Information + Web Programming

Fall 2020 Monday + Thursday 5:30 - 6:45 pm

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ZOOM

Our class will meet synchronously during our class time. Attendance is mandatory. You should have your camera on as much as possible. By now we've learned the difference between nodding smiling faces and talking to grey rectangles! If you're concerned about privacy don't forget you can setup a Zoom background to obscure your surroundings, family members, pets, messy rooms, ugly wall paper, etc!

If you plan on attending class from home - or your dorm I strongly suggest you buy an **external monitor.** So you can have the Zoom meeting on one screen and your own tools (text editor, terminal, browser, etc.) on another.

From time to time I will turn off my camera to save bandwidth. If possible I strongly encourage you to buy a **wifi dongle** and connecting your machine directly into your router via an **ethernet cable**.

Everyone should have Slack open during class. If your software crashes during class please send a message on our slack channel. When you see that someone has messaged that they were kicked out - please let me know so I can let them back in!

class repo: https://github.com/rebleo/infoWeb2020

class wiki: https://github.com/rebleo/infoWeb2020/wiki

if you do not already have a github account:

!! **https://education.github.com/pack** !!

Networks - Internet - TCP Protocol

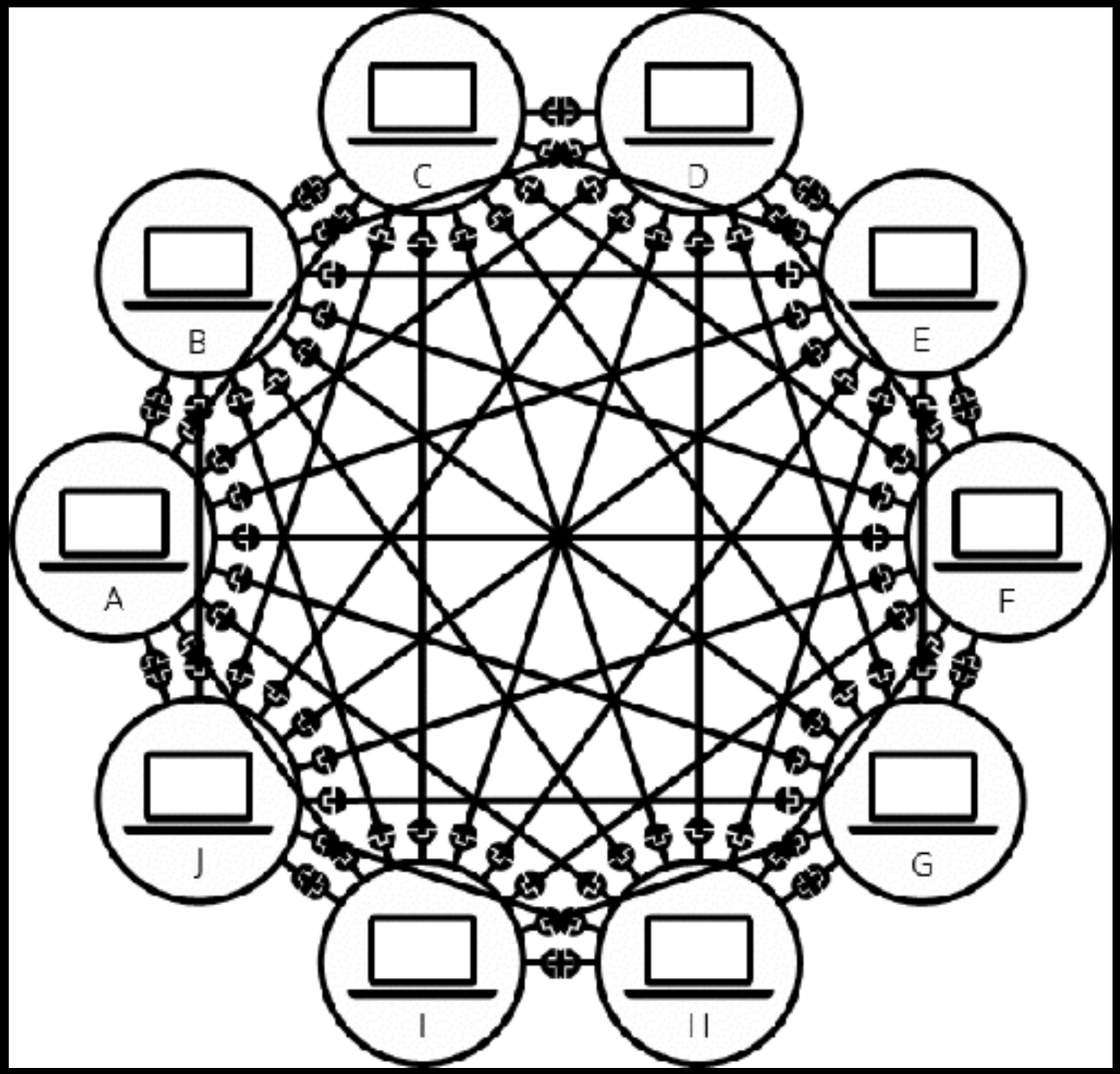
1969 - Arpanet

first message sent from UCLA to Stanford

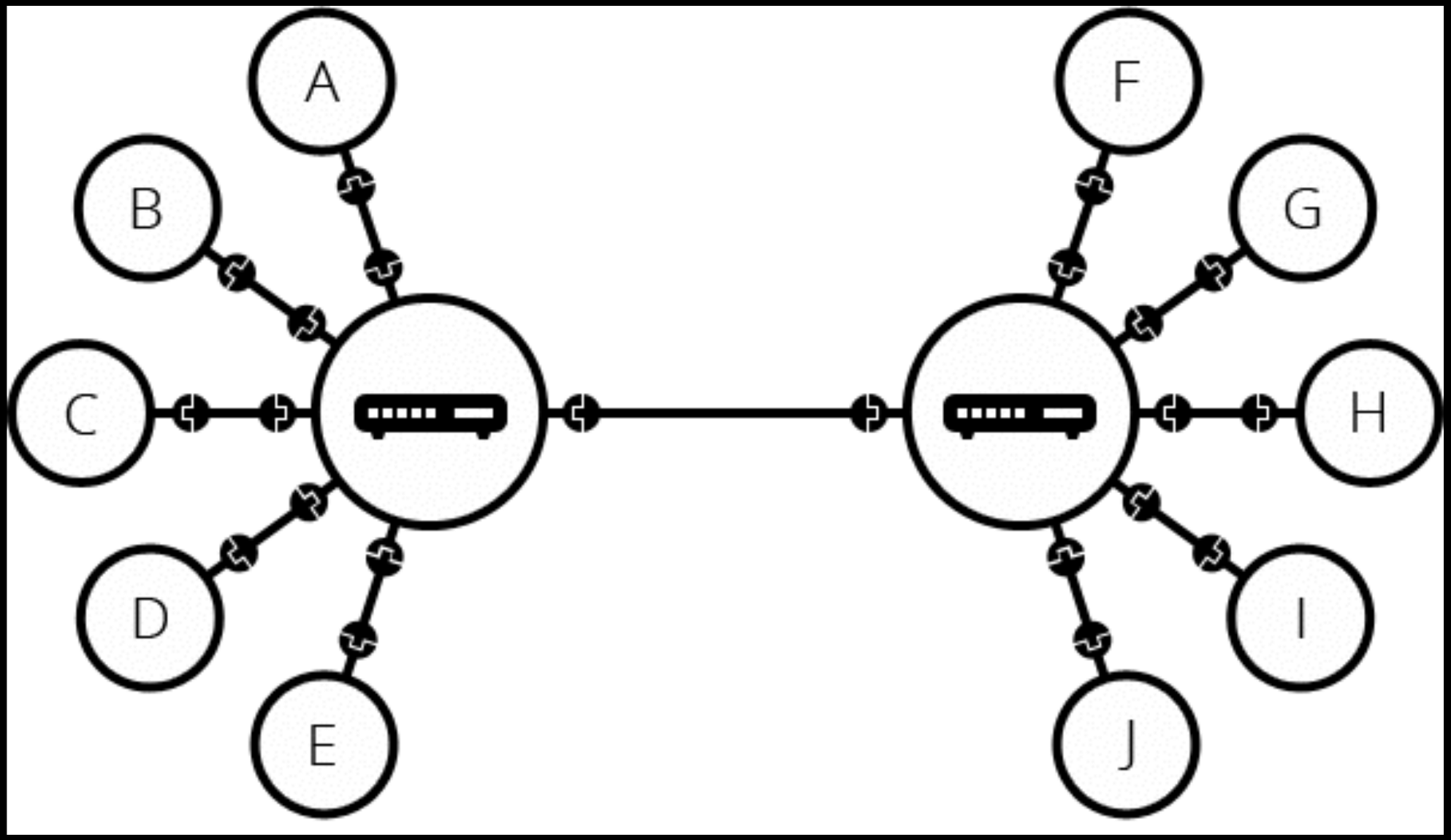
standford machine had 128 Kb of memory and 24 Mb of disk space

the following is from: https://developer.mozilla.org/en-US/docs/Learn/Common_questions/How_does_the_Internet_work

What is the Internet? A global network of computers connected to each other.



