

J220

Coding for Journalists

LECTURER

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PROMPTS

Download files from
<https://journ220.github.io>

Sign into
<https://pollev.com/soooh>

Zoom screenshare + start Zoom recording

Agenda

Announcements

Homework review + how much time

CSS Selectors

VS Code

BREAK

Intro to JavaScript

Homework

Announcements

- Sign up for [final project check-in office hours](#). Last week was deadline, but you can still get partial credit. Final booking is April 12.
- Do you want to know your grade so far for the class? If you schedule a final project check-in, we can let you know then. If you've already checked in with us about your final project, then book more office hours (which are extra credit), and we'll go over your grades.

Announcements

After reviewing the **midterm survey**, we're making some schedule changes:

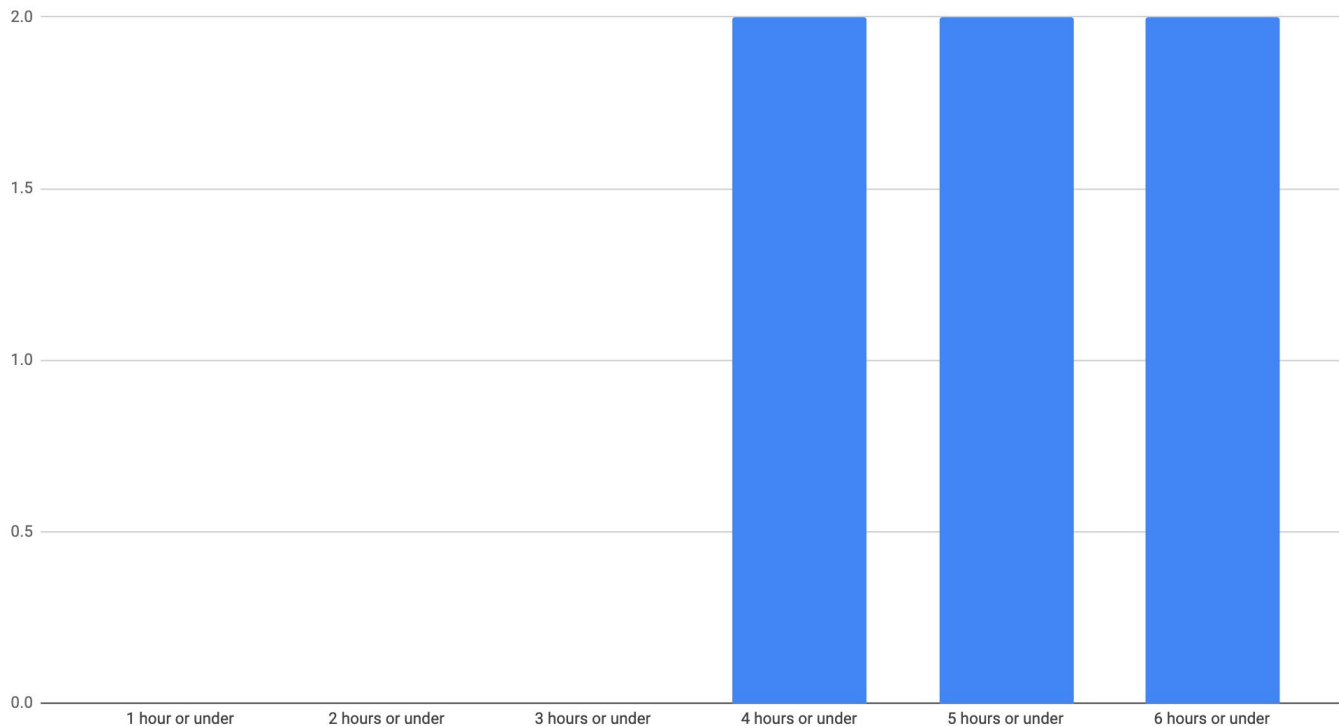
- **April 15:** GitHub + Terminal + Study Hall (time to work on final project)
- **April 22:** Career workshop + Study Hall + food (will send out food survey next week)

Announcements

- [Final project wireframe](#) due in two weeks. We'll discuss more at end of class.

