week 2

HTML 1

1. Recap
2. Tags—typography & HTML entities
3. Tags—hyperlink & attribute, Recap: file path
4. Make it public—uploading your website to a server
5. Tags—image
6. Tags—list
7. Tags—video & audio
8. Codecademy

1 Recap: HTML, CSS, javaScript

HTML (.html)

Content: text, image, video, etc.

CSS (.css)

Style: size, position, color, etc.

javaScript (.js)

Behavior: interactive features.

Don’t forget the file extension.

1 Recap: HTML basic structure

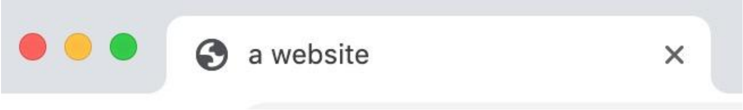
```
<!DOCTYPE html>[1]
<html>[2]
    <head></head>[3]
    <body></body>[4]
</html>
```

1. Document Type. Specify file type to client’s browser.
2. <html> contains everything.
3. <head> contains metadata and links to other codes, like CSS or javascript.
4. <body> contains the content of your website, like text, images, videos, and hyperlinks.

1 Recap: HTML basic structure

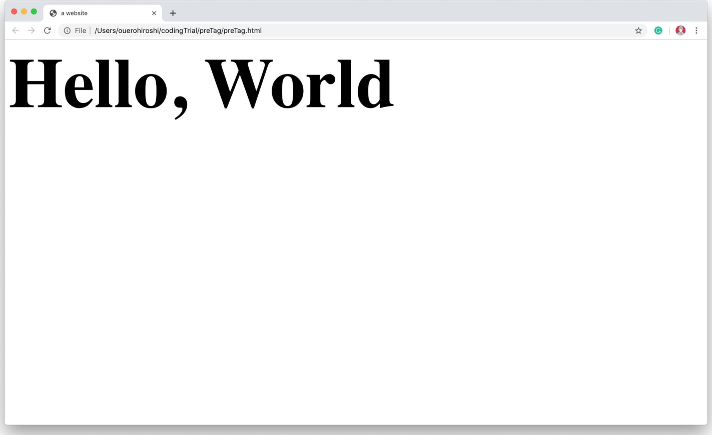
```
<!DOCTYPE html>
<html>
    <head>
        <title>a website</title>[1]
    </head>
    <body>
        <h1>Hello, World</h1>[2]
    </body>
</html>
```

1.



a website

2.



a website

File | /Users/ouerohiroshi/codingTrial/preTag/preTag.html

Hello, World

1 Recap: HTML basic structure

```
<!DOCTYPE html>
<html>
    <head>
        <title>a website</title>
    </head>
    <body>
        <h1>Hello, World</h1>
    </body>
</html>
```

★

Tags should always be a pair of an Opening Tag and a Closing Tag except for a few cases called Self-closing Tag; Opening and Closing Tags don’t need to be on the same line.

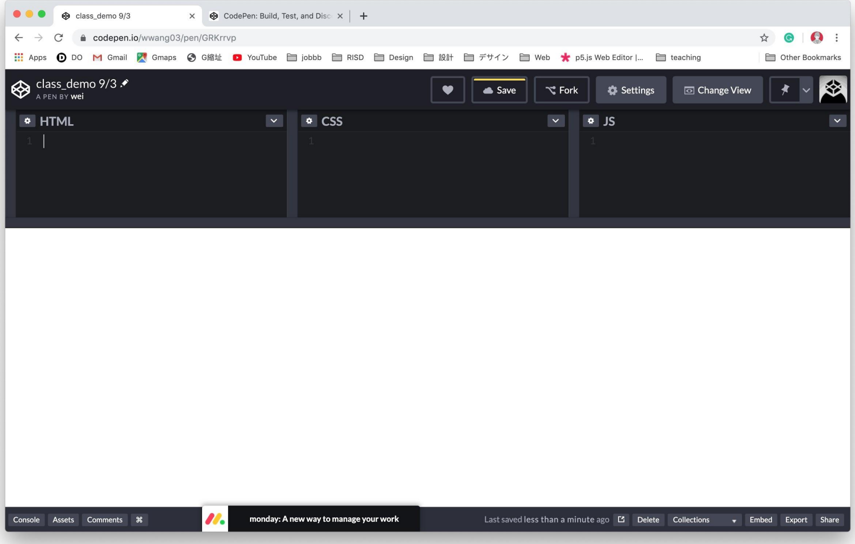
1 Recap: HTML basic structure

```
<!DOCTYPE html>
<html>
⟷<head>
⟷⟷<title>a website</title>
   </head>
⟷<body>
      <h1>Hello, World</h1>
   </body>
</html>
```

★

Indent and spaces won’t influence how your code works. The purpose of them is to help you organize your code.

1 Codepen



Already inside of <body>. <html> and <head> are hidden.

Instant rendering. Good for practicing or testing.

When copy-paste back to sublime text, don’t forget to add <html> and <head> tags back.

<h> & <p>

<h1>

<h2>

...

<h6>

<p>

h stands for Heading; **numbers** refer to the hierarchy and default sizes.

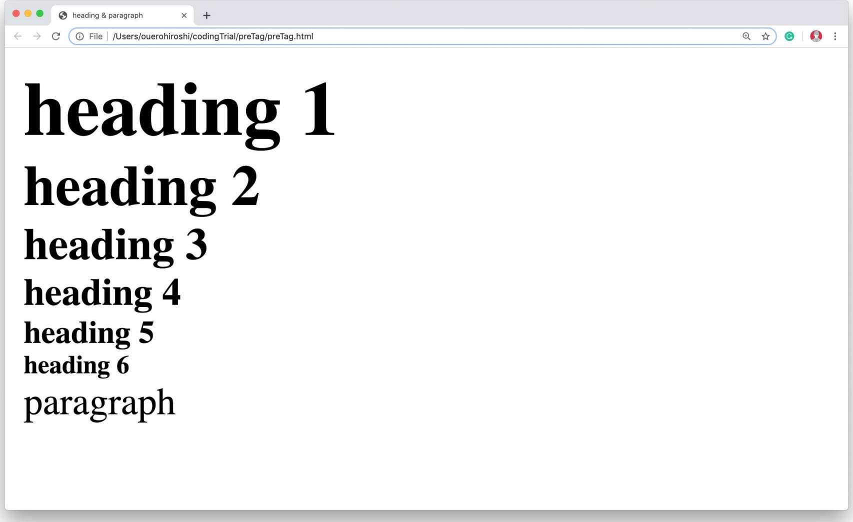
p stands for Paragraph

There’s no strict regulation on the case of tags, but lowercase is recommended.

2 Tags—typography

<h> & <p>

```
<body>
    <h1>heading 1</h1>
    <h2>heading 2</h2>
    <h3>heading 3</h3>
    <h4>heading 4</h4>
    <h5>heading 5</h5>
    <h6>heading 6</h6>
    <p>paragraph</p>
</body>
```



heading 1

heading 2

heading 3

heading 4

heading 5

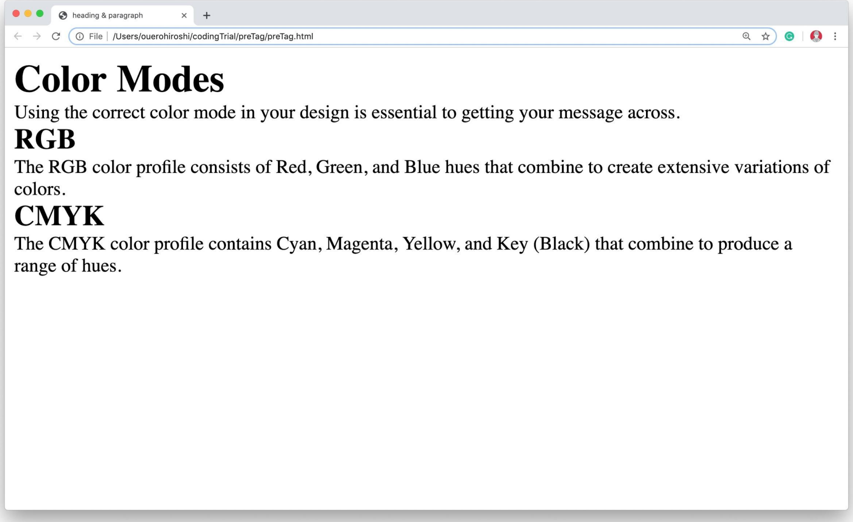
heading 6

paragraph

* Default font size is changeable with CSS.