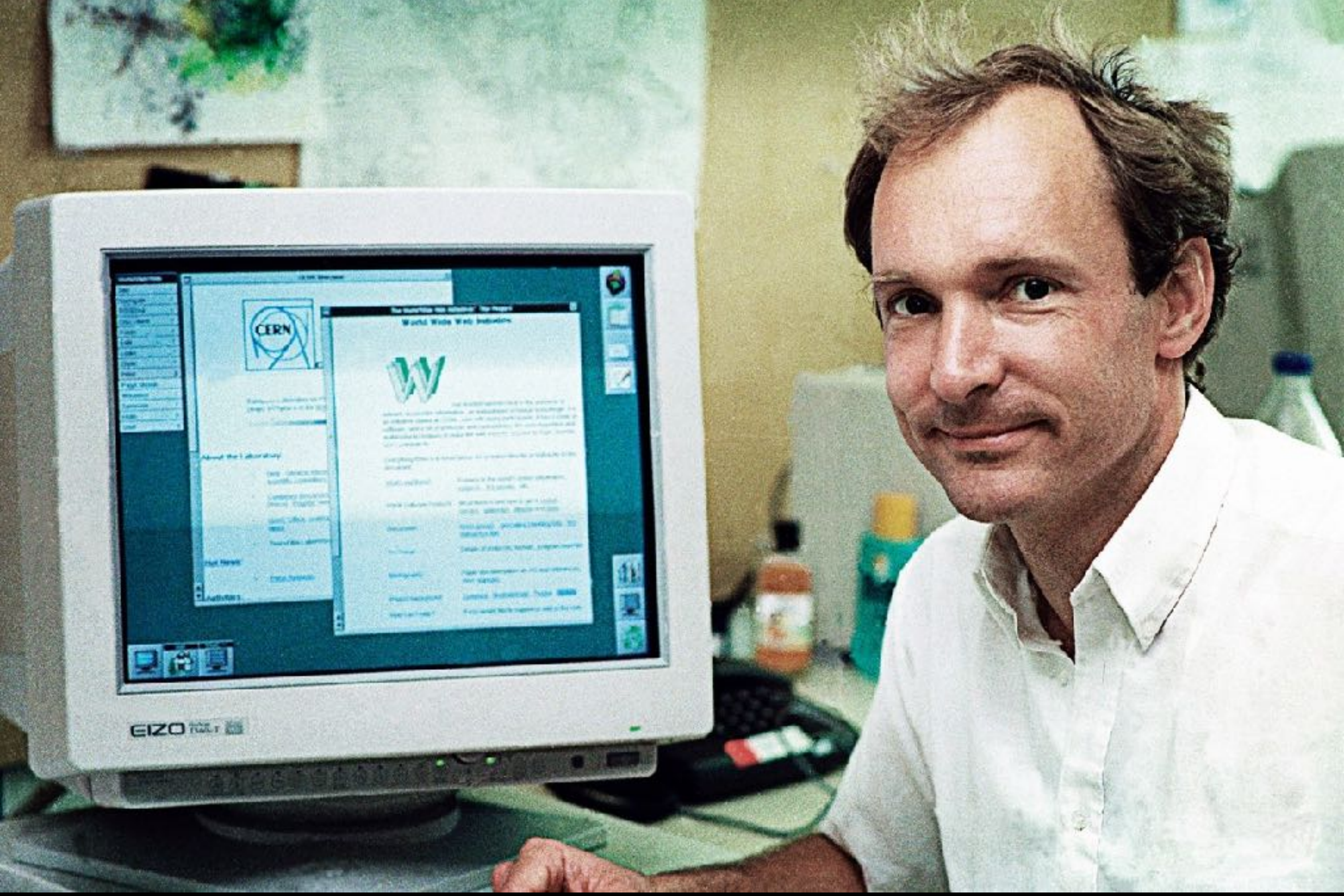
A networks of networks



By connecting computers to routers, then routers to routers, we are able to scale infinitely.