How much time spent on J220

Week of 03-18: Number of students grouped by hours spent outside of lecture and office hours



Homework Review

Assignment #6

Assignment #7

Assignment #8

Download the assignment guides from

<https://journ220.github.io>

These are guides, not answers, because there are multiple ways to use HTML and CSS to end up with the same layout.

Tip: Check homework rubrics!

Homework Review

Assignment #6

Assignment #7

Assignment #8

- Review [homework rubric](#)
- Open **assignment6_guide**

Homework Review

Assignment #6

Assignment #7

Assignment #8

Simple, single-column layouts: Use a combo of percentage, max-width, and auto margins, but NOT in `html` or `body`.

CSS

```
html, body {  
  font: normal 16px/1.2 'Helvetica', sans-serif;  
}  
  
.container {  
  width: 90%;  
  max-width: 650px;  
  margin: auto;  
}
```

Homework Review

Assignment #6

Assignment #7

Assignment #8

- Review [homework rubric](#)
- Open **assignment7_guide**

Homework Review

Assignment #6

Assignment #7

Assignment #8

- Review [homework rubric](#)
- Open **assignment8_guide**

Homework Review

Assignment #6

Assignment #7

Assignment #8

When using **simple-grid.css**, place the file above **main.css**.

HTML

```
<!-- omitted for space -->
<head>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width,initial-scale=1">
  <title>Title TK</title>
  <meta name="description" content="Description TK">
  <!-- styles -->
  <link rel="stylesheet" href="./styles/simple-grid.css">
  <link rel="stylesheet" href="./styles/main.css">
</head>
<!-- omitted for space -->
```

Homework Review

Assignment #6

Assignment #7

Assignment #8

Alt text for thumbnail images: Use a VERY short description. If an image is small for sighted people, the equivalent would be brief text for blind and hard-of-sight people.

What questions do you have?

CSS Selectors

CSS Selectors

Download and open zip file shared in slack

CSS Selectors

#headline

.byline

p.canAdopt

- Logic: If the element is a `<p>` tag with the class of `canAdopt`
- Syntax: No spacing between tag and class name

figure img

- Logic: If the `img` is nested inside of a `figure`
- Syntax: Spacing between both tags

CSS Selectors

`.kittenInfo .canAdopt`

- Logic: If the second class is nested in an element with the first class
- Syntax: One space between classes

