**Bootstrap Assignment**

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

**Easy to use:** Anybody with just basic knowledge of HTML and CSS can start using Bootstrap

**Responsive features:** Bootstrap's responsive CSS adjusts to phones, tablets, and desktops

**Mobile-first approach:** In Bootstrap 3, mobile-first styles are part of the core framework

**Browser compatibility:** Bootstrap is compatible with all modern browsers (Chrome, Firefox, Internet Explorer, Edge, Safari, and Opera)

**(2)What is a Bootstrap Container, and how does it work?**

>> Containers are packages of software that contain all of the necessary elements to run in any environment. In this way, containers virtualize the operating system and run anywhere, from a private data center to the public cloud or even on a developer's personal laptop.

container is used to set the content's margins dealing with the responsive behaviors of your layout. It contains the row elements and the row elements are the container of columns (known as grid system). The container class is used to create boxed content.

**(3)What are the default Bootstrap text settings?**

>> Bootstrap 4 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 and is fully responsive. Below is an example and an in-depth look at how the grid comes together.

**(5)What is the difference between Bootstrap 4 and Bootstrap 5**

>> **Bootstrap 4 uses Jekyll software.** **Bootstrap 5 uses Hugo software as it is fast static site generator**. 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.

| 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 an isset 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?**

>> “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”.

1. **How can you use Bootstrap to make thumbnails?**
2. Add an <a> tag with the class of . thumbnail around an image.
3. This adds four pixels of padding and a gray border.
4. On hover, an animated glow outlines the image.
5. **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.

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

Add data-dismiss="alert" to a link or a button, element to close the alert message. To use Bootstrap 4 alert in your project, you need have the following downloaded or cdn link scripts.  
...  
Bootstrap 4 Alert CSS Classes.

|  |  |
| --- | --- |
| **.alert** | **Creates an alert message box** |
| .alert-heading | Adds color:inherit to the specified element |

**(10) What is a bootstrap card and how would you create one?**

>> Bootstrap 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. Card replaces panel, well, and thumbnail components in old Bootstrap 3 version.

1. text-center for center display:inline elements.
2. mx-auto for centering display:block elements inside display:flex (d-flex)
3. offset-\* or mx-auto can be used to center grid columns.
4. or justify-content-center on row to center grid columns.