



Javascript + jQuery

CS160 Section 2A
Rachel Lee



Agenda

HTML + CSS Review (5 min)

Review HTML + CSS concepts

JavaScript Practice (15 min)

Practice coding simple web app components in JS!

jQuery Workshop (10 min)

Practice some basic exercises with jQuery

Intro to JavaScript (15 min)

Building off of HTML + CSS and entering the powerful scripting language of JS

jQuery Overview (5 min)

Brief overview of JQuery and its applications in web development



HTML + CSS Review



HTML

```
<html>

  <body>

    <p>
      Blue paragraph.
    </p>

    <p class='red'>
      Red paragraph.
    </p>

    <p id='unique'>
      Unique paragraph.
    </p>

  </body>

</html>
```

CSS

```
body {
  font-size: 40px;
}
```

Q: How many lines of text will this webpage have?

<https://jsfiddle.net/shmothy/v2nfx5kb/9/>

HTML

```
<html>

  <body>

    <p>
      Blue paragraph.
    </p>

    <p class='red'>
      Red paragraph.
    </p>

    <p id='unique'>
      Unique paragraph.
    </p>

  </body>

</html>
```

CSS

```
body {
  font-size: 40px;
}

p {
  color: blue;
}
```

Q: How many lines of text will be blue?

HTML

```
<html>

  <body>

    <p>
      Blue paragraph.
    </p>

    <p class='red'>
      Red paragraph.
    </p>

    <p id='unique'>
      Unique paragraph.
    </p>

  </body>

</html>
```

CSS

```
body {
  font-size: 40px;
}

p {
  color: blue;
}

.red {
  color: red;
}
```

Q: How many lines of text will be red, and how many will be blue?

Introducing JavaScript

JavaScript Overview



- Programming language for web pages
 - Enables **dynamic** behaviors:
 - interactions
 - animations
 - computations
-

The New York Times - Breakin... x +

nytimes.com

U.S. INTERNATIONAL CANADA ESPAÑOL 中文

PLAY THE CROSSWORD Account

Tuesday, June 29, 2021
Today's Paper

58°F 72° 50°
S&P 500 +0.14% ↑

World U.S. Politics N.Y. Business Opinion Tech Science Health Sports Arts Books Style Food Travel Magazine T Magazine Real Estate Video


The Morning
David Leonhardt on New York's working-class lessons for Democrats.

California Today
Why the state banned taxpayer-funded travel to Florida and elsewhere.

Listen to 'The Daily'
The collapse of Champlain Towers.

LIVE
Condo President Warned Residents in April of Worsening Damage

- The president of the building that collapsed in Florida said in a letter that damage in the building had "gotten significantly worse" since a 2018 inspection.
- The letter adds to evidence that engineers raised alarms months and even years before the catastrophic failure. Here's the latest.




The crews on the pile are using cameras to explore the narrow voids rescuers have not been able to reach. Maria Alejandra Cardona for The New York Times

Rubble, Narrow Voids, Storms: The Dangerous Rescue Effort in Miami
The death toll rose to 11 as search-and-rescue teams continued to sort through pulverized steel and dig through concrete boulders.

LIVE
Delta Variant Drives New Lockdowns in Asia and Australia

Bangladesh and Malaysia are among the countries scrambling to contain outbreaks as vaccination campaigns have slowed. Here's the latest on Covid-19.




A drive-through coronavirus testing site in Brisbane, Australia, on Tuesday. Darren England/EPA, via Shutterstock

Economy Updates

- United Airlines is planning a record expansion of its aircraft fleet.
- The chief executive of Teneo, an influential advisory firm, steps down.
- A new mortgage rule aims to speed modifications and slow foreclosures.

Opinion
'THE EZRA KLEIN SHOW'

Why Do We Work So Damn Much?



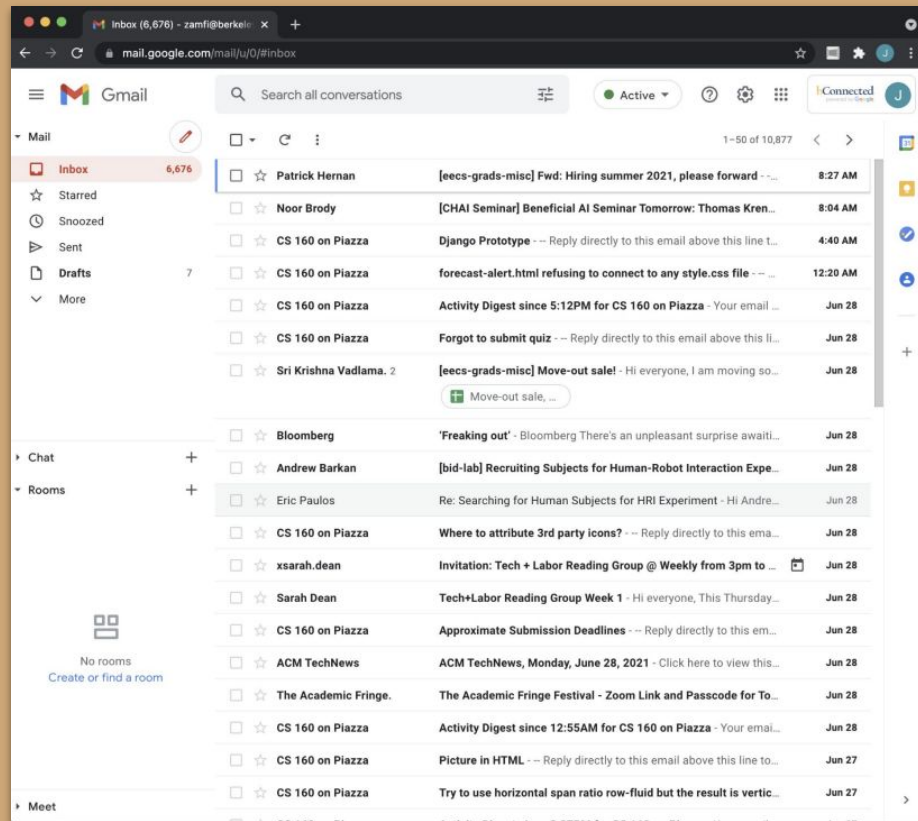
SAMUEL GETACHEW
Black Valedictorians and the Toxic Trope of Black Exceptionalism