`.kittenInfo, .canAdopt`

- Logic: If the element contains either class
- Syntax: A comma between classes

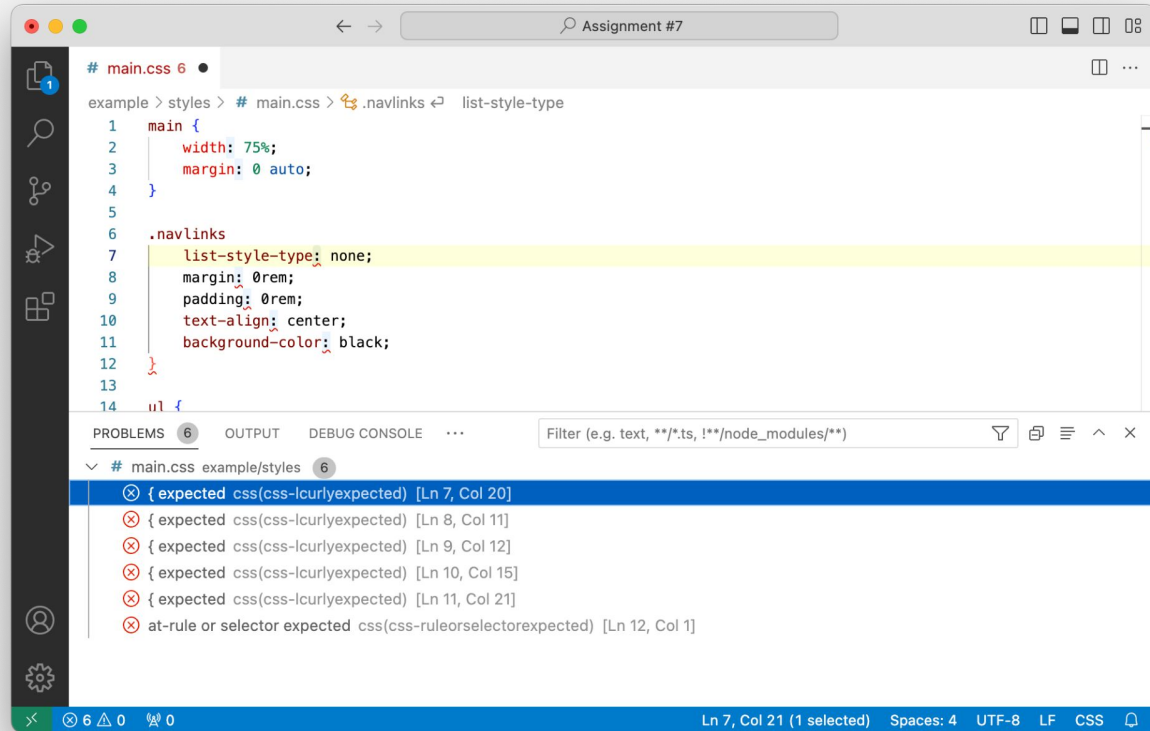
`.kittenInfo.canAdopt`

- Logic: If an element has both classes listed
- Syntax: No space between classes

CSS Game

Useful VS Code tools and extensions

VS Code > View > Problems

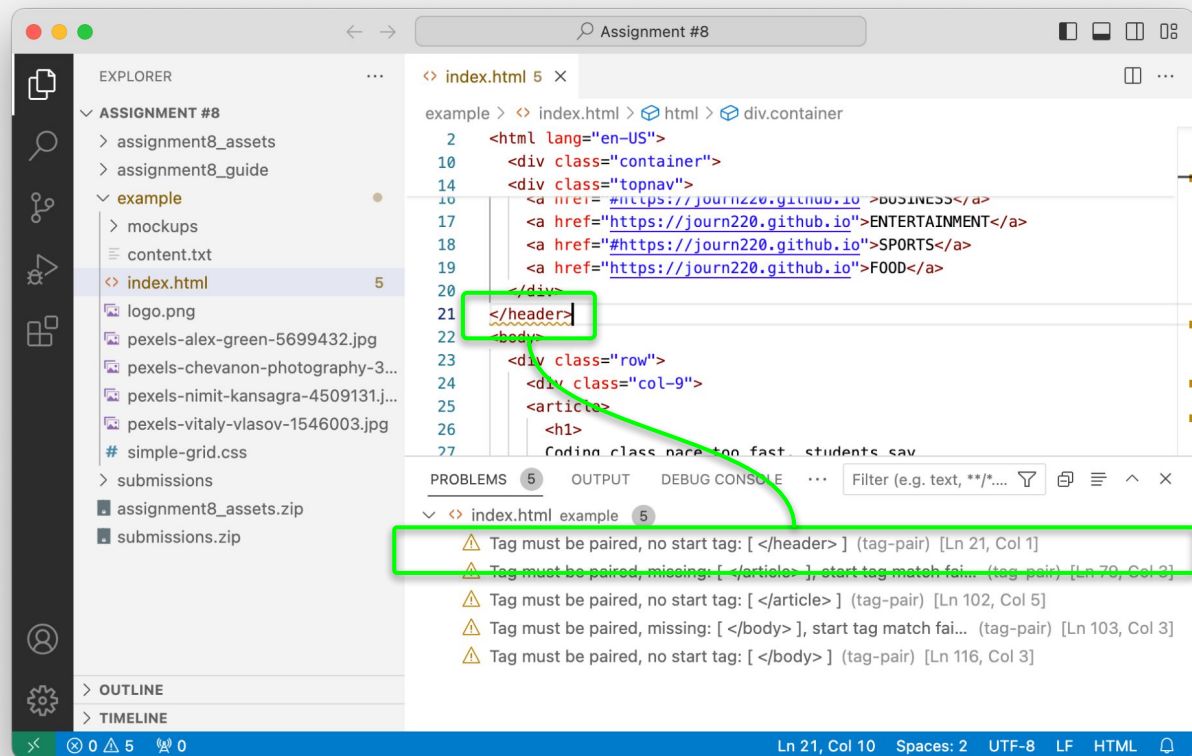


Built-in error check for VS Code.

Works for **CSS** and **JavaScript**.

Does NOT work for **HTML**. We'll install something next for that!

