

Coding for Designers

Week 1 – Intro

Megumi Tanaka

Welcome !

Intro to Coding for Designers

- Slack me questions anytime or email hello@megumi.co
- Syllabus & Course Reader on Github
 - send me your Github @username for access
 - Username will become your website URL ie. username.github.io
- Figma for interactive activities
- Interrupt me anytime! All questions are good!

Web Design 101

Browser as Design Tool

- By the end of this course, I want you to reach for **code editors** for web design
 - Not Sketch, Figma, etc.
 - Code can do things that graphics programs can't do!

Topics we'll cover

Web as Garden

- Website as metaphor
- Digital Gardening
- The Small Web
- Handmade Web
- View it as a seedbed for your garden—it doesn't have to be “finished” or “perfect”
- Embody creative play
- Have fun!



<https://www.are.na/block/1705980>

Final Project

Important Dates

- Week 3 – Mini critique (Figjam hangout)
- Week 5 – Mini critique (Figjam hangout)
- Week 6 – Final critique
 - Bring a lo-fi computing device if you have one!
 - Must have internet capability

Final Project

Assessment

You can accomplish seedling  activities during class workshops, but I recommend 2-3 hours a week of independent study and coding work to get to  level.

-  Publish a single column site with images, text, and links styled with basic CSS
-  Publish a multi-column layout with intermediate CSS techniques
-  Use advanced CSS techniques and responsive/fluid design
-  Add CSS or JS animation, effects, or interactive elements

Website as Index

Final Project Idea

- It doesn't have to be a “finished” concept
- Your final project can simply be an archive of all your in class activities!
- I encourage you to come up with your concept and web design incrementally by **doing the work**
- Discover how to design for the web by experimenting in the browser directly
- Keep it simple!

Intros

- Name
- Pronouns
- Relationship to design or coding
- Favorite food or beverage

Today's Agenda

Schedule

- Introductions
- WWW History & HTML
- Hello World Activity
- Stretch Break
- Intro to File Organization
- File Organization Activity
- Q&A

Theory

HTML is the soil of
your website!

website

noun

Individuals like you!

a group of World Wide Web pages usually containing hyperlinks to each other and made available online by an individual, company, educational institution, government, or organization

Merriam-Webster Dictionary

The World Wide Web project

WORLD WIDE WEB

The WorldWideWeb (W3) is a wide-area hypermedia[1] information retrieval initiative aiming to give universal access to a large universe of documents.

Everything there is online about W3 is linked directly or indirectly to this document, including an executive summary[2] of the project, Mailing lists[3] , Policy[4] , November's W3 news[5] , Frequently Asked Questions[6] .

What's out there?[7]Pointers to the world's online information, subjects[8] , W3 servers[9] , etc.

Help[10] on the browser you are using

Software Products[11] A list of W3 project components and their current state. (e.g. Line Mode[12] ,X11 Viola[13] , NeXTStep[14] , Servers[15] , Tools[16] , Mail robot[17] , Library[18])

Technical[19] Details of protocols, formats, program internals etc

<ref.number>, Back, <RETURN> for more, or Help:

The World Wide Web (W3) was invented in 1989 by Tim Berners-Lee ([source](#))

World Wide Web

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[Servers](#) ,[Tools](#) ,[Mail robot](#) ,[Library](#))

[Technical](#)

Details of protocols, formats, program internals etc

[Bibliography](#)

Paper documentation on W3 and references.

[People](#)

A list of some people involved in the project.

[History](#)

A summary of the history of the project.

[How can I help ?](#)

If you would like to support the web..

[Getting code](#)

Getting the code by [anonymous FTP](#) , etc.

Tim Berners-Lee's website is
still available today in HTML
(HyperText Markup Language)

The first website published by CERN to the public in 1993 ([source](#))



Command Line Interface (CLI) on a Commodore 64, released in 1982 ([source](#))

