



# THE DOM & JQUERY

*Code 301*

# AGENDA

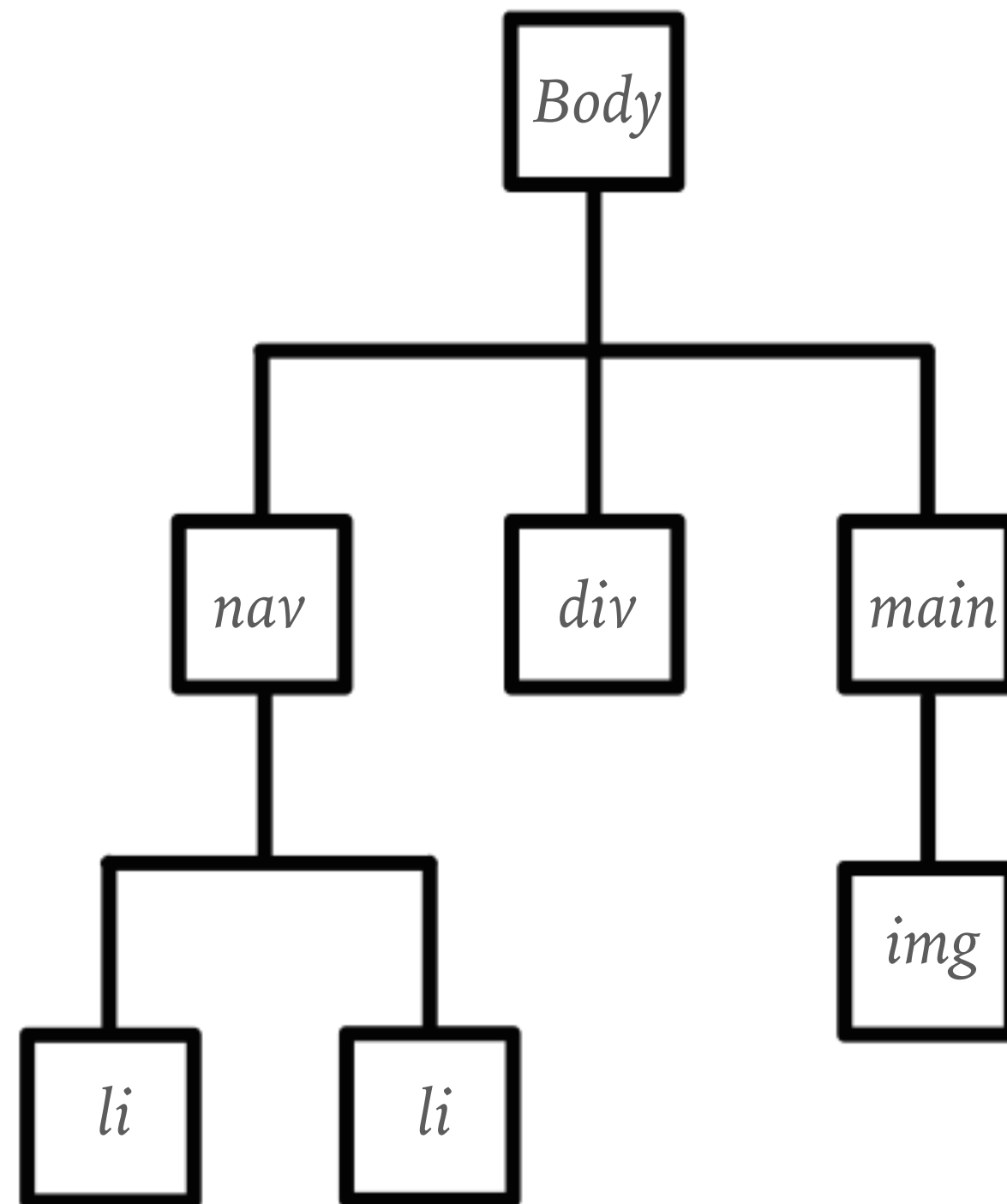
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- Agile Development Discussion
- Git/GitHub Discussion & Demo
- Understanding the DOM
- jQuery Basics
- Code Demo & Assignment Prep

# THE DOM



NOPE.



YUP.

# THE DOM

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- What is the DOM?
  - Document Object Model
  - What the browser does with HTML
  - Internal representation of a web page

“

The DOM states what your script can ask the browser about the current page, and how to tell the browser to update what is being shown to the user.

