

SHREE H. N. SHUKLA GROUP OF COLLEGES

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BCA/ BSCIT SEM - 2

Web Programming

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Unit 4: JQuery

What is jQuery?

Introduction:-

- JQuery is a JavaScript Library.
- jQuery greatly simplifies JavaScript programming.
- Created by **John Resig in 2006** with a motto – **Write less, do more.**
- jQuery simplifies HTML document traversing, event handling, animating, and Ajax interactions for rapid web development.

Core features supported by jQuery –

- **DOM manipulation** – The jQuery made it easy to select DOM(**Document Object Model**) elements, traverse them and modifying their content by using cross-browser open source selector engine called **Sizzle**.
- **Event handling** – The jQuery offers an elegant way to capture a wide variety of events, such as a user clicking on a link.
- **AJAX Support**
- **Animations** – The jQuery comes with plenty of built-in animation effects which you can use in your websites.
- **Lightweight** – The jQuery is very lightweight library - about 19KB in size
- **Cross Browser Support** – The jQuery has cross-browser support, and works well.
- **Latest Technology**

Sr No.	Question	Answer
1.	_____ is a JavaScript Library.	JQuery
2.	_____ is not a language, but it is a well w JavaScript code.	jQuery

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iQuery Syntax

- The jQuery syntax is tailor made for selecting HTML elements and performing some action on the element(s).
- Basic syntax is: \$(selector).action()
- A \$ sign to define/access jQuery.
- A (selector) to "query (or find)" HTML elements.
- A jQuery action() to be performed on the element(s).
- Examples:
\$(this).hide() - hides the current element.
\$("p").hide() - hides all <p> elements.
\$(".test").hide() - hides all elements with class="test".
\$("#test").hide() - hides the element with id="test".

Sr No.	Question	Answer
*1.	A_____sign to define/access jQuery	\$
2.	A_____to "query (or find)" HTML elements.	selector
3.	A jQuery _____to be performed on the element(s).	action()

iQuery Selector - Element selector

- jQuery selectors allow you to select and manipulate HTML element(s).
- jQuery selectors are used to "find" (or select) HTML elements based on their name, id, classes, types, attributes, values of attributes and much more. It's based on the existing CSS Selectors, and in addition, it has some own custom selectors.
- All selectors in jQuery start with the dollar sign and parentheses: \$().
- Types of Selectors
 1. The element Selector
 2. The #id Selector

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3. The .class Selector

1. The element Selector

- The jQuery element selector selects elements based on their tag names.
- You can select all <p> elements on a page like this:
- \$("p") Example
- When a user clicks on a button, all <p> elements will be hidden:
- Example

```
$(document).ready(function(){  
    $("button").click(function(){  
        $("p").hide();  
    });  
});
```

2. Class Selector

- The jQuery class selector finds elements with a specific class.
- To find elements with a specific class, write a period character, followed by the name of the class:
- \$(".test")
- Example: When a user clicks on a button, the elements with class="test" will be hidden:

```
$(document).ready(function(){  
    $("button").click(function(){  
        $(".test").hide();  
    });  
});
```

3. id Selector

- The jQuery #id selector uses the id attribute of an HTML tag to find the specific element.
- An id should be unique within a page, so you should use the #id selector when you want to find a single, unique element.
- To find an element with a specific id, write a hash character, followed by the id of the element:
- \$("#test")
- When a user clicks on a button, the element with id="test" will be hidden:

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- Example

```
$(document).ready(function(){  
    $("button").click(function(){  
        $("#test").hide();  
    });  
});
```

jQuery Events

Mouse Events	Keyboard Events	Form Events	Window Events
Click	Keypress	Submit	Load
Dbclick	Keydown	Change	Resize
Mouseenter	Keyup	Focus	Scroll
Mouseleave		Blur	Unload

jQuery Event Methods

1. blur():

- The blur event occurs when an element loses focus.
- The blur() method triggers the blur event, or attaches a function to run when a blur event occurs.

Syntax: \$(selector).blur()

\$(selector).blur(function)

Example: Attach a function to the blur event. The blur event occurs when the <input> field loses focus:

```
$("#input").blur(function()  
{  
    alert("This input field has lost its focus.");  
});
```

2. change():

- The change event occurs when the value of an element has been changed (only works on <input>, <textarea> and <select> elements).

Syntax \$(selector).change()

\$(selector).change(function)

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Example

```
$("#input").change(function()  
{ alert("The text has been changed."); });
```

Event methods trigger or attach a function to an event handler for the selected elements.

3. **click()**: The click event occurs when an element is clicked.

Syntax \$(selector).click()

\$(selector).click(function)

Example

Click on a <p> element to alert a text:

```
$("#p").click(function(){  
    alert("The paragraph was clicked.");  
});
```

4. **dblclick()** : The dblclick event occurs when an element is double-clicked.

