



Workshop

Build and Deploy Your First Website

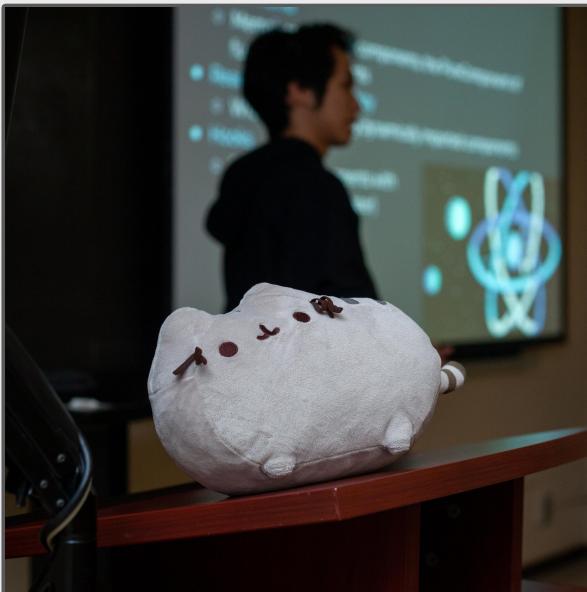
MLH localhost

Welcome to *MLH Localhost: Build and Deploy Your First Website!*



Event Hashtag:
#MLHLocalhost

Twitter Handle:
@MLHacks



Welcome! My name is Frederic.

- 1 I'm here to lead this session & help you learn something new today!**
- 2 I'm a 3rd year CS student doing a CS specialist**
- 3 I'm the front-end developer for CSEC, and the tech lead for Hack The Valley IV**

1

*Using your Web Browser,
Open this URL & Fill out the Form:*

<http://mlhlocal.host/checkin>

2

Afterwards, Check your Email to Find:

- Setup Instructions
- An Invite to the MLH Slack
- The Code Samples
- A Workshop FAQ
- These Workshop Slides
- More Learning Resources



Our Mission is to Empower Hackers.

65,000+
HACKERS

12,000+
PROJECTS CREATED

400+
CITIES

We hope you learn something awesome today!
Find more resources: <http://mlh.io/>

What will you **learn today?**

1

Structure and Syntax of HTML and CSS

2

Important HTML Elements and CSS Properties

3

How to Deploy Your Website

Why does this matter?

1

HTML and CSS are used in every website!

2

HTML and CSS are the foundation of more complicated skills you may learn later.

3

Being able to deploy and share your personal website helps you market yourself and connect with other developers!

Table of Contents

-  **1.** Intro to HTML and CSS
- 2.** Add Content to Your Website
- 3.** Style Your Website
- 4.** Time to Customize!
- 5.** Review & Quiz
- 6.** Next Steps

What are we building today?

To preview the what you'll be building, go to this URL:

mlhlocal.host/first-website

Ada Lovelace

Hey, I'm Ada! I invented coding, basically.

about

I was born in 1815 and died in 1852. I eventually went on to become the logo for Major League Hacking's 2016 Season. During my life, I worked with Charles Babbage on the earliest computing devices and the predecessor to whatyou call software today.



projects

- **The Difference Engine**

The Difference Engine is the first project I worked on with Charles Babbage.

- **The Analytical Engine**

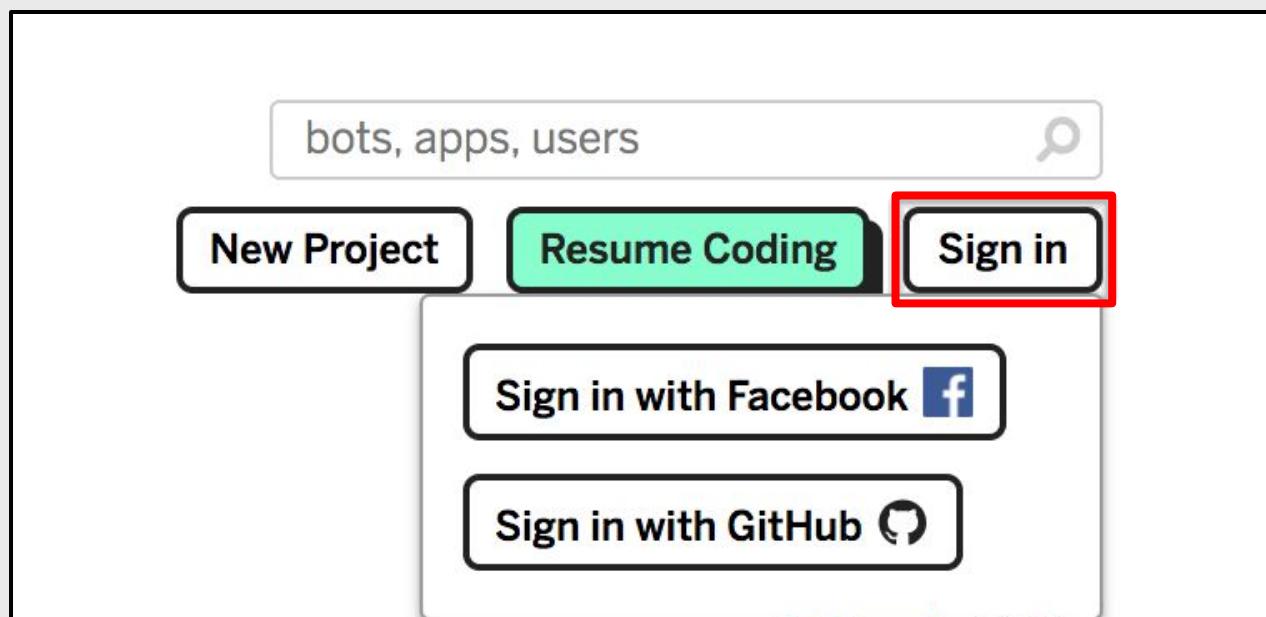
From 1842-1843, I translated Luigi Menabrea's article on Babbage's proposed "Analytical Engine."

- **The First Computer Program**

I am credited with writing the first ever published algorithm for computing. My work has been highlighted by many scientists! In 1990, Allan G. Bromley wrote about me in an article titled *Difference and Analytical Engines*. The programming language **Ada**, developed by the US government, is named after me.

Make an Account on Glitch

1. Go to [Glitch.com](https://glitch.com)
2. In the upper right hand corner, click **Sign in**
3. Choose how you would like to sign in.



