FEWD WEEK 2 • CLASS 3:

CSS Core Concepts

https://slides.com/jennifermeade/fewd-2-3/live

A QUIZ TOO?!?

SHOW OF HANDS: About Your Assignment

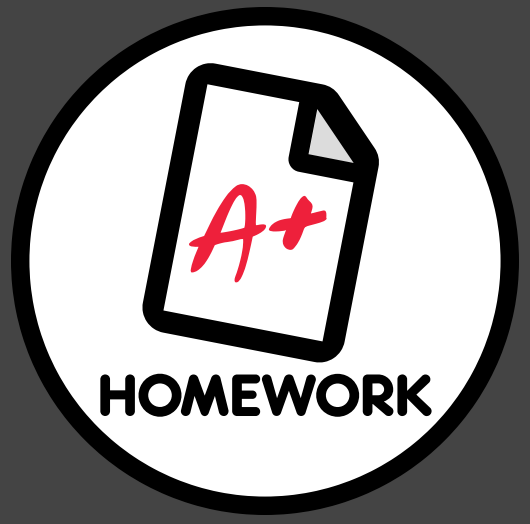
Were you able to successfully complete the homework following the instructions?

- [ ] Nailed It!
- [ ] Ummm... you gave us the answers... not that I'm saying I looked at them...
- [ ] Wait, there was homework?

YOUR HOMEWORK

- You did an amazing job no matter how far you got.
- Last week we covered massive amounts of HTML; about **60%** of all of the CSS2.1 spec feature; and a little CSS3!
- After we review the assignment, we need to learn how to submit them via GitHub.

HOMEWORK REVIEW



OBJECTIVES

- Working with GitHub to submit assignments
- CSS Selectors in depth
- Demystifying cascade and inheritance

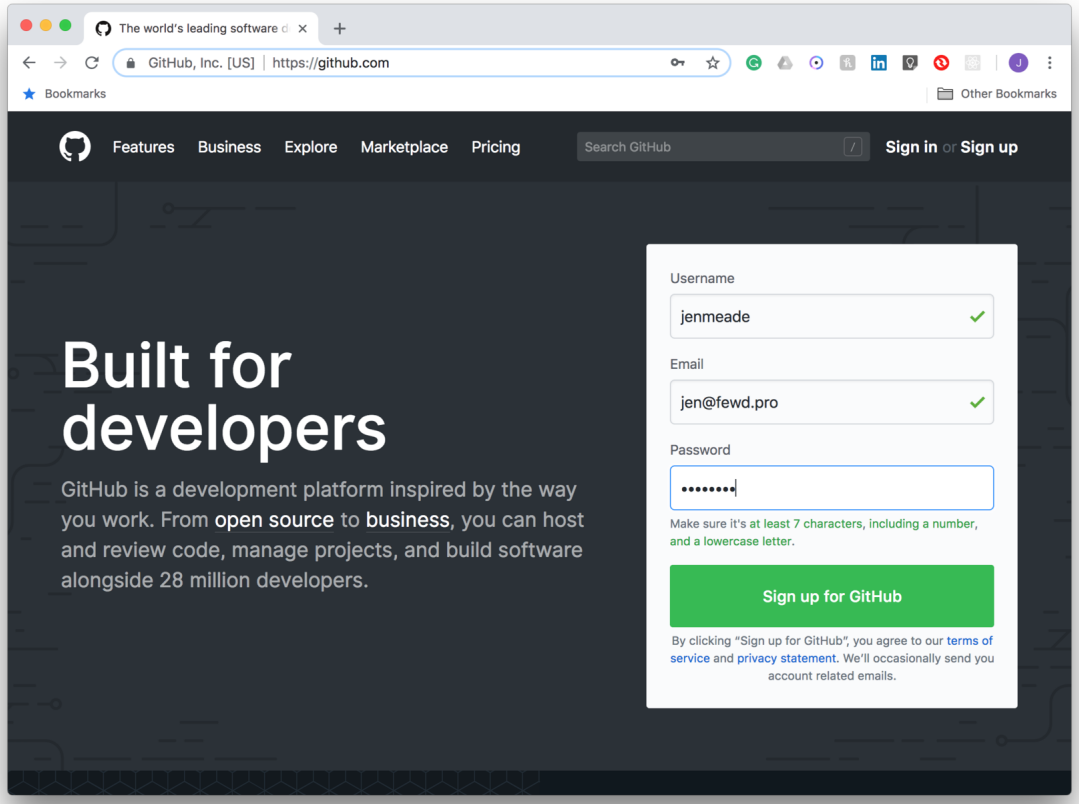
SUBMITTING YOUR ASSIGNMENTS

Or... Let's Learn GitHub!!!

WHAT IS GITHUB PAGES?

GITHUB ACCOUNT

If you don't already have a GitHub account, create one now.

