JQUERY, ANGULAR FUNDAMENTALS

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Lecture 9, Week 9

LAST WEEK

- ❏ CLI
- ❏ NPM
- ❏ GITHUB

TODAY

- ❏ JQUERY FUNDAMENTALS
- ❏ ANGULAR FUNDAMENTALS

JQUERY FUNDAMENTALS

- ❏ jQuery is a JavaScript library.
- ❏ jQuery greatly simplifies JavaScript programming.
- ❏ jQuery is easy to learn.

- ❏ jQuery is an open-source minified JavaScript library created for simplified JavaScript operations.

- ❏ You can use jQuery to quickly code a set of different commands that would take much longer if you'd use HTML code.

- ❏ If you code with JavaScript, learning what jQuery is and how to use it can streamline your workflow. It can make your coding practices faster and more efficient, saving you energy and time.

- ❏ A JavaScript library consists of JavaScript files with various functions.

jQuery Syntax

The jQuery syntax is tailor-made for selecting HTML elements and performing some action on the element(s).

Basic syntax is: $(*selector*).*action*()

Important jQuery Features

1. hide() Function

The **hide()** function hides HTML elements, making them no longer affect the HTML page. It serves as an animation method if paired with the duration and easing parameters as well as the **callback function**.

2. show() Function

The **show()** function displays HTML elements. It only works on elements hidden by the **hide()** function. Additionally, it becomes an animation method function if given a parameter, just like **hide()**.

3. toggle() Function

The **toggle()** function modifies HTML elements' visibility based on their CSS display property using a click event.

If an element is visible, this function will hide it.

The opposite will happen if it's hidden.

4. fadeIn() Function

The **fadeIn()** function modifies HTML elements' opacity to make them appear gradually on the HTML page. Pair it with the speed or callback function to adjust the animation's speed and trigger the next event once the matched elements fully appear.

5. fadeOut() Function

This jQuery function works the opposite of the **fadeIn()** function. Similar to **hide()** and **show()**, the **fadeIn()** and **fadeOut()** become animation methods if given a parameter.

6. fadeToggle() Function

The **fadeToggle()** function works similarly to the **toggle()** function. It lets a user display or hide specific elements gradually.

7. slideUp() Function

The **slideUp()** function hides elements with a sliding animation. Pair it with duration and easing parameters to adjust the animation's duration.

8. slideDown() Function

The **slideDown()** function displays elements with a sliding animation. Similarly, it accepts duration and easing parameters.

9. slideToggle() Function

The **slideToggle()** function lets you toggle between the **slideUp()** and **slideDown()** functions to display or hide elements.

10. animate() Function

This function animates elements using one or several CSS properties.

Like the previous functions, it lets you adjust the animation's duration and transition mode as well as trigger the following function once it's complete.

jQuery Examples

Index.html

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <title>jQuery</title>
    <link href="index.css" rel="stylesheet" />
    <script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>
    <script src="index.js"></script>
</head>
<body>
    <h1 id="h1">jQuery Fundamentals</h1>
    <div class="btns">
        <button class="btn hide" id="hide-h1">Hide</button>
        <button class="btn show" id="show-h1">Show</button>
        <button class="btn toggle" id="toggle-h1">Toggle</button>
        <button class="btn fadeIn" id="fade-h1">fadeIn()</button>
        <button class="btn fadeInSlow" id="fadeSlow-h1">fadeIn("slow")</button>
        <button class="btn hide fadeInSlowNum" id="fadeSlowNum-h1">
            fadeIn(3000)
        </button>

        <button class="btn fadeOut" id="fadeOut-h1">fadeOut()</button>
        <button class="btn fadeOutSlow" id="fadeOutSlow-h1">
            fadeOut("slow")
        </button>
```

```html
      <button class="btn fadeOutSlowNum" id="fadeOutSlowNum-h1">
        fadeOut(3000)
      </button>
    </div>
  </body>
</html>
```

Index.css

```css
body {
  max-width: 900px;
  margin: auto;
}

.btns {
  display: flex;
  flex-direction: column;
}

.btn {
  max-width: 140px;
  height: 40px;
  outline: deepskyblue;
  border: none;
  margin-bottom: 5px;
  border-radius: 5px;
  color: #fff !important;
  font-weight: 600;
  font-size: 16px;
}

.btn:hover {
  color: #0984e3 !important;
  background-color: #fff !important;
  border: 2px solid #0984e3 !important;
}

.btn.hide {
  background-color: #55efc4;
}
```

```css
.btn.show {
 background-color: #ff7675;
}

.btn.toggle {
 background-color: #ffeaa7;
}

.btn.fadeIn {
 background-color: #fab1a0;
}

.btn.fadeInSlow {
 background-color: #e17055;
}

.btn.fadeInSlowNum {
 background-color: #74b9ff;
}

.btn.fadeOut {
 background-color: #a29bfe;
}

.btn.fadeOutSlow {
 background-color: #0984e3;
}

.btn.fadeOutSlowNum {
 background-color: #b2bec3;
}
```

Index.js

```javascript
$(document).ready(function () {

  $("#hide-h1").click(function () {

      $("#h1").hide();
```

```javascript
});



$("#show-h1").click(function () {

    $("#h1").show();

});



$("#toggle-h1").click(function () {

    $("#h1").toggle();

});



$("#fade-h1").click(function () {

    $("#h1").fadeIn();

});



$("#fadeSlow-h1").click(function () {

    $("#h1").fadeIn("slow");

