

Module(jQuery Basic,Effects & Advanced)

- What is jQuery?

jQuery is a popular JavaScript library that simplifies HTML document manipulation, event handling, animation, and AJAX interactions for web development. It was developed to make it easier for developers to create dynamic and interactive web pages, and is designed to be lightweight and easy to use. jQuery includes a set of pre-written JavaScript code that can be used to manipulate HTML elements, create animations, handle events, and more. It is used by millions of websites to create a more seamless user experience and has become a standard tool in web development.

- How to Apply CSS Using JQuery, How to Add Class and Remove Class in JQuery , JQuery Animation?

1.Applying CSS Using JQuery:

To apply CSS using jQuery, you can use the `css()` method.

2. Adding and Removing Class in JQuery:

You can add and remove classes using the `addClass()` and `removeClass()` methods.

3. JQuery Animation:

jQuery provides a range of methods for animating HTML elements, including

`fadeIn()`, `fadeOut()`, `slideUp()`, and `slideDown()`

- How to create slider with animation?

1.**HTML:**

```
<div id="slider">
  
  
  
</div>
```

2.**Css:**

```
#slider {
  position: relative;
  height: 400px;
  width: 600px;
  overflow: hidden;
}
```

```
#slider img {
  position: absolute;
```

```
top: 0;
left: 0;
height: 400px;
width: 600px;
}
```

3.jQuery:

```
$(document).ready(function() {
    // set interval for slider animation
    setInterval(function() {
        // get the current image and its width
        var currentImage = $('#slider img:first');
        var imageWidth = currentImage.width();

        // animate the slider container to move left
        $('#slider').animate({
            left: -imageWidth
        }, 1000, function() {
            // after animation, move the current image to the end of the slider
            currentImage.appendTo('#slider');
            // reset the slider container position
            $('#slider').css('left', 0);
        });
    }, 5000); // repeat animation every 5 seconds
});
```

Module (Bootstrap Basic & Advanced)

● What are the advantages of Bootstrap?

1. **Responsive Design:** Bootstrap provides a responsive grid system that makes it easy to create responsive web pages that adjust to different screen sizes and devices.
2. **Time-Saving:** Bootstrap includes pre-built UI components and JavaScript plugins that can be easily integrated into web projects, saving developers time and effort.
3. **Consistency:** Bootstrap provides a consistent and standardized set of styles and components that can be used throughout a web project, ensuring a cohesive design and user experience.

4. **Cross-Browser Compatibility:** Bootstrap is designed to be compatible with all modern browsers, including Internet Explorer, ensuring consistent performance and appearance across different browsers.
5. **Customizable:** Bootstrap is highly customizable, allowing developers to easily modify its components and styles to fit their specific needs and preferences.
6. **Community Support:** Bootstrap has a large and active community of developers who contribute to its development, provide support, and share resources, making it easier for developers to learn and use the framework.

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

In Bootstrap, a container is a class that is used to create a fixed-width container that centers the content within it. The purpose of a container is to provide a consistent layout and spacing for the content on a web page.

The container class is available in three variations:

1. `.container` - Creates a responsive fixed-width container that centers the content within it. The width of the container changes depending on the screen size and device.
2. `.container-fluid` - Creates a full-width container that spans the entire width of the viewport. This container is also responsive and adjusts its width depending on the screen size and device.
3. `.container-{breakpoint}` - Creates a responsive fixed-width container that centers the content within it for a specific screen size breakpoint. The `{breakpoint}` can be one of Bootstrap's predefined breakpoints, such as `sm`, `md`, `lg`, or `xl`.

Example code:

```
<div class="container">  
  
  <!-- Content goes here -->  
  
</div>
```

● What are the default Bootstrap text settings?

In Bootstrap, there are several classes that can be used to modify the appearance of text. The default Bootstrap text settings are as follows:

1. `.text-left` - Aligns text to the left.
2. `.text-center` - Centers text horizontally.

3. `.text-right` - Aligns text to the right.
4. `.text-justify` - Justifies text to fill the entire width of its container.
5. `.text-nowrap` - Prevents text from wrapping to the next line.
6. `.text-lowercase` - Converts text to lowercase.
7. `.text-uppercase` - Converts text to uppercase.
8. `.text-capitalize` - Capitalizes the first letter of each word.
9. `.font-weight-bold` - Makes the text bold.
10. `.font-italic` - Makes the text italic.
11. `.text-muted` - Fades the text to a lighter color, indicating it is less important.
12. `.text-white` - Sets the text color to white.
13. `.text-dark` - Sets the text color to a dark shade.

● What do you know about the Bootstrap Grid System?

The Bootstrap Grid System is a powerful feature that helps developers to create responsive and flexible layouts for web pages. The Grid System is based on a 12-column layout that can be easily customized to fit the needs of different projects.

Here are some key features of the Bootstrap Grid System:

1. **Responsive Design:** The Grid System is responsive, meaning it automatically adjusts to fit different screen sizes and devices. This helps ensure that web pages look great on desktops, tablets, and smartphones.
2. **12-Column Layout:** The Grid System is based on a 12-column layout, which makes it easy to create complex layouts and design structures. Developers can use any combination of columns to create unique designs.
3. **Column Classes:** Bootstrap provides a variety of column classes that can be used to define the size and position of elements on a web page. For example, `col-md-4` defines a column that takes up 4 of the 12 available columns on medium-sized screens.
4. **Nesting:** Columns can be nested inside other columns to create more complex layouts. This can be done by creating a new row within a column, and then adding new columns inside that row.
5. **Offsetting:** Columns can be offset to the left or right by using the `offset-` classes. For example, `offset-md-2` will offset a column by 2 columns on medium-sized screens.
6. **Alignment:** The `justify-content-` and `align-items-` classes can be used to align columns and content within them.

