BOOTSTRAP BASIC & ADVANCE:

1. What are the advantages of Bootstrap?

❖ Bootstrap is a popular framework for building responsive websites. Some advantages of using Bootstrap are: it saves time and effort by providing pre-built components and templates, it's mobile-friendly and adjusts to different screen sizes, and it's easy to customize and maintain. It's a great tool for creating sleek and professional-looking websites.

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

❖ A Bootstrap container is a class that helps to center and contain the content of our website within a specific width. It creates a responsive layout by adjusting its width based on the screen size.

By default, Bootstrap provides two types of containers: `.container` and `.container-fluid`.

The `.container` class creates a fixed-width container that adapts its size based on the screen size. It adds left and right margins to center the content.

The `.container-fluid` class creates a full-width container that spans the entire width of the viewport. It doesn't have any left and right margins.

To use a container, we simply wrap your content inside a `<div>` element with the respective container class.

3.What are the default Bootstrap text settings?

❖ Bootstrap is a popular framework for creating responsive web pages. It has some default settings for typography, such as font family, font size, font weight, and line spacing. Here are some of the default Bootstrap text settings:

Font family: The default font family in Bootstrap is "Helvetica Neue", Helvetica, Arial, sans-serif. This means that the browser will try to use Helvetica Neue first, then Helvetica, then Arial, and finally any sans-serif font if none of the

previous ones are available.

Font size: The default font size for the <body> element in Bootstrap is 16px. This is equivalent to 1rem, which is relative to the root element's font size. You can change the root element's font size by modifying the font-size-base variable in Sass.

Font weight: The default font weight for headings (<h1> through <h6>) in Bootstrap is bold. This is equivalent to 700. You can change the font weight for headings by modifying the $headings-font-weight variable in Sass.

Line height: The default line height for the <body> element in Bootstrap is 1.5. This means that the space between lines of text is 1.5 times the font size. You can change the line height for the <body> element by modifying the line-height-base variable in Sass. You can also change the line height for headings by modifying the headings-line-height variable in Sass.

4.What do you know about the Bootstrap Grid System?

❖ The Bootstrap Grid System is a powerful layout system provided by Bootstrap. It allows you to create responsive and flexible grid-based layouts for your web pages. Here are some key points about the Bootstrap Grid System:

1. Grid Structure: The grid system is based on a 12-column layout. You can divide the horizontal space into 12 equal-width columns.

2. Grid Classes: Bootstrap provides a set of CSS classes to define the structure of the grid. You can use classes like `col-`, `col-sm-`, `col-md-`, `col-lg-`, and `col-xl-` to specify the width of columns at different breakpoints.

3. Responsive Design: The grid system is designed to be responsive, meaning it automatically adjusts the layout based on the screen size. You can define different column widths for different screen sizes using the responsive classes mentioned earlier.

4. Nesting and Alignment: You can nest columns within columns to create more complex layouts. Additionally, Bootstrap provides classes to align

columns vertically and horizontally within a row.

5. Offset and Order: Bootstrap allows you to offset columns and change their order using the `offset-` and `order-` classes. This gives you more control over the positioning and arrangement of elements.

By utilizing the Bootstrap Grid System, you can create visually appealing and responsive layouts for your web pages.

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

❖ Bootstrap is a popular framework for creating responsive web pages and online apps. It has some default settings for typography, such as font family, font size, font weight, and line spacing. Bootstrap 4 and Bootstrap 5 are two versions of the framework that have some differences in features, design, and compatibility. Here are some of the main differences between Bootstrap 4 and Bootstrap 5:

-Bootstrap 4 uses jQuery and its related plugins, while Bootstrap 5 removes jQuery and switches to vanilla JavaScript with some working plugins.

-Bootstrap 4 supports both Internet Explorer 10 and 11, while Bootstrap 5 drops support for Internet Explorer 10 and 11.

-Bootstrap 4 has five grid tiers: xs, sm, md, lg, and xl, while Bootstrap 5 has six grid tiers: xs, sm, md, lg, xl, and xxl.