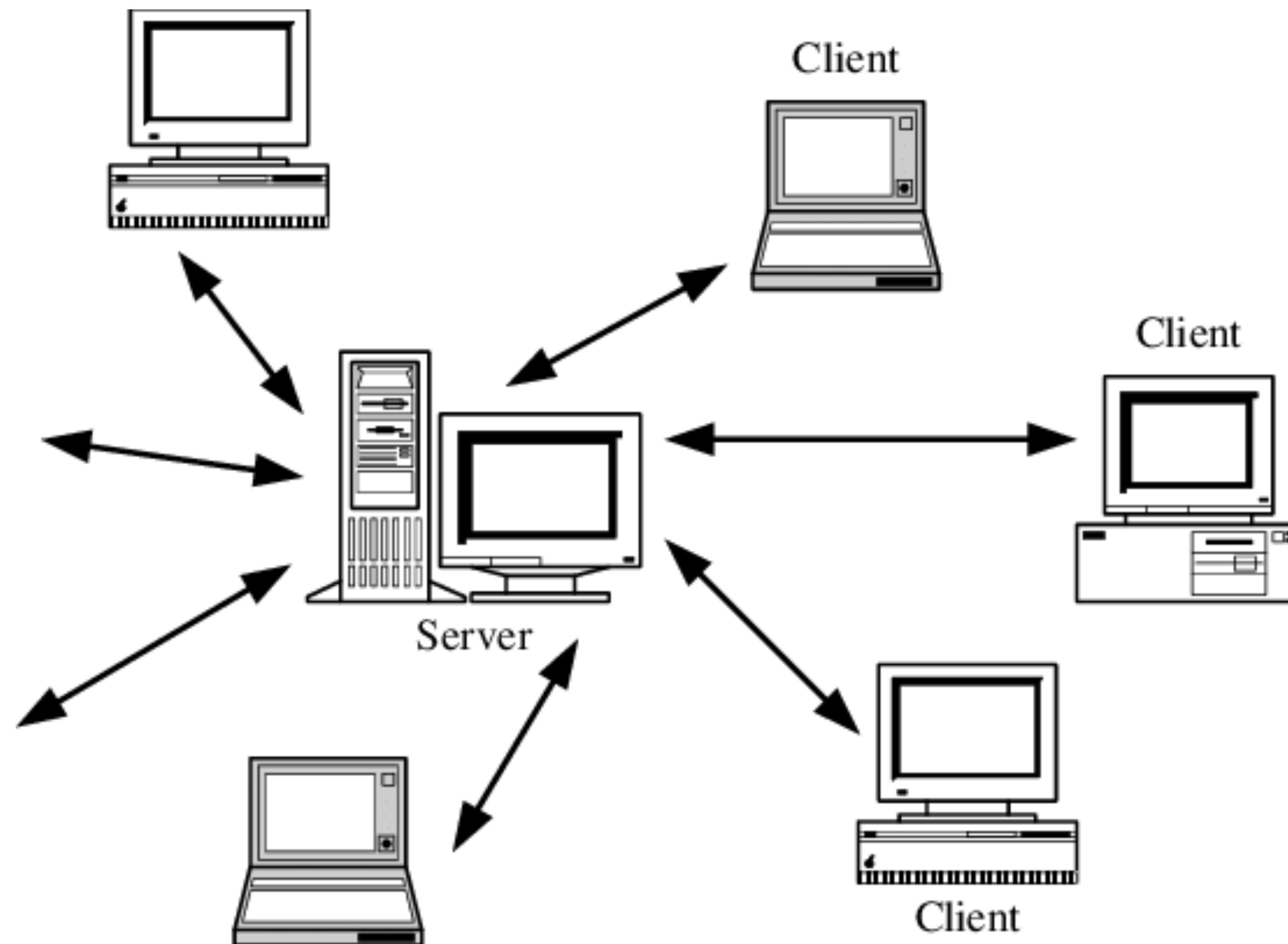


The Graphical User Interface (GUI) is a visual layer that runs on top of a Command Line Interface

“Programming” languages are the way we communicate with machines

The first Macintosh, released in 1984, retailed at \$6,220 in 2020 dollars ([source](#))

Source



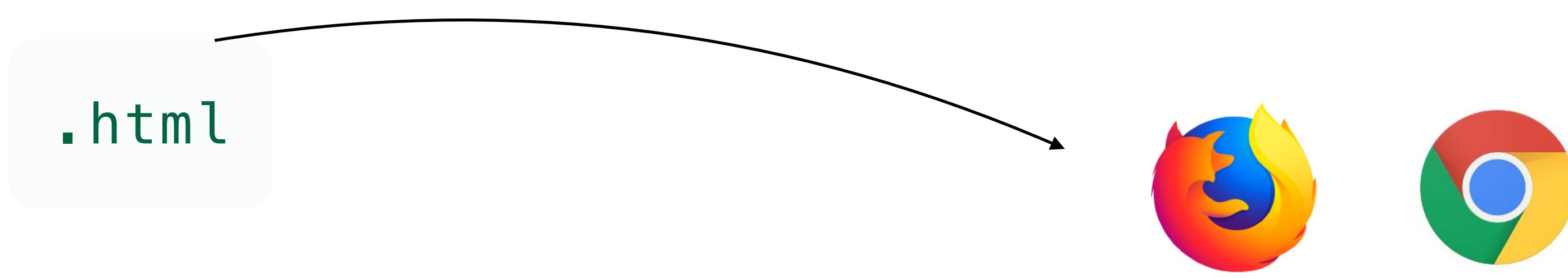


**Front End
(Client)**



**Back End
(Server)**

Browsers translate text files to visuals



Render HTML, CSS, and Javascript

A Web Without CSS

Ling's Cars



View Source Code for
fun ASCII art!

A Web Without CSS

Ling's Cars



Page is not responsive

resized

A Web Without CSS

What happened???

- Width was defined in pixels (absolute units)
- HTML is intrinsically responsive by default
- Understanding browser defaults is key to web design



A Web Without CSS

Ling's Cars, CSS Disabled

LINGS CARS.com

Leader of the Pack - The UK's favorite car leasing website!

Contract hire cars, LINGS CARS is the "UK's favourite car leasing website" - On 2016 We leased over £85 million in cars! (RRP)

We live inside our car leasing website all day Monday to Friday 9am-6pm. We lease the cheapest contract hire cars in the UK! - We are LINGS CARS.com, accept no substitutes



Car and Vehicle leasing is the leasing of the use of a car for a fixed period of time. It is a cost-effective alternative to car or vehicle purchase. It can be known as PCP or contract hire. The key difference in a car lease is that after the lease expires, the customer can return the car or vehicle to the dealer for no cost, or can often buy it at an agreed price. Ling owns the UK's favourite car leasing company.

Rationale:

Car Leasing offers big advantages to customers. For the lease buyer, lease payments will usually be lower than payments on a car loan would be and qualification is usually easier. Some very cheap car leasing deals are available, but these change all the time. Some consumers may prefer leasing as it allows them to simply return a car and select a new model when the lease expires, allowing a consumer to drive a new vehicle every few years without the responsibility of selling the old car. It's a very simple car owning solution. A car leasing customer does not have to worry about the future value of the car or vehicle, while a vehicle owner does have this nagging doubt.

For the leasing company, leasing generates income from a vehicle the car leasing company still owns and will be able to sell at auction or lease again once the original lease has expired. As consumers will typically use a leased vehicle for a shorter period of time than one they buy outright, leasing may generate repeat customers more quickly, which may fit into various aspects of a finance company's business model.

Car Lease agreement:

Car leasing agreements typically stipulate an early termination fee and limit the number of miles a customer can drive (for passenger cars, a common mileage is 10,000 to 15,000 miles per year of the lease). If the mileage allowance is exceeded, a per-mile fee is charged. Customers can negotiate a higher mileage allowance, for a higher lease payment. Car lease agreements usually specify how much wear and tear is allowable, and the customer may face a fee if the car is not in good condition at the end of the lease.