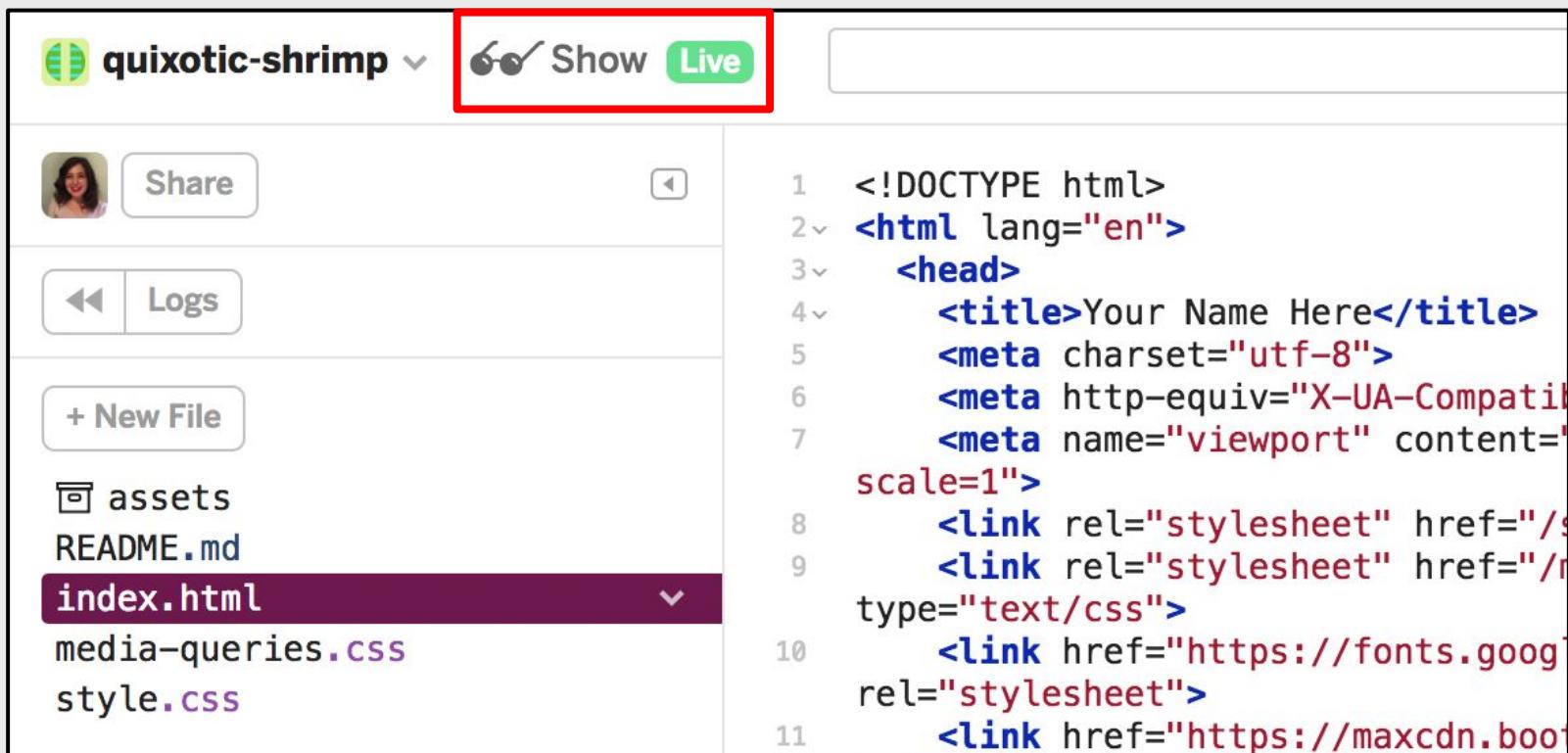
Remix the Starter Code

1. Go to mlhlocal.host/first-website-remix.
2. Scroll down.
3. Click **Remix your own**.



Preview the Website

1. Click **Show Live**. The website will open in another tab.



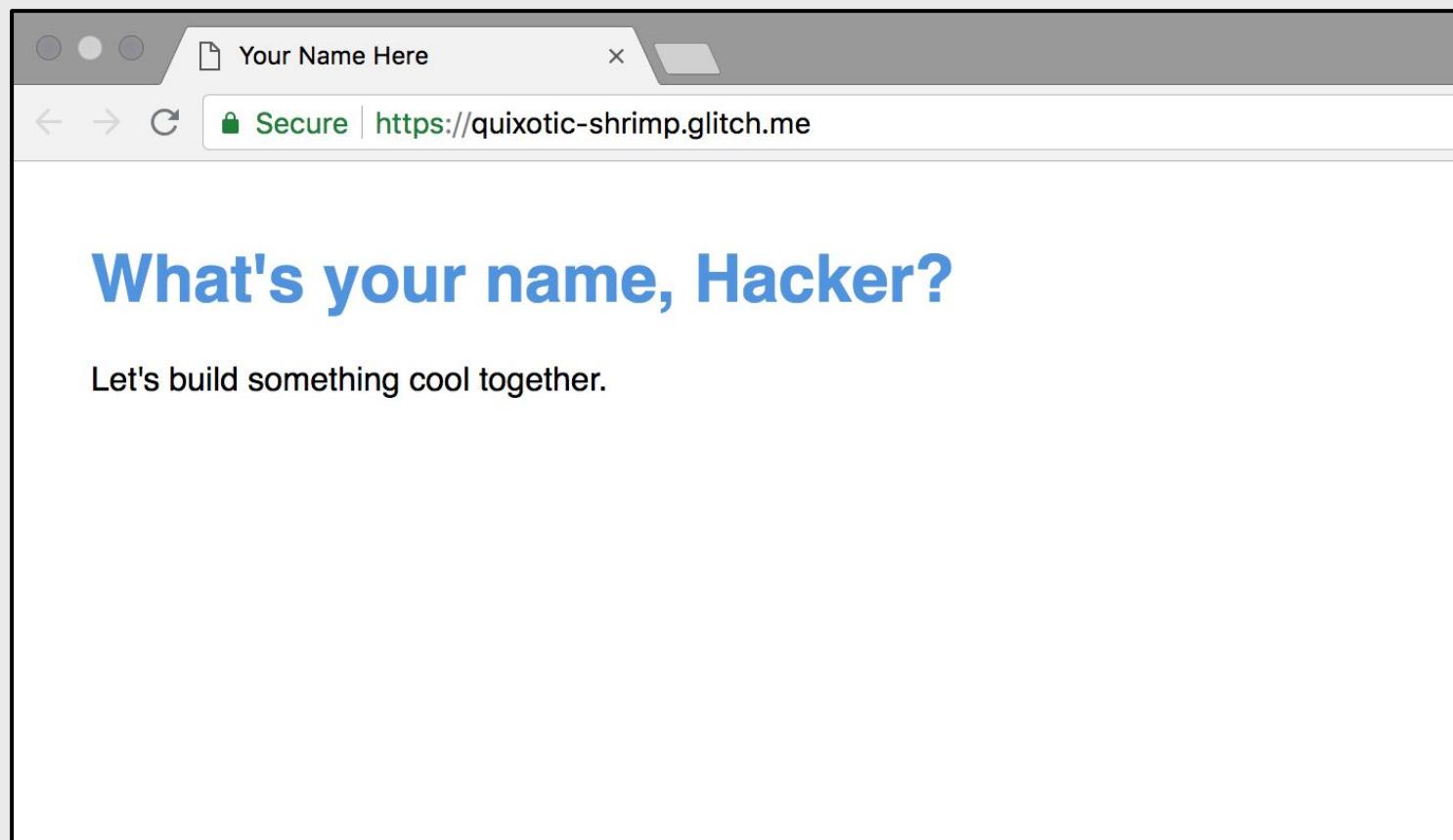
The screenshot shows a code editor interface with the following details:

- Project Name:** quixotic-shrimp
- Files:** index.html, media-queries.css, style.css
- Selected File:** index.html
- Toolbar Buttons:** Share, Logs, + New File
- Code Preview:** Shows the first 11 lines of the index.html file's code.

```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4  <title>Your Name Here</title>
5  <meta charset="utf-8">
6  <meta http-equiv="X-UA-Compatible" content="IE=edge">
7  <meta name="viewport" content="width=device-width, initial-scale=1">
8  <link rel="stylesheet" href="/css/style.css" type="text/css">
9  <link href="https://fonts.googleapis.com/css?family=Lato:400,700" rel="stylesheet">
10 <link href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0-alpha.6/css/bootstrap.min.css" rel="stylesheet">
11 <link href="https://maxcdn.bootstrapcdn.com/font-awesome/4.7.0/css/font-awesome.min.css" rel="stylesheet">
```

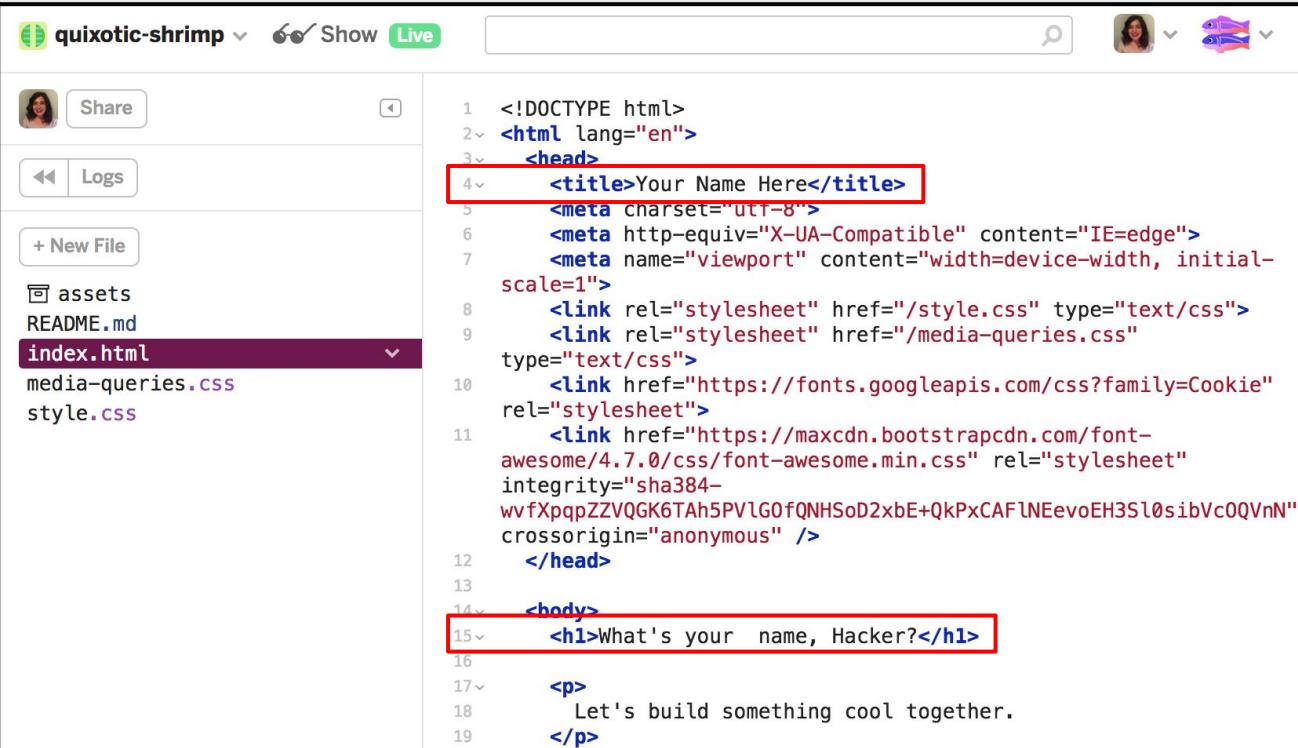
Preview the Website

2. This is what your website looks like right now. Let's change it!



Make Your First Changes

1. In the tab with your code, replace `Your Name Here` (line 4) and `What's your name, Hacker?` (line 15) with your name.
2. Check the tab with the live version to see the changes!



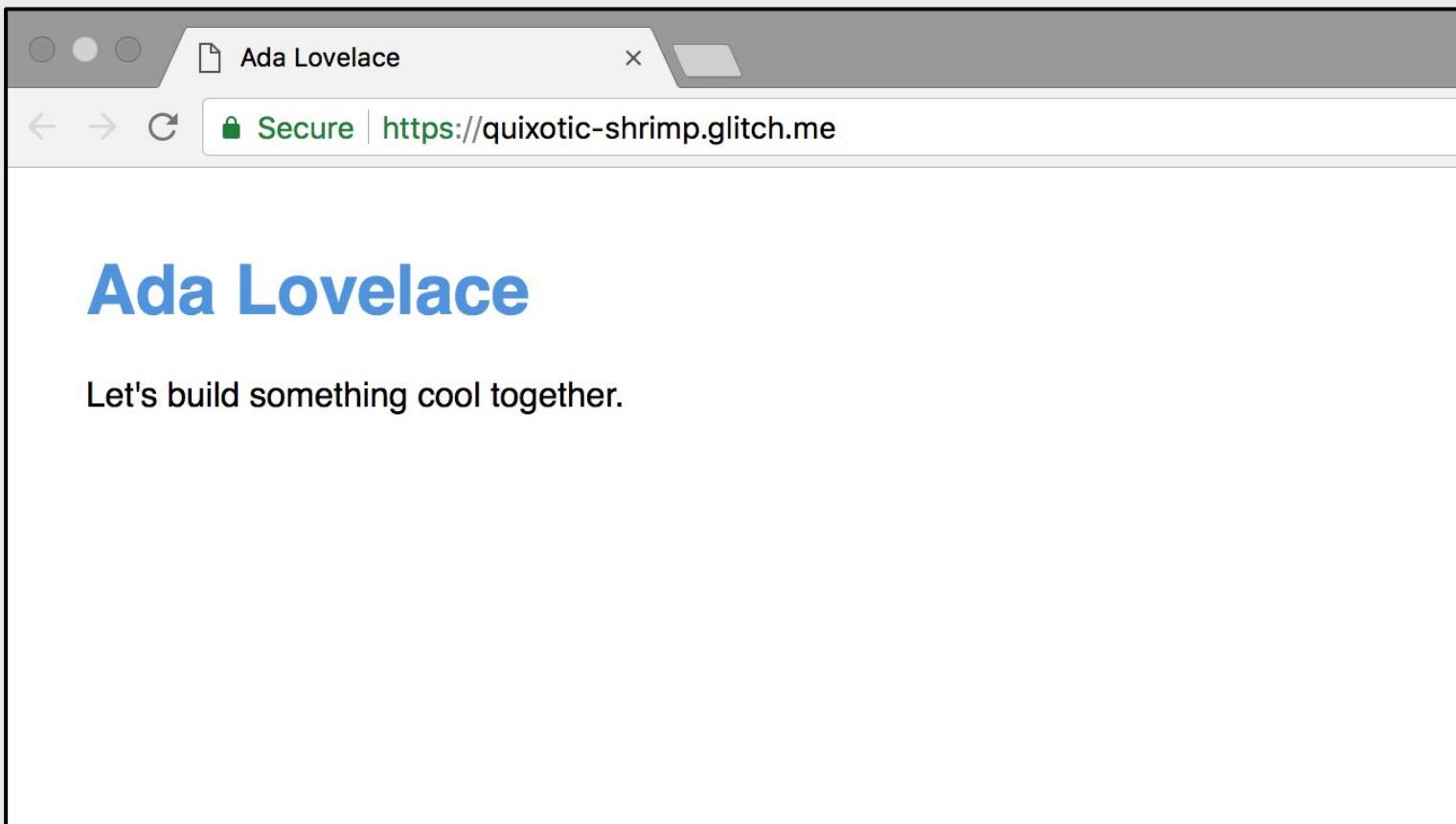
The screenshot shows a code editor interface with a sidebar on the left containing files: Share, Logs, + New File, assets, README.md, index.html (selected), media-queries.css, and style.css. The main area displays the contents of index.html:

```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4  <title>Your Name Here</title>
5  <meta charset="utf-8">
6  <meta http-equiv="X-UA-Compatible" content="IE=edge">
7  <meta name="viewport" content="width=device-width, initial-
scale=1">
8  <link rel="stylesheet" href="/style.css" type="text/css">
9  <link rel="stylesheet" href="/media-queries.css"
type="text/css">
10 <link href="https://fonts.googleapis.com/css?family=Cookie"
rel="stylesheet">
11 <link href="https://maxcdn.bootstrapcdn.com/font-
awesome/4.7.0/css/font-awesome.min.css" rel="stylesheet"
integrity="sha384-
wvfXppZZVQGK6TAh5PVlG0fQNHSoD2xbE+QkPxCAF1NEevoEH3Sl0sibVc0QVnN"
crossorigin="anonymous" />
12 </head>
13
14 <body>
15 <h1>What's your name, Hacker?</h1>
16
17 <p>
18     Let's build something cool together.
19 </p>
```

Two sections of the code are highlighted with red boxes: the title element at line 4 and the h1 element at line 15.