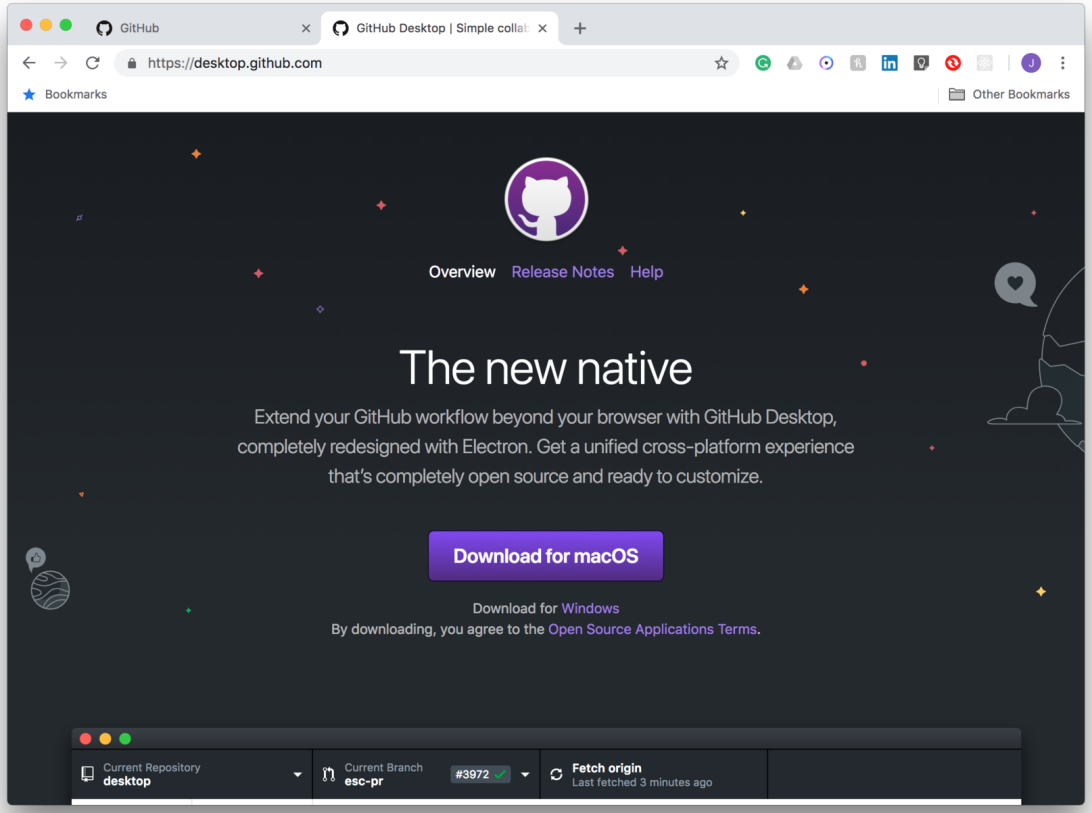


GitHub

1. Sign up at **github.com**.
2. Select the free plan.
3. Verify your email.

DOWNLOAD GITHUB DESKTOP

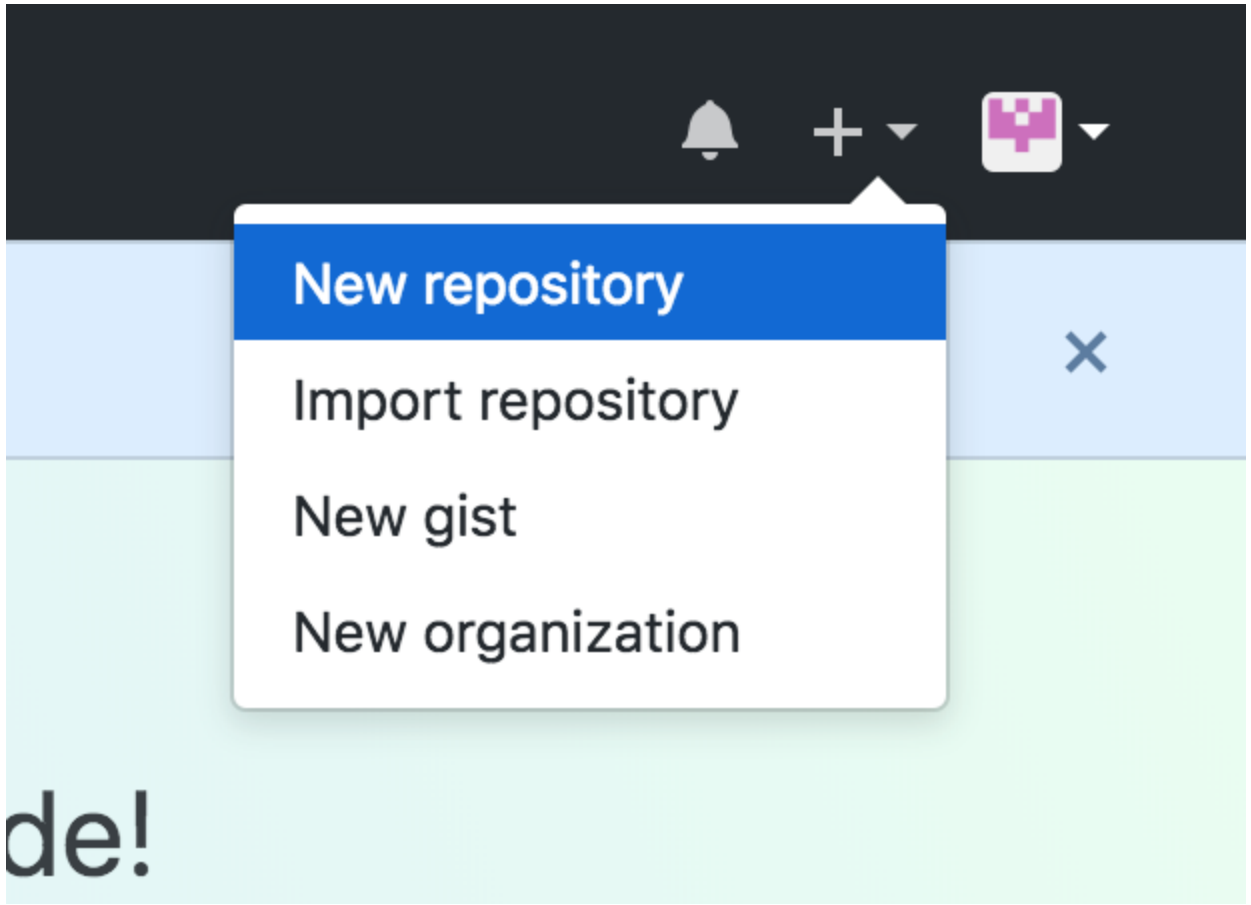
Download and install Github Desktop.