2 Tags—typography <h> & <p>

```
<body>
    <h1>Color Modes</h1>
    <p>Using...</p>
    <h2>RGB</h2>
    <p>The RGB...</p>
    <h2>CMYK</h2>
    <p>The CMYK...</p>
</body>
```



Color Modes

Using the correct color mode in your design is essential to getting your message across.

RGB

The RGB color profile consists of Red, Green, and Blue hues that combine to create extensive variations of colors.

CMYK

The CMYK color profile contains Cyan, Magenta, Yellow, and Key (Black) that combine to produce a range of hues.

<br>

<br>

br stands for (line)Break.

It is placed inside <h>, <p>, and other typographic tags.

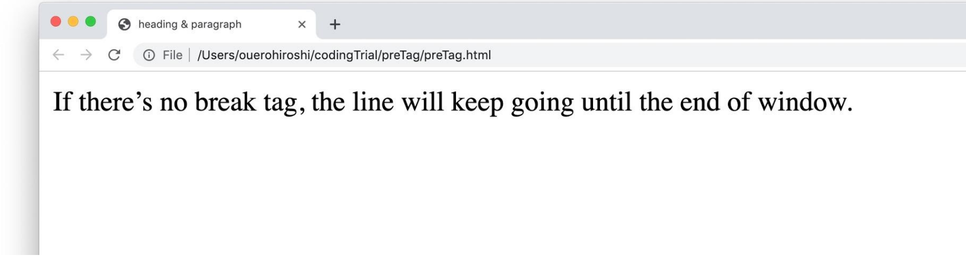
<br> is a Self-closing Tag, which means it can work without a closing tag.

Self-closing Tag can be marked as:

<br>
</br>
<br/>

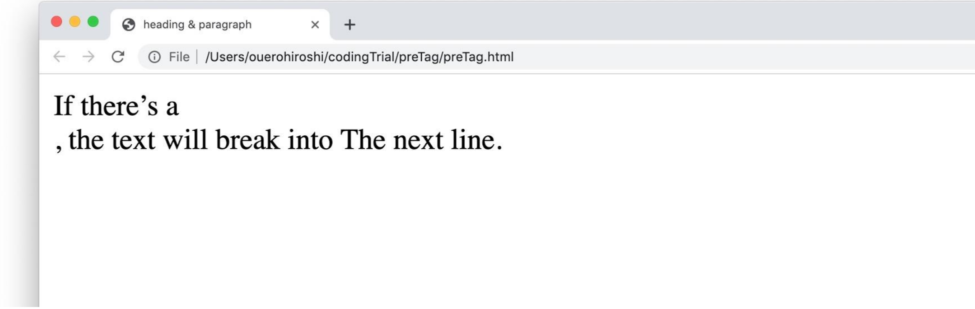
2 Tags—typography <br>

```
<p>
    If there’s no break tag,
    the line will keep going
    until the end of window.
</p>
```



If there’s no break tag, the line will keep going until the end of window.

```
<p>
    If there’s a <br>,
    the text will break into
    The next line.
</p>
```



If there’s a
, the text will break into The next line.

<pre>

<pre>

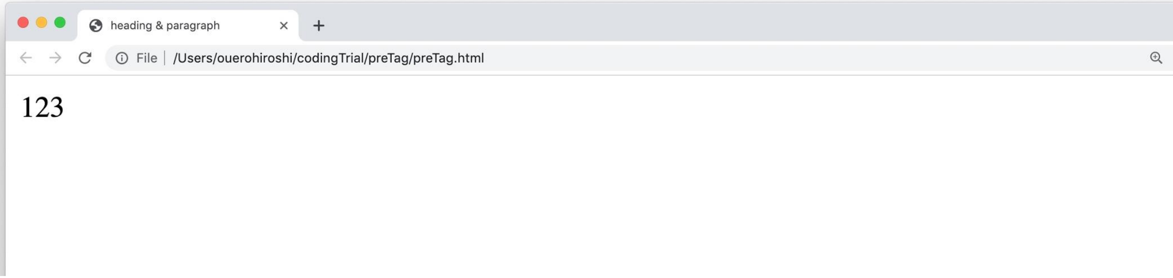
pre stands for Preformatted.

Linebreak, multiple spaces, tabs will be included.

Set in monospace typeface by default. (changed to Times New Roman in the following examples)

2 Tags—typography <pre>

```
<p>
    1
    2
    3
</p>
```

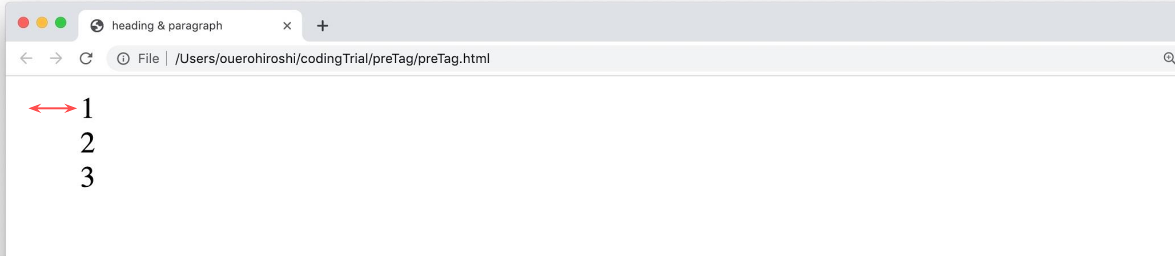


heading & paragraph

File | /Users/ouerohiroshi/codingTrial/preTag/preTag.html

```
123
```

```
<pre>
⟷   1
    2
    3
</pre>
```



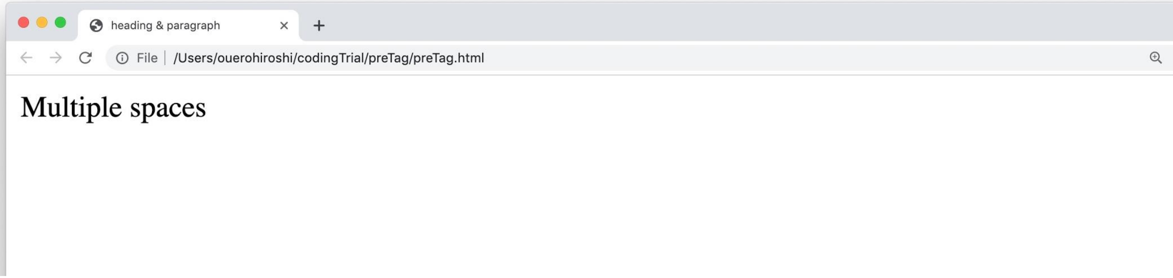
heading & paragraph

File | /Users/ouerohiroshi/codingTrial/preTag/preTag.html

```
⟷ 1
  2
  3
```

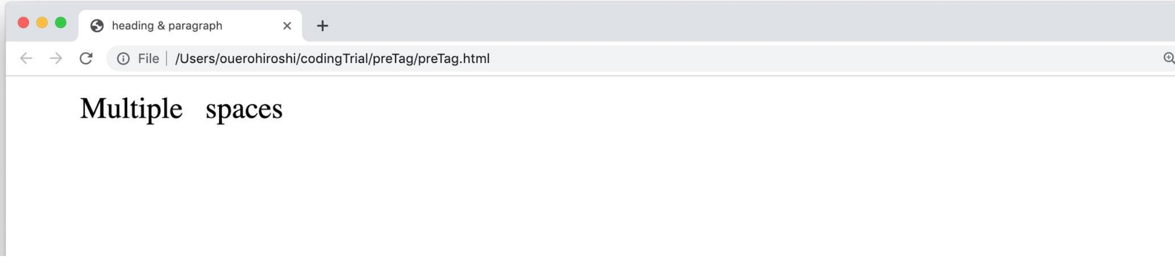
2 Tags—typography <pre>

```
<p>
    Multiple    spaces
</p>
```