HTMLHint

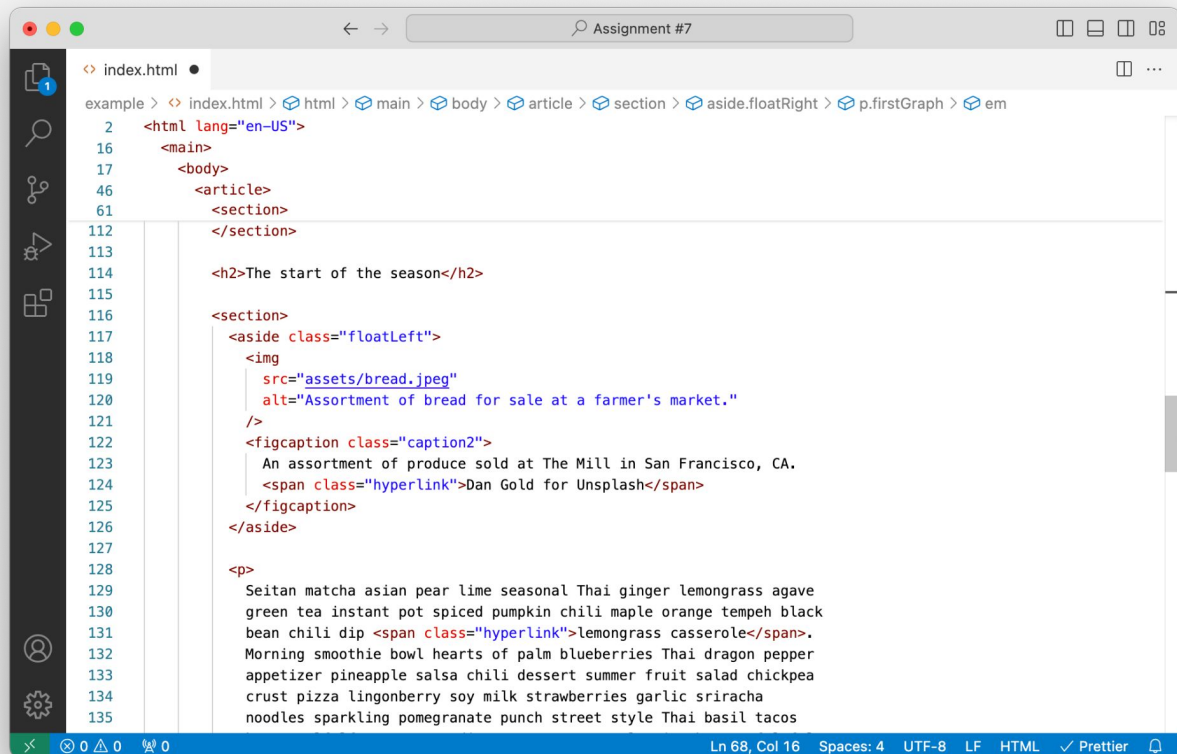


Points out missing elements, unclosed HTML tags.

After installing HTMLHint, go to **View > Problems**

HTMLHint won't catch all mistakes! Do you see something wrong in the screenshot?