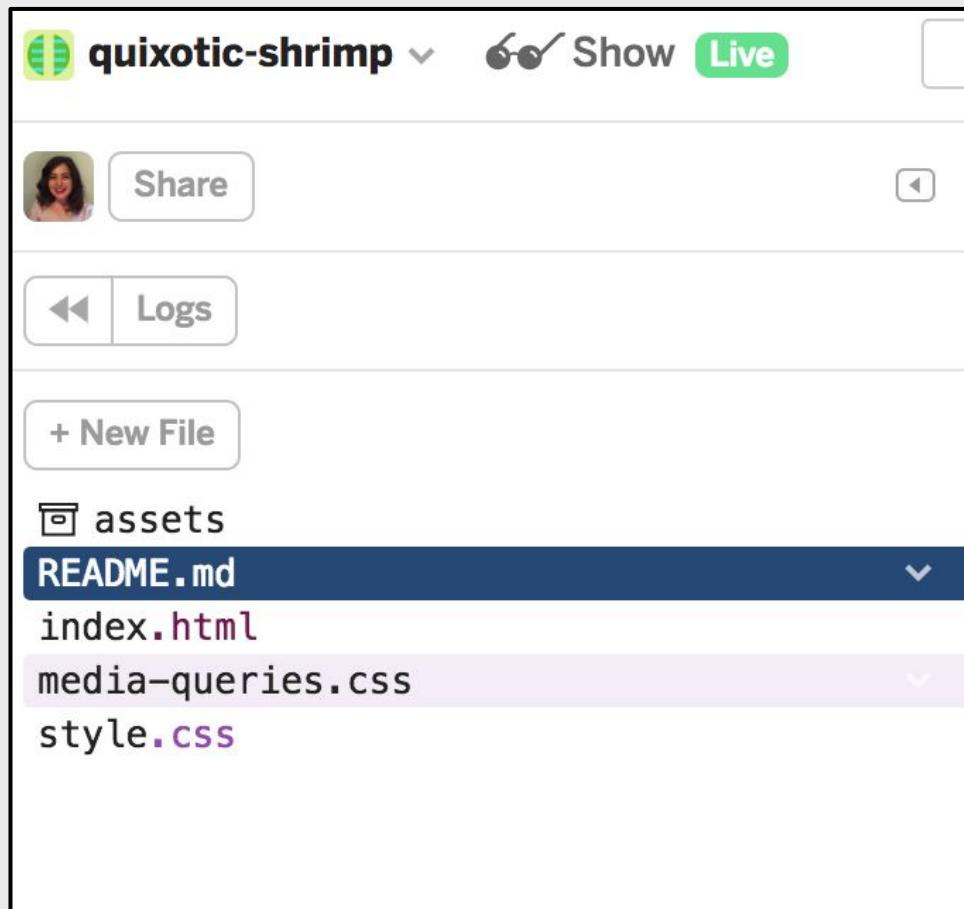
Preview Your First Changes

1. Make sure the website says your name, not Ada Lovelace!



That was pretty cool! We edited the HTML and saw live changes on our website. Let's dive into the project to understand what we just did!

What are all these files?

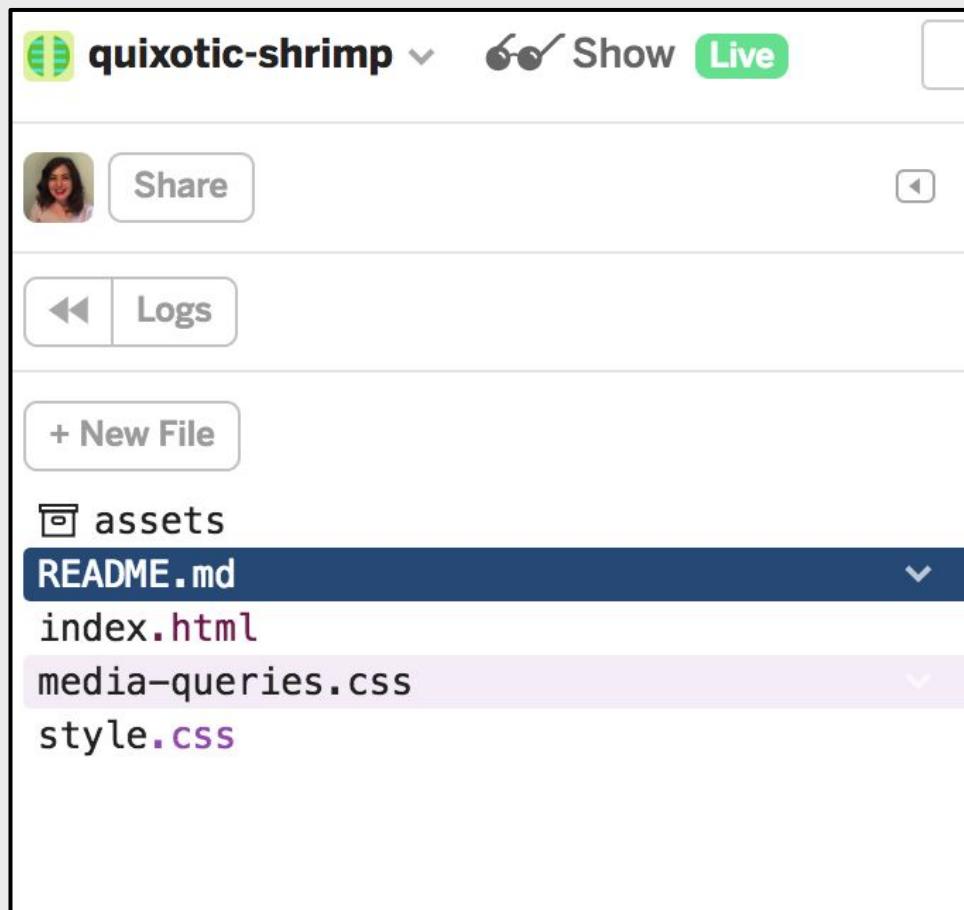


assets/ - a folder where you can store images you want on your page

README .md - information about your website

index.html - the skeleton of your website

What are all these files?



media-queries.css – a file that makes your website look nice on different devices (you won't be editing that file in this workshop)

style.css – a file that contains the main styling for your website (you will be editing this file)

What is HTML?

HTML is the skeleton of every webpage on the internet.

Key Term

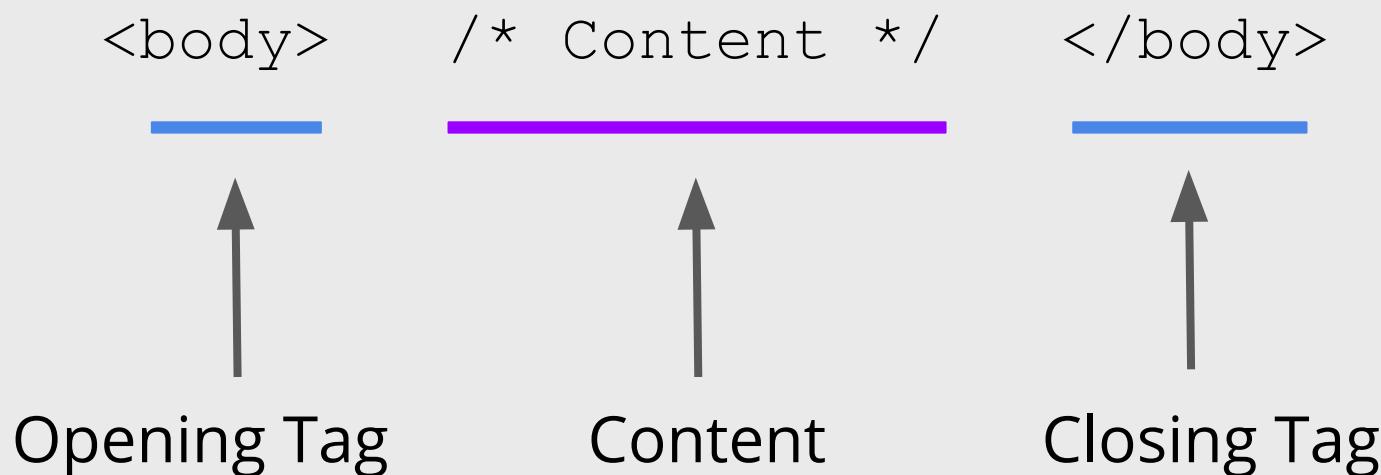
HTML (hypertext markup language): HTML is the code that structures webpages.



```
1  <!DOCTYPE html>
2  <html>
3      <head>
4          <meta charset="utf-8">
5          <title>Title of Your Website</title>
6      </head>
7      <body>
8          // Body Content
9      </body>
10     </html>
```

HTML Syntax

Most HTML elements consist of an opening tag, content, and a closing tag. Important exceptions include the `<link>` and `` tags, which are called "self-closing" tags.



Every website needs the code below

What does this code mean?