1. Download the installer: **desktop.github.com**
2. Launch the installer and follow the onscreen prompts.

CREATE A REPOSITORY

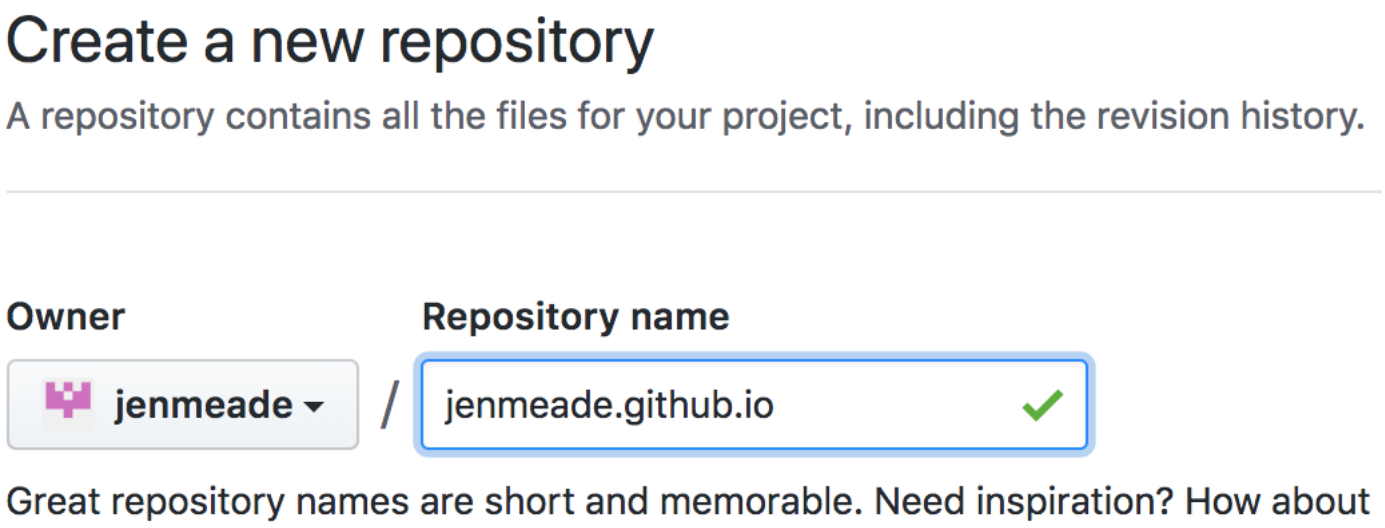
Back in GitHub, click the **plus** symbol in the upper right corner and choose **New repository**.



GitHub

NAMING YOUR REPO

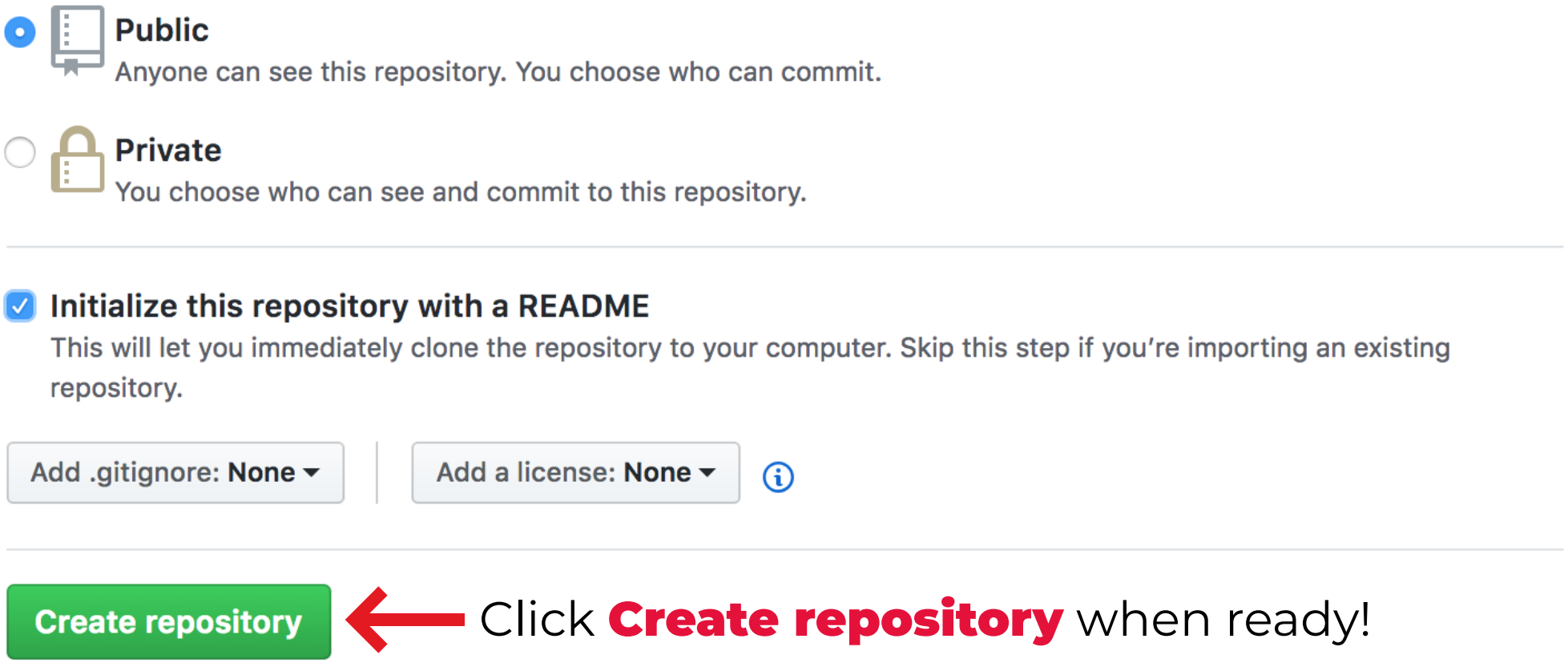
Enter the name of the repository as:
your-username.github.io



Make sure your username and repository name match exactly!