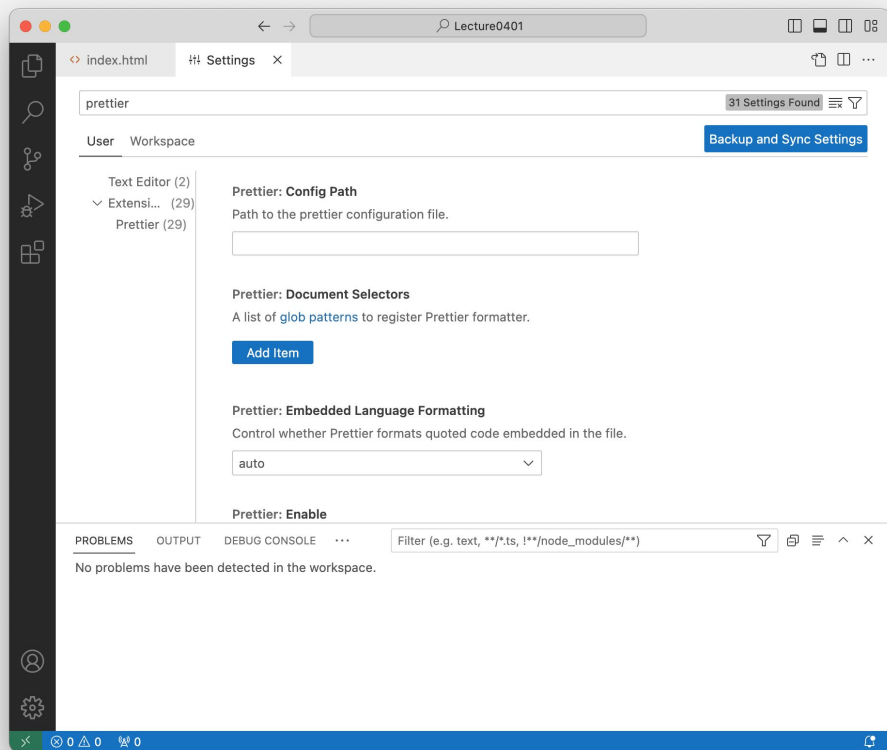
Prettier



Better than VS Code's native format option. Formats and indents your **HTML**, **CSS**, and **JavaScript**. Sometimes works only if your code doesn't contain errors.

After installing, go to **View > Command Palette > Format Document**

How to adjust Prettier settings



Code > Settings > Settings

Then search for “prettier” in the search bar.

Accessing VS Code's Command Palette

- **View > Command Palette**
- Or use these **hotkeys**:

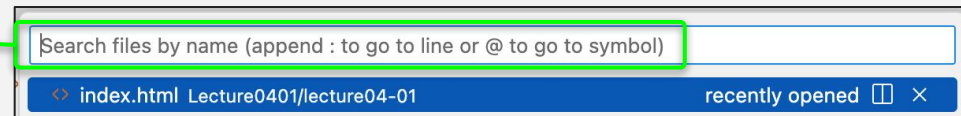
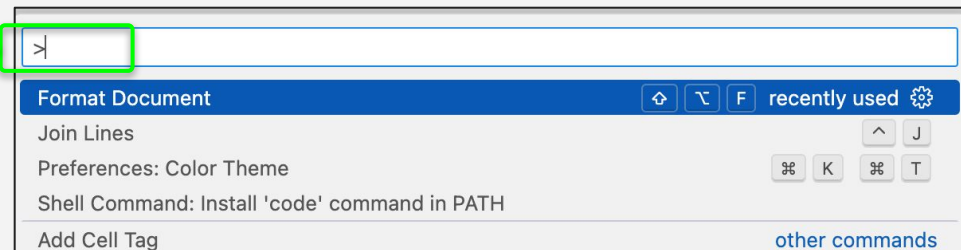


Accessing VS Code's Command Palette

Note that there's a “greater than” symbol (>) here.

If you delete the symbol, you can search for files instead.

This is a common accident if you can't “find” a command.



Break

Meet back in 15 minutes.

Zoom screenshare +
start Zoom recording

Intro to JavaScript

JavaScript

main.js, defer, async

comments

alert()

select and **change**
element

interact with element

debug with
console.log()

What is the DOM?

Use JavaScript to implement scrollytellers, provide interactivity on a page, or otherwise make a website dynamic.

Learning JavaScript is usually harder than learning HTML/CSS.

JavaScript is NOT Java.

Open lecture materials in VS Code

JavaScript

main.js, defer, async

comments

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console.log()

What is the DOM?

You can place **main.js** in a **scripts/** folder.

Include **main.js** in **index.html** by placing the following line in the **<head>** tag:

```
<!DOCTYPE html>
<html class="html" lang="en">
<head>
  <meta charset="utf-8">
  <!-- omitting content for space -->
  <link rel="stylesheet" href="./styles/main.css">
  <script defer src="./scripts/main.js"></script>
</head>
<!-- omitting content for space -->
```


JavaScript

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What is the DOM?

```
<script defer src="../scripts/main.js"></script>
```

Use the **async** keyword to run **main.js** as soon as **main.js** is downloaded. The rest of the HTML will continue to be parsed at the same time.

Use the **defer** keyword to run **main.js** after the browser has parsed the HTML file.

