Web Programming

Native Girls Code

How many websites are there?
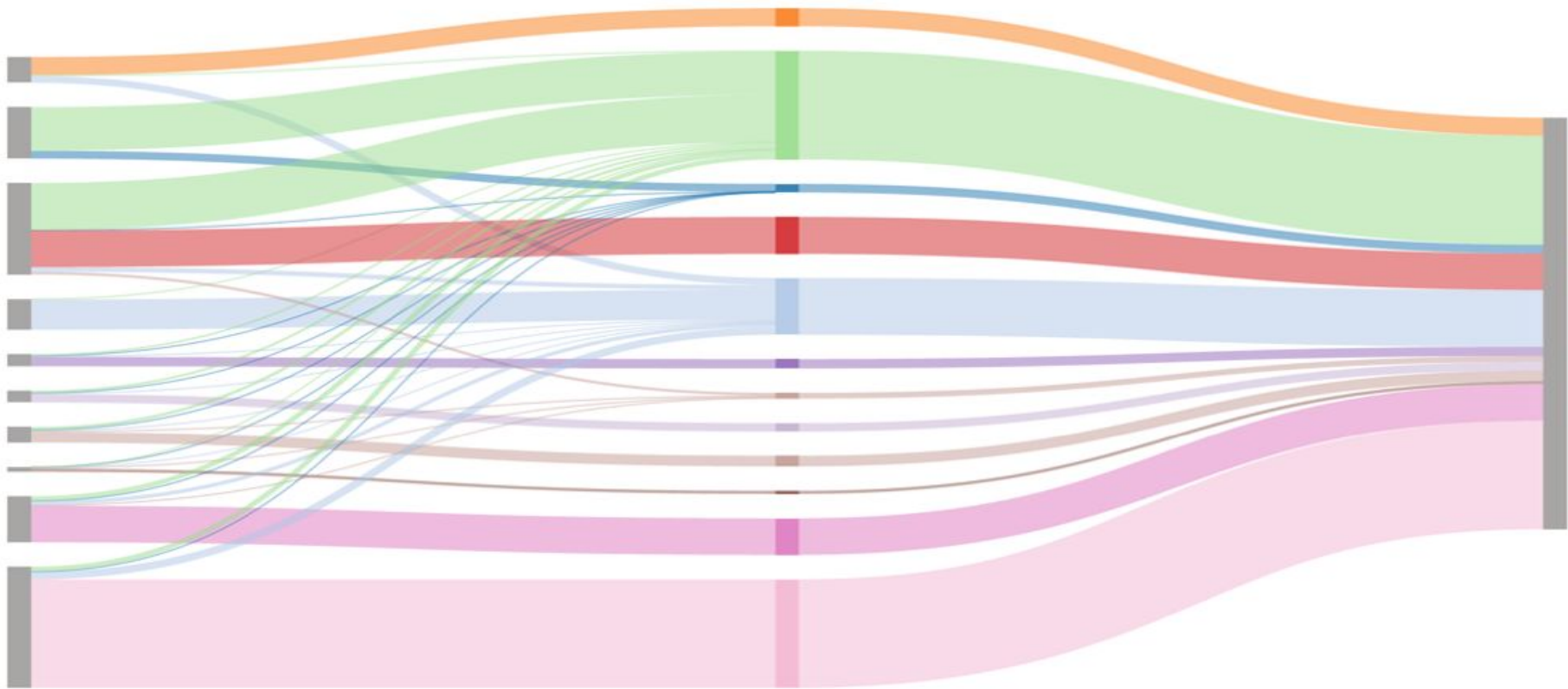
>1 Billion

(source)

Why learn how to write code to build websites if there are all these tools?

Why are we here?