-Bootstrap 4 has limited colors for web pages, while Bootstrap 5 adds extra colors and improves the card's color palette.

-Bootstrap 4 uses Jekyll software for static site generation, while Bootstrap 5 uses Hugo software for faster static site generation.

-Bootstrap 4 has some classes that are removed in Bootstrap 5, such as form-row, form-inline, list-inline, and card-deck.

-Bootstrap 5 has some classes that are not available in Bootstrap 4, such as gx-, gy-, g-*, and rows-cols-auto.

-Bootstrap 5 has its own SVG icons, while Bootstrap 4 does not have its own icons and relies on font-awesome for icons.

-Bootstrap 5 has custom form controls that have a consistent look and feel across all browsers, while Bootstrap 4's form controls use whatever presets are available in each browser.

-Bootstrap 5 has an improved API for utilities that allows modifying and creating custom utilities, while Bootstrap 4 does not have this feature.

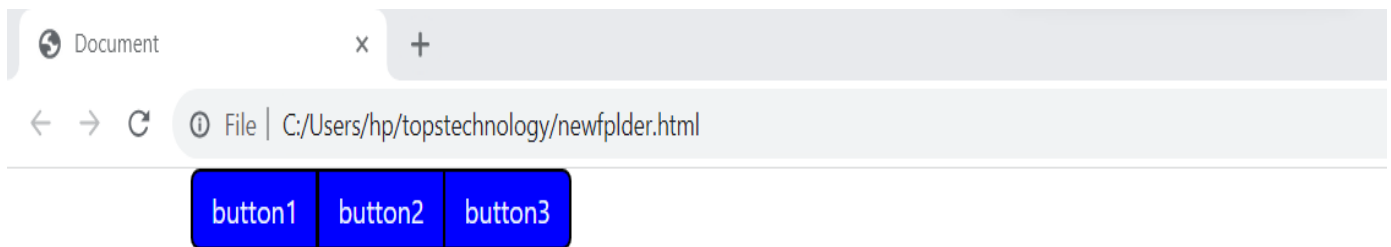## 6.What is a Button Group, and what is the class for a basic Button Group?

❖ A Button Group is a component in web design that groups together multiple buttons, allowing users to select only one option from the group. It's commonly used when we want to provide a set of mutually exclusive choices.

In HTML, to create a basic Button Group, we can use the "btn-group" class. This class helps style and organize the buttons within the group. we can apply this class to a container element that wraps around the buttons we want to include in the group.

for example:

```html
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-
    <title>Document</title>
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.3/d:
    <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.3/
    <style>
      .btn{
        border: 2px solid ☐black;
        background-color: ■blue;
        color: ☐aliceblue;
      }
    </style>
</head>
<body>
  <div class="container">
<div class="btn-group">
  <button class="btn">button1</button>
  <button class="btn">button2</button>
  <button class="btn">button3</button>
</div>
</div>
</body>
```
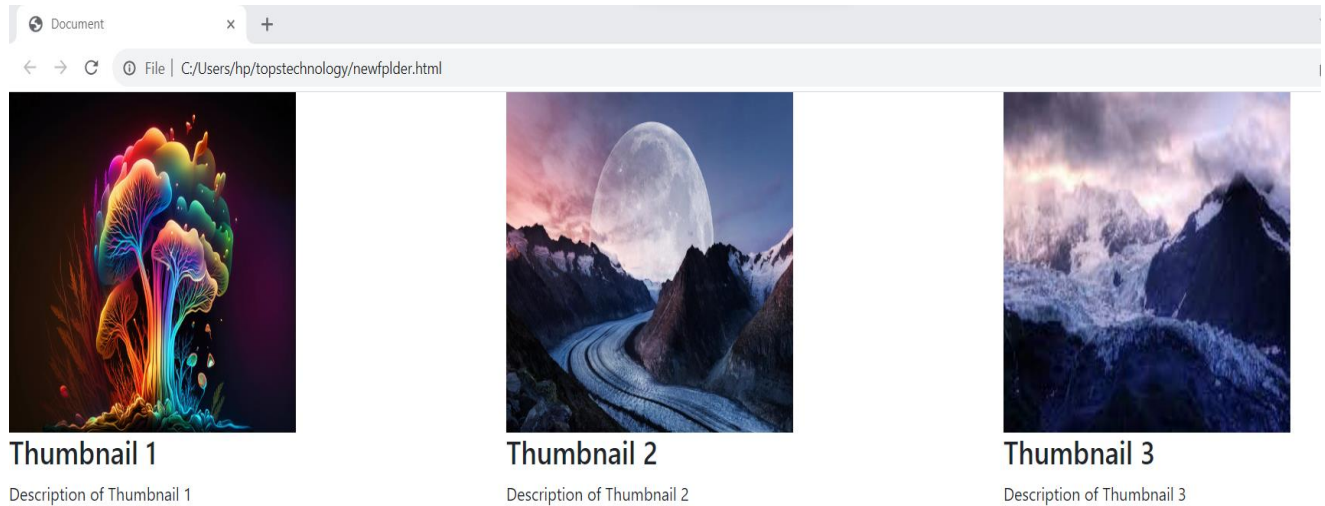
output:

7.How can you use Bootstrap to make thumbnails?

❖ To create thumbnails using Bootstrap, we can use the "thumbnail" class provided by Bootstrap. Here's an example of how we can use it:

```html
</head>
<body>
  <div class="row">
    <div class="col-md-4">
      <div class="thumbnail">
        <img src="https://t3.ftcdn.net/jpg/05/71/06/04/360_F_57
        <div class="caption">
          <h3>Thumbnail 1</h3>
          <p>Description of Thumbnail 1</p>
        </div>
      </div>
    </div>
    <div class="col-md-4">
      <div class="thumbnail">
        <img src="https://www.imageshine.in/uploads/gallery/natu
        <div class="caption">
          <h3>Thumbnail 2</h3>
          <p>Description of Thumbnail 2</p>
        </div>
      </div>
    </div>
    <div class="col-md-4">
      <div class="thumbnail">
        <img src="https://encrypted-tbn0.gstatic.com/images?q=th
        <div class="caption">
          <h3>Thumbnail 3</h3>
          <p>Description of Thumbnail 3</p>
        </div>
      </div>
    </div>
  </div>
</body>
</html>
```

output:

In this example, we have a row with three columns, each containing a thumbnail. we can customize the images, captions, and descriptions as per our needs.

8.In Bootstrap 4, what is flexbox?

❖ In Bootstrap 4, flexbox is a powerful CSS layout module that provides a flexible way to arrange and align elements within a container. It allows we to create responsive and dynamic layouts with ease.

With flexbox, we can control the alignment, direction, order, and spacing of elements within a container. It helps in building responsive designs that adapt to different screen sizes and orientations.
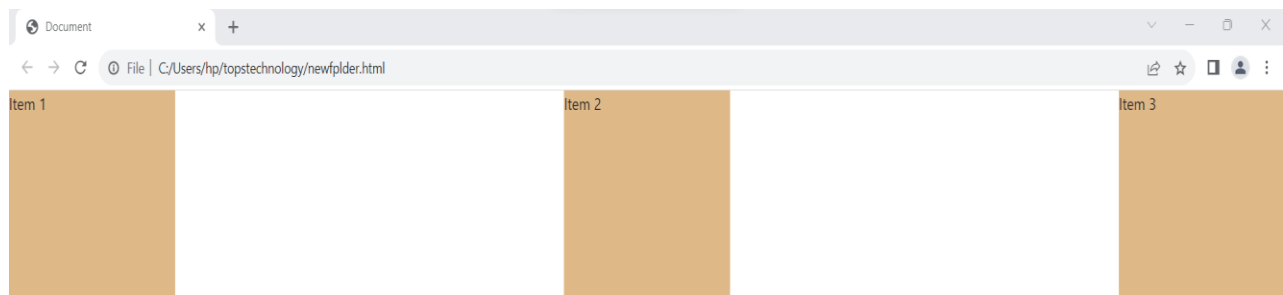
To use flexbox in Bootstrap 4, we can make use of the various flexbox classes provided by Bootstrap. These classes include "d-flex" to create a flex container, "flex-row" or "flex-column" to set the direction of the flex items, and "justify-content-*" and "align-items-*" classes to control the alignment of the flex items.