- **Line 1:** Specifies that the code below is HTML.
- **Line 2:** This is an opening `<html>` tag.
- **Line 3:** The `<head>` tag contains information about your website. This isn't visible to users.

```
1  <!DOCTYPE html>
2  <html>
3      <head>
4          <meta charset="utf-8">
5          <title>Title of Your Website</title>
6      </head>
7      <body>
8          // Body Content
9      </body>
10     </html>
```

Every website needs the code below

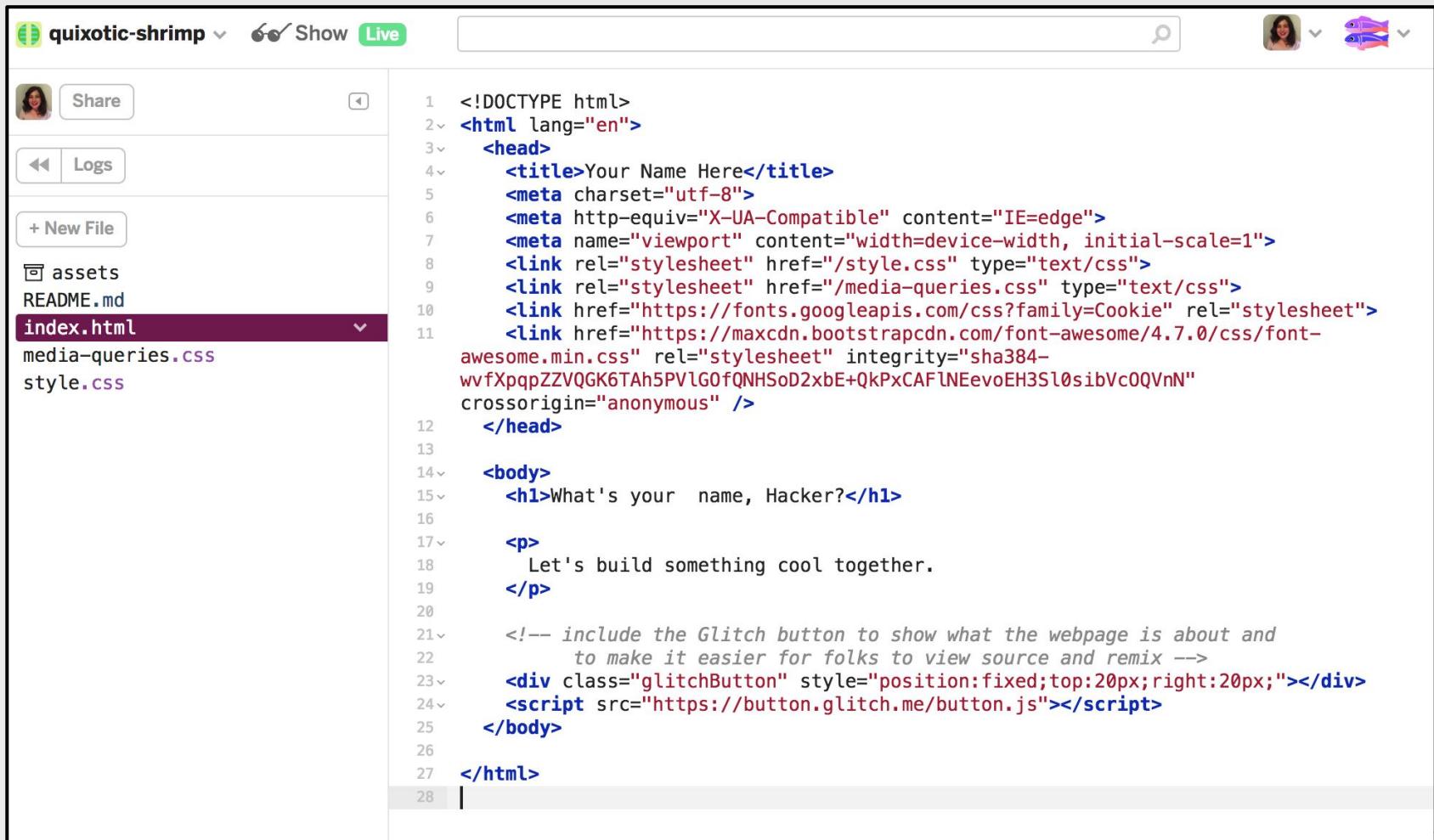
What does this code mean?

- **Line 5:** This is the title of your website that users see in the browser tab
- **Line 6:** This is a closing `</head>` tag. This ends element.
- **Line 7-10:** This is the `<body>` of your website.
- **Line 11:** This tag closes your `<html>` element.

```
1  <!DOCTYPE html>
2  <html>
3      <head>
4          <meta charset="utf-8">
5          <title>Title of Your Website</title>
6      </head>
7      <body>
8          // Body Content
9      </body>
10     </html>
```

What's in our HTML?

Open `index.html` in Glitch.



The screenshot shows a Glitch project titled "quixotic-shrimp". The left sidebar lists files: "index.html" (selected), "media-queries.css", and "style.css". The main area displays the contents of "index.html".

```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4  <title>Your Name Here</title>
5  <meta charset="utf-8">
6  <meta http-equiv="X-UA-Compatible" content="IE=edge">
7  <meta name="viewport" content="width=device-width, initial-scale=1">
8  <link rel="stylesheet" href="/style.css" type="text/css">
9  <link rel="stylesheet" href="/media-queries.css" type="text/css">
10 <link href="https://fonts.googleapis.com/css?family=Cookie" rel="stylesheet">
11 <link href="https://maxcdn.bootstrapcdn.com/font-awesome/4.7.0/css/font-
awesome.min.css" rel="stylesheet" integrity="sha384-
wvfXpqZZVQGK6TAh5PVlG0fQNHSoD2xbE+QkPxCAF1NEevoEH3Sl0sibVcOQVnN"
crossorigin="anonymous" />
12 </head>
13
14 <body>
15 <h1>What's your name, Hacker?</h1>
16
17 <p>
18   Let's build something cool together.
19 </p>
20
21 <!-- include the Glitch button to show what the webpage is about and
22     to make it easier for folks to view source and remix -->
23 <div class="glitchButton" style="position:fixed;top:20px;right:20px;"></div>
24 <script src="https://button.glitch.me/button.js"></script>
25 </body>
26
27 </html>
28 |
```

index.html |

What does this code mean?

Line 5-7: `<meta>` tags contain information about how the page should be rendered.

```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <title>Your Name Here</title>
5      <meta charset="utf-8">
6      <meta http-equiv="X-UA-Compatible" content="IE=edge">
7      <meta name="viewport" content="width=device-width, initial-scale=1">
8      <link rel="stylesheet" href="/style.css" type="text/css">
9      <link rel="stylesheet" href="/media-queries.css" type="text/css">
10     <link href="https://fonts.googleapis.com/css?family=Cookie" rel="stylesheet">
11     <link href="https://maxcdn.bootstrapcdn.com/font-awesome/4.7.0/css/font-
awesome.min.css" rel="stylesheet" integrity="sha384-
wvfXpqZZVQGK6TAh5PVlg0fQNHSoD2xbE+QkPxCAF1NEvoEH3Sl0sibVc0QVnN"
crossorigin="anonymous" />
12  </head>
```

index.html ||

What does this code mean?

Line 8-11: `<Link>` tags connect your HTML to other files. Our HTML is connected to two files that we have in our project:

- `style.css` – our main stylesheet
- `media-queries.css` – the stylesheet that makes our web page look nice on various devices

```
1  <!DOCTYPE html>
2  <html lang="en">
3    <head>
4      <title>Your Name Here</title>
5      <meta charset="utf-8">
6      <meta http-equiv="X-UA-Compatible" content="IE=edge">
7      <meta name="viewport" content="width=device-width, initial-scale=1">
8      <link rel="stylesheet" href="/style.css" type="text/css">
9      <link rel="stylesheet" href="/media-queries.css" type="text/css">
10     <link href="https://fonts.googleapis.com/css?family=Cookie" rel="stylesheet">
11     <link href="https://maxcdn.bootstrapcdn.com/font-awesome/4.7.0/css/font-
awesome.min.css" rel="stylesheet" integrity="sha384-
wvfXpqZZVQGK6TAh5PVlG0fQNHSoD2xbE+QkPxCAFNEevoEH3Sl0sibVc0QVnN"
crossorigin="anonymous" />
12   </head>
```

index.html III

What does this code mean?

Line 8-11: `<Link>` tags connect your HTML to other files. Our HTML is connected to two files that we don't have in our project from:

- fonts.googleapis.com, which allows us to add fonts to our website
- maxcdn.bootstrapcdn.com, which allows us to use an icon library called Font Awesome to add icons to our page

```
1  <!DOCTYPE html>
2  <html lang="en">
3    <head>
4      <title>Your Name Here</title>
5      <meta charset="utf-8">
6      <meta http-equiv="X-UA-Compatible" content="IE=edge">
7      <meta name="viewport" content="width=device-width, initial-scale=1">
8      <link rel="stylesheet" href="/style.css" type="text/css">
9      <link rel="stylesheet" href="/media-queries.css" type="text/css">
10     <link href="https://fonts.googleapis.com/css?family=Cookie" rel="stylesheet">
11     <link href="https://maxcdn.bootstrapcdn.com/font-awesome/4.7.0/css/font-
awesome.min.css" rel="stylesheet" integrity="sha384-
wvfXpqZZVQGK6TAh5PVlG0fQNHSoD2xbE+QkPxCAFNEevoEH3Sl0sibVc0QVnN"
crossorigin="anonymous" />
12   </head>
```

index.html IV

What does this code mean?

Line 14 - 25: All of the visible content of our website is between the opening and closing `<body>` tags.

- `<h1>` is a header tag. These range from `<h1>` to `<h6>`.
- `<p>` is a paragraph tag.
- Lines 23-24 make the Glitch fish appear in the corner.

```
14<body>
15<h1>What's your name, Hacker?</h1>
16
17<p>
18    Let's build something cool together.
19</p>
20
21<!-- include the Glitch button to show what the webpage is about and
22      to make it easier for folks to view source and remix -->
23<div class="glitchButton" style="position:fixed;top:20px;right:20px;"></div>
24<script src="https://button.glitch.me/button.js"></script>
25</body>
26
27</html>
```

That was a deep dive into `index.html`. Remember, HTML is the skeleton of your web page. Some of the text on our page is blue, and some of it is bigger than other parts.

How do we style HTML elements?

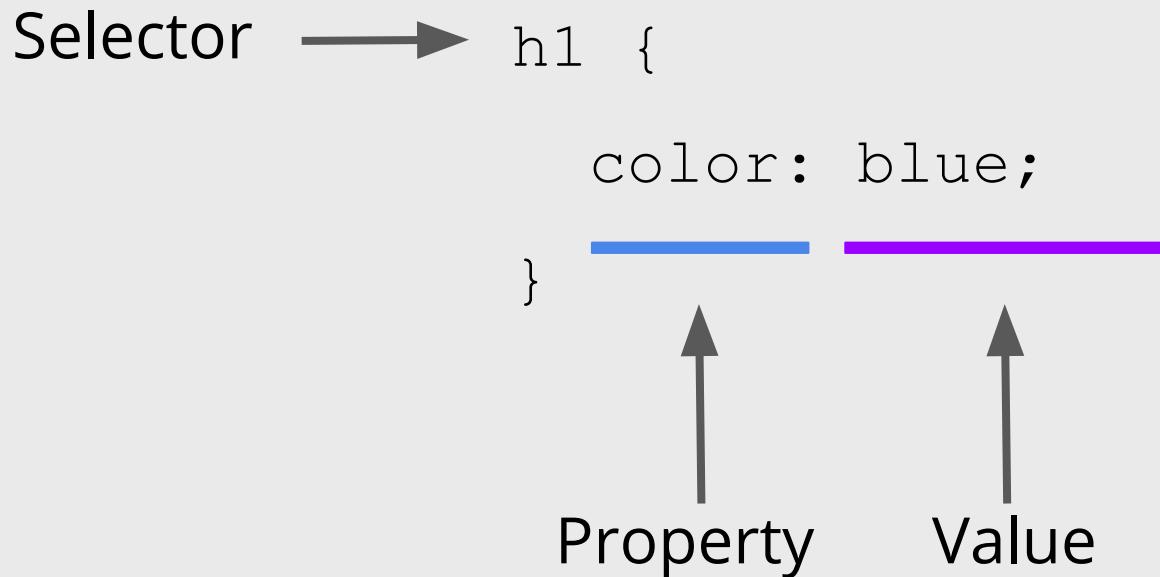
Using CSS!