Why do *you* want to learn how to build websites?
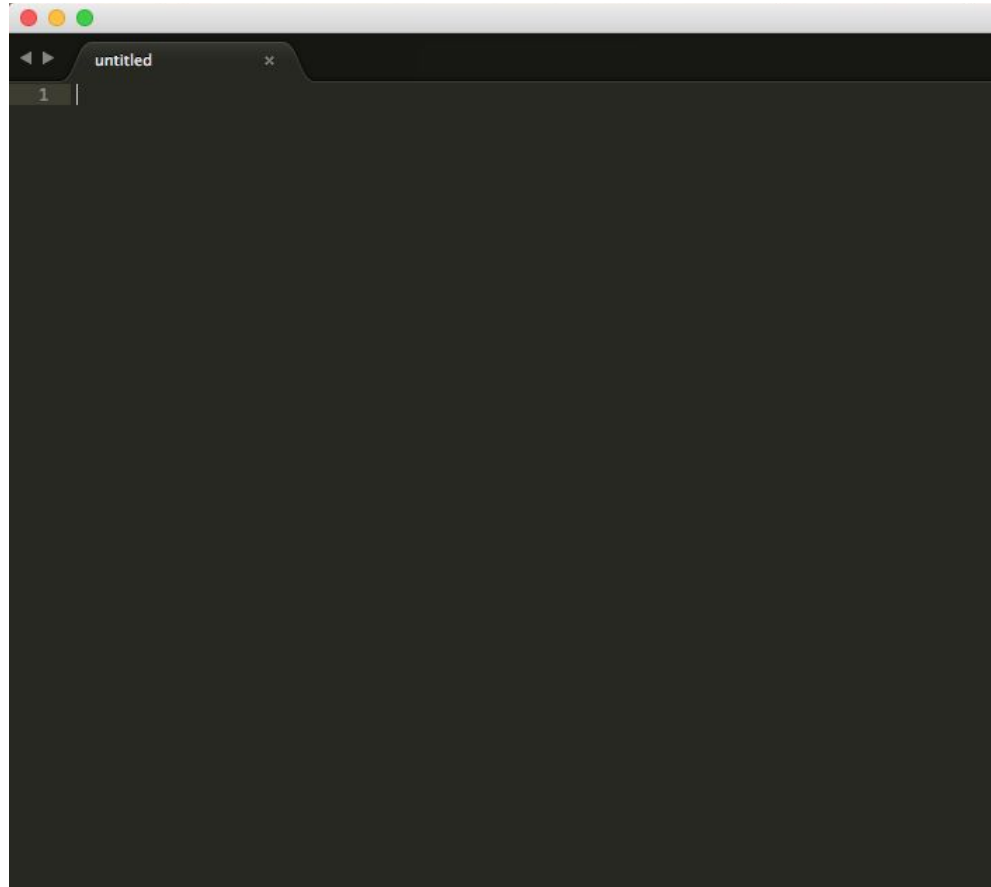
Can building websites be in any way *impactful*?

Organizations (of all shapes and sizes) still need *custom* applications
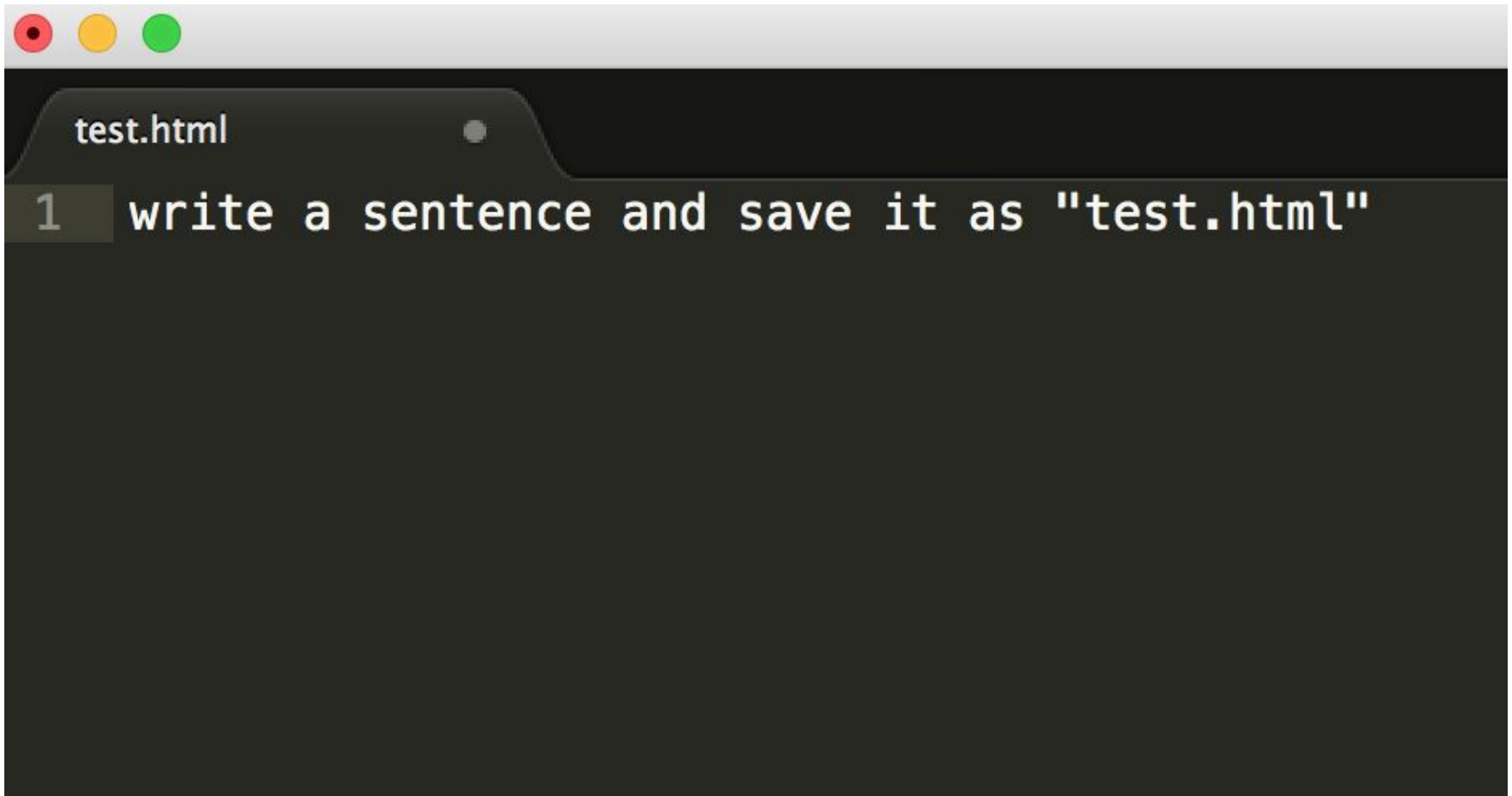
Today's Outline