At the end of a leasing term, the customer must either return the car or vehicle to the car leasing company, or purchase it. The end of lease price is usually agreed upon when the lease is signed.

In Firefox, View > Page Style > No Style

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Pure HTML is
responsive!

Semantic HTML

Accessibility & Benefits

- Choose the right element for your content
- Screen readers treat elements differently
- HTML renders with default visual hierarchy
- Search engines can crawl your site better

LINGsCARS.com



<h1>

Leader of the Pack - The UK's favorite car leasing website!

<h2>

Contract hire cars, LINGsCARS is the "UK's favourite car leasing website" - On 2016 We leased over £85 million in cars! (RRP)

<p>

We live inside our car leasing website all day Monday to Friday 9am-6pm. We lease the cheapest contract hire cars in the UK! - We are LINGsCARS.com, accept no substitutes



<p>

Car and Vehicle leasing is the leasing of the use of a car for a fixed period of time. It is a cost-effective alternative to car or vehicle purchase. It can be known as PCP or contract hire. The key difference in a car lease is that after the lease expires, the customer can return the car or vehicle to the dealer for no cost, or can often buy it at an agreed price. Ling owns the UK's favourite car leasing company.

<p>

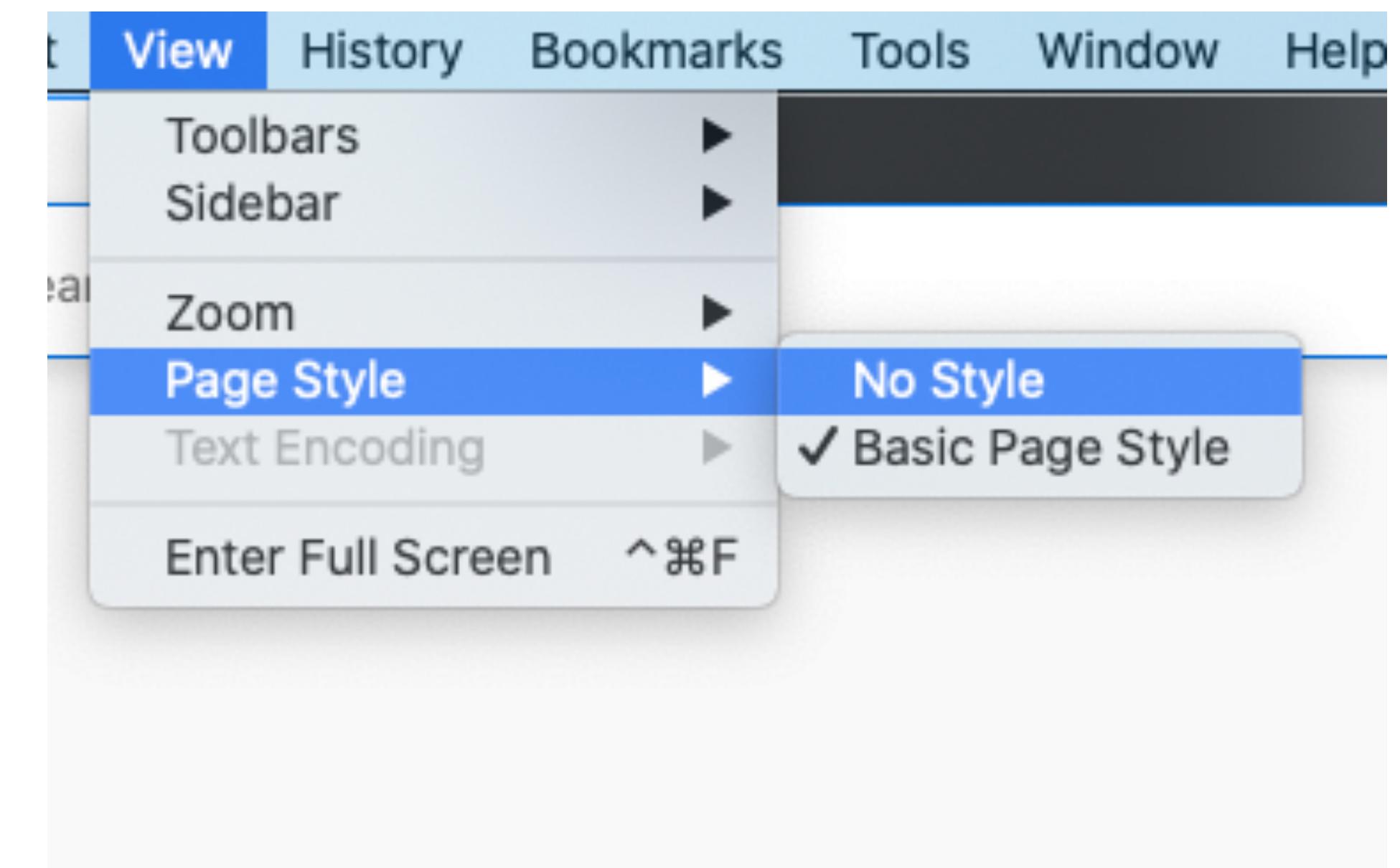
Rationale:

Car Leasing offers big advantages to customers. For the lease buyer, lease payments will usually be lower than payments on a car loan would be and qualification is usually easier. Some very cheap car leasing deals are available.