Overall, the Bootstrap Grid System is a powerful tool that can help developers to create flexible, responsive, and visually appealing layouts for their web projects. It is a key feature of Bootstrap that has contributed to its popularity among developers.

● What is the difference between Bootstrap 4 and Bootstrap 5

Bootstrap 5 is the latest version of the popular front-end development framework, released in May 2021. Here are some of the key differences between Bootstrap 4 and Bootstrap 5:

1. **Smaller File Size:** Bootstrap 5 has a smaller file size compared to Bootstrap 4, which makes it faster and easier to load.
2. **New Utility Classes:** Bootstrap 5 introduces new utility classes, such as `gap`, `fs-1` to `fs-6` for font sizes, and `ratio` for aspect ratios. These classes provide developers with more flexibility and control over the layout and design of their web pages.
3. **Updated Components:** Bootstrap 5 has updated and improved components, such as the navbar, carousel, and forms. These components have new features and functionality, as well as improved accessibility.
4. **Dropped jQuery Dependency:** Bootstrap 5 no longer requires jQuery, which makes it lighter and more compatible with modern web development practices.
5. **New Color Palette:** Bootstrap 5 introduces a new color palette with updated colors and shades, which gives developers more options for customizing the design of their web pages.
6. **Improved Accessibility:** Bootstrap 5 has improved accessibility with updated markup and new utility classes, such as `visually-hidden` and `sr-only`.

Overall, Bootstrap 5 is a significant improvement over Bootstrap 4, with new features, improved components, and better performance. However, the core principles and philosophy of Bootstrap remain the same, which means that developers who are familiar with Bootstrap 4 should have no problem transitioning to Bootstrap 5.

● What is a Button Group, and what is the class for a basic Button Group?

A Button Group is a set of related buttons that are grouped together for better organization and user experience. Button groups are commonly used in web applications to group related actions or options, such as in a toolbar or menu. In Bootstrap, a Button Group can be created by wrapping a set of buttons in a `<div>` element with the `.btn-group` class. Here's an example:

```
<div class="btn-group" role="group" aria-label="Basic example">  
  
  <button type="button" class="btn btn-secondary">Button 1</button>  
  
  <button type="button" class="btn btn-secondary">Button 2</button>  
  
  <button type="button" class="btn btn-secondary">Button 3</button>  
  
</div>
```

● How can you use Bootstrap to make thumbnails?

Bootstrap provides a simple and flexible way to create thumbnails, which are small images or videos that can be used to showcase products or content on a web page. Here's how you can use Bootstrap to create thumbnails:

```
<div class="row">

  <div class="col col-md-4">

    <div class="thumbnail">

      

      <div class="caption">

        <h4>Thumbnail 1</h4>

        <p>Description of Thumbnail 1</p>

      </div>

    </div>

  </div>

</div>

<div class="col col-md-4">

  <div class="thumbnail">

    

    <div class="caption">

      <h4>Thumbnail 2</h4>

      <p>Description of Thumbnail 2</p>

    </div>

  </div>

</div>

<div class="col col-md-4">

  <div class="thumbnail">
```

```


<div class="caption">

  <h4>Thumbnail 3</h4>

  <p>Description of Thumbnail 3</p>

</div>

</div>

</div>

</div>
```

● In Bootstrap 4, what is flexbox?

In Bootstrap 4, flexbox is a CSS layout mode that is used for creating flexible and responsive page layouts. Flexbox provides a powerful set of layout properties that allow you to create complex layouts with minimal CSS code, and without relying on floats or positioning.

The main idea behind flexbox is to provide a flexible and dynamic container that can adjust its contents to different screen sizes and device orientations. The container is known as a flex container, and it can be created by adding the `.d-flex` class to a `<div>` element. Once the container is defined, you can use a variety of flexbox properties to control the layout and alignment of the child elements, which are known as flex items.

Some of the key flexbox properties used in Bootstrap 4 include:

- **justify-content**: used to align flex items horizontally within the container.
- **align-items**: used to align flex items vertically within the container.
- **flex-direction**: used to define the direction of the main axis of the container.
- **flex-wrap**: used to control whether flex items should wrap to multiple lines when the container width is reduced.
- **align-content**: used to align multiple lines of flex items within the container.

Overall, flexbox provides a powerful and flexible way to create responsive layouts in Bootstrap 4, and it is widely used in modern web design.

● How can one create an alert in Bootstrap?

Bootstrap provides a simple and effective way to create alerts on a web page using predefined classes. Here's how you can create an alert in Bootstrap:

1. Create a `<div>` element with the `.alert` class
2. Add a contextual class to specify the type of alert, such as `.alert-success`, `.alert-info`, `.alert-warning`, or `.alert-danger`
3. Add a dismiss button to allow the user to close the alert, using the `.close` class and the `data-dismiss="alert"` attribute

```
<div class="alert alert-danger alert-dismissible fade show" role="alert">
  <strong>Error:</strong> Something went wrong!
  <button type="button" class="close" data-dismiss="alert" aria-label="Close">
    <span aria-hidden="true">&times;</span>
  </button>
</div>
```

- What is a bootstrap card and how would you create one?

In Bootstrap, a card is a flexible and extensible content container that can be used to display different types of content, such as text, images, videos, or links, in a visually appealing way.

Code:

```
<div class="card" style="width: 18rem;">

  

  <div class="card-body">

    <h5 class="card-title">Richard Taylor title</h5>

    <p class="card-text">Some quick example text.</p>

    <a href="#" class="btn btn-primary">Go somewhere</a>

  </div>

</div>
```