
- It works as a responsive and stable layout for the web application.  
<div class = "d-inline-flex"> Bootstrap flexbox items <div>

### The bootstrap horizontal flexbox syntax is below.

- The flexbox items place in one row using a flex row class.  
<div class = "d-flex flex-row"> Bootstrap flexbox items <div>

### The reverse horizontal flexbox items display the right side of the component.

<div class = "d-flex flex-row-reverse"> Bootstrap flexbox items <div>

### The basic vertical flexbox syntax is below.

- The flexbox items display vertically using the flex column class in the bootstrap4.  
- The default and reverse vertical flexbox class used as per the user’s requirement.  
<div class = "d-flex flex-column"> Bootstrap flexbox items <div>  
<div class = "d-flex flex-column-reverse"> Bootstrap flexbox items <div>

### The basic bootstrap flexbox alignment syntax is below.

- The flexbox is useful to justify-content class for display the flexbox item position as per requirement.  
- The start, end, between, around, and center alignments are used with flex class.  
<div class = "d-flex justify-content-start"> Bootstrap flexbox items </div>  
<div class = "d-flex justify-content-end"> Bootstrap flexbox items </div>

### The basic flexbox wrap syntax is below.

- The flexbox used to wrap, reverse wrap, and no wrap with respective flexbox classes.  
<div class = "d-flex flex-wrap"> Bootstrap flexbox items </div>  
<div class = "d-flex flex-wrap-reverse"> Bootstrap flexbox items </div>

### The flex-nowrap is the default flexbox. The users need to use it for design and responsive purposes.

<div class = "d-flex flex-nowrap"> Bootstrap flexbox items </div>

# (Q-9) : How can you create an alert in Bootstrap?

- Alerts are created with the .alert class, followed by one of the four contextual classes  
.alert-success, .alert-info, .alert-warning or .alert-danger

## Syntax :

<div class="alert alert-success">  
 <h1>Success!</h1> Indicates a successful or positive action.  
</div>  
  
<div class="alert alert-info">  
<h1>Info!</h1> Indicates a neutral informative change or action.  
</div>  
  
<div class="alert alert-warning">  
<h1>Warning!</h1> Indicates a warning that might need attention.  
</div>  
  
<div class="alert alert-danger">  
<h1>Danger!</h1> Indicates a dangerous or potentially negative action.  
</div>

# (Q-10) : What is a bootstrap card and how would you create one?

### To create a basic Bootstrap card, you need to:

- Add the .card class to a element.  
- Inside the element, add another element with the .card-body class.  
- Add text inside the inner element.  
- To create a more complex card, you can use the following classes:  
- .card-title: to add a heading element to the card.  
- .card-text: to add text elements to the card.  
- .card-header: to create a header inside the card.  
- .card-footer: to create a footer inside the card.  
- .card-img-top or .card-img-down: to align an image within the card.

## Example :

<div class="card" style="width: 18rem;">  
<img src="Module - 11 - WD - Bootstrap Basic & Advanced\profile-logo.jpg" alt="...">  
<div class="card-body">  
 <h5 class="card-title">Card title</h5>  
 <p class="card-text">Some quick example text to build on the card title and make up the bulk of the card's content.</p>  
 <a href="#" class="btn btn-danger">Click Me</a>  
</div>  
</div>