For example:

```html
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.3/dist/css/bootstra
    <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.3/dist/js/bootstra
    <style>
        .flex-item{
            height: 200px;
            width: 200px;
            background-color: burlywood;
        }
    </style>
</head>
<body>
  <div class="d-flex flex-row justify-content-between">
  <div class="flex-item">Item 1</div>
  <div class="flex-item">Item 2</div>
  <div class="flex-item">Item 3</div>
</div>

</body>
</html>
```

output:

In this example, we have a flex container with three flex items arranged in a row. The "justify-content-between" class is used to evenly distribute the items along the horizontal axis.Flexbox is a powerful tool for creating flexible and responsive layouts in Bootstrap 4.

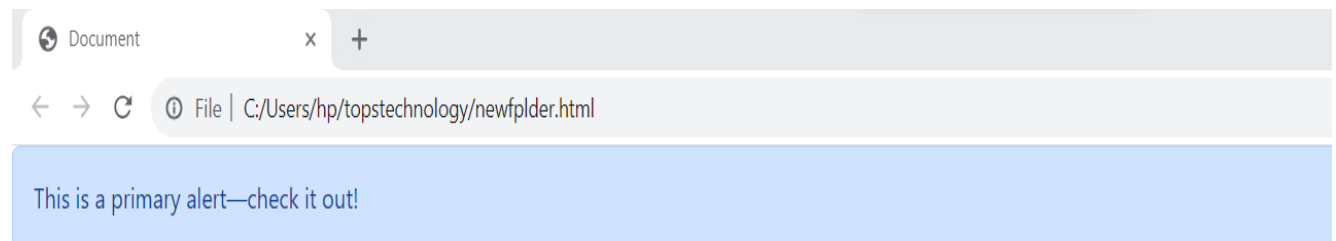## 9.How can one create an alert in Bootstrap?

❖ To create an alert in Bootstrap, you can use the "alert" component provided by Bootstrap.

Here's an example of how we can create a basic alert:

input:

```
</head>
<body>
  <div class="alert alert-primary" role="alert">
  This is a primary alert—check it out!
</div>
```

output:

This is a primary alert—check it out!

In this example, the "alert" class is used to create the alert component. The "alert-primary" class is used to give the alert a primary color. we can replace "alert-primary" with other contextual classes like "alert-success", "alert-info", "alert-warning", or "alert-danger" to change the color and style of the alert.
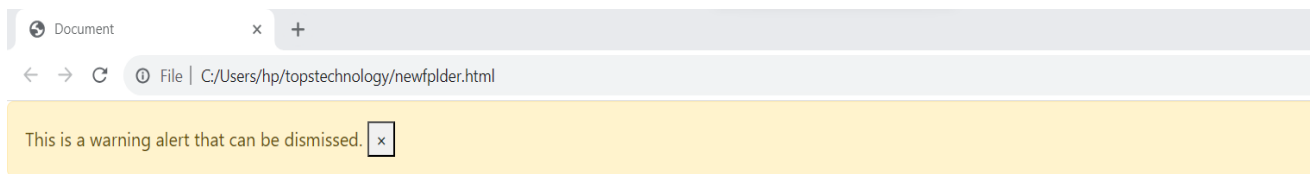
we can also add additional classes like "alert-dismissible" to make the alert dismissible with a close button.