Multiple spaces

```
<pre>
    Multiple    spaces
</pre>
```



```
    Multiple   spaces
```

HTML Entities

Inserting multiple spaces (and many other symbols) in HTML

⟶ HTML Entities/HTML Code

https://www.toptal.com/designers/htmlarrows/

https://dev.w3.org/html5/html-author/charref

HTML Entities

Format:

&entity_name; or &#entity_number;

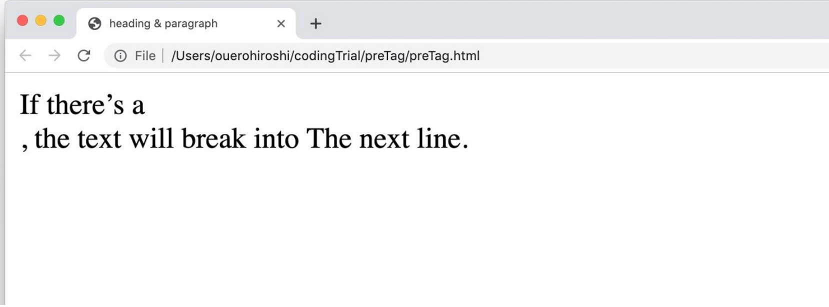
Example:

```
&nbsp;
&#160;
```

HTML Entities

Substitution of reserved HTML characters

```
<p>
    If there’s a </br>,
    the text will break into
    The next line.
</p>
```



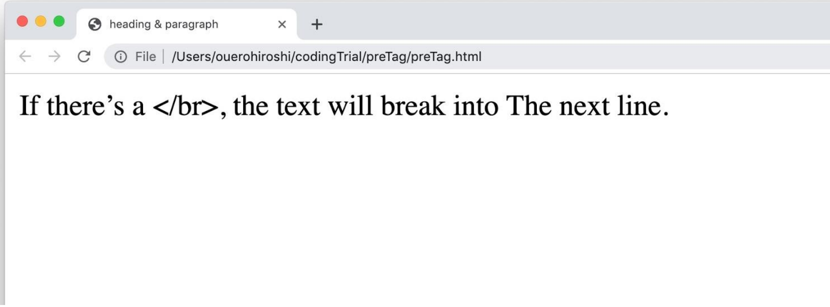
If there’s a
, the text will break into The next line.

HTML Entities

The HTML code of < is &lt; (less than)

The HTML code of > is &gt; (greater than)

```
<p>
   If there’s a &lt;/br&gt;,
   the text will break into
   The next line.
</p>
```



If there’s a </br>, the text will break into The next line.

Emphasizing Tags

<i>

<em>

<strong>

```
<p>
   <i>Harry Potter</i> is my
   favorite book series.
</p>
```

i makes text *italic*.

em makes text *italic* too.

strong makes text **bold**.

Not recommended. Use CSS instead.

Exercise 1: HTML markup

1. Create a folder for this class on your laptop.
2. Create an exercise1.html file with the foundational structure (<!DOCTYPE>, <html>, <head>, <body> tags) in the class folder.
3. Go to the class website, Assignments, Exercise1. Copy the full text of Seven Principles of Typographic Contract and paste it inside <body>.
4. Consider the structure of the article (heading, body text, list), and mark them with <h>, <p>, <br> (<i>, <em>, <strong>).

3 Tags—hyperlink & attribute <a>

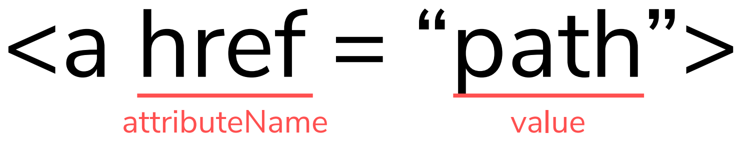
<a>

a stands for Anchor.

<a> defines a hyperlink, which allows you to link different pages together.

HyperText Markup Language

3 Tags—hyperlink & attribute <a>



<a href = “path”>

Attribute is an important feature in HTML tags. It provides additional information in a tag. For example, **href** (Hypertext REFerence) attribute provides the path to the destination of an <a> tag.

Attribute is included in the opening tag.

The format is attributeName = “value”.

Multiple values in one attribute should be separated by space: “value1 value2”.

Recap: file path

File path

Absolute path:
URL, exact location, including the **protocol**.

For example,
https://www.google.com

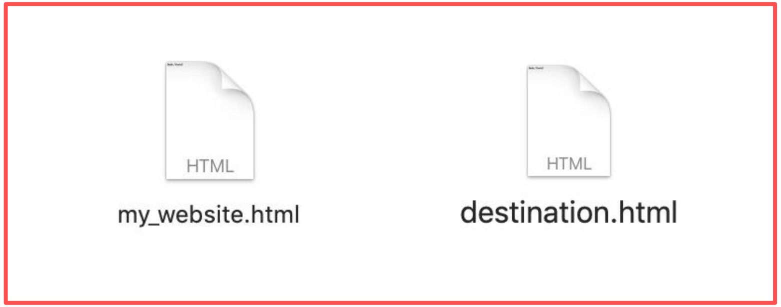
Network protocols are sets of established rules that dictate how to format, transmit and receive data so computer network devices — from servers and routers to endpoints (like clients) — can communicate regardless of the differences in their underlying infrastructures, designs or standards.

Recap: file path

File path

Relative path:
Same level

Path to destination.html from my_website.html:
destination.html



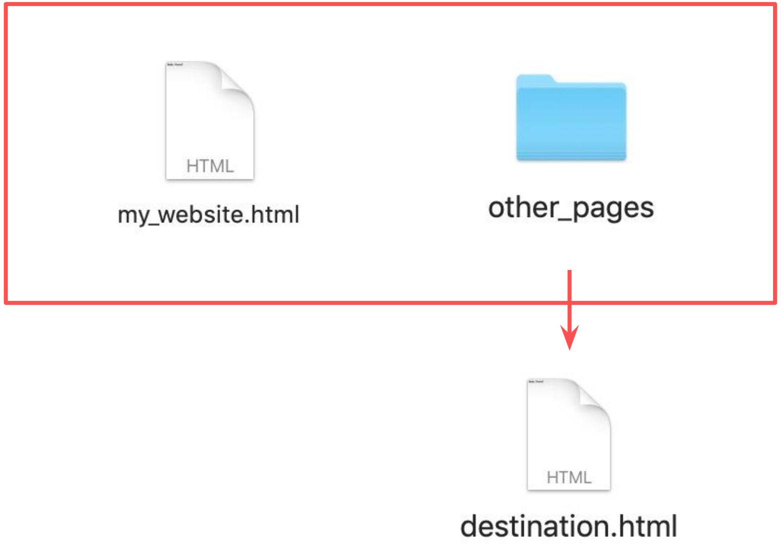
Recap: file path

File path

Relative path:
Different levels

Path to destination.html:
other_pages/destination.html

/: forward, next level



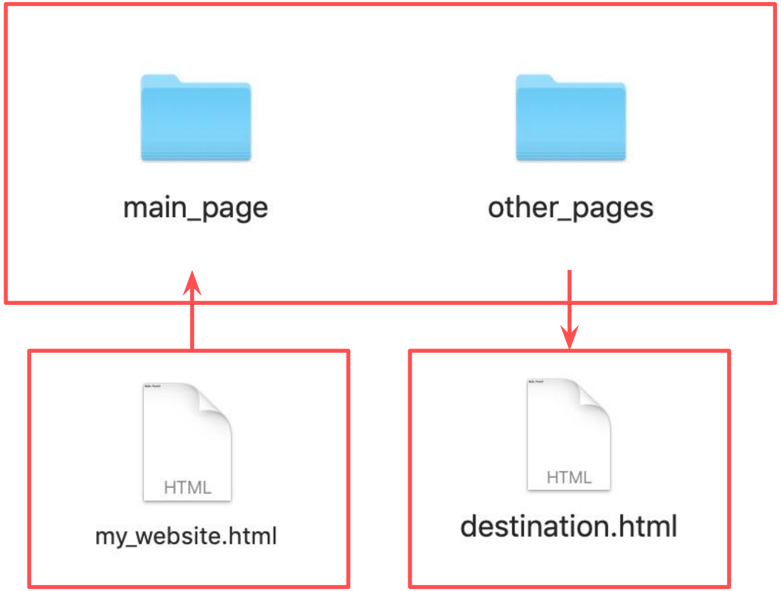
File path

Relative path:
Same levels

my_website is located inside of the main_page folder.