Open `style.css` in Glitch and
let's dive in!

CSS Syntax

This is a CSS Rule Set.

- The **selector** specifies which elements to style.
- A **property** is a characteristic of an element we can set.
- A **value** is how that property should appear.



CSS Syntax

This is a CSS Rule Set.

- A **value** and a **property** together are a **declaration**
- A **selector** and its **declarations** together make a **rule set**

Rule Set



```
h1 {  
    color: blue;  
}
```



Declaration

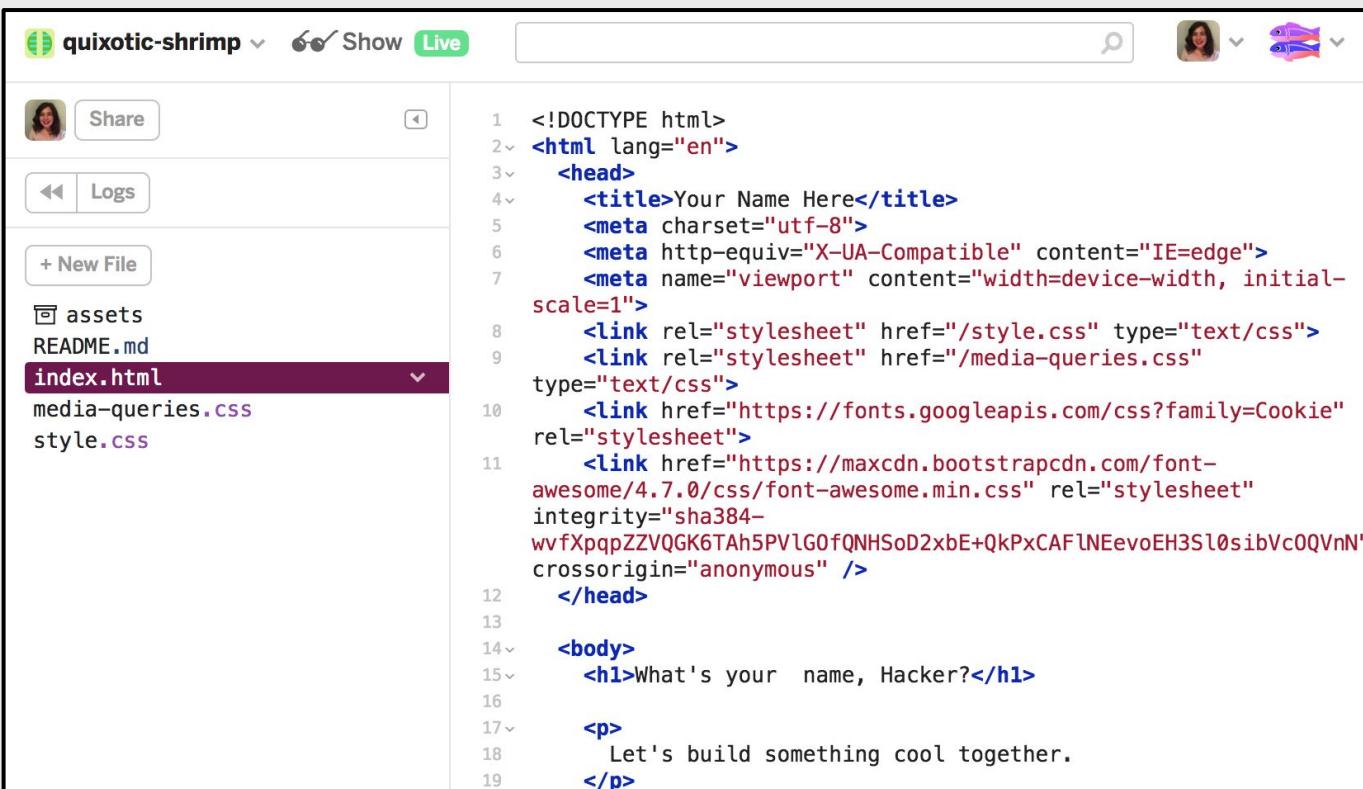
**Now that you understand the structure
and syntax of HTML and CSS, let's add
some content to your website.**

Table of Contents

1. Intro to HTML and CSS
2. Add Content to Your Website
3. Style Your Website
4. Time to Customize!
5. Review & Quiz
6. Next Steps

Add a Headline

1. Change **Let's build something cool together** (line 18) to a sentence or two about yourself.



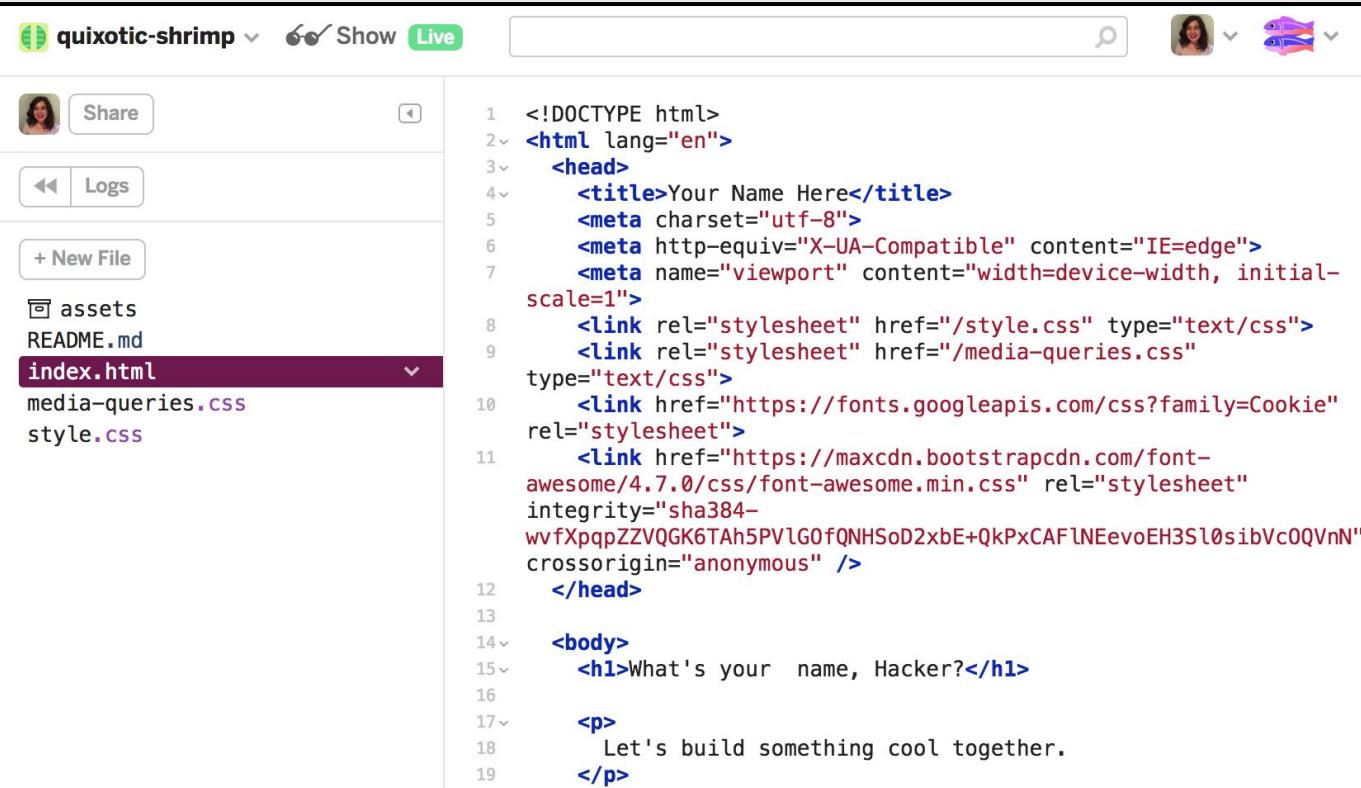
The screenshot shows a live code editor interface with the following details:

- Header:** quixotic-shrimp, Show Live, search bar, user profile.
- Left Sidebar:** Share, Logs, + New File, assets, README.md, index.html (selected), media-queries.css, style.css.
- Code Editor:** The code for index.html is displayed in a syntax-highlighted text area. The content includes a title, meta tags for character encoding and compatibility, and a body section with an h1 and a p tag containing a placeholder message.

```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4  <title>Your Name Here</title>
5  <meta charset="utf-8">
6  <meta http-equiv="X-UA-Compatible" content="IE=edge">
7  <meta name="viewport" content="width=device-width, initial-
scale=1">
8  <link rel="stylesheet" href="/style.css" type="text/css">
9  <link rel="stylesheet" href="/media-queries.css"
type="text/css">
10 <link href="https://fonts.googleapis.com/css?family=Cookie"
rel="stylesheet">
11 <link href="https://maxcdn.bootstrapcdn.com/font-
awesome/4.7.0/css/font-awesome.min.css" rel="stylesheet"
integrity="sha384-
wvfXpqZZVQGK6TAh5PVlG0fQNHSoD2xE+QkPxCAFNEvoEH3Sl0sibVc0QVnN"
crossorigin="anonymous" />
12 </head>
13
14 <body>
15 <h1>What's your name, Hacker?</h1>
16
17 <p>
18 Let's build something cool together.
19 </p>
```

Add the About Section I

1. Add an `<h2>` element that says `about` on line 21.
2. Add a `<p>` element on line 25. Add some information about yourself.



The screenshot shows a web-based code editor interface. On the left, there's a sidebar with user profile icons, a 'Share' button, and a 'Logs' button. Below that is a file list with 'assets', 'README.md', 'index.html' (which is selected and highlighted in purple), 'media-queries.css', and 'style.css'. The main area is a code editor with line numbers and syntax highlighting. The code is as follows:

```
1  <!DOCTYPE html>
2  <html lang="en">
3    <head>
4      <title>Your Name Here</title>
5      <meta charset="utf-8">
6      <meta http-equiv="X-UA-Compatible" content="IE=edge">
7      <meta name="viewport" content="width=device-width, initial-
scale=1">
8      <link rel="stylesheet" href="/style.css" type="text/css">
9      <link rel="stylesheet" href="/media-queries.css"
type="text/css">
10     <link href="https://fonts.googleapis.com/css?family=Cookie"
rel="stylesheet">
11     <link href="https://maxcdn.bootstrapcdn.com/font-
awesome/4.7.0/css/font-awesome.min.css" rel="stylesheet"
integrity="sha384-
wvfbXpqZZVQGK6TAh5PVlG0fQNHSoD2xE+QkPxCAF1NEvoEH3Sl0sibVc0QVnN"
crossorigin="anonymous" />
12   </head>
13
14   <body>
15     <h1>What's your name, Hacker?</h1>
16
17     <p>
18       Let's build something cool together.
19     </p>
```

Add the About Section II

Look at the live version again! It should look like this.

