**Chapter 6**

**jQuery**

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| **6.1** | **jQuery Introduction** |
| **6.1.1** | **Use of jQuery** |
|  | jQuery is a popular JavaScript library that simplifies HTML document traversal, manipulation, event handling, and animation. It was widely used in web development  jQuery makes it easier to select and manipulate HTML elements in the Document Object Model (DOM). You can use selectors similar to CSS selectors to target elements and perform actions on them.  jQuery simplifies event handling by providing methods to attach event listeners to elements. This is useful for handling user interactions such as clicks, keypresses, and mouse events.  jQuery offers a simplified way to make asynchronous requests to a server using AJAX. You can load data from a server without a full page reload.  jQuery provides built-in functions for creating animations and effects, making it easier to create interactive web elements. |
| **6.1.2** | **Difference between jQuery and JavaScript** |
|  | The simple difference is that JavaScript is Language while jQuery is a built-in library built for JavaScript.  jQuery simplifies the use of JavaScript language.  JavaScript is an interpreted programming language whereas jQuery is a library with APIs built for JavaScript |
| **6.1.3** | **HTML/Css method of jQuery** |
|  | The jQury html() method is used to change the entire content of the selected elements It replaces the selected element content with new given content  The jQuery css() method is used to get or set style properties or values for selected elements. It facilitates you to get one or more style properties |
| **6.1.4** | **jQuery Selector** |
|  | 1. Element selector 2. Id selector 3. Class selector 4. Universal selector(\*) 5. This selector |
| **6.2** | **Events of jQuery** |
| **6.2.1** | **Basic events** |
|  | |  |  |  |  | | --- | --- | --- | --- | | **Mouse Events** | **Keyboard Events** | **Form Events** | **Document/Window Events** | | click | keypress | submit | load | | dblclick | keydown | change | resize | | mouseenter | keyup | focus | scroll | | mouseleave |  | blur | unload | |
| **6.2.2** | **How to fire event programmatically** |
|  | // Trigger a click event on a button with id "myButton"  $("#myButton").trigger("click"); |
| **6.2.3** | **Custom logic on event fire** |
|  | $(document).on("myCustomEvent", function(event) {  // Your custom event handler code here  console.log("Custom event fired!");  // Add your custom logic here  });  // Trigger the custom event "myCustomEvent" programmatically  $(document).trigger("myCustomEvent"); |
| **6.3** | **jQuery Validation** |
| **6.3.1** | Include jQuery and jQuery Validation via CDN:  Create Your HTML Form:  Initialize jQuery Validation: |
| **6.3.3** | **Jquery Function**  **map(),grep(),extends,each, merge etc.** |
|  | $.map() – function is used to transform an array like object  $.grep() – function filters elements in array or jQuery collection  $.extend() – function is used to merge the contents of two more object into first object. It’s often used for extending objects with additional properties or setting  $.each() –function is used for iterating over elements in an array or an object  $.merge() – function is used to merge the contents of two or more arrays togather |
| **6.3.4** | **Regular expression in jQuery** |
|  | // i  Perform case-insensitive matching      // g  Perform a global match (find all matches rather than stopping after the first match)      // m  Perform multiline matching      // [abc]  Find any of the characters between the brackets      // [0-9]  Find any of the digits between the brackets      // (x|y)  Find any of the alternatives separated with |      // \d Find a digit      // \s Find a whitespace character      // \b Find a match at the beginning of a word like this: \bWORD, or at the end of a word like this: WORD\b      // \uxxxx Find the Unicode character specified by the hexadecimal number xxxx      // n+ Matches any string that contains at least one n      // n\* Matches any string that contains zero or more occurrences of n      // n? Matches any string that contains zero or one occurrences of n |
| **6.3.5** | **Callback functions** |
|  | A callback function is a function that you pass as an argument to another function, and that function is executed at a later time or after an asynchronous operation has completed. Callbacks are often used to handle events, perform actions upon the completion of tasks, or to structure code for asynchronous operations. |
| **6.3.6** | **Deferred& Promise object** |
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