

How to make your website lively

JavaScript & jQuery

DOM

- Document Object Model: a cross-platform and language-independent convention for representing and interacting with objects in HTML, XHTML, and XML documents.
- The nodes of every document are organized in a tree structure, called the DOM tree.
- The point is to make document manipulation easier.

JavaScript in Web Dev

- Can be used to manipulate DOMs
- Add/Edit/Delete HTML elements
- Add/Edit/Delete CSS styling
- Handling events, enabling further interaction between web page and users.
- Animation.

JS Basics

- Resources to learn JS:
 - Codecademy: <https://www.codecademy.com/learn/javascript>
 - W3school: <http://www.w3schools.com/js/default.asp>
 - Mozilla Guide: <https://developer.mozilla.org/en-US/docs/Web/JavaScript>
- A scripting language:
 - PHP, Python, Ruby are families.
- Variables, Functions and whatnot...

\$jQuery: a JavaScript Library

- Making some operations easier: Animations, DOM traversal, selectors, ajax...
- Hot debates over which one is better.
- Anything done in jQuery can be done in JavaScript.

JavaScript vs jQuery

- `document.getElementById("lo");` `$(document).ready(function(){`
 `$("#lo");`
 `});`
- `element.appendChild(...);` • `element.append(...);`

DOM traversal and handling

- .parentNode
- .childNodes
- .nextSibling
- .querySelector("")
- .style.property =
- .parent()
- .children
- .siblings()
- .select("")
- .css("")

Events & Event Listener

- e.addEventListener("Click",
function);
- e.on("click", function);

Animation

- function frame() {
positionx++;
positiony++;
}
• fadeIn()
• slideDown()
• animate({css})

Make a web-based calculator

- https://github.com/WebmonkeysUIUC/Spring2016/tree/master/Week3_jQuery_Static_Dynamic_Website/JS_Practice_Calculator
- Download the code and see what it looks like.
- Try to write it out yourself without looking through the source code.
- Challenge: build a tip calculator.