A screenshot of a web browser window titled "Ada Lovelace". The address bar shows a secure connection to "https://quixotic-shrimp.glitch.me". The page content includes a blue header "Ada Lovelace", a bio paragraph, and a heading "about". Below the bio is a paragraph about Ada's life and work. In the top right corner of the browser window, there are two small, stylized fish icons.

Hey, I'm Ada! I invented coding, basically.

about

I was born in 1815 and died in 1852. I eventually went on to become the logo for Major League Hacking's 2016 Season. During my life, I worked with Charles Babbage on the earliest computing devices and the predecessor to what you call software today.

Code Review

<h2> – a heading element. These range from **<h1>** to **<h6>**. Every web page should only have one **<h1>**. It is a best practice to think of them like roman numerals in an outline, used to separate levels of detail.

<p> – a paragraph element. These are used to create paragraphs of text on your web page.



Add the Projects Section I

1. Add an `<h2>` element that says `projects` on line 29.
2. Add a `` element on line 33. Leave it empty for now.

```
17~<p>
18    Hey, I'm Ada! I invented coding, basically.
19</p>
20
21~<h2>
22    about
23</h2>
24
25~<p>
26    I was born in 1815 and died in 1852. I eventually went on to become the logo for Major
League Hacking's 2016 Season. During my life, I worked with Charles Babbage on the earliest
computing devices and the predecessor to what you call software today.
27</p>
28
29~<h2>
30    projects
31</h2>
32
33~<ul>
34
35</ul>
```

Add the Projects Section II

3. Inside the `` element, add 3 `` elements.
4. Inside each `` element, add an `<h3>` element.

Note: Glitch will separate `<h3>` elements onto three lines. We have deleted the blank space between the opening and closing tags of the `<h3>` elements.

```
33 <ul>
34   <li><h3></h3></li>
35   <li><h3></h3></li>
36   <li><h3></h3></li>
37 </ul>
```

Add the Projects Section III

5. Inside each `<h3>` element, list a project or accomplishment you'd like to highlight.
6. Below each `` element, add a `<p>` of text to describe the project.

```
33~<ul>
34~  <li><h3>The Difference Engine</h3></li>
35~  <p>
36~      The Difference Engine is the first project I worked on with Charles Babbage.
37~  </p>
38~  <li><h3>The Analytical Engine</h3></li>
39~  <p>
40~      From 1842–1843, I translated Luigi Menabrea's article on Babbage's proposed
"Analytical Engine."
41~  </p>
42~  <li><h3>The First Computer Program</h3></li>
43~  <p>
44~      I am credited with writing the first ever published algorithm for computing. My work
has been highlighted by many scientists! In 1990, Allan G. Bromley wrote about me in an
article titled Difference and Analytical Engines. The programming language Ada, developed by
the US government, is named after me.
45~  </p>
46~ </ul>
```

Add the Projects Section IV

Look at the live version again! It should look like this.

Ada Lovelace



Hey, I'm Ada! I invented coding, basically.

about

I was born in 1815 and died in 1852. I eventually went on to become the logo for Major League Hacking's 2016 Season. During my life, I worked with Charles Babbage on the earliest computing devices and the predecessor to what you call software today.

projects

- The Difference Engine**

The Difference Engine is the first project I worked on with Charles Babbage.
- The Analytical Engine**

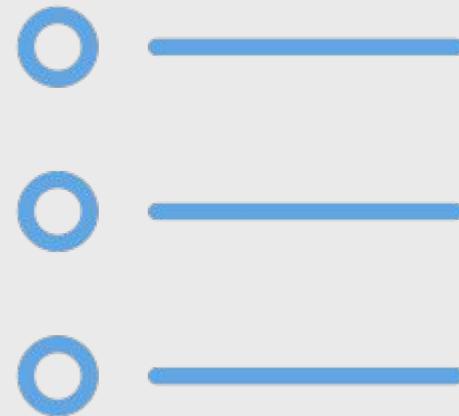
From 1842-1843, I translated Luigi Menabrea's article on Babbage's proposed "Analytical Engine."
- The First Computer Program**

I am credited with writing the first ever published algorithm for computing. My work has been highlighted by many scientists! In 1990, Allan G. Bromley wrote about me in an article titled "Difference and Analytical Engines". The programming language Ada, developed by the US government, is named after me.

Code Review

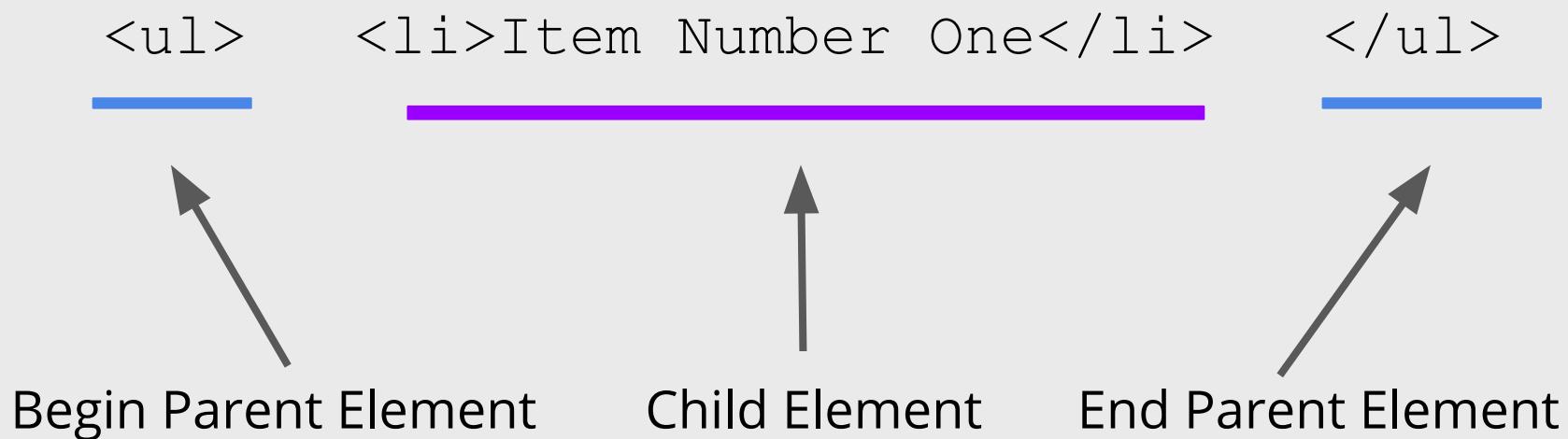
`` – an unordered list. By default, an unordered list element will contain a bulleted list of elements.

`` – a list item. Inside of `` and `` (ordered lists) elements, each item you want to include should be contained inside its own `` element.



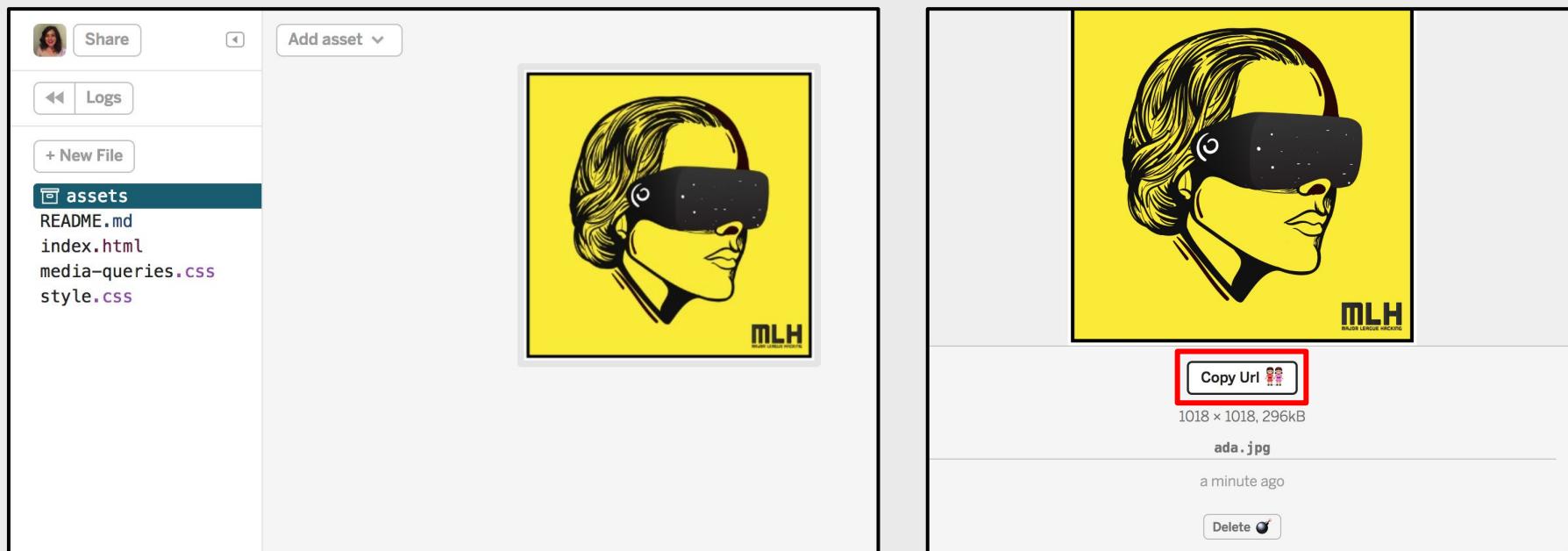
Elements Can Be Nested

HTML elements that are inside of other HTML elements are called **child** elements. The outer element is the **parent** element. `` elements are children of `` elements and `` elements.



Add an Image !

1. Add an image of yourself to the **assets/** folder in Glitch. You can just drag and drop the image here!
2. Click the image, then click **Copy Url**.



Add an Image II

1. Return to `index.html`. Below the about paragraph, add an `` tag.
2. Inside the `` tag, add a `src` attribute. Set `src=` the URL you copied in the last slide. The URL needs to be surrounded by quotation marks.

```
25 <p>
26     I was born in 1815 and died in 1852. I eventually went on to
27     become the logo for Major League Hacking's 2016 Season. During my life,
28     I worked with Charles Babbage on the earliest computing devices and the
29     predecessor to what you call software today.
30   </p>
31
32   
```

Add an Image III

Look at the live version again! It should look like this.

Note: Your image might be huge. We'll fix this later.

Ada Lovelace

Hey, I'm Ada! I invented coding, basically.

about

I was born in 1815 and died in 1852. I eventually went on to become the logo for Major Babbage on the earliest computing devices and the predecessor to what you call soft



projects

- The Difference Engine

Code Review

`` - an element that contains an image. `` is a self-closing tag. This means you do not need to write it like ``.