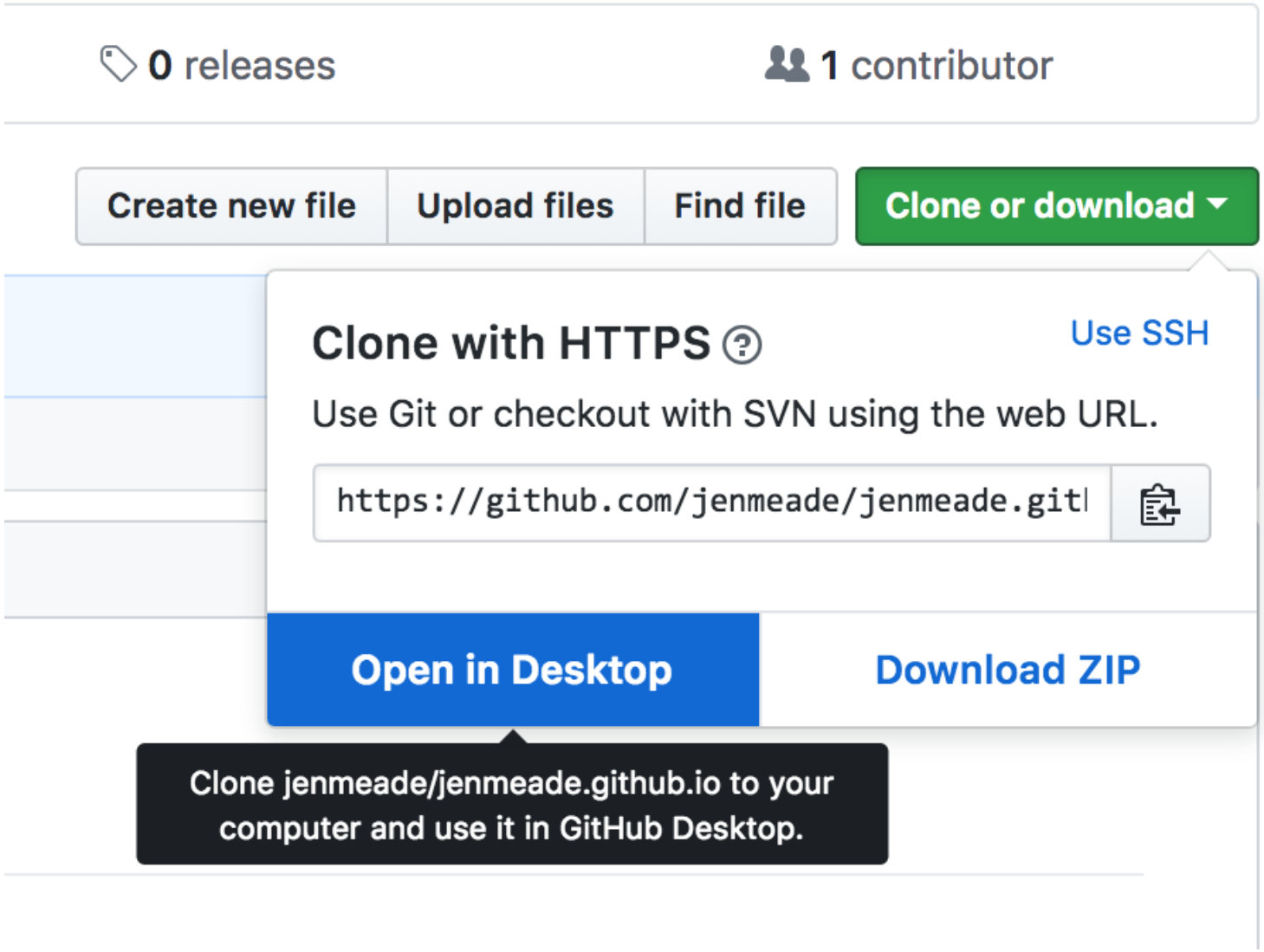
INITIALIZING YOUR REPO

Set the repo to **Public** and select **initialize this repository with a README option**.



Click **Create repository** when ready!