1. You enter a URL into a web browser
2. The browser looks up the IP address for the domain name via DNS
3. The browser sends a HTTP request to the server
4. The server sends back a HTTP response
5. The browser begins rendering the HTML
6. The browser sends requests for additional objects embedded in HTML (images, css, JavaScript) and repeats steps 3-5.
7. Once the page is loaded, the browser sends further async requests as needed.

https://wsvincent.com/what-happens-when-url/



1989 - Due to the way the NeXT software was designed, **Tim Berners-Lee** is able to invents the WWW on a NeXT machine

1989 - First Web Server

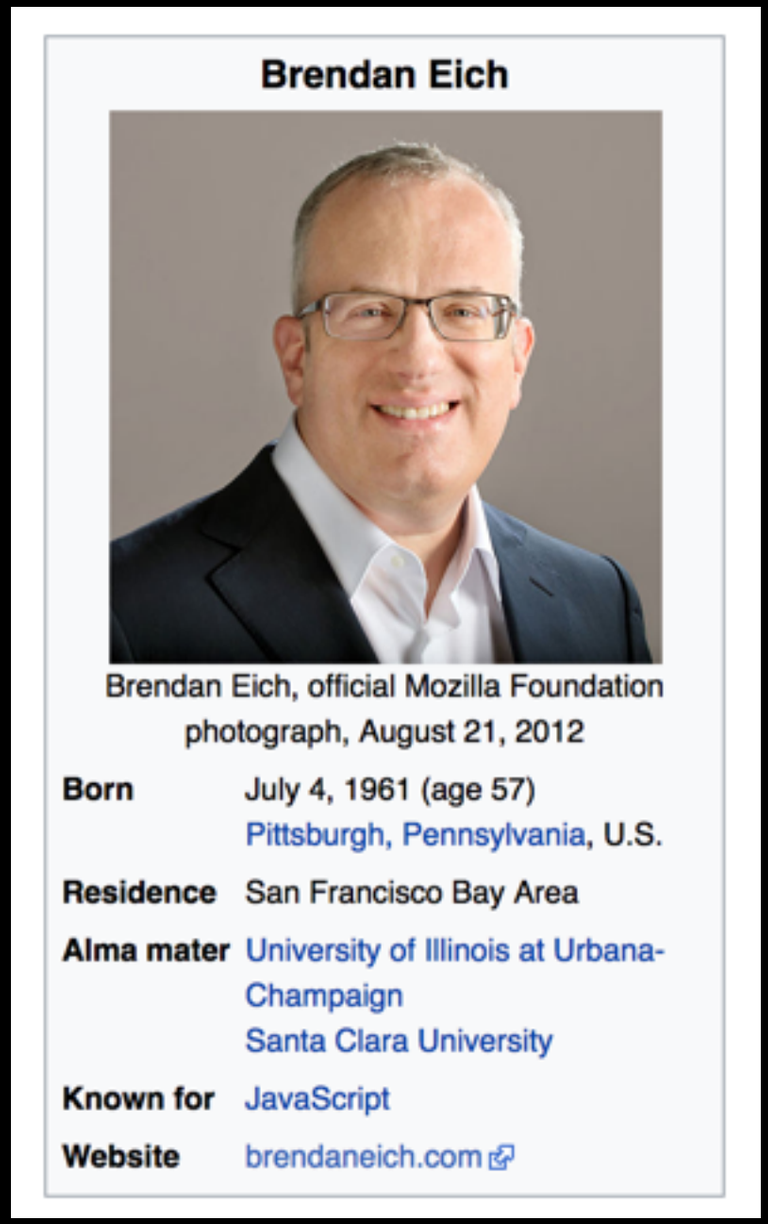
Due to the way the computer’s storage was designed, Tim Berners-Lee invents the WWW (HTTP) on a NeXT machine

HTML CSS JS

May 1995 - Brendan Eich - Netscape developer creates Mocha, renamed LiveScript
Dec 1995 - Netscape renames to JavaScript
1996/1997 - Netscape standardizes ECMA Standards Organization
2014 - Quits Mozilla after pressure from shareholders for supporting far right groups trying to undo Prop 8.