*-Jon Duckett*

# THE DOM

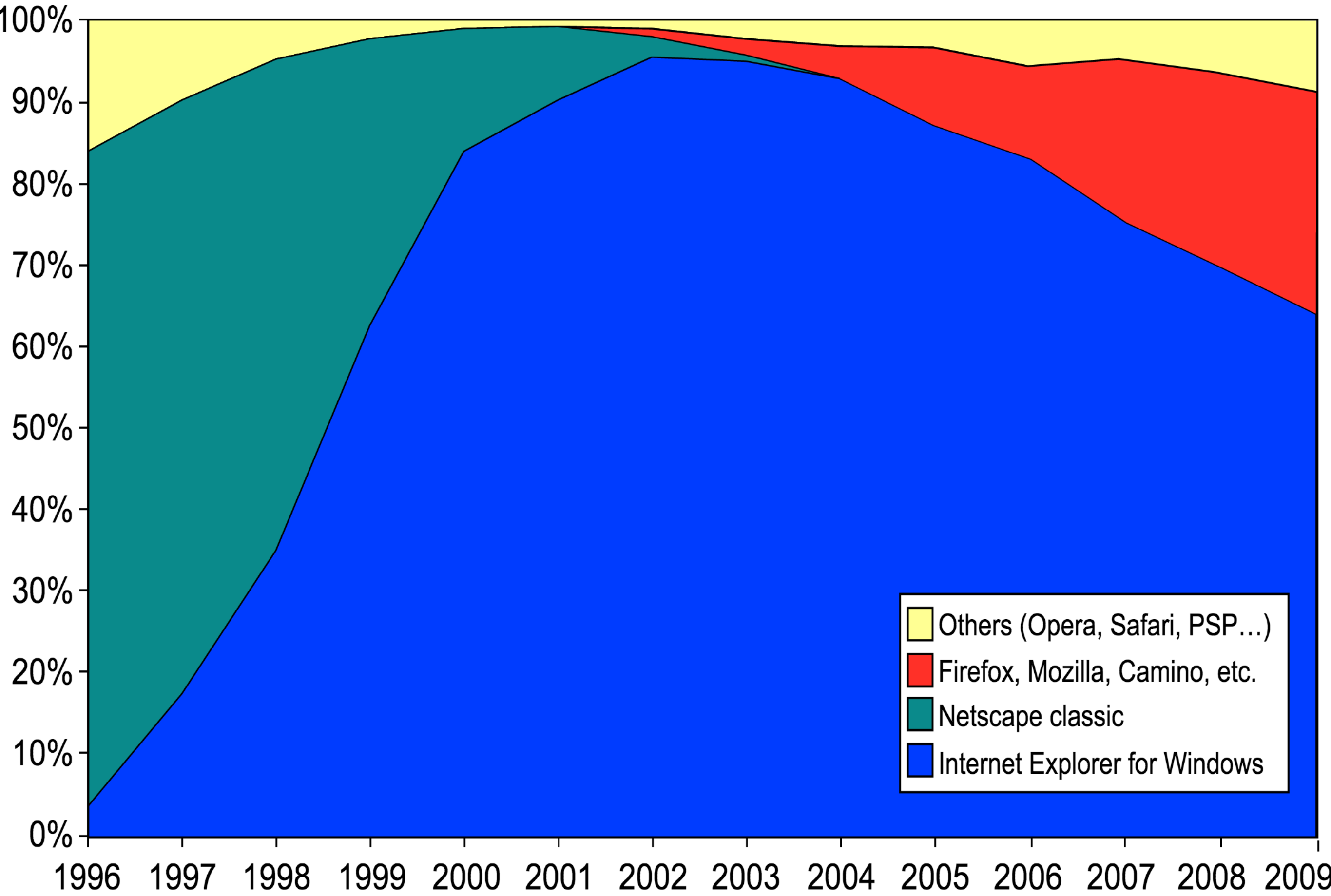
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- What can you do with the DOM?
  - Find elements:
    - `var el = document.getElementById('articles');`
    - `var els = document.getElementsByTagName('li');`
    - `var els = document.querySelectorAll('#articles > li');`
  - Change elements:
    - `document.getElementById('articles').innerHTML = '<h1>News</h1>';`
    - `document.getElementById('articles').textContent = 'News';`
    - `document.getElementById('articles').innerText = 'News1';`
  - Also:
    - Add and remove elements
    - Read attributes and values
    - Navigate the tree... Manage user interactions, events, etc...



