

# Introduction to Web

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Intended for those who have never worked on a web page before, this tutorial teaches the basics of working with HTML, CSS, and the DOM. You will build a web page with text, image, and links, and publish it through github pages so that it can be your homepage for the course. You will have the option to style it.

In this tutorial and the next you will:

- Read about the DOM and basic web protocols
- Setup your workspace by downloading tutorial files.
- Add text and image content.
- Apply CSS styles to the page as you see fit
- Save and publish your page as a dedicated class page to be updated throughout the semester

*Estimated Time: 30 Minutes*

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## Style Key for This Tutorial

*Code is in blue and italicized*

Exact “file names” and “commands” are in quotation marks

// Code comments are gray and start with //

**Changes in code are highlighted in bold**

**and actions to take are orange**

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## Before You Start

- This tutorial requires no prior knowledge and contains reading to get you oriented.
- If you have experience making webpages and with git, please make a page for sharing your projects in this class and submit the url to courseworks, there is no need to follow these steps below. You can use any tools, themes, frameworks you are familiar with, as long as the page is hosted so that it can be viewed publicly.

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## 0.Read & Review

**If you are new** to making web pages, please first **read** the first half of the “Technology Fundamentals” section of *Interactive Data Visualization for the Web*, pages 17 - 36.

**Or if you are familiar** with HTML, DOM, CSS, **review** the shorter version of this material here:

<http://alignedleft.com/tutorials/d3/fundamentals>

When you return to this tutorial, **keep in mind** these main points from the reading

### 1. HTML, HyperText Markup Language

- HTML tags (which look like <tagname>) are used to “mark up” content in order to provide structure to a web page. See some examples here:

## A Simple HTML Document



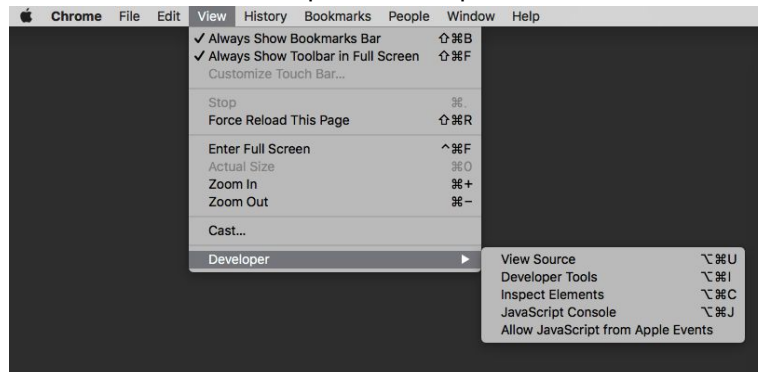
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- [https://www.w3schools.com/html/html\\_intro.asp](https://www.w3schools.com/html/html_intro.asp)
- [https://www.w3schools.com/Html/html\\_basic.asp](https://www.w3schools.com/Html/html_basic.asp)
- You can see a list of common elements from HTML on page 22-23 of the review

## 2. CSS, Cascading Style Sheets

- Uses selectors to target specific HTML tags and style them.
- For usage examples of different CSS attributes:  
[https://www.w3schools.com/css/css\\_examples.asp](https://www.w3schools.com/css/css_examples.asp)

## 3. The Console

- You will use it to examine the elements on your page and also to debug later
- You open the console by first making sure the page you want to examine is in the foreground in focus, and then going to:
  - In Chrome: View >Developer>Javascript Console



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- In Firefox: Tools>Web Developer>Web Console
- In Safari: Develop>Show Error Console

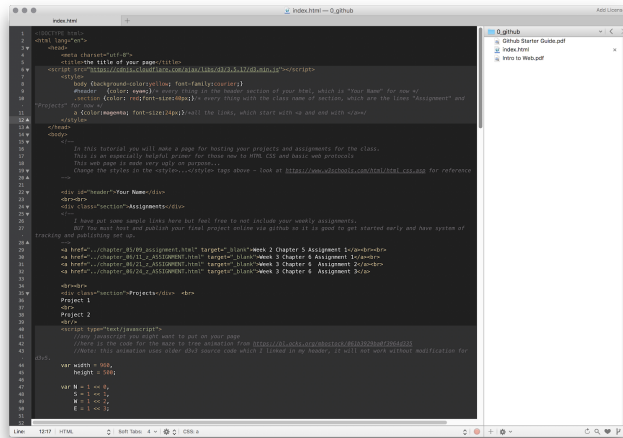
**In this tutorial, when the console or the browser is referenced, I am using Chrome. And when text editors are used, I am using textmate. Others might look slightly different, but should function similarly.**