CHRISTINA GREER
Dear Kamala Harris: It's a Team!

Static Page

(primarily HTML)

Full Apps
(lots of HTML, lots
of JS)



Adding JavaScript to your HTML file

index.html

```
<html>

  <header>

    <script>
      alert("Hello World!");
    </script>

  </header>

  <body>

    <p>
      Learning JavaScript.
    </p>

  </body>

</html>
```

- **Q:** What is the order in which this page would run?
- **hint:** in the <header>
- **A:** Web pages render from top to bottom, so the script runs **before** anything else!

Adding JavaScript to your HTML file

index.html

```
<html>

  <header>
  </header>

  <body>

    <p>
      Learning JavaScript.
    </p>
    <script>
      alert("Hello World!");
    </script>
  </body>

</html>
```

- **Tip:** If your script **writes** page content, it should be placed at the **bottom** of the <body> element.
- **Ref:** [Where to put JavaScript in an HTML Document ?](#)

Adding JavaScript to your HTML file

index.html

```
<html>

  <header>

    <script src='javascript.js'>
    </script>

  </header>

  <body>

    <p>
      Learning JavaScript.
    </p>

  </body>

</html>
```

javascript.js

```
alert('Hello World!');
```

- **Tip:** Can also link to a separate location that contains your JavaScript code



JavaScript Practice



JavaScript Practice

Here's some syntax: <https://codepen.io/leerach/pen/ExEYzRo>

1. Create a function that prints the name and color values of the exampleObject in the console.

```
var exampleObject = {'name': 'Nate', 'color': 'aqua'}
```

Hint:

- How to make a function: https://www.w3schools.com/js/js_functions.asp

jQuery



JQuery

Overview

JavaScript library that adds interactivity to web pages

Benefits

Can be **simpler, cleaner**, or better suited to your programming style than plain JS

Advantages

- Pre-written JS allows for easier, faster development (similar to Bootstrap & HTML)
- More with less code!
- Ex: React, D3 charts, etc.

Drawbacks to JS Libraries

(are there even any?)

- can probably find a way using vanilla JS
 - don't make users download more than necessary
 - **You might not even need jQuery**
-

Adding jQuery

index.html

jquery.js

```
<html>
  <header>
    <script
      src="https://code.jquery.com/
      jquery-3.4.1.min.js" integrity="CS
      XorXvZ" crossorigin="anonymous">
    </script>
    <script src='jquery.js'></script>
  </header>
  <body>
    <p>
      Learning jQuery.
    </p>
  </body>
</html>
```

```
$(document).ready(() => {
  $('p').hide();
});
```

- Imports the jQuery library

Adding jQuery

index.html

jquery.js

```
<html>
  <header>
    <script
      src="https://code.jquery.com/
        jquery-3.4.1.min.js" integrity="CS
        XorXvZ" crossorigin="anonymous">
    </script>
    <script src='jquery.js'></script>
  </header>
  <body>
    <p>
      Learning jQuery.
    </p>
  </body>
</html>
```

```
$(document).ready(() => {
  $('p').hide();
});
```

- **Q:** What does this jQuery do?
- **A:** Hides the 'Learning jQuery' text

jQuery Basic Structure

1. Specify the HTML Tag:

```
$( 'selector' ).on( 'event', () => {  
    // code to execute  
});
```

```
$( 'img' ).on( 'event', () => {  
    // code to execute  
});
```

jQuery Basic Structure

2. Which Event to listen for:

```
$( 'selector' ).on( 'event', () => {  
    // code to execute  
});
```

```
$( 'img' ).on( 'click', () => {  
    // code to execute  
});
```

```
var img = document.getElementById('jumpinjoe');  
var butt = document.getElementById('mycoolbutton');  
butt.onclick = function() {toggleImage()};  
function toggleImage() {  
  
    if (img.style.visibility == 'hidden') {  
        img.style.visibility = 'visible';  
    }  
    else {  
        img.style.visibility = 'hidden';  
    }  
}
```

Vanilla JS

```
$('#mycoolbutton').on("click", function(e) {  
    $('#jumpinjoe').toggle();  
});
```

JavaScript + jQuery

jQuery Exercise

1. <https://codepen.io/leerach/pen/ExEYzRo>
2. Change the color of the button to light blue
3. Make an alert appear on the page that says "Hello World!"

```
/* ----- Start of Exercise 2 ----- */

// This function will be referenced by a button to
// change its color when button is clicked
var toggleBackground = function() {
    $('body').toggleClass('bg-lightgreen')
}

/* JQuery Exercise: Now let's change the button
color with jQuery! */

// TODO: YOUR CODE HERE

/* Extra Exercise: Add an alert that says "Hello
World" */

// TODO: YOUR CODE HERE
```


Thank you for coming!

Any Questions?

