CACS 205: Script Language

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(MECHI MULTIPLE CAMPUS)

jQuery.

- Introduction of jQuery
- jQuery integration.
- Advantages of jQuery.
- Strength of jQuery
- Playing with the elements
- Hiding and unhiding the image
- jQuery UI

What is Jquery?

➢ jQuery was originally created by John Resig in early 2006. The jQuery project is currently run and maintained by a distributed group of developers as an open-source project.

➢ jQuery is a fast, small, cross-platform and feature-rich JavaScript library which is based on the principle **"write less, do more"**.

➢ It is designed to simplify the client-side scripting of HTML. It makes things like HTML document traversal and manipulation, animation, event handling to a web page much simpler that works seamlessly across all the major browsers like Chrome, Firefox, Safari, Internet Explorer, etc.

➢ The main purpose of jQuery is to provide an easy way to use JavaScript on our website to make it more interactive and attractive. It is also used to add animation.

➢ It is also very useful to simplify a lot of the complicated things from JavaScript, like AJAX calls and DOM manipulation.

  o jQuery is a small, fast and lightweight JavaScript library.

  o jQuery is platform-independent.

  o jQuery means "write less do more".

  o jQuery simplifies AJAX call and DOM manipulation.

Features Of jQuery

- HTML/DOM manipulation
- CSS manipulation
- HTML event methods
- Effects and animations
- AJAX handling
- Utilities
- AJAX
- HTML event methods
- JSON Parsing

Why jQuery is required?

- It is very fast and extensible.
- It facilitates the users to write UI related function codes in minimum possible lines.
- It improves the performance of an application.
- Browser's compatible web applications can be developed.
- It uses mostly new features of new browsers.
- jQuery is the most popular and the most extendable. Many of the biggest companies on the web use jQuery like: Microsoft, Google, IBM, Netflix

jQuery Integration

There are several ways to start using jQuery on our web page/site.

➢ Download the jQuery library from jQuery.com

➢ Include jQuery from a CDN(Content Delivery Network), like Google, Microsoft

There are two versions of jQuery available for downloading:

➢ Production version - this is for your live website because it has been minified and compressed

➢ Development version - this is for testing and development (uncompressed and readable code)

Both versions can be downloaded from jQuery.com.

The jQuery library is a single JavaScript file, and you reference it with the HTML <script> tag (notice that the <script> tag should be inside the <head> section):

```
<head>
<script src="jquery-3.4.1.min.js"></script>
</head>
```

```
<head>
<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.4.1/jquery.min.js"></script>
</head>
```

```
<head>
<script src="https://ajax.aspnetcdn.com/ajax/jQuery/jquery-3.4.1.min.js"></script>
</head>
```

```
<script src="https://code.jquery.com/jquery-1.12.4.min.js"></script>
```

Features Of jQuery

➢ **Save lots of time** we can save lots of time and efforts by using the jQuery inbuilt effects and selectors and concentrate on other development work.

➢ **Simplify common JavaScript tasks** jQuery considerably simplifies the common JavaScript tasks. Now you can easily create feature rich and interactive web pages with fewer lines of codes, a typical example is implementing Ajax to update the content of a page without refreshing it.

➢ **Easy to use** jQuery is very easy to use. Anybody with the basic working knowledge of HTML, CSS and JavaScript can start development with jQuery.

➢ **Compatible with browsers** jQuery is created with modern browsers in mind and it is compatible with all major modern browsers such as Chrome, Firefox, Safari, Internet Explorer, etc.

➢ **Absolutely Free** And the best part is, it is completely free to download and use.

```html
<!DOCTYPE html>
<html>
<head>
    <meta charset="utf-8">
    <title>My First jQuery Powered Web Page</title>
    <link rel="stylesheet" type="text/css" href="css/style.css">
    <script src="js/jquery-3.4.1.min.js"></script>
    <script type="text/javascript">
        $(document).ready(function(){
            $("h1").css("color", "green");
        });
    </script>
</head>
<body>
    <h1>Hello, MMC-BCA 4th Sem !</h1>
</body>
</html>
```

jQuery Syntax

A jQuery statement typically starts with the dollar sign ($) and ends with a semicolon (;).

```
$(function(){
    // Some code to be executed...
    alert("Hello World!");
});
```