# JQUERY

# Browser Wars



# JQUERY

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- What is it, exactly?
  - A JavaScript library (6,358 LOC)
  - That provides an API for:
    - DOM selection
    - DOM manipulation
    - DOM traversal
    - Event management
    - AJAX
    - ...and more

*Call the “jQuery function”, aliased to a single character*

*Use CSS3 Selectors to identify 1 or more DOM elements*

*Then take action with them*

`$( 'selector string' ).actionToPerform(args);`

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# VANILLA JAVASCRIPT: FADE IN

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```
1 function fadeIn(el) {
2   el.style.opacity = 0;
3
4   var last = +new Date();
5   var tick = function() {
6     el.style.opacity = +el.style.opacity + (new Date() - last) / 400;
7     last = +new Date();
8
9     if (+el.style.opacity < 1) {
10      (window.requestAnimationFrame && requestAnimationFrame(tick)) ||
11        setTimeout(tick, 16)
12    }
13  };
14  tick();
15 }
16
17 fadeIn(el);
```

# JQUERY: FADE IN

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```
1 $(el).fadeIn();
```

[http://youmightnotneedjquery.com/#fade\\_in](http://youmightnotneedjquery.com/#fade_in)

# VANILLA JAVASCRIPT: FILTER

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```
1 Array.prototype.filter.call(document.querySelectorAll(selector), filterFn);
```

# JQUERY: FILTER

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```
1 $(selector).filter(filterFn);
```

[http://youmightnotneedjquery.com/#fade\\_in](http://youmightnotneedjquery.com/#fade_in)

# VANILLA JAVASCRIPT: MATCHES SELECTOR?

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```
1 var matches = function(el, selector) {  
2   return (el.matches  
        || el.matchesSelector  
        || el.msMatchesSelector  
        || el.mozMatchesSelector  
        || el.webkitMatchesSelector  
        || el.oMatchesSelector).call(el, selector);  
3 };  
4  
5 matches(el, '.my-class');
```

# JQUERY: MATCHES SELECTOR?

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```
1 $(el).is('.my-class');
```

[http://youmightnotneedjquery.com/#matches\\_selector](http://youmightnotneedjquery.com/#matches_selector)

# VANILLA JAVASCRIPT: TOGGLE A CLASS

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```
1 if (el.classList) {  
2   el.classList.toggle(className);  
3 } else {  
4   var classes = el.className.split(' ');  
5   var existingIndex = classes.indexOf(className);  
6  
7   if (existingIndex >= 0)  
8     classes.splice(existingIndex, 1);  
9   else  
10    classes.push(className);  
11  
12   el.className = classes.join(' ');  
13 }
```

# JQUERY: TOGGLE A CLASS

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```
1 $(el).toggleClass(className);
```

[http://youmightnotneedjquery.com/#toggle\\_class](http://youmightnotneedjquery.com/#toggle_class)



# VANILLA JAVASCRIPT: GET JSON FROM A SERVER

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```
1 var request = new XMLHttpRequest();
2 request.open('GET', '/my/url', true);
4 request.onload = function() {
5     if (request.status >= 200 && request.status < 400) {
6         // Success!
7         var data = JSON.parse(request.responseText);
8     } else {
9         // Server returned an error
10    }
11 };
12 request.onerror = function() {
13     // There was a connection error
14 };
15 request.send();
```

# JQUERY: GET JSON FROM A SERVER

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```
1 $.getJSON('/my/url', function(data) {
2     // Do something with the data
3 });
```

<http://youmightnotneedjquery.com/#json>

# JQUERY CHEAT SHEET

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<http://oscarotero.com/jquery/>

# JQUERY IN ACTION

# JQUERY

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- From [jquery.com](http://jquery.com):
- jQuery is a fast, small, and feature-rich JavaScript library.
- It makes things like HTML document traversal and manipulation, event handling, animation, and Ajax much simpler with an easy-to-use API that works across a multitude of browsers.

jQuery is a fast, small, and feature-rich JavaScript library.



It makes things like HTML document traversal and manipulation, event handling, animation, and Ajax much simpler with an easy-to-use API that works across a multitude of browsers.

With a combination of versatility and extensibility, jQuery has changed the way that millions of people write JavaScript.

*-jquery.com*

# RECAP

# RECAP

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- You need work closely with the DOM
- Your app is logic to dictate what the DOM looks like, and what it does
- jQuery will boost your DOM skills
- ...which makes your apps more maintainable, and more fun to write.

# RESOURCES AND ATTRIBUTIONS

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- <https://blingee.com/blingee/view/113822655-Dom-Fast-Furious->
- [https://en.wikipedia.org/wiki/Browser\\_wars](https://en.wikipedia.org/wiki/Browser_wars)