If you don't use a keyword, **main.js** will run before the rest of the HTML is parsed.

Open **defer_async.html**

JavaScript

main.js, defer, async

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What is the DOM?

Use **two forward slashes** for a single-line comment or a **slash and asterisk combo** for multi-line comments.

```
// Here's a comment. It will only work on one line.  
// If you write a new line of text, that text  
// will not be commented unless you start the new  
// lines with two slashes.
```

```
/*  
This is a comment with multiple line breaks.  
See?  
Everything within the slash-and-asterisk combo will be  
commented out.  
*/
```

JavaScript

main.js, defer, async

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What is the DOM?

Use **two forward slashes** for a single-line comment or a **slash and asterisk combo** for multi-line comments.

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```
This is a comment with multiple line breaks.  
See?
```

```
Everything within the slash-and-asterisk combo will be  
commented out.
```

```
*/
```

Open **main.js**

JavaScript

main.js, defer, async

comments

alert()

select and **change**
element

interact with element

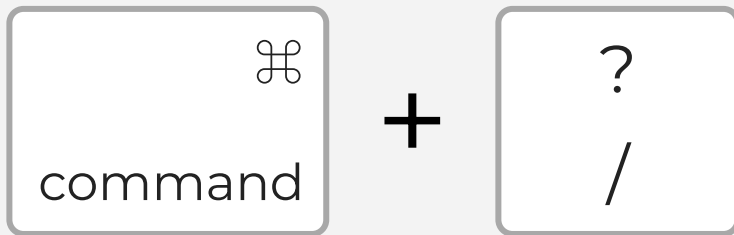
debug with
console.log()

What is the DOM?

VS Code tip: Use

 **command** – forward slash

to comment out code. You can also
select multiple lines of code and
comment them all out at once.



JavaScript

main.js, defer, async

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What is the DOM?

Write the following in **main.js**:

```
// Open a dialog box  
alert("Hello, world!");
```

Our first line of JavaScript!

JavaScript

`main.js, defer, async`

`comments`

`alert()`

select and **change**
element

interact with element

debug with
`console.log()`

What is the DOM?

Knowing the difference between HTML tags, **class**, and **id** is very important in JavaScript.

Remember: use **class** when you want to apply a style to multiple elements. Use **id** when you want to style ONE element. Use tags when you want to style every element using that tag.

JavaScript

main.js, defer, async

comments

alert()

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console.log()

What is the DOM?

Selecting an element by *id*:

```
document.getElementById(id);
```

Example:

HTML

```

```

JavaScript

```
document.getElementById('heroImage');
```

Note: In CSS, you would use a hash # to select an *id*. You don't do this in JavaScript!

JavaScript

main.js, defer, async

comments

alert()

select and **change**
element

interact with element

debug with

console.log()

What is the DOM?

Selecting an element with CSS *querySelector*:

```
document.querySelector(query);
```

Example:

HTML

```

```

JavaScript

```
document.querySelector('#heroImage');
```

This will select the **FIRST** element that matches the CSS query.

JavaScript

main.js, defer, async

comments

alert()

select and **change**
element

interact with element

debug with
console.log()

What is the DOM?

How would we select...

HTML

```
<!-- ... -->
<body>
  <h1>Main headline</h1>

  <h2 id="subhed-1">This is my first subhed</h2>
  <p>Lorem ipsum dolor sit amet, adipiscing elit.</p>

  <h2 id="subhed-2">This is my second subhed</h2>
  <p>Lorem ipsum dolor sit amet, adipiscing elit.</p>

<!-- ... -->
```

Main headline

- `document.getElementById('h1');` 0%
- `document.querySelector('#h1');` 0%
- `document.querySelector('h1');` 0%
- `alert("select");` 0%
- None of the above 0%



Start the presentation to see live content. For screen share software, share the entire screen. Get help at pollev.com/app

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  <h2 id="subhed-2">This is my second subhed</h2>
  <p>Lorem ipsum dolor sit amet, adipiscing elit.</p>
<!-- ... -->
```

subhed 1

 0

`document.getElementById('h2');`

0

`document.getElementById('subhed-1');`

0

`document.querySelector('h2');`

0

`document.querySelector('#subhed-1');`

0

None of the above

0



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What is the DOM?