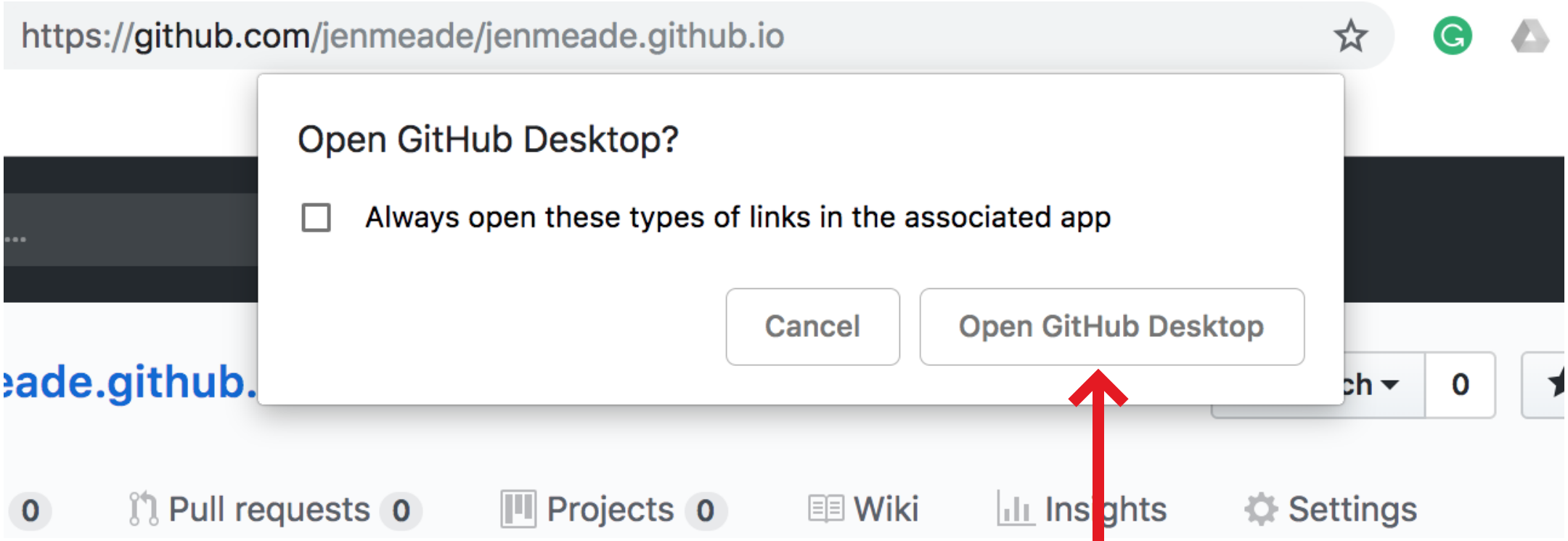
SETTING UP YOUR WEBSITE



Click **Clone or download**

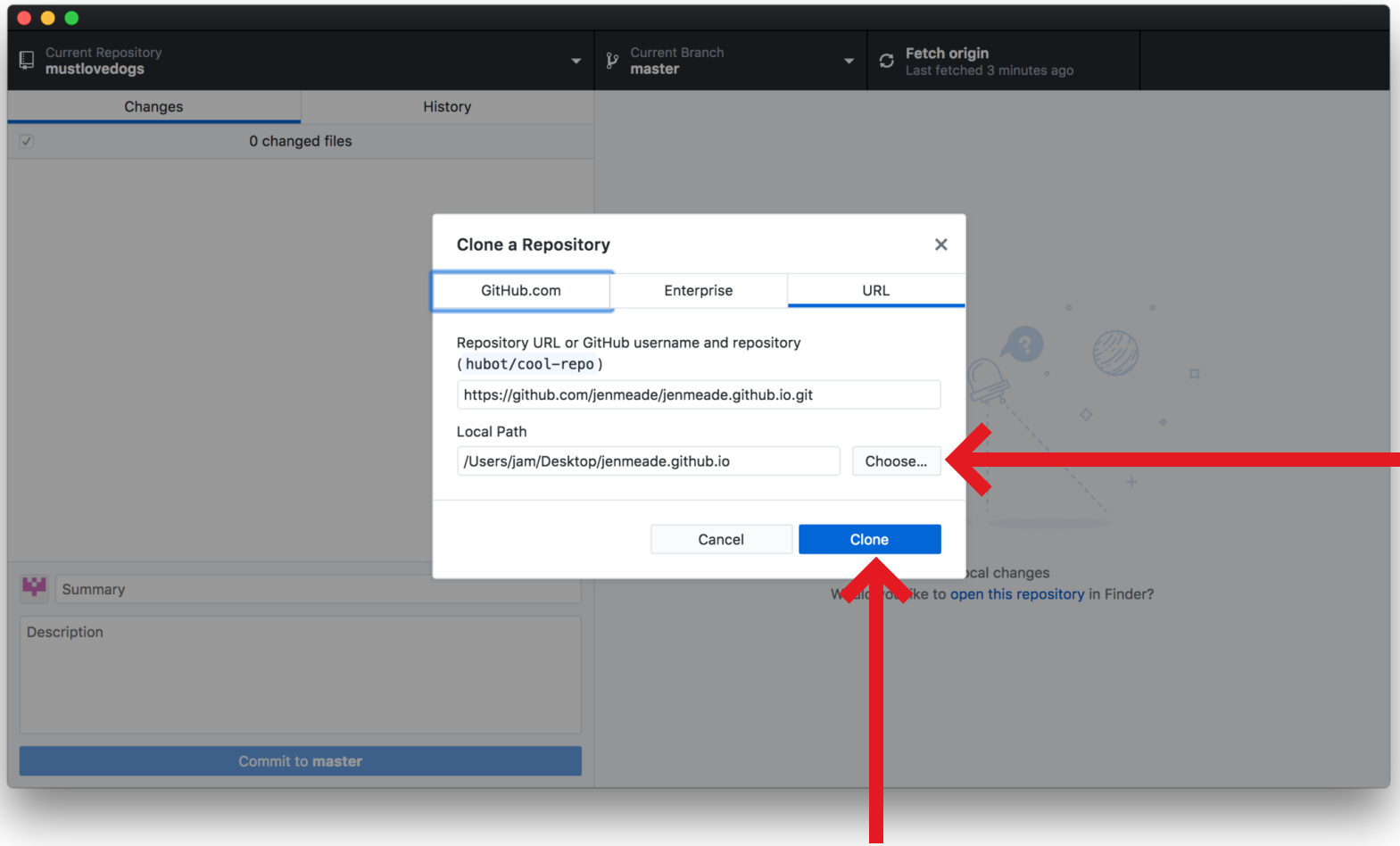
Click **Open in Desktop**

ACCEPT ANY WARNINGS



Click **Open GitHub Desktop**

CHOOSE A LOCATION FOR YOUR LOCAL REPO



Click **Choose...**

GitHub Desktop creates the folder, so just choose where you'd like to store the folder for your repo.

Click **Clone** when ready!

LET'S ADD A FILE

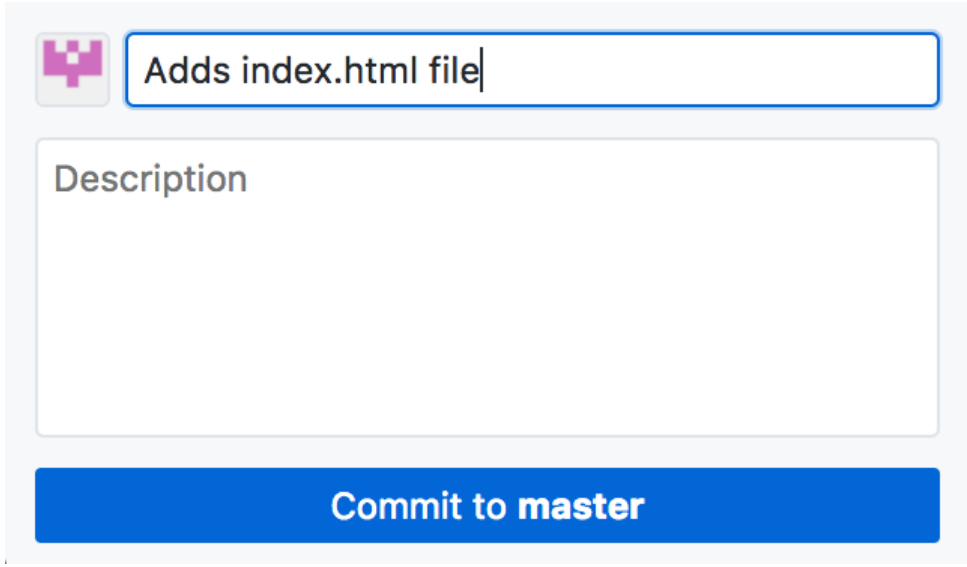
1. Drag the newly created folder on to Atom to launch it as a new project.
2. Right-click the folder in Atom and choose **New File...**
3. Name the file **index.html**.
4. Add your page boilerplate.
5. Add an h1 element and give the page a heading.
6. Save the file.

SYNC'ING UP WITH GITHUB

- Back in Github Desktop, you'll see that your new file addition is listed in the changes.
- Git will track all of the files you add, modify and delete from this folder making it easy to rollback changes if needed!
- To sync your changes with GitHub.com, you have to **commit** and then **push** the changes to the server.