`src` - an attribute. All `` elements require the `src` attribute, which tells the browser where the image is stored.

Key Term

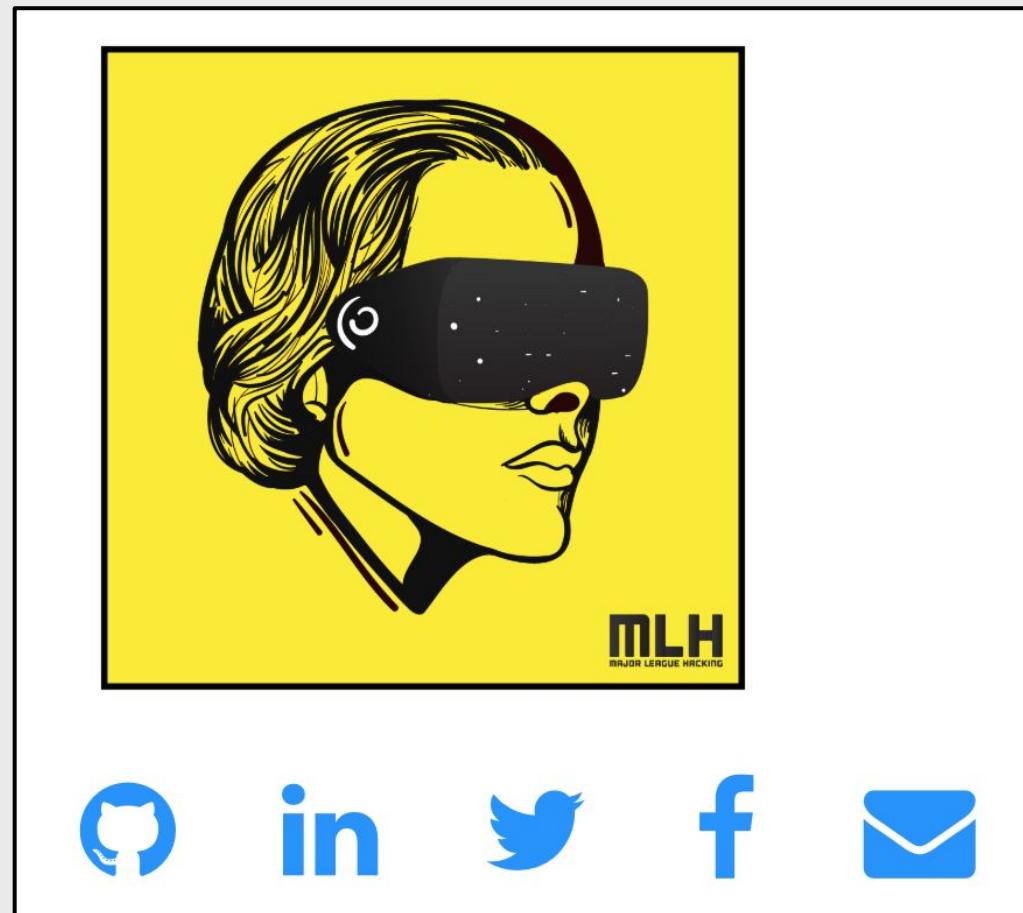
Attribute: Something you can add to HTML elements that modifies them in some way.

Key Term

Self-closing tag: HTML tags that do not require an opening and closing tag.

Add a Contact Section I

We want to add Contact Icons at the bottom of the page.



Add a Contact Section II

Remember when we reviewed the `<link>` tags at the beginning of the workshop? Look at or around line 11. This `<link>` tag allows us to use icons from Font Awesome, a library of icons. Check out **Fontawesome.com**! The first icon we're going to add will link to your LinkedIn.

```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4    <title>Ada Lovelace</title>
5    <meta charset="utf-8">
6    <meta http-equiv="X-UA-Compatible" content="IE=edge">
7    <meta name="viewport" content="width=device-width, initial-scale=1">
8    <link rel="stylesheet" href="/style.css" type="text/css">
9    <link rel="stylesheet" href="/media-queries.css" type="text/css">
10   <link href="https://fonts.googleapis.com/css?family=Cookie" rel="stylesheet">
11   <link href="https://maxcdn.bootstrapcdn.com/font-awesome/4.7.0/css/font-awesome.min.css"
     rel="stylesheet" integrity="sha384-wvfXpqpZZVQGK6TAh5PVlG0fQNHSoD2xbE+QkPxCAFNEevoEH3Sl0sibVcOQVnN"
     crossorigin="anonymous" />
```

Add a Contact Section III

1. Return to `index.html`. Below the closing `` tag, add a `<footer>` element.
2. Inside the `<footer>` element, add an `<a>` tag.
3. Inside the `<a>` element, add an `<i>` tag.

```
45~      <p>
46~          I am credited with writing the first ever published algorithm for computing.
47~          highlighted by many scientists! In 1990, Allan G. Bromley wrote about me in an artic
48~          and Analytical Engines. The programming language Ada, developed by the US government
49~      </p>
50~      </ul>
51~      <footer><a><i>|</i></a></footer>
52~      <!-- include the Glitch button to show what the webpage is about and
53~          to make it easier for folks to view source and remix --&gt;
54~      &lt;div class="glitchButton" style="position:fixed;top:20px;right:20px;"&gt;&lt;/div&gt;
55~      &lt;script src="https://button.glitch.me/button.js"&gt;&lt;/script&gt;
56~      &lt;/body&gt;
57~ 
58~  &lt;/html&gt;
59~</pre>
```

Add a Contact Section IV

1. Add an **href** attribute inside of the opening **<a>** tag. Set it equal to the URL of your LinkedIn profile.
2. Add **target="_blank"** inside the opening **<a>** tag as well.
3. Add the following code inside of the opening **<i>** tag:
class="fa fa-linkedin fa-3x" aria-hidden="true"

Note: Your code does not need to be separated this way.
We added new lines for readability.

```
50  <footer>
51    <a href="linkedin.com/in/yournamehere" target="_blank">
52      <i class="fa fa-linkedin fa-3x" aria-hidden="true"></i>
53    </a>
54  </footer>
```

Add a Contact Section V

Look at the live version again!

The bottom of your page should look like this! Later, you can add all the icons you want by checking the Font Awesome documentation for instructions.

projects

- **The Difference Engine**

The Difference Engine is the first project I worked on with Charles Babbage.

- **The Analytical Engine**

From 1842-1843, I translated Luigi Menabrea's article on Babbage's proposed "Analytical Engine."

- **The First Computer Program**

I am credited with writing the first ever published algorithm for computing. My work has been highlighted by many scientists! In 1990, Allan G. Bromley wrote about me in an article titled Difference and Analytical Engines. The programming language Ada, developed by the US government, is named after me.



Code Review

`<a>` - an anchor element. These are used to create links on your page.

`<i>` - an element with several uses; in this case, to add icons to your web site.

`href` - an attribute that contains the URL an `<a>` element should link to.

`target` - an attribute that you can use to open links in new tabs

`class` - an attribute that is used to group elements; when writing CSS, you can apply specific styles to all elements that you give the same class

`aria-hidden` - an attribute that tells a screen reader to ignore an element

Add Text Elements I

To make texts italics or bold, we can use two elements: `` and ``

- **The First Computer Program**

I am credited with writing the first ever published algorithm for computing. My work has been highlighted by many scientists! In 1990, Allan G. Bromley wrote about me in an article titled *Difference and Analytical Engines*. The programming language **Ada**, developed by the US government, is named after me.

Add Text Elements II

1. Return to `index.html`. Add opening and closing `` tags around something you would like in italics. This can be any text element!
2. Add opening and closing `` tags around something you want to be bold.

45

<p>

46

I am credited with writing the first ever published algorithm for computing. My work has been highlighted by many scientists! In 1990, Allan G. Bromley wrote about me in an article titled `Difference and Analytical Engines`. The programming language `Ada`, developed by the US government, is named after me.

47

</p>

Add Text Elements III

Look at the live version again!

Everyone's will be different, depending on where you added the `` and `` tags. However, this is what our page looks like at this point:

Ada Lovelace

Hey, I'm Ada! I invented coding, basically.

about

I was born in 1815 and died in 1852. I eventually went on to become the logo for Major League Hacking's 2016 Season. During my life, I worked with Charles Babbage on the earliest computing devices and the predecessor to what you call software today.



projects

- The Difference Engine**
The Difference Engine is the first project I worked on with Charles Babbage.
- The Analytical Engine**
From 1842-1843, I translated Luigi Menabrea's article on Babbage's proposed "Analytical Engine."
- The First Computer Program**
I am credited with writing the first ever published algorithm for computing. My work has been highlighted by many scientists! In 1990, Allan G. Bromley wrote about me in an article titled *Difference and Analytical Engines*. The programming language **Ada**, developed by the US government, is named after me.

in

We've added all (or most!) of the content we want. Now, let's work on styling our website!

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style.css |

What does this code mean?

Line 1: `body` is a css selector. The code from line 1-4 will be applied to the entire body.

Line 2: `font-family` specifies the font. This code says "Use Open Sans" for all the text in the body, and the browser doesn't know Open Sans, use helvetica, arial, or sans-serif.

```
1< body {  
2     font-family: "Open Sans", helvetica, arial, sans-serif;  
3     margin: 3%;  
4 }  
5  
6< h1 {  
7     color: DodgerBlue;  
8 }
```

style.css //

What does this code mean?

Line 3: `margin` means how much space should be around elements. This means to put a 3% margin around all sides of the body. Percent is one way to specify the size of elements; we'll learn more about this in a few slides.

```
1< body {  
2  font-family: "Open Sans", helvetica, arial, sans-serif;  
3  margin: 3%;  
4 }  
5  
6< h1 {  
7  color: DodgerBlue;  
8 }
```

style.css III

What does this code mean?

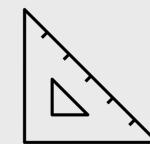
Line 6: `h1` is another CSS selector. This means apply all the styles between the opening and closing curly braces `{}` to all `<h1>` elements in this web site.

Line 7: `color` is a CSS property. A property is something about an element that we can style. Line 7 says to make the text of all `h1` elements DodgerBlue, which is a color that is built into CSS. There are 147 of these!

```
1~ body {  
2     font-family: "Open Sans", helvetica, arial, sans-serif;  
3     margin: 3%;  
4 }  
5  
6~ h1 {  
7     color: DodgerBlue;  
8 }
```



CSS Units in This Project



There are many different CSS sizing units. These are the ones used in this project.

pixels (px)

Absolute sizing of elements.

Example: `<h1>`, `<h2>`, `<h3>`, and `<p>` elements are sized with pixels in this web page.

viewport width units (vw)

Relative sizing of elements. A `vw` is 1% of the width of the viewport, which is the part of the browser that contains the web page

Percentages (%)

Relative sizing of elements. Percentages size an element relative to its parent container

Example: the images in the "Projects" section have `width: 80%` of their containing `<div>`

viewport height units (vh)

Relative sizing of elements. A `vh` is 1% of the height of the viewport, which is the part of the browser that contains the web page

Add Some Color !

