**MODULE: 5 (JQuery Basic, Effects & Advance)**

**1. What is jQuery?**

**Answer:**

jQuery is a fast, small, and feature-rich JavaScript library designed to simplify the client-side scripting of HTML. It was created by John Resig in 2006 and has since become one of the most widely used JavaScript libraries due to its simplicity and ease of use. jQuery simplifies tasks such as HTML document traversal and manipulation, event handling, and animation, making them easier to implement with an intuitive API that works across a multitude of browsers. One of the key advantages of jQuery is its cross-browser compatibility, which allows developers to write code that runs consistently across different browsers without dealing with the intricacies of each one.

jQuery abstracts much of the complexity involved in handling document object model (DOM) interactions and AJAX calls, enabling developers to perform these tasks with minimal code. Additionally, jQuery has an extensive plugin ecosystem, which allows developers to extend its functionality with a wide array of pre-built plugins for various tasks. This versatility makes jQuery a powerful tool for creating interactive and dynamic web pages.

Its popularity stems from its ability to simplify complex JavaScript tasks, enabling developers to enhance user interfaces and improve user experience efficiently. By providing a streamlined approach to common JavaScript functions, jQuery helps developers build robust and feature-rich web applications quickly and with fewer lines of code.

**1. How to Apply CSS Using JQuery, How to Add Class and Remove Class in JQuery, JQuery Animation?**

**Answer:**

**Apply CSS Using jQuery:**

To apply CSS, use the `.css()` method. For example:

javascript

$("element").css("property", "value");

Example:

javascript

$("p").css("color", "blue");

This changes the text color of all `<p>` elements to blue.

**Add and Remove Class in jQuery:**

To add a class, use the `.addClass()` method:

javascript

$("element").addClass("className");

Example:

javascript

$("p").addClass("highlight");

To remove a class, use the `.removeClass()` method:

javascript

$("element").removeClass("className");

Example:

javascript

$("p").removeClass("highlight");

You can also toggle a class using `.toggleClass()`:

javascript

$("element").toggleClass("className");

**jQuery Animation:**

jQuery provides several methods for animations, such as `.animate()`, `.fadeIn()`, `.fadeOut()`, `.slideUp()`, and `.slideDown()`.

Example using `.animate()`:

javascript

$("element").animate({property: "value"}, duration);

Example:

javascript

$("#box").animate({left: "100px"}, 1000);

**3. How to create slider with animation?**

**Answer:**

**HTML Structure**: Define a container for the slider and place your images within it. The container should have a fixed size, and images should be positioned absolutely to stack them on top of each other.

**CSS Styling**:

* Set the slider container to relative positioning and hide overflow to ensure images are not visible outside the container's boundaries.
* Style the images to be absolute positioned, with width and height set to fill the container. Initially, hide all images except the first one to prepare for animation.

**jQuery Animation**:

* Use jQuery to select the slider and images. Define a function that handles the image transition, such as fading out the current image and fading in the next one.
* Use setInterval to repeatedly call the transition function at a specified interval, creating a continuous slide effect. This makes the slider automatically advance through images at regular intervals.