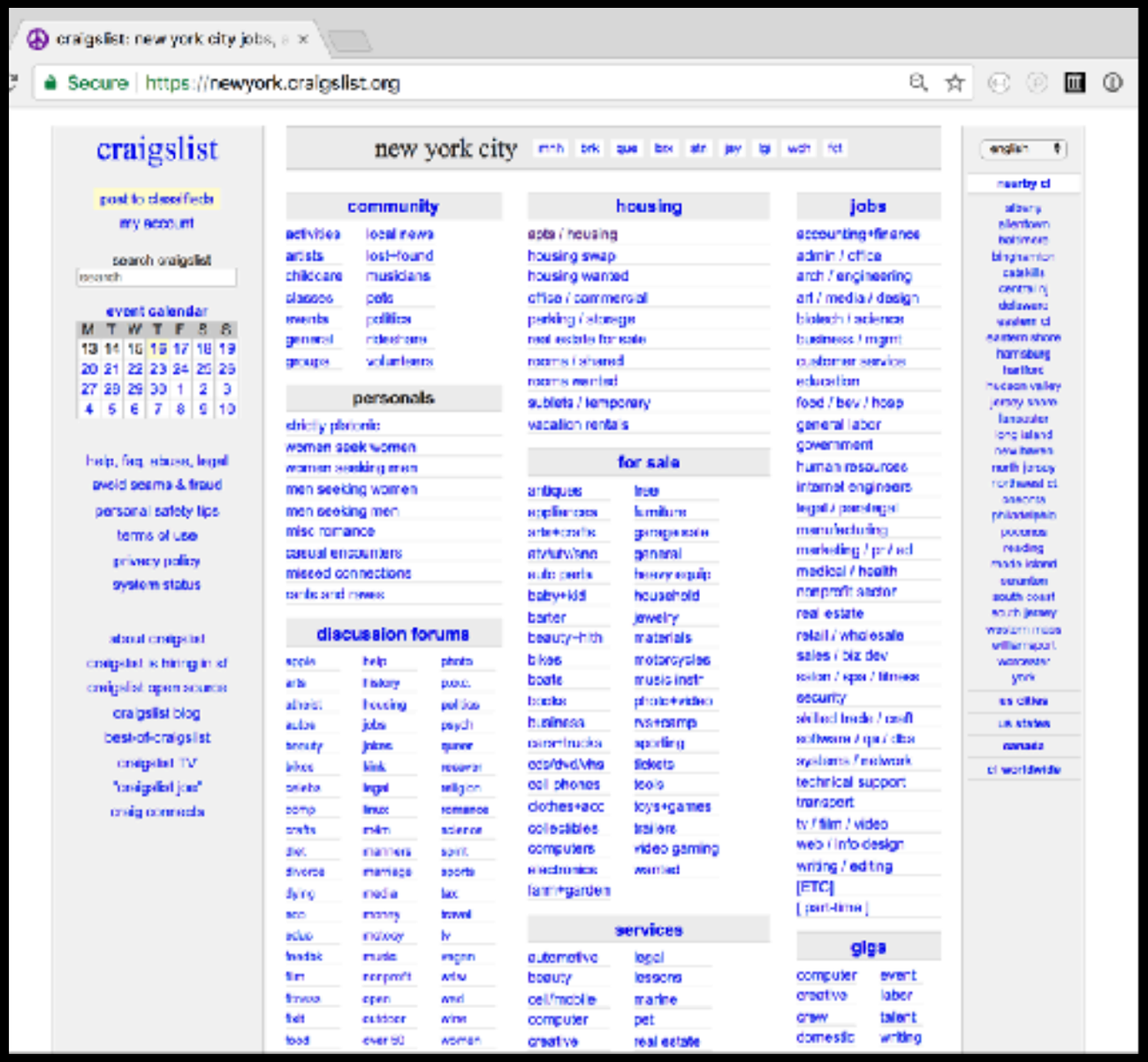
Image from wikipedia

History From Here



Unlike other programming languages - HTML, CSS + JavaScript were authored for their outputs to **be read or seen** by human persons on glowing rectangular screens **GUI**s.

It’s the difference btw this:



[Craigslist Landing Page]

HTML + CSS

(Web. 1.0)

+ this…

[NY Times Landing Page]

HTML, CSS + JS

(Web. 2.0)

HTML
CSS
JAVASCRIPT

JavaScript is a programming language specifically written to work w/ HTML and CSS. It facilitates an opportunity for more dynamic web pages with interactive media content. This led us to Web 2.0 in 2005 ish.