Path to destination.html:
../other_pages/destination.html

../: backward, previous level



Naming files

Limit your file name to lowercase letters, numbers, _, -.

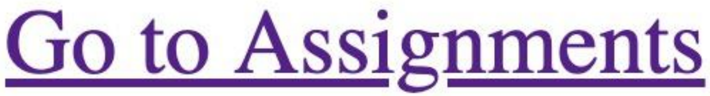
Avoid space, special symbols like !, ?, %, #, /.

Read more

3 Tags—hyperlink & attribute <a>

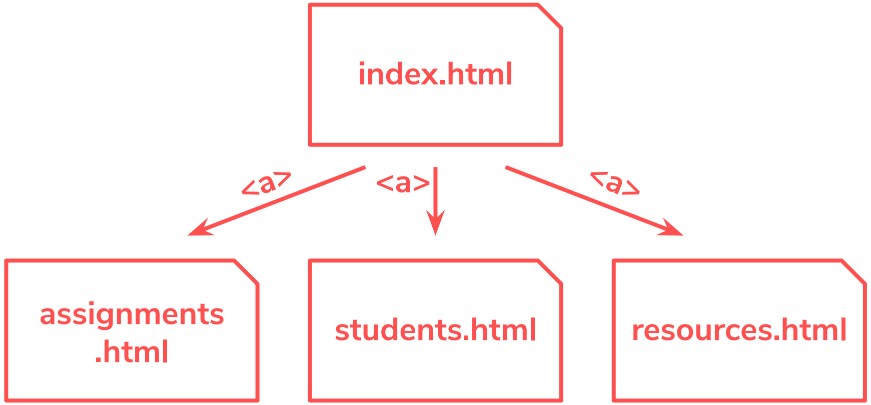
index.html:

```
<a href = “assignments.html”>
    Go to Assignments
</a>
```



Go to Assignments

index.html, by default, is the welcome page of your website.



3 Tags—hyperlink & attribute <a>

index.html:

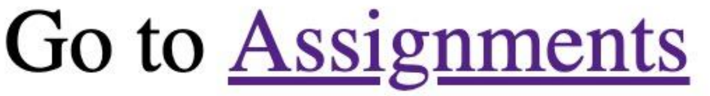
```
<a href = “assignments.html” target = “_blank”>
    Go to Assignments
</a>
```

Target is another important attribute of <a>. It defines where to open the linked document.

It has specified values:
_self (default): opens the link at the same window.
_blank: opens the link at a new tab.

3 Tags—hyperlink & attribute <a>

```
<p>go to <a href = "path”>Assignments</a></p>
```



Go to Assignments

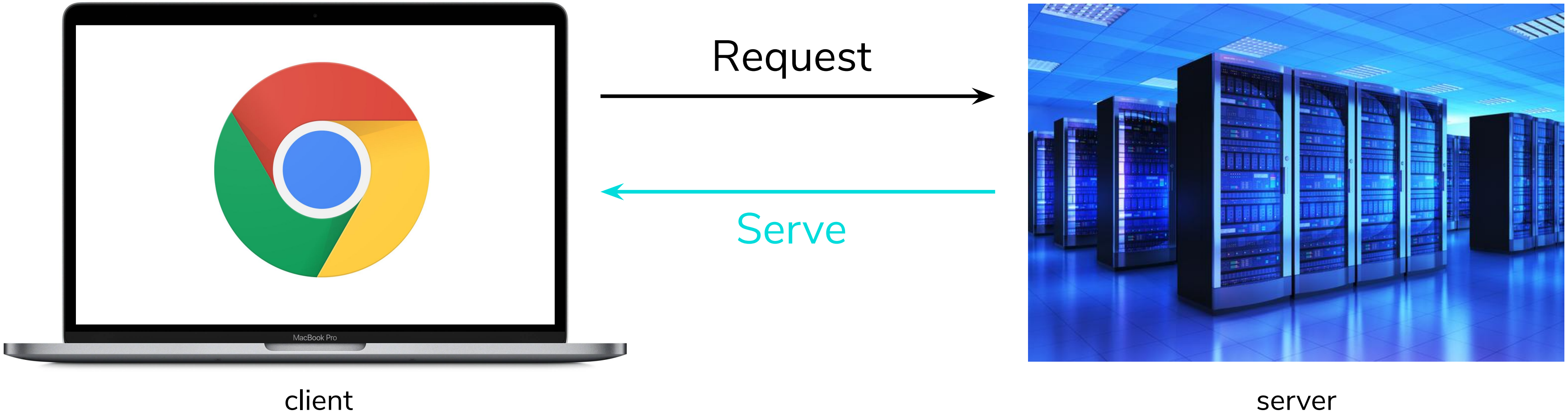
<a> can be contained in other typographic tags.

3 Tags—hyperlink & attribute quick exercise

1. Create a index.html file with the foundational structure under the class folder. (You can copy-paste exercise1.html then rename it.)
2. Add a hyperlink inside <body>, and link it to exercise1.html.

4 Make it public

server & client



Websites exist on super computers called Server.
When you put an URL in your browser, it requests data to the Server.
The Server serves the data to your browser on your device (client.)

4 Make it public

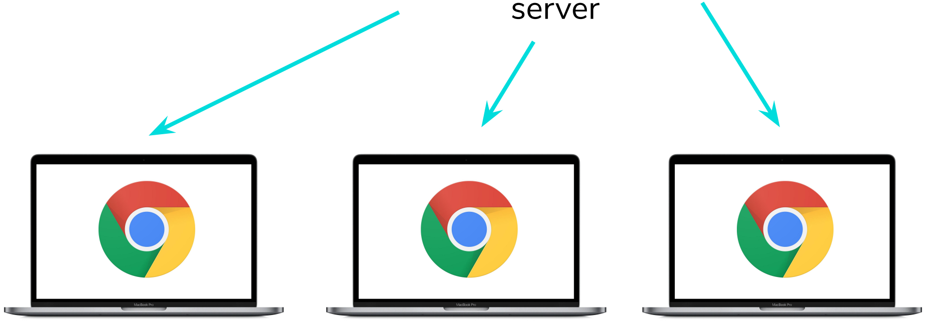
server & client

HTML
index.html
MacBook Pro

Your laptop

Upload

server



Uploading your .html file to a server.

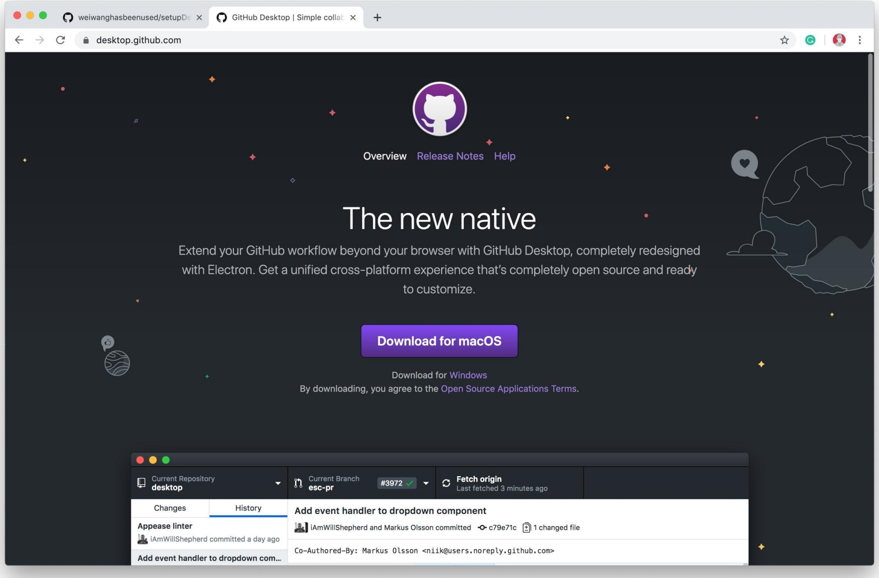
GitHub

GitHub is a web-based repository hosting service based on the Git version control and source code management system. GitHub allows individuals and teams of programmers to manage, share, store and make editable revisions to projects. We will be using Github’s code sharing and publishing service to store our class projects.