Building web pages with Hypertext Markup Language (HTML)

Adding styles with Cascading Style Sheets (CSS)
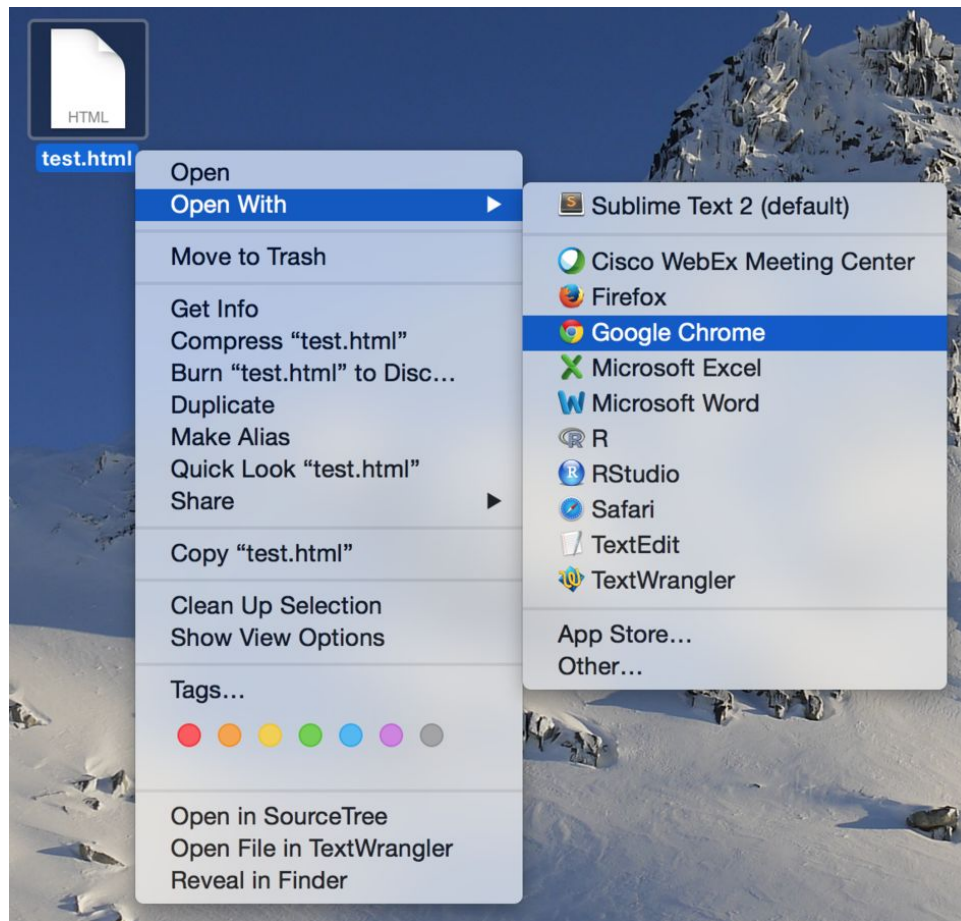
Introduction to HTML
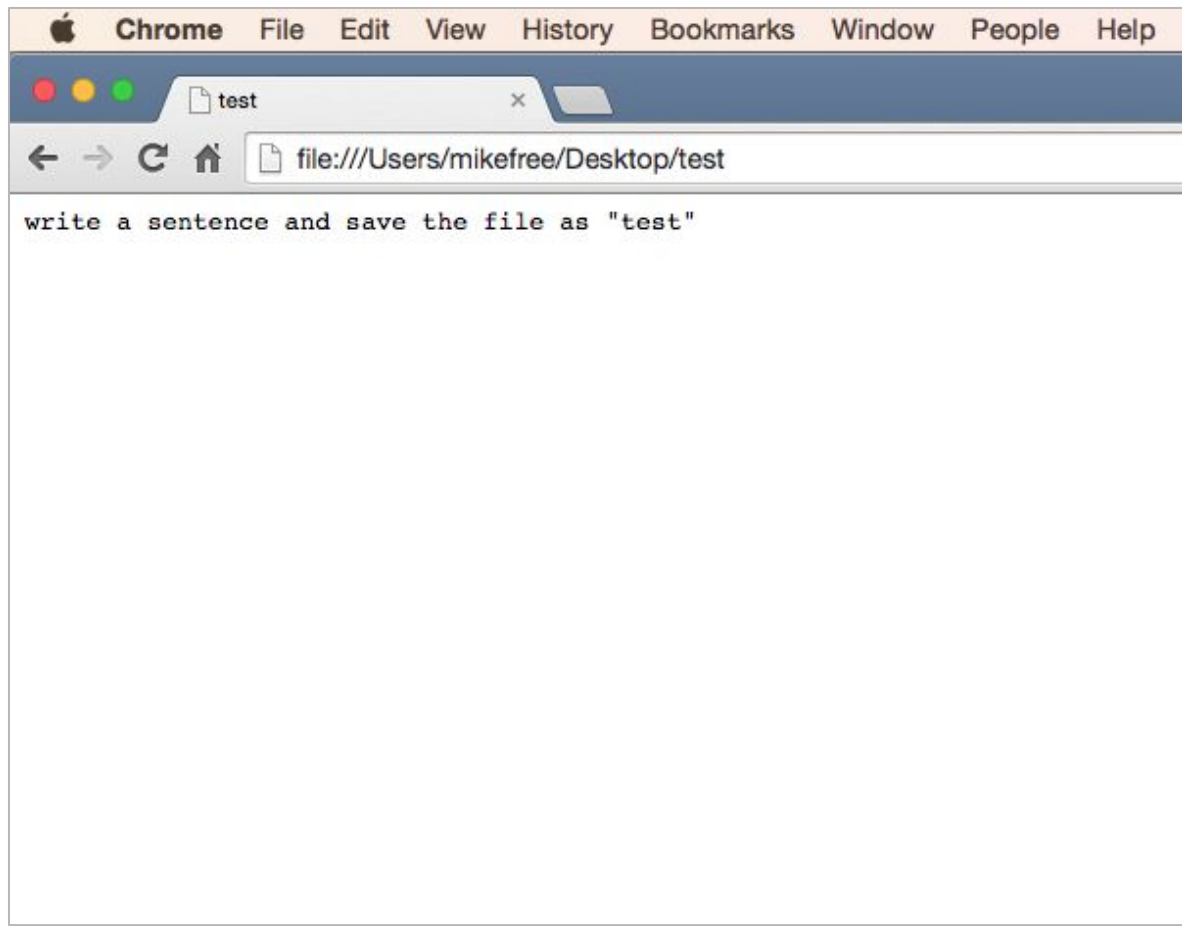
Open **Visual Studio Code**, a **text-editor** (like *Microsoft Word*, but for writing code)

```
test.html                    ●

1    write a sentence and save it as "test.html"
```

Write a sentence, and save the file (File > Save) as "*test.html*" on your **desktop**

Right click on the file icon, and select "Open With > Google Chrome"

test

file:///Users/mikefree/Desktop/test

`write a sentence and save the file as "test"`

Now you should see your website in the browser!

Now we need to **mark-up** the plain text that we've written to give it structure.