GIT COMMIT

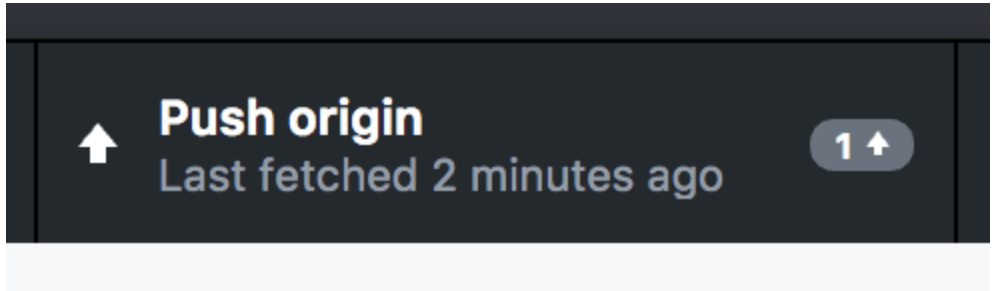
- In GitHub Desktop, add a commit message in the field at the bottom left
- After you add a message, click the **Commit to master** button



It's customary, to write commit messages in the present tense.

GIT PUSH

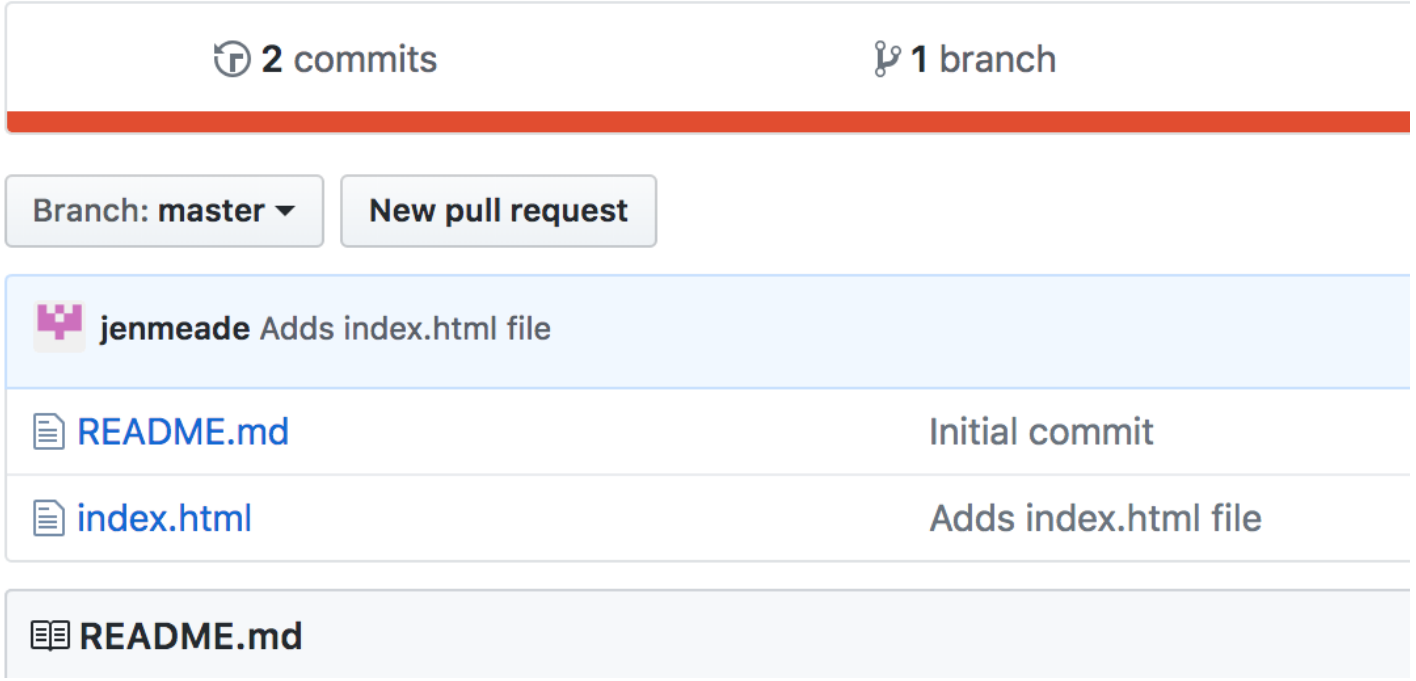
- To push the file to the server, you'll click the **Push origin** button on the right in the menubar



If the files have not been committed, you will not see the Push origin option.

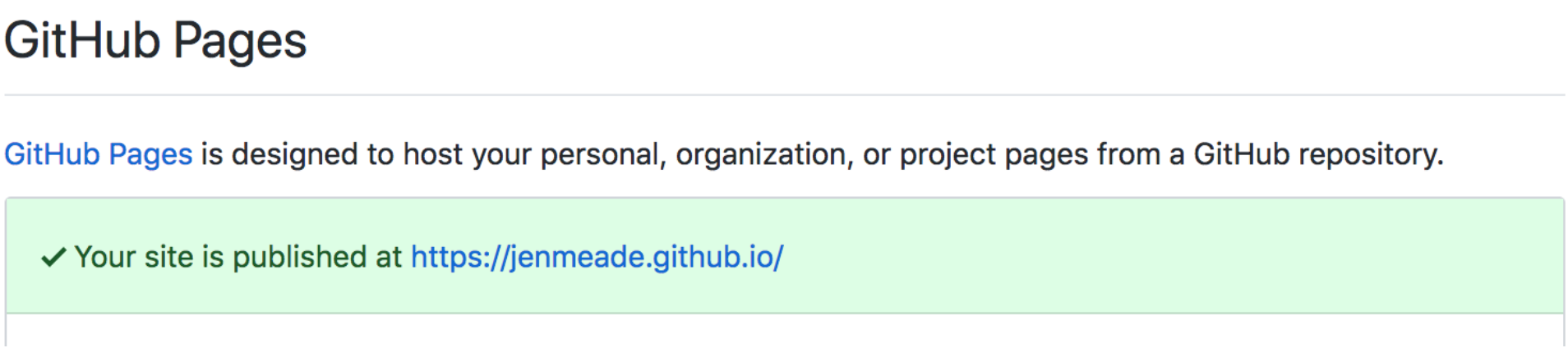
CHECK YOUR FILES ON GITHUB

- Refresh the repository page in your browser and you should now see your file!



CHECK OUT YOUR NEW WEBPAGE!

- Click the **Settings** tab on the top right.
- About halfway down the page under the heading **GitHub Pages**, is a link to your live site. Go ahead and click it...



LINKING TO YOUR HOMEWORK

- Back in Atom, add an **unordered list** to the index.html.
- Inside the first **list item** add an **anchor tag**.
- Inside the anchor, type: **Assignment #1**.
- Right-click on the project folder in Atom's navigator pane and choose **Add Folder**.
- Name the folder: **homework1**
- Link the **index.html** file that we'll put inside your homework folder using a relative path inside the anchor tag **href**.