A Web Without CSS

Default Design

- View > Page Style > No Style
- What ways do designers demonstrate a visual hierarchy with pure HTML?
 - How does this help people with vision impairment?
- Think about how you would design a page with only HTML



Firefox: Disable CSS

You can do this in any browser but I prefer Firefox

A Web Without CSS

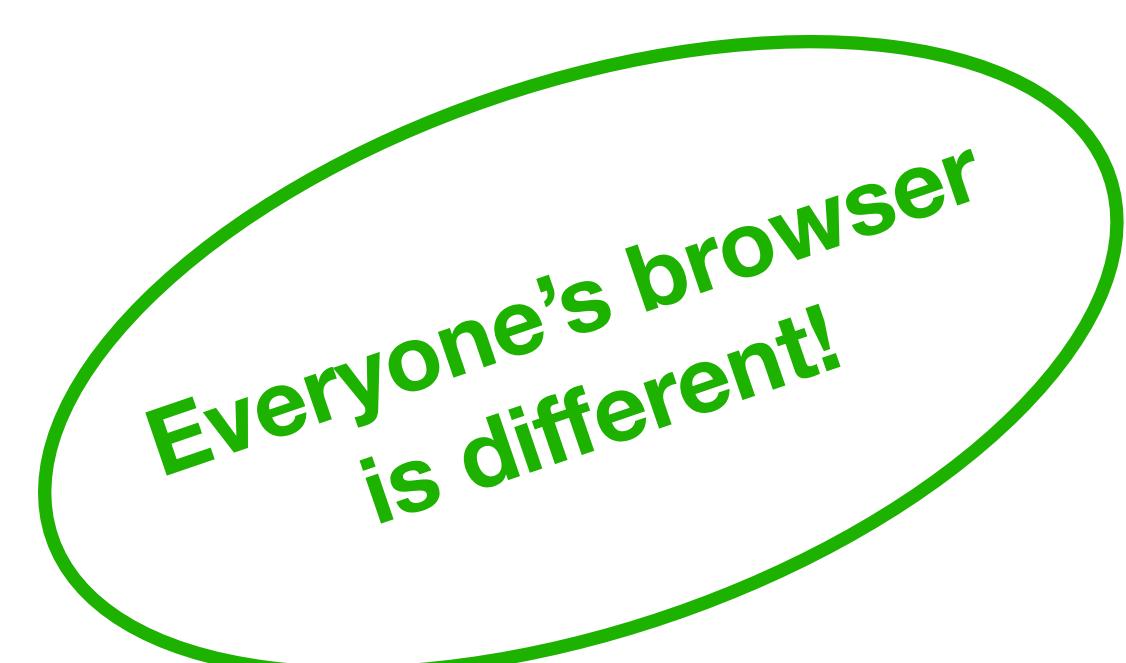
*Let go of
“Pixel Perfect”*

**Think of yourself as the browser's mentor,
rather than its micro-manager.**

<https://every-layout.dev/rudiments/axioms/>

designing for the web is **designing without seeing**. You simply can't anticipate all of the visual combinations produced by... circumstances and settings of each end user's setup

<https://every-layout.dev/rudiments/axioms/>



HTML is the foundation of your website. No CSS until next week!

HTML Documents

Bare Minimum

```
<!DOCTYPE HTML>  
  
<html>  
    <body>  
        Your content here!  
    </body>  
  
</html>
```



Every element has a symmetrical start and end tag

Elements

Tags & Nesting

- **Elements** contain tags and content

```
<p>This whole thing is an HTML element</p>
```

- **Tags** have a start and end

- Start tag = `<p>`

- End tag = `</p>`

Elements

Tags & Nesting

- “Tags have to be nested such that elements are all completely within each other, without overlapping” — from the [WHATWG](#)

```
<p>This is <em>very <strong>wrong</em>!</strong></p>
```



```
<p>This <em>is <strong>correct</strong>. </em></p>
```



Common Elements

Examples

```
<b>Bold</b>
<i>Italic</i>
<u>Underline</u>
<a href="http://github.com">Link</a>
<h1>Heading 1</h1>
<p>Paragraph</p>
<blockquote>Quote</blockquote>
```

Void Elements

No Closing Tags

```
<br>
<hr>

```

- Not all elements need a closing tag
- These exceptions are called **void elements**
- **br** stands for line break
- **hr** stands for horizontal rule
- **img** stands for image

Image Elements

Attributes

Copy a URL from
Giphy

```

```

- **src** is an attribute meaning “source” and is required
 - Use png, jpg, or gif files (TIFF will load but they are too large for the web)
- Both **alt** and **width** are optional, but it’s best practice to include them
- Specify width for small screens (mobile first design!)
 - Use this as a fallback for viewers with CSS turned off, like Ling’s cars

Codepen Hello World

*stretch
break!*

Take a break, stretch your wrists, drink water 

can adapt very far to the interests or needs of a particular reader or student.

However, with the computer-driven display and mass memory, it has become possible to create a new, readable medium, for education and enjoyment, that will let the reader find his level, suit his taste, and find the parts that take on special meaning for him, as instruction or entertainment.

Let me introduce the word "hypertext"***** to mean a body of written or pictorial material interconnected in such a complex way that it could not conveniently be presented or represented on paper. It may contain summaries, or maps of its contents and their interrelations; it may contain annotations, additions and footnotes from scholars who have examined it. Let me suggest that such an object and system, properly designed and administered, could have great potential for education, increasing the student's range of choices, his sense of freedom, his motivation, and his intellectual grasp*****. Such a system could grow indefinitely, gradually including more and more of the world's written knowledge. However, its internal file structure would have to be built to accept growth, change and complex informational arrangements. The ELF is such a file structure.

Films, sound recordings, and video recordings are also linear strings, bas-

Ted Nelson coined the word “hypertext” in 1965 to describe “written or pictorial material interconnected in such a complex way that it could not conveniently be presented or represented on paper”

Source: [GigaOm interview with Ted Nelson](#)

What's a website?

Deconstructing the web

website

noun

a place on the Internet with one or more
pages of information about a subject

Cambridge Academic Content Library

Anchor Links

and Attributes

```
<a href="http://github.com" target="_blank">
```

- Attributes are separated by spaces
- **href** is an attribute that means hypertext reference
- **target** is an attribute that allows you to open links:
 - in a new window (**_blank**)
 - or the same window (**_self**) - default

< a > stands for anchor



Anchor Links

and Attributes

```
<a href="index.htm#Heading1>
```

- Links can scroll to specific elements too!
- You must add the id attribute to the element you want to link to

```
<h1 id="Heading1">Hello World</h1>
```

Hello World!