Basic Syntax

Hyper**T**ext **M**arkup **L**anguage is used to *markup* text documents

Uses tags (`<tag>`) to describe how to render content

```
<button>This is a button!</button>
```

Common HTML elements:

- `<button>`: a button
- `<p>`: a paragraph
- `<form>`: a form
- `<img>`: an image
- `<div>`: a division of a page

All you have to do is arrange these elements into the layouts you want.

My Blog Post

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Saepe non tempora alias libero, obcaecati ex sit quod incidunt a rem at, quas optio laborum totam, culpa quia. Praesentium dolores accusantium suscipit ex temporibus possimus eius assumenda a explicabo totam laboriosam enim quaerat quod labore, at, quia. Porro officia, nemo beatae.

Quisquam esse, incidunt temporibus qui aspernatur atque velit laboriosam harum, asperiores perferendis non cum, mollitia rerum aliquam cupiditate nostrum commodi molestiae tempora aut dolorem. Accusamus dolores quod veritatis, molestias fugiat minima nam soluta obcaecati facilis vero sed! Voluptate possimus, voluptas, laboriosam tempora temporibus libero laudantium perspiciatis, ducimus quae maxime, magnam?

Quae ratione molestias ipsum alias itaque error aliquam commodi deleniti natus impedit enim vel vitae, praesentium maxime odio distinctio modi nobis, assumenda doloremque dignissimos quod consectetur nisi voluptatem ab. Id omnis eveniet alias nulla temporibus vel amet perspiciatis minima odit aperiam quam aliquid mollitia, tempora iste, itaque reprehenderit ipsum expedita?

What we'll build

```html
<!doctype html>
<html lang="en">
    <!-- The head does the thinking! Sets the title, reads in styles -->
    <head>
        <!-- Set the style -->
        <title>My Page Title</title>


        <!-- Read in our style page (we'll get to this later) -->
        <link rel="stylesheet" href="styles.css" />
    </head>


    <!-- The body is what gets displayed in the browser -->
    <body>
        This is where you put everything you want to show!
    </body>
</html>
```

There's some basic structure to every page

Create a new file in Visual Studio code and save it as **index.html**

Type in an exclamation point (!) and hit *tab* to auto fill

You should see the following code in your document:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Document</title>
</head>
<body>


</body>
</html>
```

This is where we'll put
the content we want to
show in the browser

Luckily there's a shortcut using Visual Studio Code

header

Header
text

Text

Visual elements to add to the screen

Making a header

We'll start with a <header> tag to put our text in

Inside our header, we'll put a <div> element, which helps with styling

Then, we'll put a piece of header text in an <h1> tag (top level header text)

```html
<header>
    <div class="container">
        <h1>My Blog Post</h1>
    </div>
</header>
```

Writing our blog post

We'll start with an <article> tag to put everything in

We'll again use a <div> to help with styling

Then, we'll put a paragraph (<p>) inside

To get filler text, you can type the following and hit **tab**: p*5>lorem50