ADDING YOUR HOMEWORK

- Go to the folder where you created your homework assignment.
- Copy the **index.html and the two folders** containing your css file and images.
- Navigate to your github.io folder and paste the files and folders directly into the homework1 folder you created.

TEST YOUR LINK

- Before syncing your files to GitHub on the web, let's test the homework link.
- Double-click on the main index.html file that is in your local github.io folder.
- Click the link to your homework to make sure it opens.

If the link doesn't work, check that the anchor tag is written as: `<a href="homework1/index.html">Assignment #1</a>` and that the folder is named correctly with no caps or spaces!

COMMIT AND PUSH

- Back in GitHub Desktop, the changes you made to the index.html and the new homework folder with its contents should display in the changes.
- Add a **commit message**, such as: Updates index.html and adds homework assignment #1.
- Click the **Commit to master** button.
- Click the **Push origin** button.

HOMEWORK IS SUBMITTED!

Next week, you get to do it yourself!

CSS SELECTORS IN DEPTH

CSS SELECTORS

1. **Element Tags** ✔
2. **Classes & IDs** ✔
3. Combinators
4. Attributes
5. Pseudo Classes

CLASSES & ID QUICK REVIEW

IDS

- An ID name is unique. It may only be used once on a page.
- An element may only have one ID

```
<div id="extra-special">
```

```
#extra-special {
...
}
```

CLASSES

- Classes are reusable as many times as you want
- An element can have as many classes as you want

```
<div class="big primary">
```

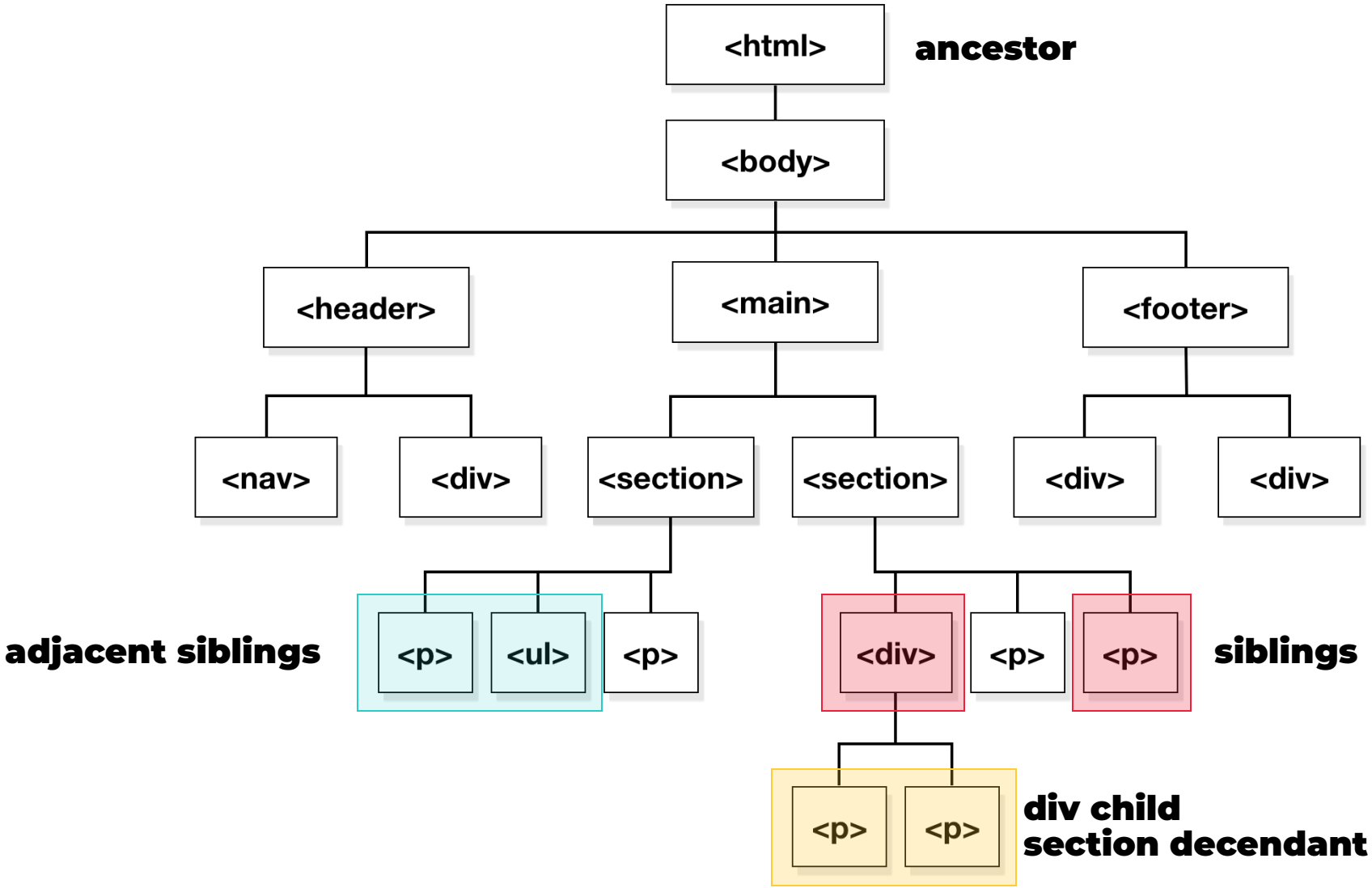
```
.primary {
  ...
}
.big {
  ...
}
```

COMBINATORS

UNDERSTANDING THE DOM

- The Document Object Model represents the page so that programs can change the document structure, style, and content.
- We can visualize our HTML as a DOM tree, sort of like a family tree visualizes the relationships between family members.

DOM: A WEBPAGE FAMILY TREE



CSS COMBINATORS

- CSS Combinators allow us to target elements on the page based on their relationship to one another.
- Combinators always follow the page source order.
- The target of the combinator selector is always the last element in the selector.

USING CSS COMBINATORS

- **Descendant** *space* : Applies to any matching descendants (**any number of levels below**) of the first selector.
- **Child** `>`: Applies only to matching children (only **one level below** the first selector) of the first selector.
- **General Sibling** `~`: Applies to any element that is a sibling of the first element, as long as it appears **after** the first element in the source order.
- **Adjacent Sibling** `+`: Must be the **very next sibling** in the source order following the first selector.