Index page

```
<!DOCTYPE html>  
<html>  
<body>  
<h1>Hello World</h1>  
</body>  
</html>
```

- Homework assignment
- Codepen HTML contains everything in <body> element

HTML Documents

Metadata

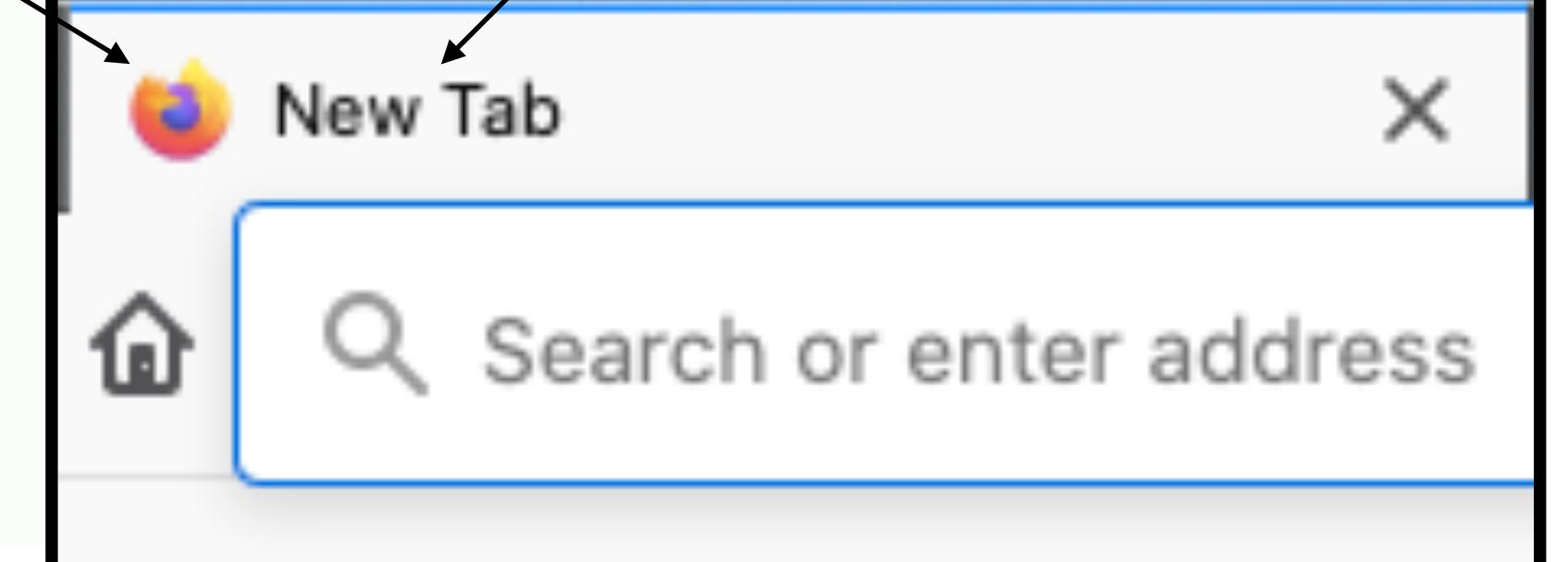
```
<!DOCTYPE HTML>
<html>
  <head>
    <title>Page Title here</title>
    <link rel="icon" type="image/png" href="favicon.png">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>
    <h1>Hello World</h1>
    <p>Write content here</p>
    <!-- this is a comment -->
  </body>
</html>
```

<head> always goes above <body>



Favicon

<title>



Meta Viewport

What does it really do??

```
<head>
  <meta name="viewport"
    content="width=device-width,
    initial-scale=1.0">
</head>
```

[More info here](#)



Without



With Meta Viewport

HTML Comments

Shortcut - ⌘ + /

```
<body>
  <h1>Hello World</h1>
  <!-- insert pics here -->
</body>
```

Note to self

Disable code
without deleting it

```
<main>
  <!-- <section>
    <h3>Week 1</h3>
    <h4>Intro</h4>
    <p>HTML Foundations.
    <p>How can we create
    web's default design?
    Wordpress) shaped the
    the
    difference between
    alt text as poetry?
    code?</p>
  </section> -->
  <section>
    <h3>Week 2</h3>
```