Shorthand form

```html
<!DOCTYPE html>
<html>
<head>
    <meta charset="utf-8">
    <title>jQuery Syntax</title>
    <script src="https://code.jquery.com/jquery-1.12.4.min.js"></script>
    <script type="text/javascript">
        $(document).ready(function(){
            // Some code to be executed...
            alert("Hello World!");
        });
    </script>
</head>
<body>
    <!--Contents will be inserted here-->
</body>
</html>
```

Basic syntax is: $(selector).action(function(){

});

A $ sign to define/access jQuery
A (*selector*) to "query (or find)" HTML elements
A jQuery *action*() to be performed on the element(s)

$(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".

```
$(document).ready(function(){
    $("p").text("Hello World!");
});
```

The previous text of p tag has been changed
with new text like hello world

jQuery Syntax

A jQuery statement typically starts with the dollar sign ($) and ends with a semicolon (;).

```
<script type="text/javascript">
    $(document).ready(function(){
        $("button").click(function(){        If you click button then value of p will change
            $("p").text("Hello World!");
        });
    });
</script>
```

You should place the jQuery code inside the document ready event so that your code executes when the document is ready to be worked on.

jQuery Selectors

jQuery selectors allow us 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.

Selector

The element Selector:

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

The id Selector(#)

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

The class Selector(.):

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

Compound CSS Selector

```
$(document).ready(function(){
  // Highlight only paragraph elements with class mark
  $("p.mark").css("background", "yellow");

  // Highlight only span elements inside the element with ID mark
  $("#mark span").css("background", "yellow");

  // Highlight li elements inside the ul elements
  $("ul li").css("background", "yellow");

  // Highlight li elements only inside the ul element with id mark
  $("ul#mark li").css("background", "red");

  // Highlight li elements inside all the ul element with class mark
  $("ul.mark li").css("background", "green");

  // Highlight all anchor elements with target blank
  $('a[target="_blank"]').css("background", "yellow");
});
```

jQuery Selector

The element Selector:

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

The id Selector(#)

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

The class Selector(.):

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

custom jQuery Selector

```
$(document).ready(function(){
  // Highlight table rows appearing at odd places
  $("tr:odd").css("background", "yellow");

  // Highlight table rows appearing at even places
  $("tr:even").css("background", "orange");

  // Highlight first paragraph element
  $("p:first").css("background", "red");

  // Highlight last paragraph element
  $("p:last").css("background", "green");

  // Highlight all input elements with type text inside a form
  $("form :text").css("background", "purple");

  // Highlight all input elements with type password inside a form
  $("form :password").css("background", "blue");

  // Highlight all input elements with type submit inside a form
  $("form :submit").css("background", "violet");
});
```

```
$('input[type="text"]')
```

jQuery Event

➤ Events are often triggered by the user's interaction with the web page, such as when a link or button is clicked, text is entered into an input box or textarea, selection is made in a select box, key is pressed on the keyboard, the mouse pointer is moved etc. In some cases, the Browser itself can trigger the events, such as the page load and unload events.

➤ jQuery enhances the basic event-handling mechanisms by offering the events methods for most native browser events, some of these methods are ready(), click(), keypress(), focus(), blur(), change(), etc.

```javascript
<script type="text/javascript">
$(document).ready(function(){
    // Code to be executed
    alert("Hello World!");
});
</script>
```

```javascript
$("#p1").mouseup(function(){
  alert("Mouse up over p1!");
});
```

```javascript
$("p").click(function(){
  $(this).hide();
});
```

```javascript
$("#p1").mouseleave(function(){
  alert("Bye! You now leave p1!");
});
```

```javascript
$("#p1").mousedown(function(){
  alert("Mouse down over p1!");
});
```

```javascript
$("p").dblclick(function(){
    $(this).hide();
});
```

```javascript
$("#p1").mouseenter(function(){
  alert("You entered p1!");
});
```

```javascript
$("#p1").hover(function(){
  alert("You entered p1!");
},
function(){
  alert("Bye! You now leave p1!");
});
```

jQuery Event

```javascript
$("input").focus(function(){
  $(this).css("background-color", "#cccccc");
}).
```

```javascript
$("input").blur(function(){
  $(this).css("background-color", "#ffffff");
});
```

```javascript
$("p").on({
  mouseenter: function(){
    $(this).css("background-color", "lightgray");
  },
  mouseleave: function(){
    $(this).css("background-color", "lightblue");
  },
  click: function(){
    $(this).css("background-color", "yellow");
  }
}).
```

```javascript
$("p").on("click", function(){
  $(this).hide();
});
```

```javascript
$(document).ready(function(){
  $("p").click(function(){
    $(this).slideUp();
  });
});
```