});



$("#fadeSlowNum-h1").click(function () {

    $("#h1").fadeIn(3000);

});
```

```
$("#fadeOut-h1").click(function () {

    $("#h1").fadeOut();

});




$("#fadeOutSlow-h1").click(function () {

    $("#h1").fadeOut("slow");

});




$("#fadeOutSlowNum-h1").click(function () {

    $("#h1").fadeOut(3000);

});



});
```

ANGULAR FUNDAMENTALS

AngularJS extends HTML with new attributes.

AngularJS is perfect for Single Page Applications (SPAs).

AngularJS is easy to learn.

Angular is one of the most popular **JavaScript** frameworks, that developers use to build dynamic websites.

AngularJS uses the **Model-View-Controller** (**MVC**) architecture, which is used in web app development.

This type of architecture consists of:

❏ **Model** – the data structure that manages information and receives input from the controller

❏ **View** – the representation of information

❏ **Controller** – responds to input and interacts with the model

EXERCISE

1. Create a folder "Lesson9", add an html file, name it index.html.
2. Add the DOCTYPE html declaration, enclosing html tags, head, title and body tags.
3. In the body of your html document, add a heading, give it an id of "h1".
4. After the heading, add a div element and give it a class of "btns".
5. Add 9 buttons inside the div you created in #4 above.

   Use the following information to add properties to the 9 buttons:
   (i) First button
   content = Hide
   class = "btn hide"
   id = "hide-h1"

   (ii) Second button

content = Show

class = "btn show"

id = "show-h1"

(iii) Third button

content = Toggle

class = "btn toggle"

id = "toggle-h1"

(iv) Fourth button

content = fadeIn()

class = "btn fadeIn"

id = "fade-h1"

(v) Fifth button

content = fadeIn("slow")

class = "btn fadeInSlow"

id = "fadeSlow-h1"

(vi) Sixth button

content = fadeInNum()

class = "btn fadeInNum"

id = "fadeInSlowNum-h1"

(vii) Seventh button

content = fadeOut()

class = "btn fadeOut"

id = "fadeOut-h1"

(viii) Eight button

content = fadeOut("slow")

class = "btn fadeOutSlow"

id = "fadeOutSlow-h1"

(ix) Ninth button

content = fadeOutSlow(3000)

class = "btn fadeOutNum"

id = "fadeOutNum-h1"

6. In the same folder, add a javascript file, name it "index.js"
7. In your browser, go to https://code.jquery.com/ and click on the minified link under jQuery 3.x
8. Copy the link and paste it in the head section of your html document.
9. Also, add a link to the index.js file you created. Add it after the jquery cdn script tags.
10.   In index.js, add a function that should be loaded when your web page loads. Hint: Use the syntax below

```
$(document).ready(function(){
....
})
```


11.   Inside the function, do the following:

(i) Attach a function to the click event of the "#hide-h1" element. I.e the element whose id = "hide-h1". So that when the element is clicked upon, that function would be called. Hint: Use the syntax below:

```
$("#hide-h1").click(function () {
    ...
   });
```

(ii) Inside the function you just created, attach the jquery hide method to the "#h1" html element. Hint: Use the syntax below:

$("#h1").hide();

(iii) Attach a function to the click event of the "#show-h1" element. I.e the element whose id = "show-h1". So that when the element is clicked upon, that function would be called.

(iv) Inside the function you just created, attach the jquery show method to the "#h1" html element.

(v) Attach a function to the click event of the "#toggle-h1" element. I.e the element whose id = "toggle-h1". So that when the element is clicked upon, that function would be called.

(vi) Inside the function you just created, attach the jquery toggle method to the "#h1" html element.

(vii) Attach a function to the click event of the "#fade-h1" element. I.e the element whose id = "fade-h1". So that when the element is clicked upon, that function would be called.

(viii) Inside the function you just created, attach the jquery fadeIn method to the "#h1" html element.

(ix) Attach a function to the click event of the "#fadeSlow-h1" element. I.e the element whose id = "fadeSlow-h1". So that when the element is clicked upon, that function would be called.

(x) Inside the function you just created, attach the jquery fadeIn method with a slow parameter to the "#h1" html element.

(xi) Attach a function to the click event of the "#fadeNum-h1" element. I.e the element whose id = "fadeNum-h1". So that when the element is clicked upon, that function would be called.

(xii) Inside the function you just created, attach the jquery fade method with a duration parameter to the "#h1" html element.

(xiii) Attach a function to the click event of the "#fadeOut-h1" element. I.e the element whose id = "fadeOut-h1". So that when the element is clicked upon, that function would be called.

(xiv) Inside the function you just created, attach the jquery fadeOut method to the "#h1" html element.

(xv) Attach a function to the click event of the "#fadeOutSlow-h1" element. I.e the element whose id = "fadeOutSlow-h1". So that when the element is clicked upon, that function would be called.

(xvi) Inside the function you just created, attach the jquery fadeOut method with a slow parameter to the "#h1" html element.

(xvii) Attach a function to the click event of the "#fadeOutNum-h1" element. I.e the element whose id = "fadeOutNum-h1". So that when the element is clicked upon, that function would be called.

(xviii) Inside the function you just created, attach the jquery fadeOut method and pass a duration parameter to the "#h1" html element.

12. Add a file "index.css" and add a reference to it in your html file.

13. Style the buttons, give them different colors. Go to
https://flatuicolors.com/ to get beautiful colors.