See more on GitHub on GitHub Guides.

4 Make it public

GitHub: setup



The new native

Extend your GitHub workflow beyond your browser with GitHub Desktop, completely redesigned with Electron. Get a unified cross-platform experience that's completely open source and ready to customize.

Download for Windows

By downloading, you agree to the Open Source Applications Terms.

Appease linter

IAmWillShepherd committed a day ago

Add event handler to dropdown com...

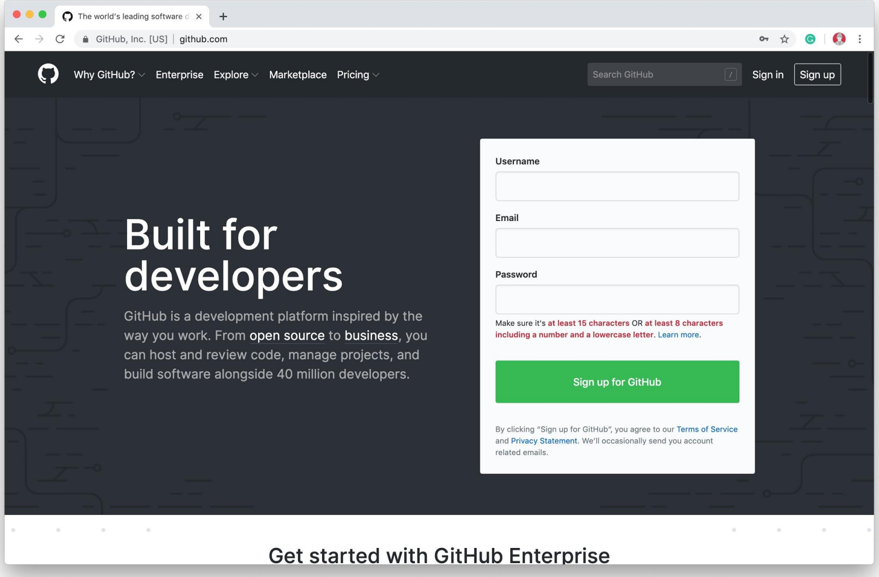
Add event handler to dropdown component

IAmWillShepherd and Markus Olsson committed c79e71c 1 changed file

```
Co-Authored-By: Markus Olsson <niik@users.noreply.github.com>
```

1. Go to desktop.github.com and download GitHub Desktop.

GitHub: setup



Built for developers

GitHub is a development platform inspired by the way you work. From open source to business, you can host and review code, manage projects, and build software alongside 40 million developers.

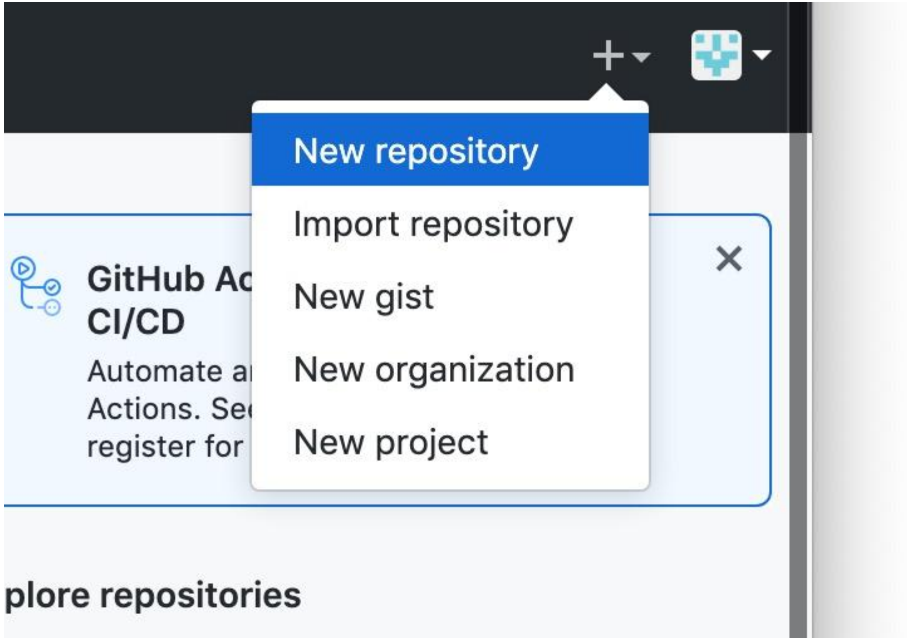
Make sure it's at least 15 characters OR at least 8 characters including a number and a lowercase letter. Learn more.

By clicking "Sign up for GitHub", you agree to our Terms of Service and Privacy Statement. We'll occasionally send you account related emails.

Get started with GitHub Enterprise

2. Go to github.com and sign up an account.

GitHub: setup

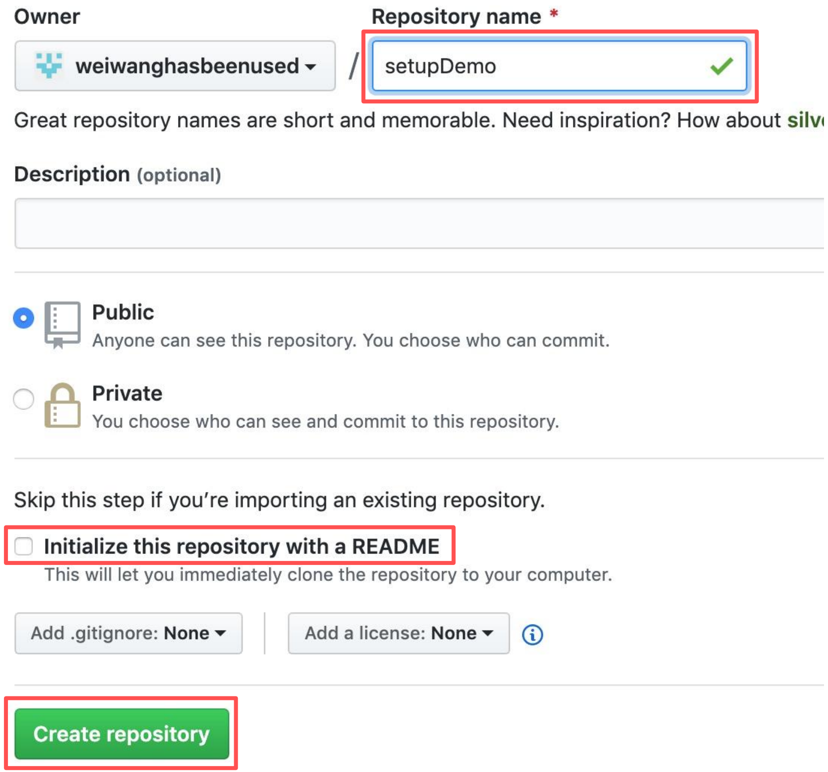


3. After logging in, click on the plus symbol on the top right corner, then click New repository.

   A repository can be thought as a folder where you put all the files related to one single website.

4 Make it public

GitHub: setup



Owner

weiwanghasbeenused ▾ / Repository name * setupDemo ✓

Great repository names are short and memorable. Need inspiration? How about silv

Description (optional)

● Public
Anyone can see this repository. You choose who can commit.

○ Private
You choose who can see and commit to this repository.

Skip this step if you're importing an existing repository.

□ Initialize this repository with a README
This will let you immediately clone the repository to your computer.