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  <h2 id="subhed-2">This is my second subhed</h2>
  <p>Lorem ipsum dolor sit amet, adipiscing elit.</p>
<!-- ... -->
```

1st paragraph

Nobody has responded yet.

Hang tight! Responses are coming in.



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What is the DOM?

How would we select...

HTML

```
<!-- ... -->
<body>
  <h1>Main headline</h1>


  <h2 id="subhed-1">This is my first subhed</h2>
  <p>Lorem ipsum dolor sit amet, adipiscing elit.</p>

  <h2 id="subhed-2">This is my second subhed</h2>
  <p>Lorem ipsum dolor sit amet, adipiscing elit.</p>
<!-- ... -->
```

2nd paragraph

Nobody has responded yet.

Hang tight! Responses are coming in.



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JavaScript

main.js, defer, async

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alert()

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element

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console.log()

What is the DOM?

Now that you can select an element, you can change it:

HTML: **select_change_interact.html**

```
<h1>Main headline</h1>
```

JavaScript: **select_change_interact.js**

```
document.querySelector('h1').innerHTML = 'This is my  
headline.';
```

HTML in browser: Inspect **select_change_interact.html**

```
<h1>This is my headline.</h1>
```

JavaScript

main.js, defer, async

comments

alert()

select and **change**
element

interact with element

debug with
console.log()

What is the DOM?

You can also change the color of your headline in JavaScript instead of CSS:

JavaScript

```
document.querySelector('h1').innerHTML = 'This is my  
headline.';  
  
document.querySelector('h1').style.color = 'red';
```

Open lecture materials

JavaScript

main.js, defer, async

comments

alert()

select and **change**
element

interact with element

debug with
console.log()

What is the DOM?

Use an **event listener** to make something happen when you interact with an element. Below, we “listen” for a “click” on an element with an ID of “alert”:

```
document.getElementById('alert').addEventListener('click',  
function(event) {  
    alert('Hello!');  
});
```

We call the functions inside the event listeners “**event handlers**.”

Open lecture materials

JavaScript

main.js, defer, async

comments

alert()

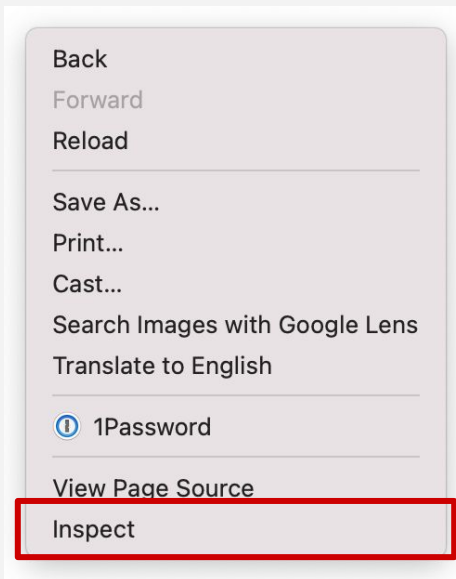
select and **change**
element

interact with element

debug with
`console.log()`

What is the DOM?

Right-click in your browser window and select **Inspect**:



JavaScript

main.js, defer, async

comments

alert()

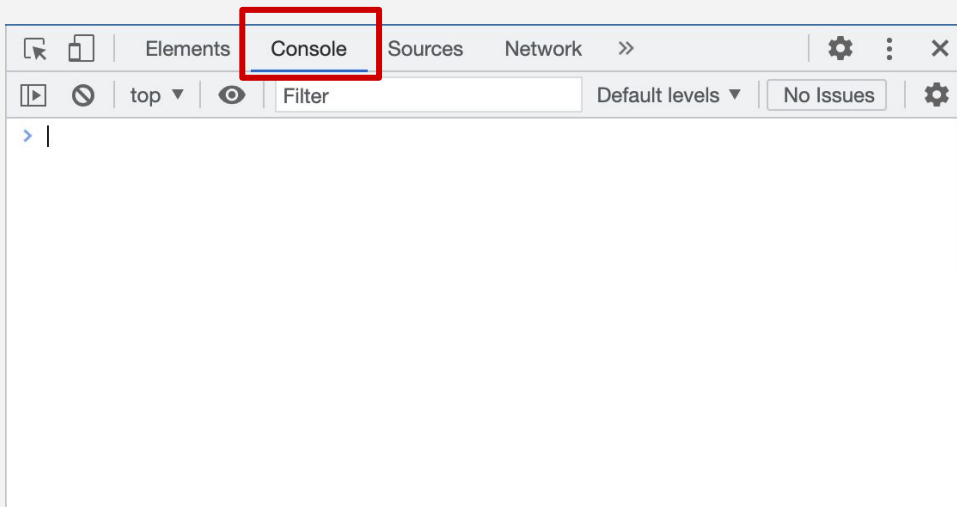
select and **change**
element

interact with element

debug with
`console.log()`

What is the DOM?

In the resulting panel, click on the **Console** tab:



JavaScript

main.js, defer, async

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alert()

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debug with
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What is the DOM?

Going back to the previous “interact” exercise, try out the different lines of code and see what happens in the Console tab of your browser window.