1. Open `style.css`. Add an h2 CSS rule set below the h1 css rule set.
2. Inside of this CSS rule set, change the color of h2 elements to anything you want! Check out mlhlocal.host/css-colors for a list!

```
9  
10 ~  h2 {  
11     color: DimGray;  
12 }
```

Add Some Color II

Look at the live version again!

Everyone's will be different, but this is what ours looks like after we changed the h2 elements to DimGray.

Ada Lovelace

Hey, I'm Ada! I invented coding, basically.

about

I was born in 1815 and died in 1852. I eventually went on to become the logo with Charles Babbage on the earliest computing devices and the predecessor



MLH

projects

CSS Tag Selectors

In **style.css**, these styles are applied to all elements inside of the **<body>** element, which is the whole web page

Key Term

tag selectors: CSS selectors that style all elements with a certain tag

```
9  
10< h2 {  
11  color: DimGray;  
12 }
```

Add Some Structure I

Ada's website has the about section next to the projects section.

Let's do the same to ours!

Ada Lovelace

Hey, I'm Ada! I invented coding, basically.

about

I was born in 1815 and died in 1852. I eventually went on to become the logo for Major League Hacking's 2016 Season. During my life, I worked with Charles Babbage on the earliest computing devices and the predecessor to what you call software today.



The image shows a stylized profile of Ada Lovelace wearing a VR headset. The background is yellow, and the MLH logo is at the bottom.

projects

- The Difference Engine**

The Difference Engine is the first project I worked on with Charles Babbage.
- The Analytical Engine**

From 1842-1843, I translated Luigi Menabrea's article on Babbage's proposed "Analytical Engine."
- The First Computer Program**

I am credited with writing the first ever published algorithm for computing. My work has been highlighted by many scientists! In 1990, Allan G. Bromley wrote about me in an article titled *Difference and Analytical Engines*. The programming language **Ada**, developed by the US government, is named after me.

[GitHub](#) [LinkedIn](#) [Twitter](#) [Facebook](#) [Email](#)

All information in this page is borrowed from the [Wikipedia article](#) about Ada Lovelace.

Add Some Structure II

1. Return to `index.html`. We're going to add a `<section>` element. Add the opening `<section>` tag above the `<h2>` that says About. Add the closing `</section>` tag right before the `<footer>`.

```
17 <p>  
18     Hey, I'm Ada!  
19 </p>  
20  
21 <section>  
22 <h2>  
23     about  
24 </h2>
```

```
<em>Difference and  
developed by the U  
48 </p>  
49 </ul>  
50 </section>  
51  
52 <footer>
```

Add Some Structure III

2. Give the opening `<section>` tag a `class` attribute with the value `main`. This will allow us to style this section later.

```
18      Hey, I'm Ada! I invented
19      </p>
20
21<section class="main">
22<h2>
23      about
24</h2>
25
```

Add Some Structure III

- Now add two `<div>` elements. Put one around the **about** section. Add the other around the **projects** section.

Note: We collapsed some of the paragraph elements for readability.

```
21<section class="main">
22  <div>
23    <h2>
24      about
25    </h2>
26
27    <p>
28      I was born in 1815 a
29      League Hacking's 2016 Season.
30      computing devices and the pred
31        </p>
32
33        
35        </div>
```

```
34<div>
35  <h2>
36    projects
37  </h2>
38
39<ul>
40  <li><h3>The Difference
41    <p>
42      The Difference Engine
43    </p>
44  <li><h3>The Analytical
45    <p> ↗ </p>
46  <li><h3>The First Compu
47    <p> ↗ </p>
48  </ul>
49</div>
50
51</section>
```

Add Some Structure IV

Look at the live version. Nothing has changed yet; **<section>** and **<div>** elements are not visible. They group code together so that we can style and position it.

Ada Lovelace

Hey, I'm Ada! I invented coding, basically.

about

I was born in 1815 and died in 1852. I eventually went on to become the logo for Major League Hacking's 2016 Season. During my life, I worked with Charles Babbage on the earliest computing devices and the predecessor to what you call software today.



projects

- The Difference Engine**
The Difference Engine is the first project I worked on with Charles Babbage.
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in

CSS Class Selector

In `style.css`, these styles are applied to all elements that have the "logo" class. Class selectors are more specific than tag selectors, so they will override tag selectors.

Key Term

class selectors: CSS selectors that style all elements with a certain class

```
13 .logo {  
14   text-align: left;  
15   width: 48vw;  
16 }
```

Add Some Structure V

5. Return to `style.css`. Add a CSS rule set that will style elements with the class `main`.
6. Add the following code inside of that rule set.

```
14~ .main {  
15   display: flex;  
16   justify-content: space-around;  
17   height: 70vh;  
18 }
```

Code Review

display – a CSS property that determines how an element should take up space on a page

flex – one possible value for the display property. Usually, each HTML element is displayed on its own line. When using flex, each element squeezes next to the one before it.

justify-content - a CSS property tells the browser how much space should be between elements on the same line

space-around – a value for the justify-content property that puts equal space around all elements

Code Review

height – a CSS property that specifies how tall an element should be

70 vh – vh means view height.
70 view height means 70% of how tall the user's browser window is.
This means: "Make the main section of this website 70% as tall as the user's browser."



Add Some Structure VI

Look at your page again!

We want to set the dimensions of the left and right sections next.

Ada Lovelace



Hey, I'm Ada! I invented coding, basically.

about

I was born in 1815 and died in 1852. I eventually went on to become the logo for Major League Hacking's 2016 Season. During my life, I worked with Charles Babbage on the earliest computing devices and the predecessor to what you call software today.



projects

- The Difference Engine**

The Difference Engine is the first project I worked on with Charles Babbage.
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From 1842-1843, I translated Luigi Menabrea's article on Babbage's proposed "Analytical Engine."
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I am credited with writing the first ever published algorithm for computing. My work has been highlighted by many scientists! In 1990, Allan G. Bromley wrote about me in an article titled *Difference and Analytical Engines*. The programming language **Ada**, developed by the US government, is named after me.

Add Some Structure VII

1. Return to `index.html`. Add the class "left" to the div around the `about` section. Add the class "right" to the div around the `projects` section. This will allow us to style them.

```
21 <section class="main">
22   <div class="left">
23     <h2>
24       about
25     </h2>
```

```
34   <div class="right">
35     <h2>
36       projects
37     </h2>
38
```

Add Some Structure VIII

2. Return to `style.css`. Add a CSS rule set to style elements with left or right.
3. Set the width property of elements with the class left or right to 46 vw.

```
20 .left, .right {  
21   width: 46vw;  
22 }
```

Resize Your Image I

1. Add a CSS rule set to style your .
2. Set the height of your image to 40vh and the width to auto.
3. This line of code will create space around your image:
margin: 3vh 0;

Note: This will make the Glitch fish huge. You can delete it.

```
24  img {  
25      height: 40vh;  
26      width: auto;  
27      margin: 3vh 0;  
28  }
```

Resize Your Image II

Look at your page! That's it! You're all done!

Ada Lovelace

Hey, I'm Ada! I invented coding, basically.

about

I was born in 1815 and died in 1852. I eventually went on to become the logo for Major League Hacking's 2016 Season. During my life, I worked with Charles Babbage on the earliest computing devices and the predecessor to what you call software today.



projects

- **The Difference Engine**

The Difference Engine is the first project I worked on with Charles Babbage.

- **The Analytical Engine**

From 1842-1843, I translated Luigi Menabrea's article on Babbage's proposed "Analytical Engine."

- **The First Computer Program**

I am credited with writing the first ever published algorithm for computing. My work has been highlighted by many scientists! In 1990, Allan G. Bromley wrote about me in an article titled *Difference and Analytical Engines*. The programming language **Ada**, developed by the US government, is named after me.

CSS Properties in This Project

There are many CSS properties. Important ones used in this project are:

display

Used to position elements. Values used in this project include: `flex`.

height

Used to specify the height of an element. Values used in this project vary, and are sized with `vh`, `%`, and `px`.

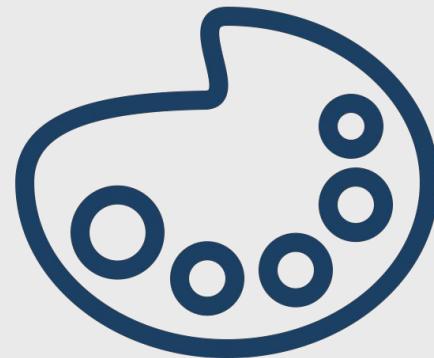
width

Used to specify the width of an element. Values used in this project vary, and are sized with `vw`, `%`, and `px`.

color

Used to specify the color of text. Values were declared in named css colors and hexidecimal.

CSS Colors



There are many ways to specify colors in CSS. Two ways that we do so in this project are:

- Named colors (like blue and red) - a fun site to visit is **www.colors.commutercreative.com**
- Hexadecimal - 6 character color codes such as #123abc

Just like that, you have a deployed website where anyone on the internet can find you and your work!

In the next section, we'll cover some optional customizations that you can do now (if there's time) or whenever you want!

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Optional Customization I

Use the CSS below to change the color of the Font Awesome contact icons you added at the bottom of the page. Add some more icons that link to your Twitter, Github, Instagram, or whatever you like!

```
30 ~  a, a:visited {  
31      color: DodgerBlue;  
32 }
```

Optional Customization II

Add `<a>` tags around the `<h3>` elements that list your projects. Set the `href` attribute to the URL where your project is stored (Github, etc).

Ada Lovelace

Hey, I'm Ada! I invented coding, basically.

about

I was born in 1815 and died in 1852. I eventually went on to become the logo for [Major League Hacking's](#) 2016 Season. During my life, I worked with Charles Babbage on the earliest computing devices and the predecessor to what you call software today.

Optional Customization III

Visit fonts.google.com and learn how to add fonts to your webpage. Change the fonts of your name, your headers, or your paragraphs.



Simple to use

The following text uses a font called Tangerine:

Making the Web Beautiful!

Applying a font is easy: just add a stylesheet link to your web page, then use the font in a CSS style.

[GET STARTED](#)

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Let's recap quickly...

- 1 HTML creates the skeleton of every website.
- 2 CSS styles HTML elements.
- 3 Deploying your website makes it available for others to see by navigating to your address!

What did you learn today?

We created a fun quiz to test your knowledge and see what you learned from this workshop.

<http://mlhlocal.host/quiz>

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Keep Learning: Practice Problems for later.

#1: Add Fonts

Challenge: Check out fonts.google.com to add fonts to your website and learn more about them!

#2: Custom Domain

Challenge: Purchase a domain and set it up to redirect to your site.

Learning shouldn't stop when the workshop ends...

Check your email for access to:



- These workshop slides
- Practice problems to keep learning
- Deeper dives into key topics
- Instructions to join the community
- More opportunities from MLH!



Workshop

Build and Deploy Your First Website

mlh localhost