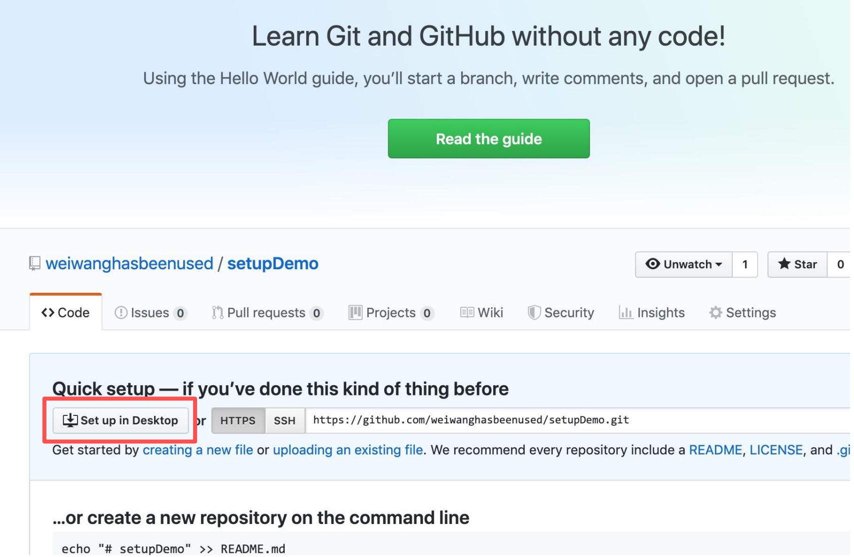
4. Name this repository creative_computation.

   DO NOT check Initialize this with a README.

   Click on Create repository

4 Make it public

GitHub: setup



Learn Git and GitHub without any code!

Using the Hello World guide, you'll start a branch, write comments, and open a pull request.

Quick setup — if you've done this kind of thing before

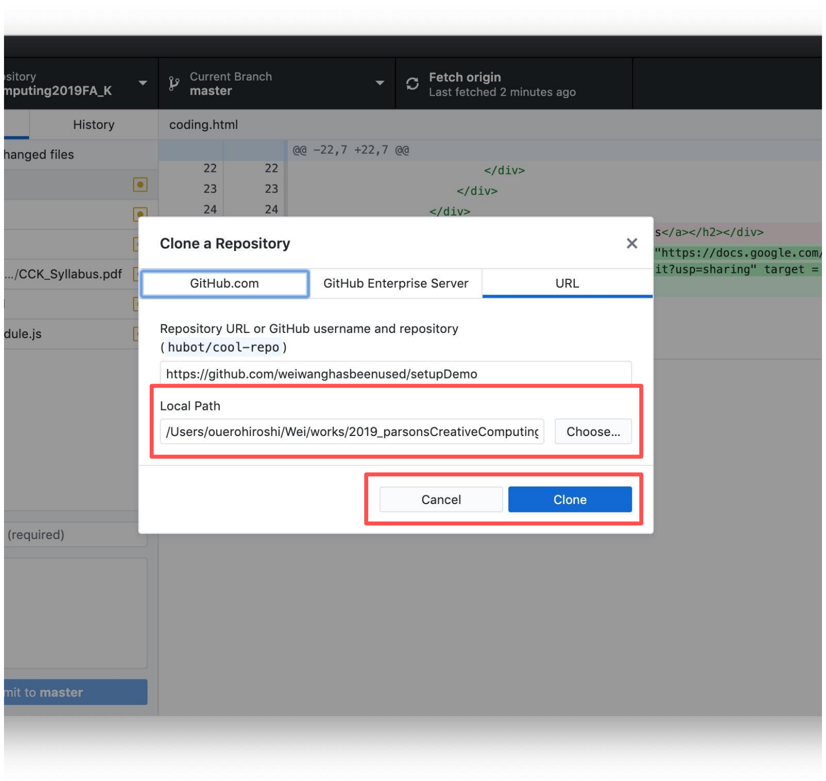
Get started by creating a new file or uploading an existing file. We recommend every repository include a README, LICENSE, and .gi

...or create a new repository on the command line

```
echo "# setupDemo" >> README.md
```

5. Hit Set up in Desktop.

GitHub: setup



```
@@ -22,7 +22,7 @@
22  22                      </div>
23  23                  </div>
24  24              </div>
s</a></h2></div>
"https://docs.google.com/
it?usp=sharing" target =
```

Clone a Repository

GitHub.com | GitHub Enterprise Server | URL

Repository URL or GitHub username and repository (`hubot/cool-repo`)

https://github.com/weiwanghasbeenused/setupDemo

Local Path

/Users/ouerohiroshi/Wei/works/2019_parsonsCreativeComputing

Choose...

Cancel | Clone

5. Make sure the Local Path box navigates to the class folder on your computer, then hit Clone.

This should create a folder named creative_computing, inside of your class folder.

GitHub: setup

0. Create a class folder on your computer.

1. Download GitHub Desktop.

2. Sign up a GitHub account.

3. & 4. Click on + and create a new repository named creative_computing.

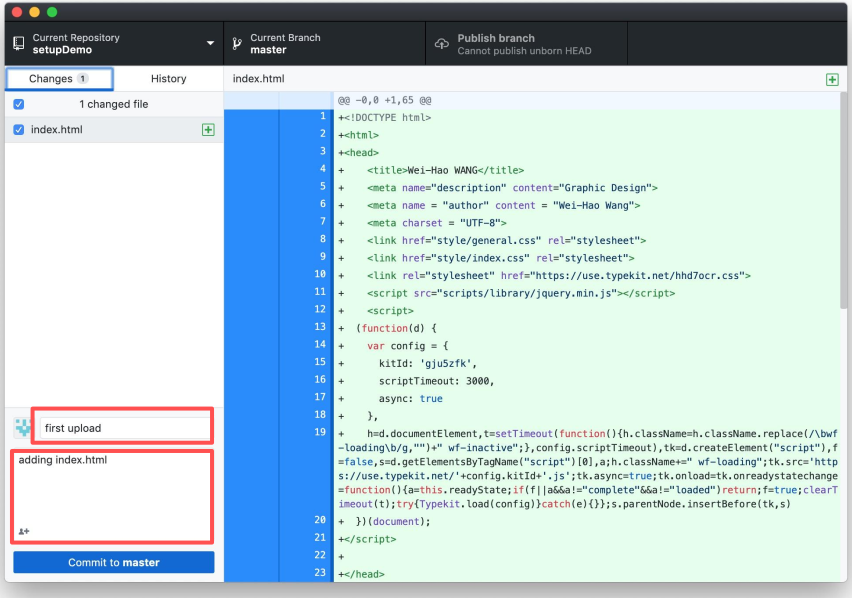
5. & 6. Link this repository to the class folder on your computer.

GitHub: upload

1. Put index.html in creative_computing. Then create a folder named exercises in creative_computing and move exercise.html to it.

4 Make it public

GitHub: upload



first upload

adding index.html

index.html

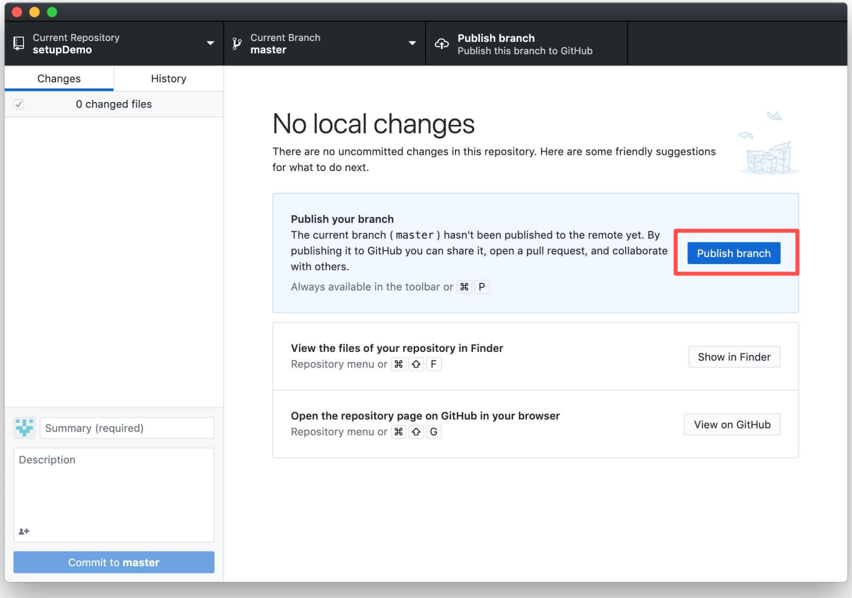
```
@@ -0,0 +1,65 @@
+<!DOCTYPE html>
+<html>
+<head>
+    <title>Wei-Hao WANG</title>
+    <meta name="description" content="Graphic Design">
+    <meta name = "author" content = "Wei-Hao Wang">
+    <meta charset = "UTF-8">
+    <link href="style/general.css" rel="stylesheet">
+    <link href="style/index.css" rel="stylesheet">
+    <link rel="stylesheet" href="https://use.typekit.net/hhd7ocr.css">
+    <script src="scripts/library/jquery.min.js"></script>
+    <script>
+  (function(d) {
+    var config = {
+      kitId: 'gju5zfk',
+      scriptTimeout: 3000,
+      async: true
+    },
+    h=d.documentElement,t=setTimeout(function(){h.className=h.className.replace(/\bwf-loading\b/g,"")+" wf-inactive";},config.scriptTimeout),tk=d.createElement("script"),f=false,s=d.getElementsByTagName("script")[0],a;h.className+=" wf-loading";tk.src='https://use.typekit.net/'+config.kitId+'.js';tk.async=true;tk.onload=tk.onreadystatechange=function(){a=this.readyState;if(f||a&&a!="complete"&&a!="loaded")return;f=true;clearTimeout(t);try{Typekit.load(config)}catch(e){}};s.parentNode.insertBefore(tk,s)
+  })(document);
+</script>
+
+</head>
```