Note to haters



Index

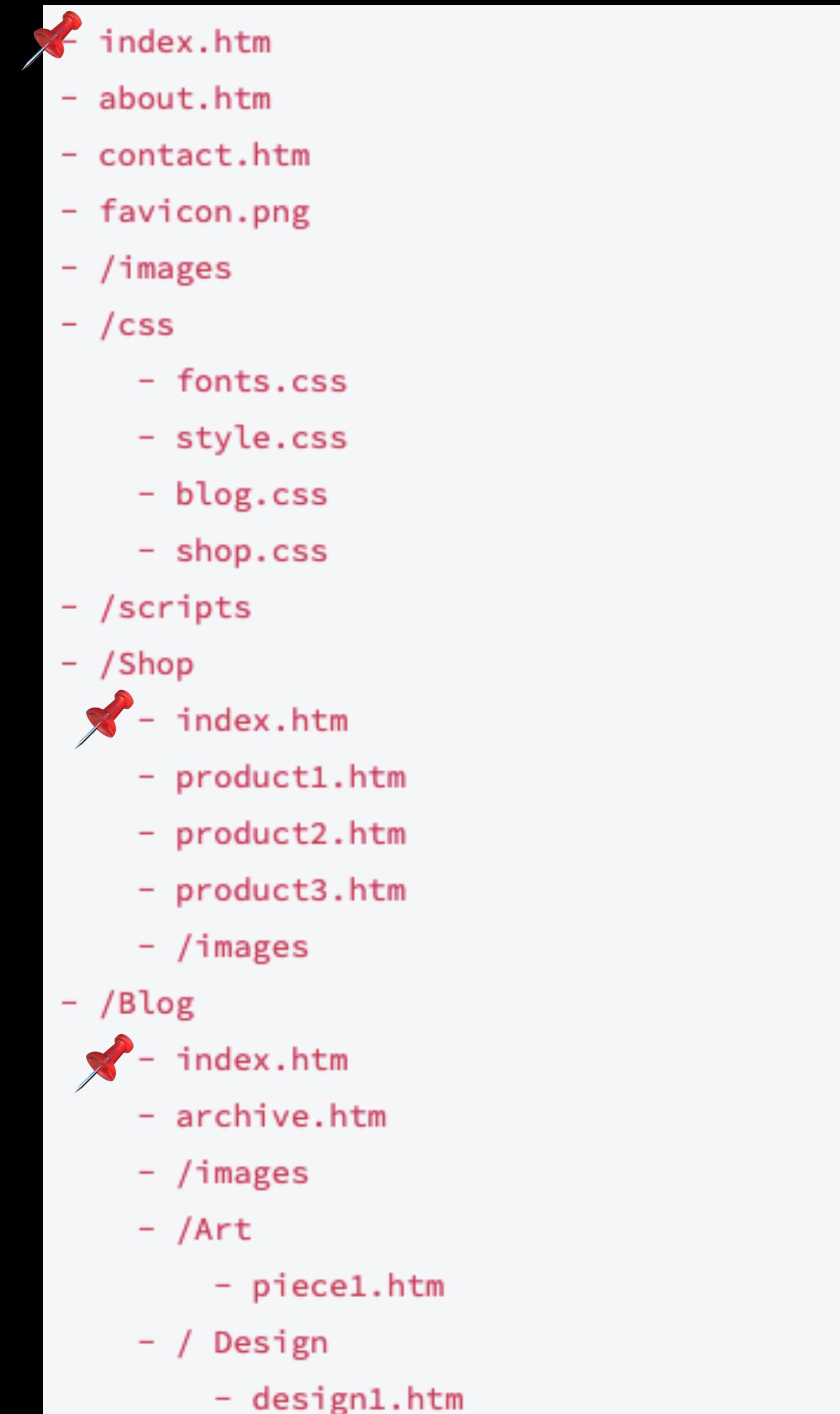
Default Page

- When you open a website (ex. website.com/) the server searches for a file named **index.htm** or **index.html**
 - Even if it doesn't show up in the URL, that's the page you're viewing!
 - Depending on the server, could also be home.htm or default.htm or index.php, etc.
- Each folder can only have one index page
 - ex. website.com/blog will load website.com/blog/index.htm by default
- Think about **index** as an archival endeavor.
- What information are you archiving on your site?

Organizing your website's files

Name folders and files anything you want, with the exception of:

- index.htm
- favicon.png



```
index.htm
about.htm
contact.htm
favicon.png
/images
/css
  fonts.css
  style.css
  blog.css
  shop.css
/scripts
/Shop
  index.htm
  product1.htm
  product2.htm
  product3.htm
  /images
/Blog
  index.htm
  archive.htm
  /images
/Art
  piece1.htm
/ Design
  design1.htm
```

File names must not contain spaces or special characters

(Exceptions: - and _)

Local Environment

Saving HTML Documents

- Remote = on the web / cloud / someone else's computer
- Local = Your computer
- All you need to do is create a folder for your project and save files with the **.htm** or **.html** extension
 - I have a folder called “Web” and each project has its own subfolder, ie. “Web > hello-world”
- Open .htm files in your browser (I prefer Firefox) and you’re good to go!

Workflow

Designing Websites



```
index.htm
1 <!DOCTYPE html>
2 <html>
3
4 <head>
5   <!--
6   All graphics, content, and code:
7   (c) Meew Studio, Megumi Tanaka
8   -->
9   <title>meew.studio</title>
10  <!-- <link rel="icon" type="image/png" href="icon.png" />
11  <link rel="stylesheet" type="text/css" href="style.css" />
12  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
13  </head>
14
15  <body>
16    <header>
```



Repeat!

Save .htm file ($\mathbb{S} + S$)



Local file:// instead of https://

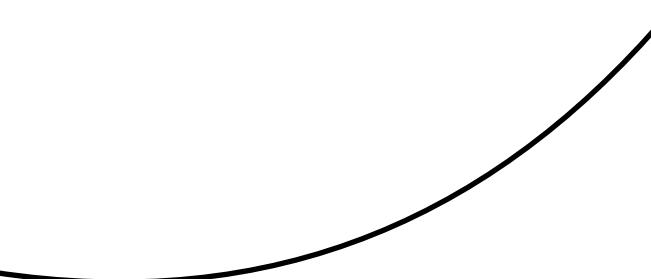
file:///Users/Home/Web/meew.studio/index.htm

meew.studio

About Services Contact

meew is a design
studio specializing

Refresh .htm file ($\mathbb{R} + R$)



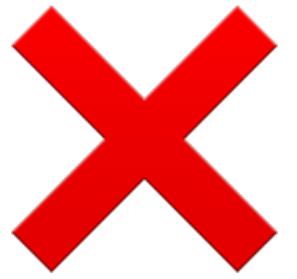
Example folder

- about.html
- index.html

Relative Links

```
<a href="index.html">
```

```
<a href="about.html">
```



Don't use absolute links

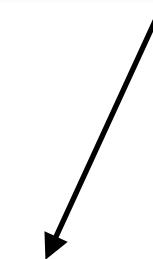
```
<a href="/Users/Megumi/meewgumi.github.io/index.html">
```

```
<a href="http://meewgumi.github.io/index.html">
```

Instead, use only the last part of the file path

This ensures your links and images will work for both file:/// and https://

```
<a href="/Users/Megumi/meewgumi.github.io/index.html">
```



```
<a href="index.html">
```

What if you need to link
to a file in the parent
directory?

