Bootstrap 5 Assignment

Q1 = What are the advantages of Bootstrap?

Ans = Bootstrap is the world's most popular front-end web development framework. Based on HTML5, CSS, and JavaScript, Bootstrap makes it possible for developers to quickly launch a fully-featured, mobile-responsive site.

- It's responsive. Today, people are more likely to be browsing the web on a mobile phone or a tablet than on a personal computer. A responsive design will automatically resize to suit the page.

- It automatically resizes images and elements. Nothing has to be handled manually by the developer — it's all done for them.

- It's grid-based. The grid mechanic makes it much easier for developers to manage where elements show up on their site.

- It includes major components. Dropdowns, navigation bars, forms, and progress bars; it's all designed for you. You just need to drop them in.

- It's built on JavaScript and CSS. These are two of the most popular programming and markup languages in existence.

- It can easily be customized. Because all the code is open-source, you can do anything with it; advanced users can heavily customize the framework.

- It has a thriving community. Many people are working on improving Bootstrap and supporting other Bootstrap users.

- It has many templates. If you don't want to design your site, you can download one of the hundreds of user-provided templates. (Make sure you get the right Bootstrap version.)

Q2 = 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.

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.

Basically, there are three types of container classes available in bootstrap:

1. Default-Container(container)
2. Responsive-Container(along with sm, md, lg, xl, xxl)
3. Fluid-Container(container-fluid)

Q3= What are the default Bootstrap text settings?

Ans=Bootstrap's Default Settings

Bootstrap's global default font-size is 14px, with a line-height of 1.428.

This is applied to the <body> element and all paragraphs (<p>).

In addition, all <p> elements have a bottom margin that equals half their computed line-height (10px by default).

h1 Bootstrap heading (36px)

h2 Bootstrap heading (30px)

h3 Bootstrap heading (24px)

h4 Bootstrap heading (18px)

h5 Bootstrap heading (14px)

h6 Bootstrap heading (12px)

Q4 = What do you know about the Bootstrap Grid System?

Ans= **Grid System:** 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.

Grid Classes: The Bootstrap grid system has four classes that can be combined to make more flexible layouts:
- **xs (<576px):** For Portrait Mobile Phones.
- **sm (>=576px):** For Landscapes phones
- **md (>=768px):** For Tablets/Phablets
- **lg (>=992px):** For Small-sized Desktops/Laptops
- **xl (>=1200px):** For Larger-sized Desktops/Laptops
-

Components of Grid System: We will be learning the Components of the Grid system one-by-one:

  Containers: Bootstrap requires a containing element to wrap site contents and house our grid system. The word 'container' is a container of row elements and row elements are 'containers' of the column elements. You will understand it more in the latter part of the article where we have dealt with columns.
  Use 'container' for a responsive fixed width container and use 'container-   fluid' for a full width container, spanning the entire width of your viewport.
  Rows: Rows must be placed within a 'container' or 'container-fluid' for proper alignment and padding. We use rows to create horizontal groups of columns.

Columns: Grid columns are created by specifying the number of twelve available columns you wish to span. For example, three equal columns would use three "col-sm-4".

Q5 = 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.

BASIS OF	BOOTSTRAP 4	BOOTSTRAP 5
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?

Ans = "Button Groups" in 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 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 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

Q 7 = How can you use Bootstrap to make thumbnails?

Ans = Bootstrap 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), a thumbnail is created using class *.thumbnail* within the element <a>. The class *.col-sm-** and *.col-md-** (where * represent number), it is used to create grids of the images.

Q 8 = In Bootstrap 4, what is flexbox?

Ans =In Bootstrap 4, flex box is used to control the layout and alignment specification of Bootstrap 4 components. This box makes it easier to design flexible responsive layout structures without using float or positioning attributes.

Q 9 = How can one create an alert in Bootstrap?

Ans = Bootstrap alerts are used to get sudden attention to the message. You can easily create alert messages using bootstrap. It also provides the functionality to create an alert message which is dismissible.

Alert messages are used quite often for some information to have a special focus, or immediate attention, like warning messages or alert messages.

The alert snippets with bootstrap are available for any length of text as well as it has an optional button to dismiss the message.

Create Bootstrap Alert Message

To create a bootstrap alert message, use the **<div>** element with the **alert** class in bootstrap.

A simple alert message is created by using the bootstrap **alert** class with the type of alert messages you want like **alert-primary**, **alert-secondary**, **alert-success**, **alert-danger**, **alert-warning**, **alert-info**, **alert-light**, and **alert-dark**.

Q 10= What is a bootstrap card and how would you create one?

Ans = 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.
It replaces the use of panels, wells and thumbnails. All of it can be used in a single container called **card**.

Basic Card: The building block of a card is the **card-body** within the parent class **card**.

Header and Footer: The **card-header** provides a header to the cards and **card-footer** provides a footer to the cards.

Card Title and Links: The **card-title** is used to give a title to the card and **card-link** is used to provide link to the card if required in it.

Card Images: The images to the card are inserted with **card-img-top** and with **card-img-bottom** with the help of these two and **img** tag is used with it to input the image.

Image Overlays: In this we have to just use an extra class call the **card-img-overlay** in the same line of code which you have used for card images.