2. Go to GitHub Desktop. Once it senses any change inside creative_computing folder, it will be prompted to update.

   Add title(required) and description(optional) for this update, then hit Commit to master.

4 Make it public

GitHub: upload



No local changes

There are no uncommitted changes in this repository. Here are some friendly suggestions for what to do next.

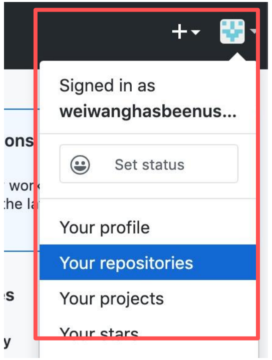
Publish your branch
The current branch (`master`) hasn't been published to the remote yet. By publishing it to GitHub you can share it, open a pull request, and collaborate with others.
Always available in the toolbar or ⌘ P

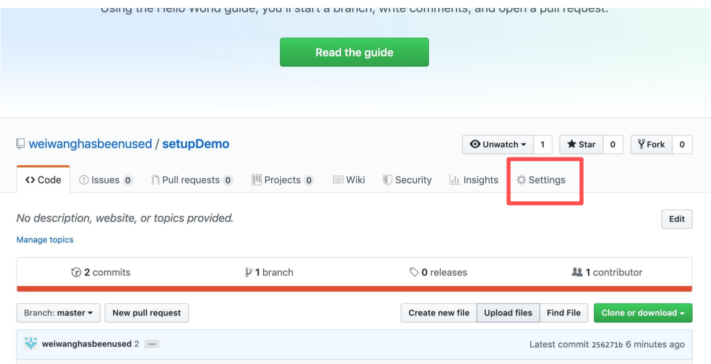
View the files of your repository in Finder
Repository menu or ⌘ ⇧ F

Open the repository page on GitHub in your browser
Repository menu or ⌘ ⇧ G

3. Click Publish branch.

4 Make it public GitHub: upload




Using the Hello World guide, you'll start a branch, write comments, and open a pull request.

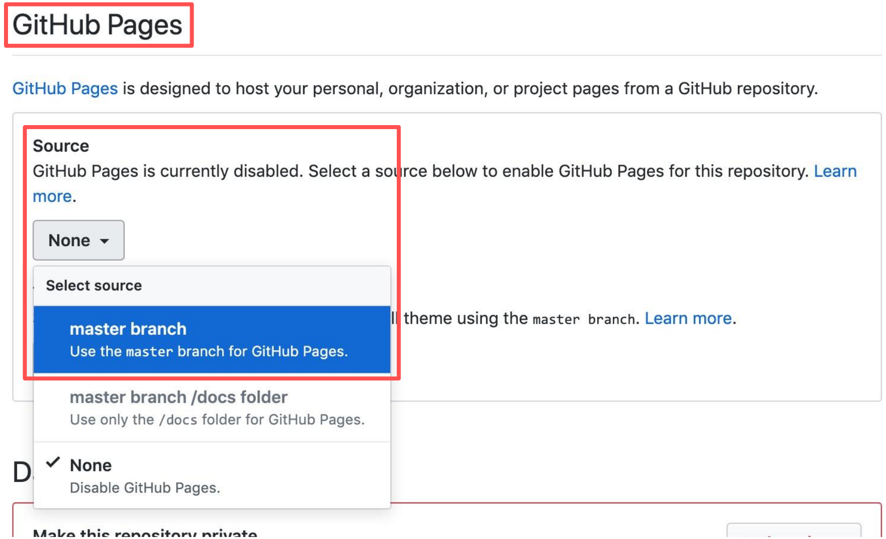
No description, website, or topics provided.

4. Go to GitHub website. Click on your avatar then Your repositories.

   Click on creative_computing, then Settings.

4 Make it public

GitHub: upload



GitHub Pages

GitHub Pages is designed to host your personal, organization, or project pages from a GitHub repository.

Source

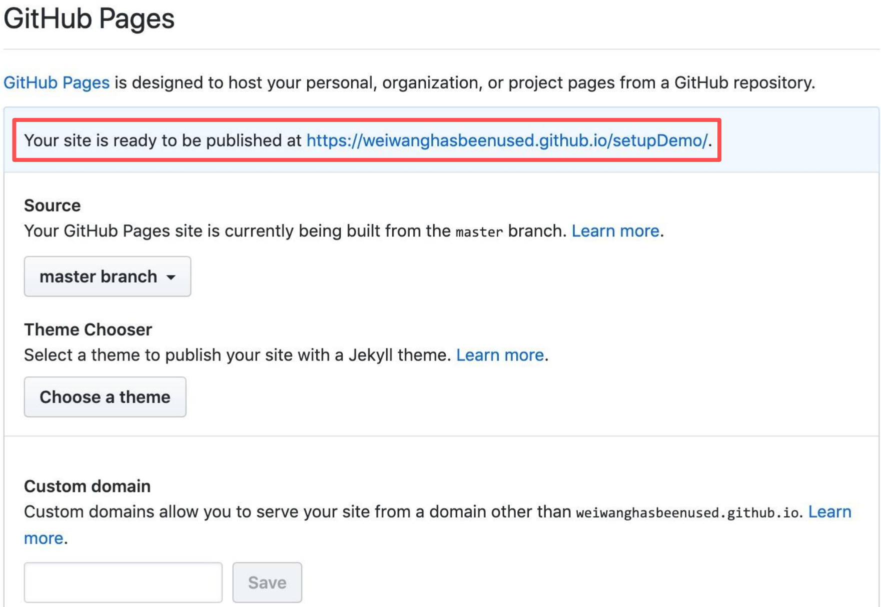
GitHub Pages is currently disabled. Select a source below to enable GitHub Pages for this repository. Learn more.

None ▾
Select source
master branch
Use the master branch for GitHub Pages.
master branch /docs folder
Use only the /docs folder for GitHub Pages.
✓ None
Disable GitHub Pages.
ll theme using the master branch. Learn more.
D
Make this repository private

5. Under Settings, find GitHub Pages section, then change Source to master branch.

4 Make it public

GitHub: upload



GitHub Pages

GitHub Pages is designed to host your personal, organization, or project pages from a GitHub repository.

Your site is ready to be published at https://weiwanghasbeenused.github.io/setupDemo/.

Source

Your GitHub Pages site is currently being built from the `master` branch. Learn more.

Theme Chooser

Select a theme to publish your site with a Jekyll theme. Learn more.

Custom domain

Custom domains allow you to serve your site from a domain other than `weiwanghasbeenused.github.io`. Learn more.

6. Your website will be accessible from the URL.

4 Make it public GitHub: upload

1. Move your index.html to the creative_computing folder, then create a folder named exercises and move exercise1.html to it.

2. & 3. Go to GitHub Desktop. Add title and description for this update, then hit Commit to master, then Publish branch.