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## 1. Download, save and open this tutorial file

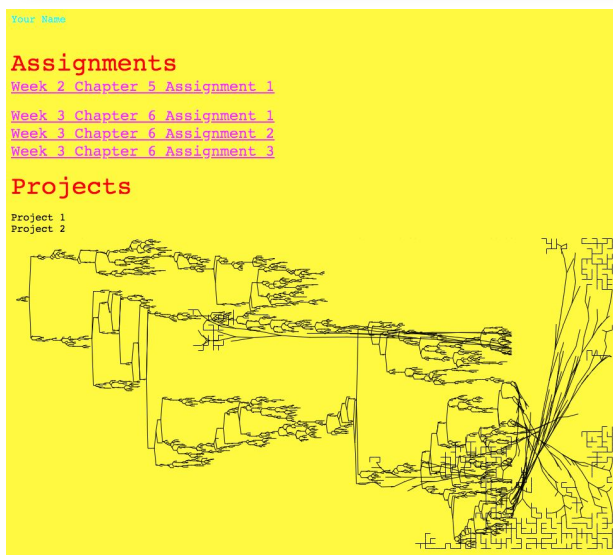
**Go to** the repository the folder 0\_github in your tutorial files, you will find that the folder contains:

1. "Index.html"
2. And pdfs - like the one you are reading now for 2 tutorials
  - a. Intro to web
  - b. github



Open your files in a text editor. On a mac in TextMate, you should see this:

If you do not have the right hand side bar where the list of files are displayed, in TextMate go to View > Show File Browser.



Now open your "index.html" file in the web browser. In Chrome, you can do so by clicking on File > Open File, and selecting the "index.html" file and clicking the "open" button.

Or you can also open a new browser window, drag and drop the "index.html" file into that window.

You will see this web page to the left, don't worry if it looks terrible, you will be changing it.

Don't worry if you do not see the animation at the bottom, you will when we get to using the local server or when it is published online.

## 2. Change the title element of your page

Replace the words "Page Title", found between the `<title>` and `</title>` tags with the title of you want to give your page. The title tag addresses the top bar of your page in the browser.



For example, you can change this to your name & class name like this: `<title>Jia Zhang | Data Visualization</title>` Save and refresh your page in the browser and you should now see the title reflected in the tab.



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### 3. Create Sections(divs) in your page

You will see that I have made some sections in the html already for assignments and projects. Look at the code in textmate versus in the browser. Make sure you understand where each of the sections how up on the web browser. Try changing the text in some of the divs such as “Your Name” to your actual name, etc.

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### Editing your CSS style

**Go back to your text editor.**

```
<style>
  body {
    background-color:yellow;
    font-family:courier;
  }
  #header{
    color: cyan;
  }/* every thing in the header section of your html, which is "Your Name" for now */
  .section {
    color: red;
    font-size:40px;
  }/* every thing with the class name of section, which are the lines "Assignment" and "Projects" for now */
  a {
    color:magenta;
    font-size:24px;
  }/*all the links, which start with <a and end with </a>*/
</style>
```

You are free to change the style of your page by altering code in this section of the index.html file in the text editor. The “#” mark addresses the id of of each div (for example #header is the id “header”). To style the “header” div, you would change the css code within the #header brackets. For a full list of items that you can style with css, refer to <https://www.w3schools.com/css/default.asp>

Some simple things you can do in the css file are:

- Change the line spacing
- Change the font and the color of the text
- Change the background and text color
  - some colors [https://www.w3schools.com/cssref/css\\_colors.asp](https://www.w3schools.com/cssref/css_colors.asp)
- Add an image
  - see here [https://www.w3schools.com/html/html\\_images.asp](https://www.w3schools.com/html/html_images.asp)

**Save and refresh** the page again and you can see your changes reflected.

Now that you have the page the way you want it to look, go to the github starter guide in this folder and setup your page to display on the web.