```
console.log(document.getElementById('alrt'));  
console.log(document.getElementById('alert'));  
console.log(document.getElementById('alert').clientWidth);  
console.log(document.getElementById('alert').clientHeight);
```

Open lecture materials

JavaScript

main.js, defer, async

comments

alert()

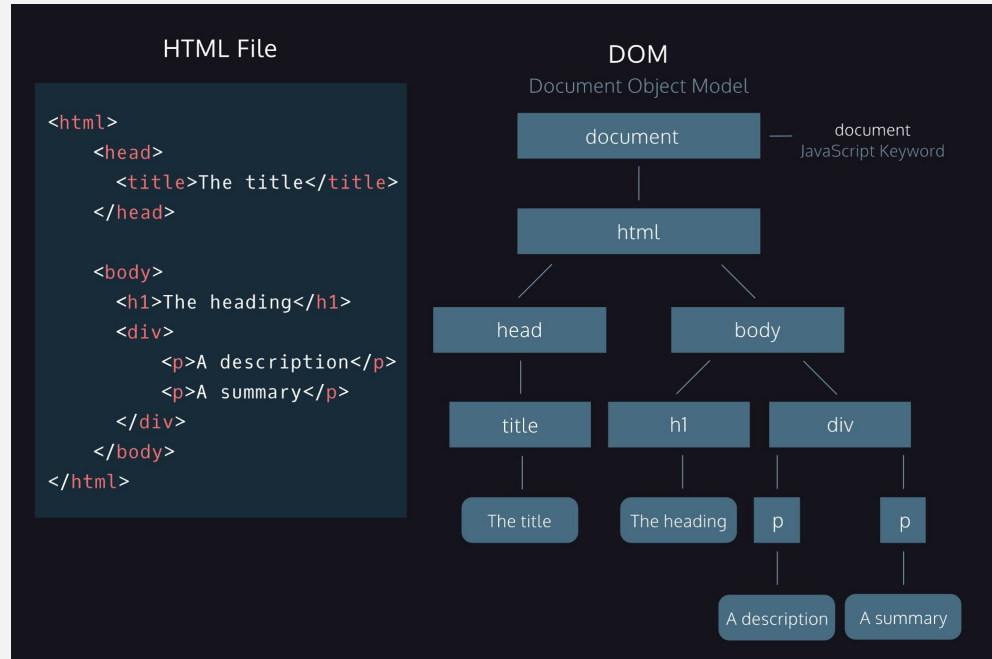
select and **change**
element

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What is the DOM?

DOM stands for **D**ocument **O**bject
Model.



JavaScript

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console.log()

What is the DOM?

It's the representation of a web document as a **data structure**.

You'll have to understand the DOM in order to do more complex things in JavaScript. If you want to understand data structures, take J233 in the fall!

Change or access an element with the various methods listed here:

<https://developer.mozilla.org/en-US/docs/Web/API/Element>

Homework

<https://journ220.github.io>

- Book [final project check-in](#) office hours if you haven't yet.
- [Assignment #9: CSS/JavaScript](#) (short 10-point assignment) due Sunday, April 7.
- [Final Project Wireframe](#) due Sunday, April 14. Review rubric.

**Please help
clean up:** close
windows,
return tables,
etc.