**Module (Bootstrap Basic & Advanced) -6**

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| **1** | **What are the advantages of Bootstrap?** |
|  | **The Benefits of Using Bootstrap Framework**  Using the Bootstrap framework saves time in many ways by taking advantage of reusable code for Navbars, Dropdowns, Labels, Alerts, List groups and JavaScript plugins. Using the framework offers these design benefits:   * Easy to prevent repetitions among multiple projects * Responsive design that can be used to adapt screen sizes and choose what shows and what doesn’t on any given device * Maintaining consistency among projects when using multiple developer teams * Quick design of prototypes * Cross-browser compatibility |
| **2** | **What is a Bootstrap Container, and how does it work?** |
|  | Containers are **the most basic layout element in Bootstrap and are required when using our default grid system.** 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.  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 |
| **3** | **What are the default Bootstrap text settings?** |
|  | Bootstrap uses a **default font-size of 16px, and its line-height is 1.5**. The 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). |
| **4** | **What do you know about the Bootstrap Grid System?** |
|  | Bootstrap’s grid system uses a series of containers, rows, and columns to layout and align content. It’s built with [flexbox](https://developer.mozilla.org/en-US/docs/Web/CSS/CSS_Flexible_Box_Layout/Using_CSS_flexible_boxes) and is fully responsive.  "In graphic design, a grid is a structure (usually two-dimensional) made up of a series of intersecting straight (vertical, horizontal) lines used to structure the content. It is widely used to design layout and content structure in print design. In web design, it is a very effective method to create a consistent layout rapidly and effectively using HTML and CSS."  Bootstrap Grid System  The Bootstrap Grid System allows up to 12 columns across the page. You can use all 12 columns individually or you can groups the columns together to create wider columns.  Bootstrap Grid System is responsive and the columns are re-arranged automatically according to the screen size. Basic Structure of a Bootstrap Grid:  1. **<div** class="row"**>** 2. **<div** class="col-\*-\*"**></div>** 3. **</div>** 4. **<div** class="row"**>** 5. **<div** class="col-\*-\*"**></div>** 6. **<div** class="col-\*-\*"**></div>** 7. **<div** class="col-\*-\*"**></div>** 8. **</div>** 9. **<div** class="row"**>** 10. ... 11. **</div>**  Bootstrap Grid Classes There are 5 classes in Bootstrap 4 grid system.   * **.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** | **What is the difference between Bootstrap 4 and Bootstrap 5** **?** |
|  | **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). | |
| **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**. This is the basic syntax of the button group class where each button has its own class of **“btn”**. |
| **7** | **How can you use Bootstrap to make thumbnails?** |
|  | [**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/#:~:text=HTML%20Tag,-Difficulty%20Level%20%3A%20Basic&text=The%20tag%20(anchor,as%20its%20%E2%80%9Chref%E2%80%9D%20value.).  The class .col-sm-\* and .col-md-\* (where \* represent number ), it is used to create grids of the images.  **Input:** [**https://github.com/adc1989/bootstrap/blob/main/assignment\_thumbnail\_img.html**](https://github.com/adc1989/bootstrap/blob/main/assignment_thumbnail_img.html) |
| **8** | **In Bootstrap 4, what is flexbox ?** |
|  | 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. |
| **9** | **How can one create an alert in Bootstrap?** |
|  | Bootstrap Alerts are used to provide an easy way to create predefined alert messages. Alert adds a style to your messages to make it more appealing to the users.  Following classes are used within <div> element for alerts.   * .alert-success * .alert-info * .alert-warning * .alert-danger * .alert-primary * .alert-secondary * .alert-light * .alert-dark |
| **10** | **What is a bootstrap card and how would you create one?** |
|  | A **card** is a flexible and extensible content container. It includes options for headers and footers, a wide variety of content, contextual background colors, and powerful display options.  **Input:** [**https://github.com/adc1989/bootstrap/blob/main/assignment\_card.html**](https://github.com/adc1989/bootstrap/blob/main/assignment_card.html)  **Output:** |