Syntax \$(selector).dblclick()

\$(selector).dblclick(function)

Example

```
$("#p").dblclick(function(){  
    alert("The paragraph was double-clicked");  
});
```

5. **focus()** : The focus event occurs when an element gets focus (when selected by a mouse click or by "tab-navigating" to it).

Syntax \$(selector).focus()

\$(selector).focus(function)

Example

```
$("#input").focus(function(){  
    $("#span").css("display", "inline").fadeOut(2000);  
});
```

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6. **resize()** : The resize event occurs when the browser window changes size.

Syntax `$(selector).resize()`

Example Count the number of times the browser window is resized:

```
$(window).resize(function(){  
    $('span').text(x+=1);  
});
```

7. **scroll()** The scroll event occurs when the user scrolls in the specified element.

Syntax: `$(selector).scroll()`

`$(selector).scroll(function)`

Example Count the number of times the scroll is used for an element:

```
$("div").scroll(function(){  
    $("span").text(x+=1);  
});
```

8. **submit()** The submit event occurs when a form is submitted. This event can only be used on <form> elements.

Syntax `$(selector).submit()`

`$(selector).submit(function)`

Example Display an alert when a form is submitted:

```
$("form").submit(function(){  
    alert("Submitted");  
});
```

9. **unload()** The unload event occurs when the user navigates away from the page.

● The unload event is triggered when:

- a link to leave the page is clicked
- a new URL is typed in the address bar
- the forward or back buttons are used

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- the browser window is closed
- the page is reloaded
- The unload() method specifies what happens when a unload event occurs.
- The unload() method should only be used on the window object.

Syntax \$(selector).unload(function)

Example Alert a message when navigating away from the page:

```
$(window).unload(function()  
{  
    alert("Goodbye!");  
});
```

Sr No.	Question	Answer
1.	The_____event occurs when an element loses focus.	blur
2.	The_____event occurs when the value of an element has been changed	Change
3.	The_____event occurs when an element is double-clicked.	dblclick
4.	The_____event occurs when an element gets focus	Focus
5.	The_____event occurs when a keyboard key is pressed down.	Keydown
6.	The_____method triggers the keypress event, or attaches a function to run when a keypress event occurs.	Keypress
7.	The_____event occurs when a keyboard key is released.	Keyup
8.	The_____method attaches an event handler to the load event.	load
9.	The_____event occurs when the browser window changes size.	resize
10.	The_____event occurs when the user scrolls in the specified element.	scroll

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11.	The_____event occurs when a form is submitted.	submit
12.	The_____event occurs when a form is submitted.	submit
13.	The_____event occurs when the user navigates away from the page.	unload

jQuery Effects

- jQuery provides a trivially simple interface for doing various kind of amazing effects.
- jQuery methods allow us to quickly apply commonly used effects with a minimum configuration.

1. **fadeIn()**: method fades in all matched elements by adjusting their opacity and firing an optional callback after completion.

Syntax: selector.fadeIn(speed, [callback]);

2. **fadeOut()**: method fades out all matched elements by adjusting their opacity to 0, then setting display to "none" and firing an optional callback after completion.

Syntax: selector.fadeOut(speed, [callback]);

3. **slideDown()**: reveals all matched elements by adjusting their height and firing an optional callback after completion.

Syntax: selector.slideDown(speed, [callback]);

4. **slideUp()**: method hides all matched elements by adjusting their height and firing an optional callback after completion.

Syntax: selector.slideUp(speed, [callback]);

Sr No.	Question	Answer
1.	The_____method fades in all matched elements by adjusting their opacity and firing an optional callback after completion.	fadeIn()
2.	The_____method fades out all matched elements by adjusting their opacity	fadeOut()

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3.	The _____ method reveals all matched elements by adjusting their height and firing an optional callback after completion.	slideDown()
4.	The _____ method hides all matched elements by adjusting their height and firing an optional callback after completion.	slideUp()

jQuery HTML / CSS Methods

Method	Description
addClass()	Adds one or more class names to selected elements
after()	Inserts content after selected elements
append()	Inserts content at the end of selected elements
before()	Inserts content before selected elements
css()	Sets or returns one or more style properties for selected elements
empty()	Removes all child nodes and content from selected elements
height()	Sets or returns the height of selected elements

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html()	Sets or returns the content of selected elements
innerHeight()	Returns the height of an element (includes padding, but not border)
innerWidth()	Returns the width of an element (includes padding, but not border)
outerHeight()	Returns the height of an element (includes padding and border)
outerWidth()	Returns the width of an element (includes padding and border)
prepend()	Inserts content at the beginning of selected elements
remove()	Removes the selected elements (including data and events)
text()	Sets or returns the text content of selected elements
width()	Sets or returns the width of selected elements
toggleClass()	Toggles between adding/removing one or more classes from selected elements
removeClass()	Removes one or more classes from selected elements