COMBINATORS IN ACTION

```
/* targets paragraphs that are descendants of divs */

div p {
  color: red;
}

/* targets paragraphs that are direct children of sections */

section > p {
  color: blue;
}

/* targets paragraphs are adjacent siblings of another paragraph */

p + p {
  background-color: yellow;
}

/* targets paragraphs are siblings of divs */

div ~ p {
  background-color: orange;
}
```

HEADS UP: It's always the **last** element that we're targeting.

USING COMBINATORS

ATTRIBUTES

ATTRIBUTE SELECTORS

- Attributes let us target elements by their attributes
- The main syntax for attributes is:

```
[attribute="value"] {
  /* styles here */
}
```

TARGETING ATTRIBUTES

```
/* Target the attribute that contains a value */

[title~="flower"] {
  /* styles for elements with title="flower" or title="Summer flower" */
}

/* Target the attributes that start with a value */

[href^="http://"] {
  /* styles for anchors that link to external addresses */
}

/* Target the attribute that ends with a value */

[class$="-box"] {
  /* matches classes like large-box and small-box */
}
```

ATTRIBUTE SELECTORS

PSEUDO CLASSES

PSEUDO CLASSES

- A CSS pseudo-class is a keyword added to a selector that specifies a special state of the selected element(s)
- For example, when an element is being hovered over, or when it is the first or last element in its parent

FIRST-CHILD

```
/* Selects any <p> that is the first element
   among its siblings */

p:first-child {
  color: lime;
}
```

- The element matching the selector **must** be the first element inside its parent
- There's a corresponding last-child

FIRST-OF-TYPE

```
/* Selects any <p> that is the first element
   of its type among its siblings */

p:first-of-type {
  color: red;
}
```

- Unlike the first-child, this element can be anywhere in the source order among its siblings so long as it is the first instance of that type of element
- There are last-of-type and only-of-type as well

NOT

```
/* Selects any element that has a class of blue
   and is NOT a paragraph */

.blue:not(p) {
  color: blue;
}
```

- The not pseudo class can be used on its own or in combination with other selectors

HOVER

```
/* Selects any <img> element when "hovered" */

img:hover {
  border: 5px solid blue;
}
```

- The hover pseudo class allows for powerful interactions without Javascript!

NTH-CHILD & NTH-OF-TYPE

```
/* Selects the 1st, 4th, 7th, 10th... div
   among any group of siblings */

div:nth-child(3n+1) {
  color: lime;
}
```

- The value in the paren can be **even**, **odd**, or a formula in the form of **An+b**
- The formula is calculated with every value of n starting with zero. So, (3*0)+1 = **1**, (3*1)+1= **4**, (3*2)+1= **7**, etc.
- To select just the 3rd element use `:nth-child(3)`

PSEUDO CLASSES

CASCADING & INHERITANCE

CASCADING & INHERITANCE

- Many CSS properties inherit their values from their ancestors and most accept a value of **inherit**
- Properties can be overridden when you provide a rule that has **more specificity**
- Any rules that are **not specifically overridden** continue to be inherited

SPECIFICITY

Specificity is a calculation based on the selectors used. Each type of selector is weighted:

1. Inline Styles (highest)
2. IDs
3. Classes & Attributes
4. Element Tags (lowest)

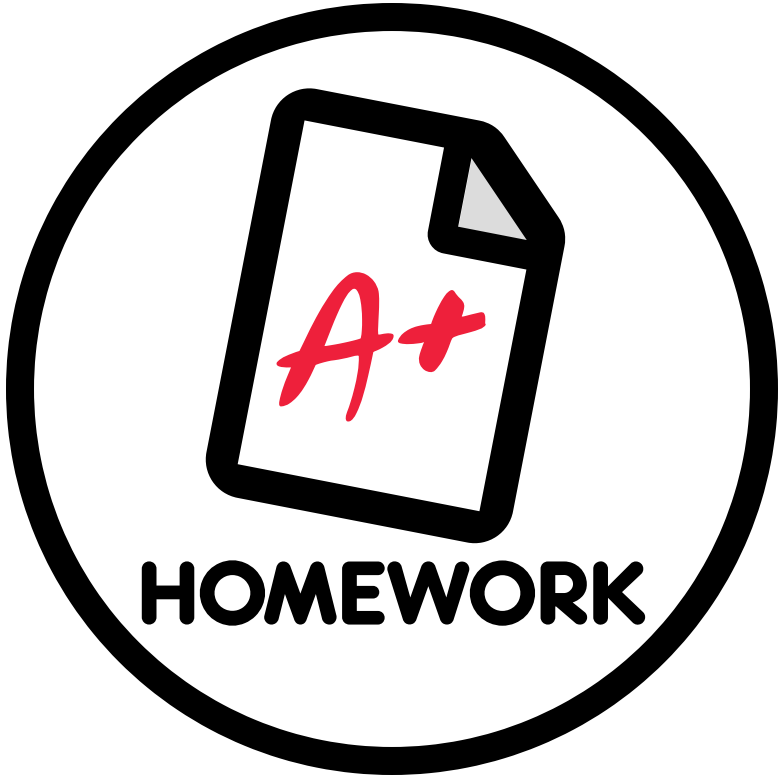
CALCULATING SPECIFICITY

	inline	id	class	element
`#main-nav > a.nav-item { background-color: red; }`	0	1	1	1
`header > nav .nav-item { background-color: blue; }`	0	0	1	2
`header nav#main-nav > a.nav-item { background-color: green; }`	0	1	1	3

WHEN SPECIFICITY MATTERS

- When there are multiple rules that contradict one another, the specificity is calculated to determine which is applied.
- For identically weighted rules, the last declaration for wins!
- Inline styles trump **almost** all others.
- One exception is the special `!important` attribute.

GUESS WHICH?



WEEK 1 HOMEWORK

https://github.com/jmeade11/FEWD/Class3/homework

HOMEWORK FOR NEXT CLASS

- Read this article on **Margin Collapse** (https://www.sitepoint.com/collapsing-margins/)
- Add some spice to your homework homepage... Be creative and make it your own!

EXIT SURVEY

https://goo.gl/EB4XFw

GO BUILD AWESOME THINGS!