4. Go to GitHub website, avatar ⟶ Your repositories ⟶ creative_computing ⟶ Settings.

5. Under Settings, find GitHub Pages, then change Source to master branch.

6. Visit https://yourAccount.github.io/creative_computing/
(It might take some time to process for the first publishing.)

7. Modify the link in index.html so that it's linked to exercises/exercise1.html.

5 Tags—image <img>

<img src = “path” alt = “message”>

img stands for IMaGe.

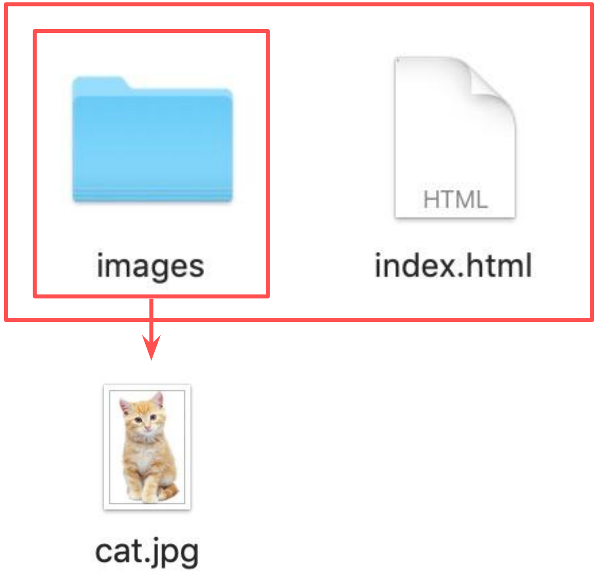
src attribute identifies where the image file is.

alt attribute gives the users a message if the image is not loaded (optional).

<img> is a Self-Closing Tag, which means it can work without a closing tag.

5 Tags—image <img>

```
<img src = “images/cat.jpg”>
```



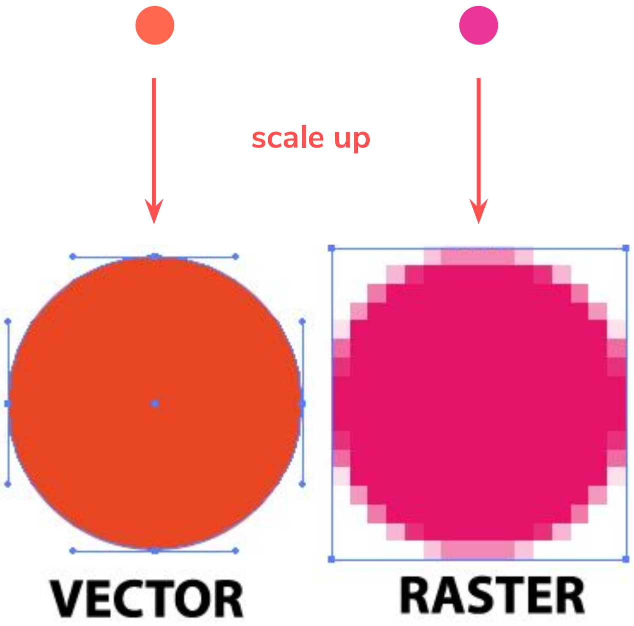
5 Tags—image

<img>

Acceptable file types:

.jpg / .jpeg
.png
.gif
.svg (vector image)

5 Tags—image <img>



Bitmap / Raster
For example: jpg, jpeg, gif, png

A raster graphics image, or bitmap, is a dot matrix data structure representing a generally rectangular grid of pixels, or points of color. Raster graphics are resolution dependent. They cannot scale up without loss of quality.

Vector
For example: svg

Use geometrical primitives like points, lines, curves and shapes that can be mathematically expressed to represent them in a graphic. Thus vector graphics are not resolution dependent.

<img>

Image optimization

Image compression algorithms seek to eliminate or reduce redundancy in the image data in order to be able to store or transmit data efficiently.

Read more

jpg is best for photography and detailed line art with subtle shifts in tonal range.

png is best suited for logos and shapes with a few number of colors. png files allow for transparency.

gif is best for solid blocks of color. Is similar to png and allows for transparency, but has animation capabilities.

svg, fonts are good ways to use vectors to the page instead of images

Exercise 1: add images

1. Create a images folder in creative_computing, and put an image inside of it.
2. Add a <img> tag in exercise1.html that displays your image.

6 Tags—list

<ul> <ol> <li>

<ul>

<ol>

<li>

ul stands for Unordered List.

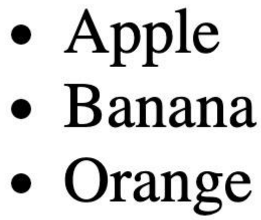
ol stands for Ordered List.

li stands for List Item.

<li> should be included within either a <ul> or <ol> tag.

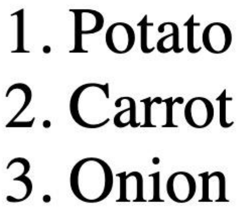
6 Tags—list <ul> <ol> <li>

```
<ul>
    <li>Apple</li>
    <li>Banana</li>
    <li>Orange</li>
</ul>
```



- Apple
- Banana
- Orange

```
<ol>
    <li>Potato</li>
    <li>Carrot</li>
    <li>Onion</li>
</ol>
```

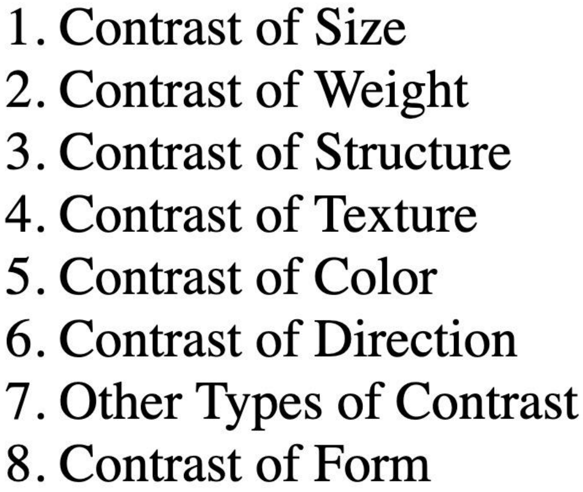


1. Potato
2. Carrot
3. Onion

6 Tags—list

Exercise 1: list structure

1. Under the paragraph Seven Kinds of Contrast in the article, create a ordered list of the eight categories.



1. Contrast of Size
2. Contrast of Weight
3. Contrast of Structure
4. Contrast of Texture
5. Contrast of Color
6. Contrast of Direction
7. Other Types of Contrast
8. Contrast of Form

<video> & <audio>

<video>

<audio>

7 Tags—video & audio <video> & <audio>

```
<video src = “media/video/cat.mov” controls loop muted
autoplay poster = “media/image/videoLoading.jpg”></video>
```

controls: show the control bar.

loop: replay the video again and again.

muted: mute the video.

autoplay: play the video once loaded. Won’t work unless the video is muted.

poster: an image displayed when the video is loading.

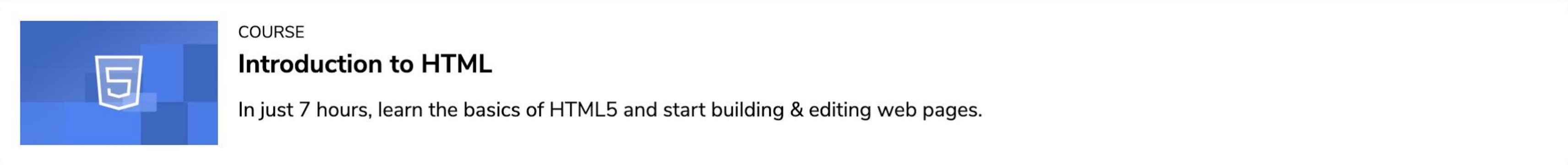
Controls, loop, muted, and autoplay are attributes that don’t required a value.

7 Tags—video & audio <video> & <audio>

```
<audio src = “media/sound/meow.mp3” controls loop muted
autoplay></audio>
```

The functions of attributes
are same as in <video>

8 Codecademy



COURSE

Introduction to HTML

In just 7 hours, learn the basics of HTML5 and start building & editing web pages.