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 is jQuery 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. Plenty of JS libraries, such as **React**, can serve a specific purpose, be it on the client or server side.
- ❏ jQuery library is arguably the most popular JS library on the market today. It's easy to modify and use. Plus, jQuery has a large community with extensive learning resources, tutorials, and other documentation.
- ❏ The best part is that jQuery is compatible with other JavaScript libraries and has plenty of plugins to help scale its functions. However, it does not work with any other programming languages.

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. Web developers often use this function to turn several animations into a sequence.
If given a parameter, this function can bind two or more functions to specific elements. It lets you toggle between the functions by

clicking on the element. Keep in mind that this function signature was deprecated in jQuery version 1.8 and removed in version 1.9.

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.
Keep in mind that the **animate()** function cannot display hidden elements like **slideDown()** and **fadeIn()**.

jQuery Examples

The following example shows you how to use the **slideDown()**, **slideUp()**, and **slideToggle()** functions:

```
$("#flip").click(function(){

  $("#panel").slideDown();

});
```

Here's an example of how to use the **hide()** and **show()** functions:

```
$("#hide").click(function(){

  $("p").hide();

});

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

  $("p").show();

});
```

This example shows an **animate()** function code block:

```
$("button").click(function(){

  $("div").animate({

    left: '250px',

    height: '+=150px',
```

```
    width: '+=150px'
});
});
```

Here's an example of CSS manipulation:

```
$("button").click(function(){
$("h1, h2, p").toggleClass("blue");
});
```

ANGULAR FUNDAMENTALS

- ❏ AngularJS extends HTML with new attributes.
- ❏ AngularJS is perfect for Single Page Applications (SPAs).
- ❏ AngularJS is easy to learn.

Angular is 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

In the context of AngularJS, the model is the framework, while the view is HTML, and the control is JavaScript.
To put it simply:

- AngularJS **binds** JavaScript and HTML
- JavaScript **accepts** the user input and **sends** it to AngularJS
- AngularJS uses the input to **modify** HTML

With the framework binding JavaScript and HTML, the code between them is synchronized. This mechanism makes developers' jobs easier because it reduces the amount of code needed to write.