(Web. 2.0)

A Web Page **WAS:**

HTML - Hyper Text Mark Up

is a grammar for structuring web pages. It defines paragraphs, headings, data tables + media elements. HTML describes the content of the page - not how it looks.

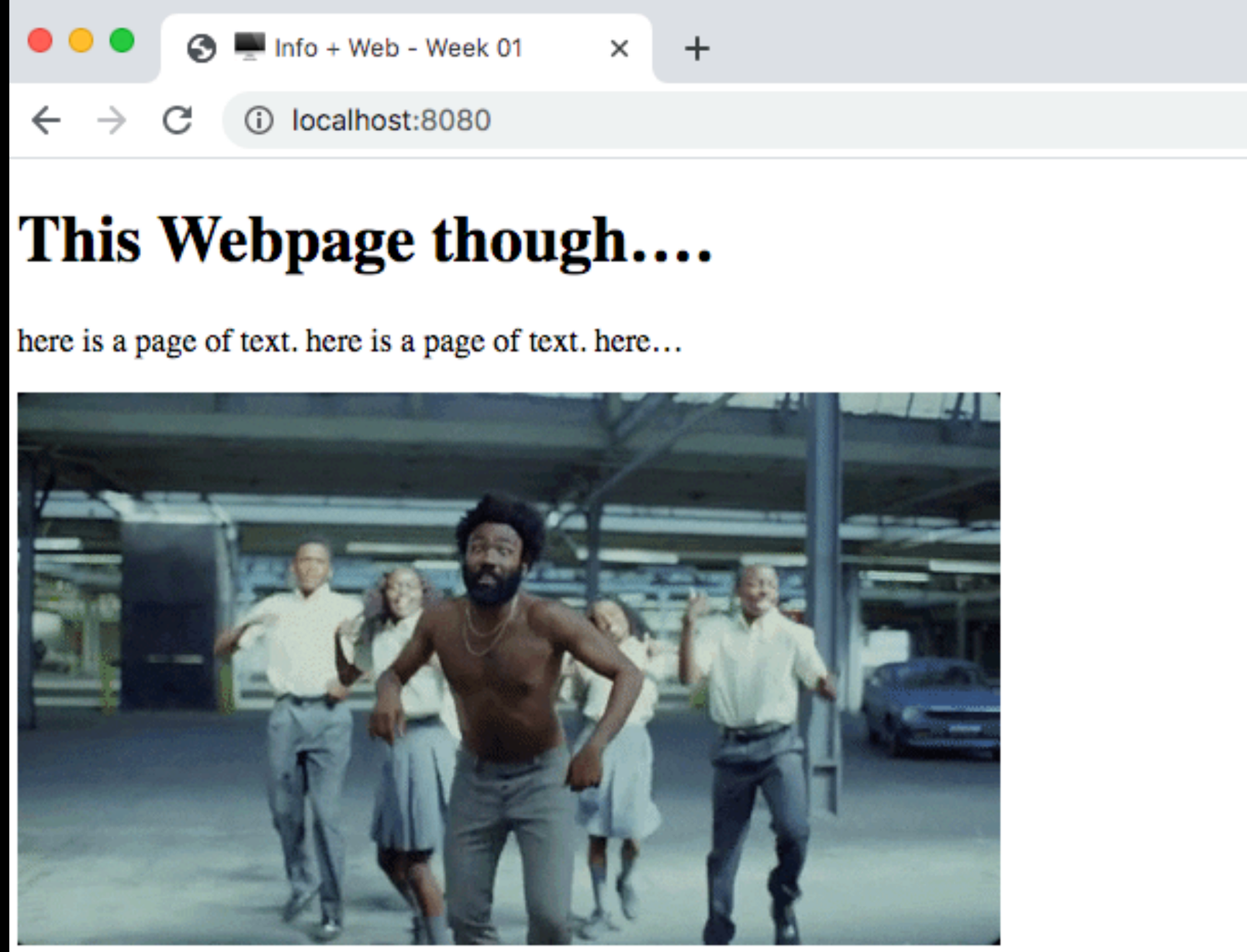
CSS - Cascading Style Sheet

rules for styling a web page. Setting colors, typeface, and the layout. It can be used to consider the design of your page across different platforms and screen sizes.