Here's an example of a dismissible alert:

```html
<body>

<div class="alert alert-warning alert-dismissible fade show" role="alert">
  This is a warning alert that can be dismissed.
  <button type="button" class="close" data-dismiss="alert" aria-label="Close">
    <span aria-hidden="true">&times;</span>
  </button>
</div>
```

output:

In this example, the "alert-dismissible" class is added to make the alert dismissible. The close button is created using the "close" class, and the "data-dismiss" attribute is used to specify that clicking the button should dismiss the alert.
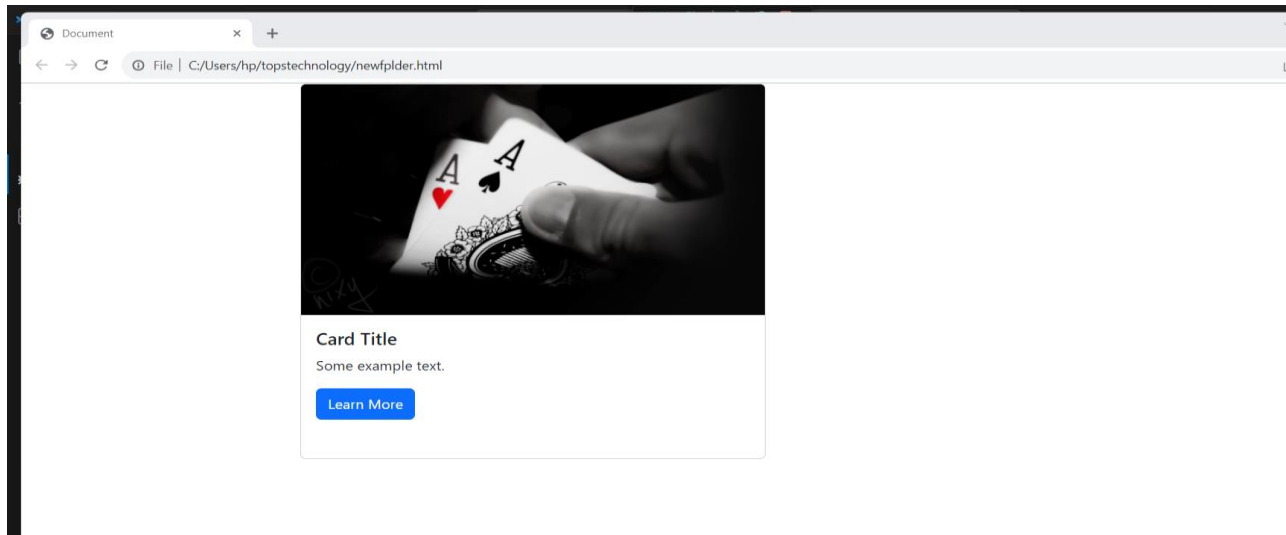
10. What is a bootstrap card and how would you create one?

❖ A Bootstrap card is a flexible and versatile component that allows you to display various types of content, such as images, text, buttons, and more, in a visually appealing way. It provides a structured and organized layout for presenting information.

To create a Bootstrap card, you can use the "card" component provided by Bootstrap. Here's an example of how you can create a basic card:

```html
<div class="card">
  <img src="https://wallpapercave.com/wp/wp4693435.jpg" class="card-img-top" alt="Image">
  <div class="card-body">
    <h5 class="card-title">Card Title</h5>
    <p class="card-text">Some example text.</p>
    <a href="#" class="btn btn-primary">Learn More</a>
  </div>
</div>
```

output:

In this example, the "card" class is used to create the card component. Inside the card, we can include various elements like an image, a card body, and different types of content such as a card title, card text, and buttons.

we can customize the appearance of the card by adding additional classes like "card-header" for a header section, "card-footer" for a footer section, or "card-columns" for a multi-column layout.

we can also use different contextual classes like "card-primary", "card-success", "card-info", "card-warning", or "card-danger" to change the color and style of the card.

Bootstrap cards are a great way to present information in a visually appealing and organized manner.