<u>Name</u>	<u>Last modified</u>	<u>Size</u>	<u>Description</u>
 Parent Directory		-	
 css/	2013-07-06 09:42	-	

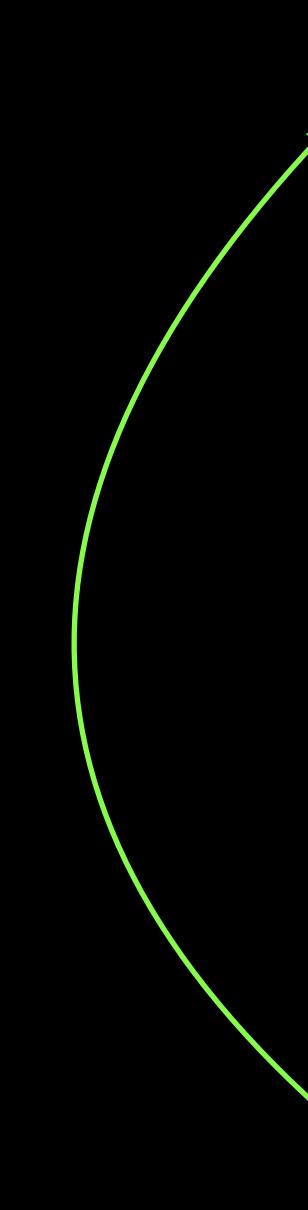
Source

From **/shop/index.htm**

To link to the about page,
imagine going up to the
parent directory, then
locating about.htm

Instruct the browser to do
this by typing:

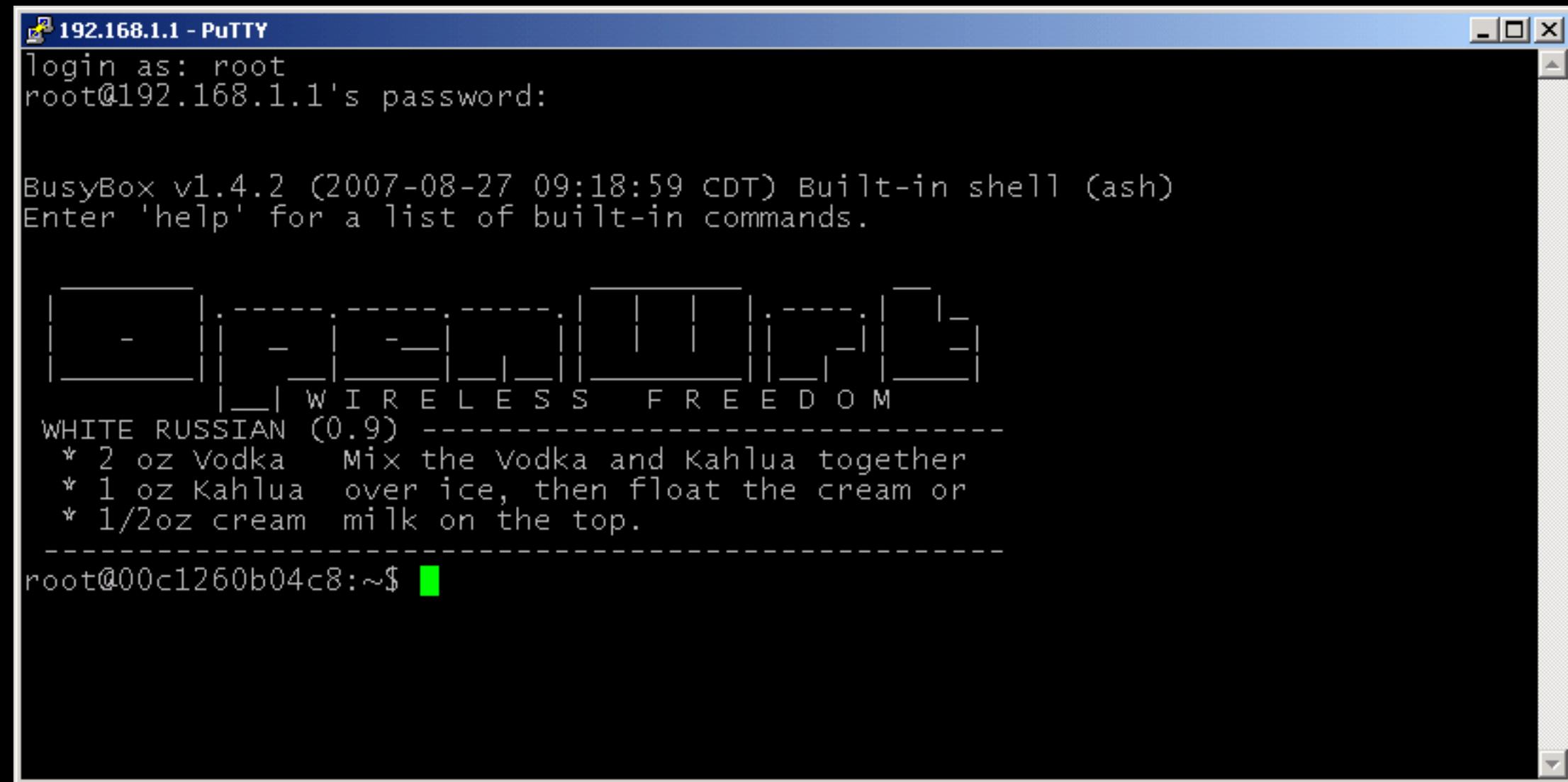
```
<a href="..../about.htm">
```

- 
- index.htm
 - about.htm
 - contact.htm
 - favicon.png
 - /images
 - /css
 - fonts.css
 - style.css
 - blog.css
 - shop.css
 - /scripts
 - /Shop
 - index.htm
 - product1.htm
 - product2.htm
 - product3.htm
 - /images
 - /Blog
 - index.htm
 - archive.htm
 - /images
 - /Art
 - piece1.htm
 - / Design
 - design1.htm

.. /

**Relative paths consider the position of other files
relative to the file you're editing**

Add .. / to the beginning of any URL to go up one directory. You can also stack it, like .. / .. / blog / about.htm



• . / and relative path logic
comes from the command line
interface (CLI) standard

An example of remote login via Secure Shell Protocol (SSH) ([source](#))

File Organization

Activity

- Burger Boilerplate Activity
 - We'll re-use this throughout the course as we learn CSS next week
 - If you finish early, work on your Codepen Hello World → Local File homework project

What's Next?