```
<article>
    <div class="container">
        p*5>lorem50
    </div>
</article>
```
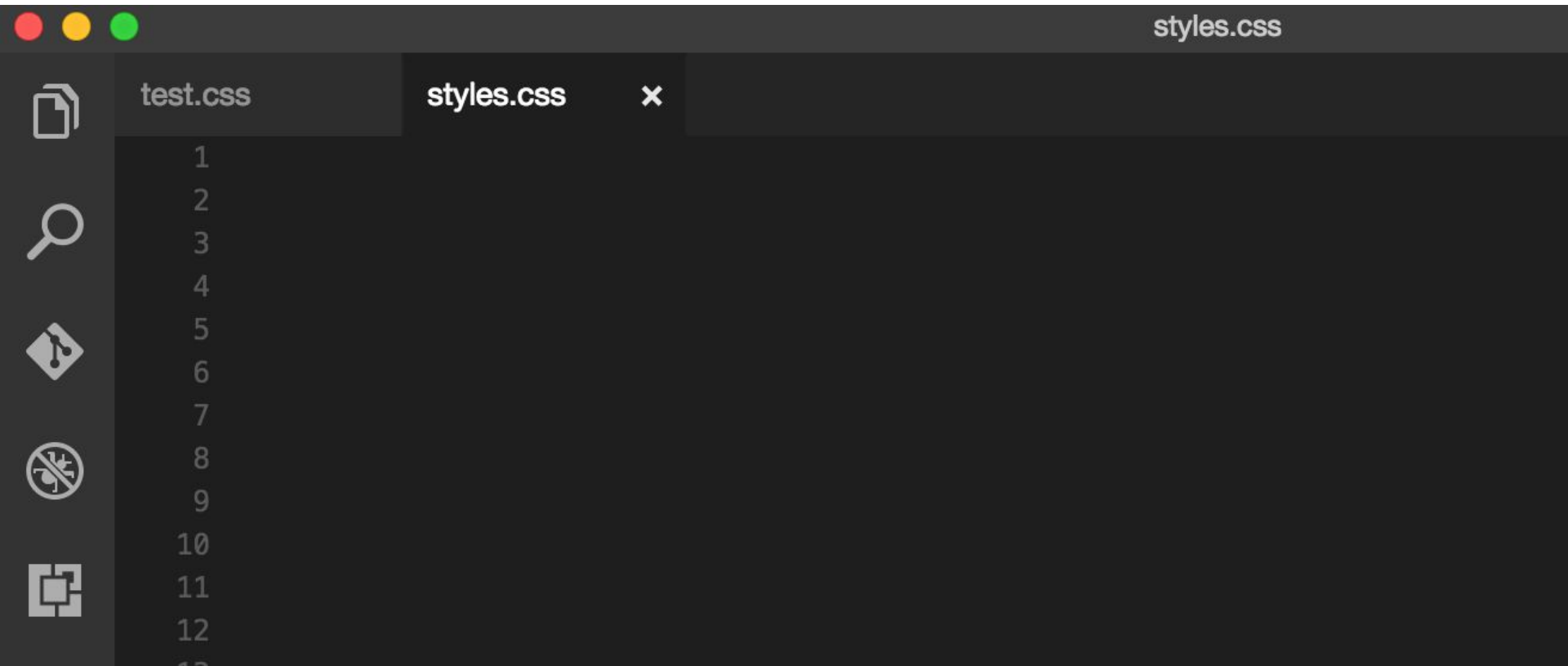
My Blog Post

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Saepe non tempora alias libero, obcaecati ex sit quod incidunt a rem at, quas optio laborum totam, culpa quia. Praesentium dolores accusantium suscipit ex temporibus possimus eius assumenda a explicabo totam laboriosam enim quaerat quod labore, at, quia. Porro officia, nemo beatae.

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Quae ratione molestias ipsum alias itaque error aliquam commodi deleniti natus impedit enim vel vitae, praesentium maxime odio distinctio modi nobis, assumenda doloremque dignissimos quod consectetur nisi voluptatem ab. Id omnis eveniet alias nulla temporibus vel amet perspiciatis minima odit aperiam quam aliquid mollitia, tempora iste, itaque reprehenderit ipsum expedita?

After all that work?

Introduction to CSS

What makes a website "look good"?

test.css

styles.css ✕

```
 1
 2
 3
 4
 5
 6
 7
 8
 9
10
11
12
```

Create a new file called "style.css"

```
<!doctype html>

<html lang="en">

    <!-- The head does the thinking! Sets the title, reads in styles -->

    <head>

        <!-- Set the style -->

        <title>My Page Title</title>


        <!-- Read in our style page (we'll get to this later) -->

        <link rel="stylesheet" href="styles.css" />          Add this line of code
                                                             in your <head>
    </head>                                                  section

</html>
```

Link your styles.css file to your webpage in the head section of index.html

Applying styles

Determine which elements you want to ***apply the styles to***

Set the **properties** (color, font-size) to the correct **values** ('blue', 16px)

```
body {
    font-family: Helvetica;
    font-size: 16px;
    color:blue;
}
```

Let's download some high-resolution photos from pixabay.com

```
header {
    background-image:url(banner.jpg);
    background-size: cover;
    background-position: center;
    color: #FFF;
}
```

Apply header styles to see your image

```css
h1 {
    padding-top: 300px;
    font-size: 48px;
}

body {
    margin: 0;
}

.container {
    padding: 10px;
    max-width: 1170px;
    margin: 0 auto;
}
```

Additional styles to manage layout / spacing

Let's find some cooler fonts on https://fonts.google.com/

```css
header {
    background-image:linear-gradient(to right, rgba(0,0,0,0.5), rgba(0,0,0,0)), url(banner.jpg);
    background-size: cover;
    background-position: center;
    color: #FFF;
}
```

Fancy gradient on the image

Learning Resources

https://www.codecademy.com/learn/web

http://www.w3schools.com/html/

https://www.khanacademy.org/computing/computer-programming/html-css

Thanks!