Homework

- Read Laurel Schwulst's article

Appendix

**Permaculture web
design**

**Every permaculture design starts with a vision
that guides you where to go... every step you
take you can observe and adjust your course**

<https://www.permaculture.co.uk/articles/how-create-website-using-permaculture-design-principles>

Website as Zine

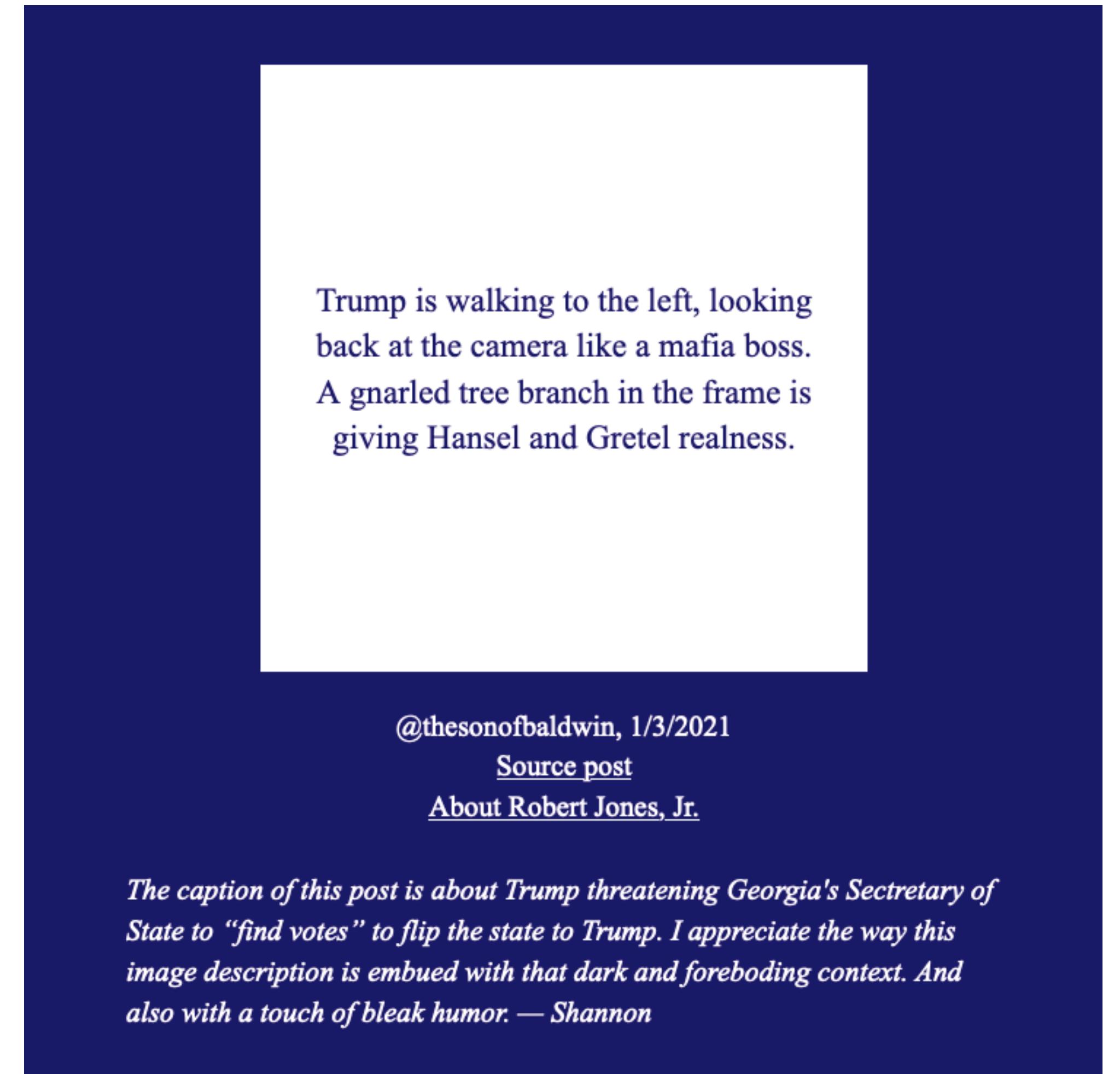
Self Publishing

- The website has much wider potential circulation than a printed zine
- Instead of publishing a finished product, publish a work in progress
- Keep updating the content after it's been shared
- Grow ideas organically over time

Image Elements

Alt Text as Poetry

- Be playful with your alt text
- 1-2 sentences is best
- Start in foreground of image and work to background
- Create a fun and unique experience for vision impaired readers
- There are 7.7 million vision impaired adults in the US alone



Trump is walking to the left, looking back at the camera like a mafia boss. A gnarled tree branch in the frame is giving Hansel and Gretel realness.

@thesonofbaldwin, 1/3/2021

[Source post](#)

[About Robert Jones, Jr.](#)

The caption of this post is about Trump threatening Georgia's Secretary of State to "find votes" to flip the state to Trump. I appreciate the way this image description is embued with that dark and foreboding context. And also with a touch of bleak humor. — Shannon