(Web. 1.0)

```
<!DOCTYPE html>
<html>
   <head>
       <title> 🖥️ Inro to CSS</title>
    </head>
   <body>
       <h1>
       This Webpage though….
       </h1>
       <p>
       here is a page of text. here is a page of text. here…
       </p>
       <img src = “https://media.giphy.com/media/
       lYf4uAJEWVo1FffnVD/giphy.gif”>
   </body>
</html>
```

the world w/out css



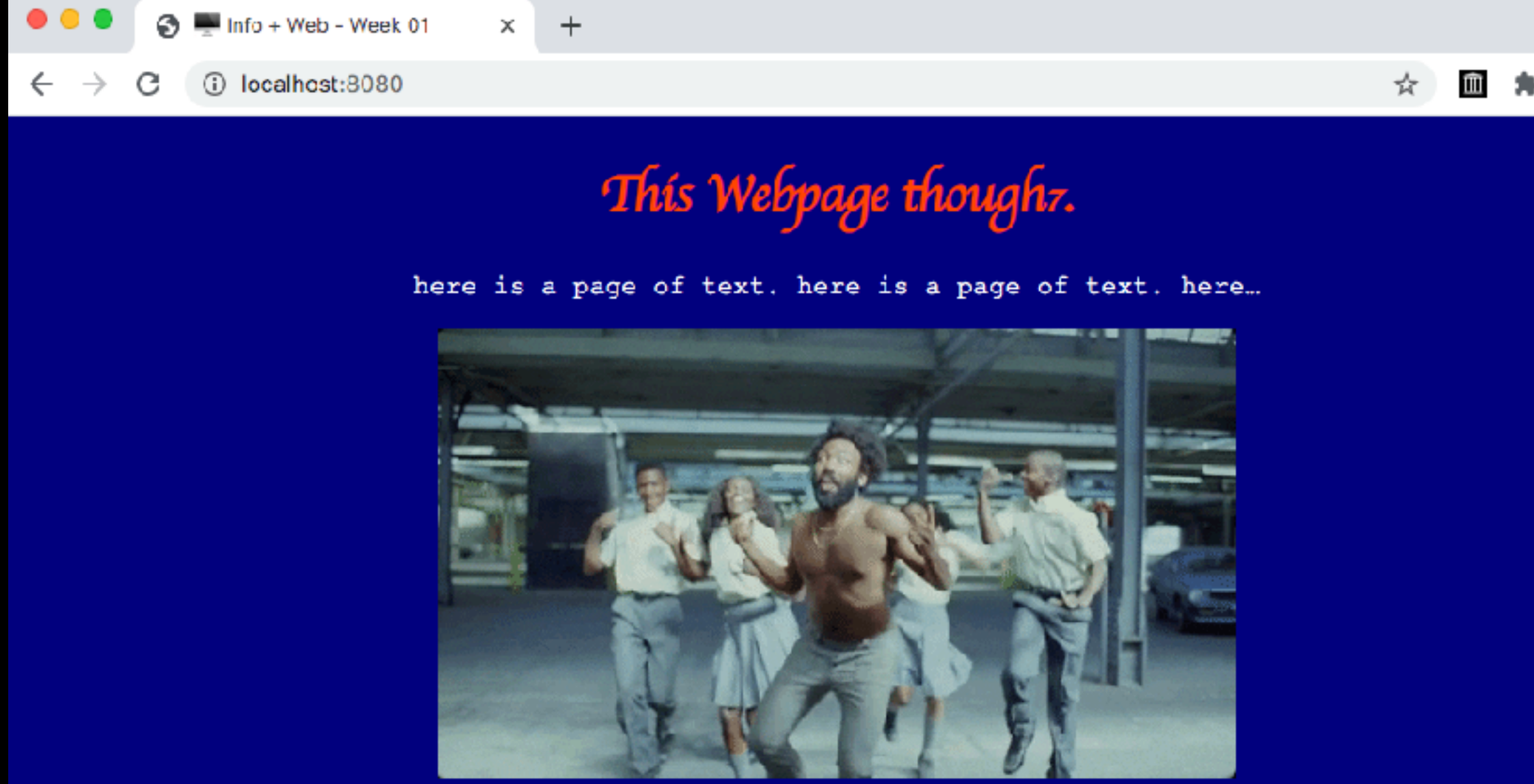
CSS - Cascading Style Sheet

```
h1 {
        color: #FF4500
 }

 body {
          background: #000080;
          font-family: sans-serif;
          color: rgb(255,255,255);
 }

body p {
        font-family: ‘Courier New’;
 }
```

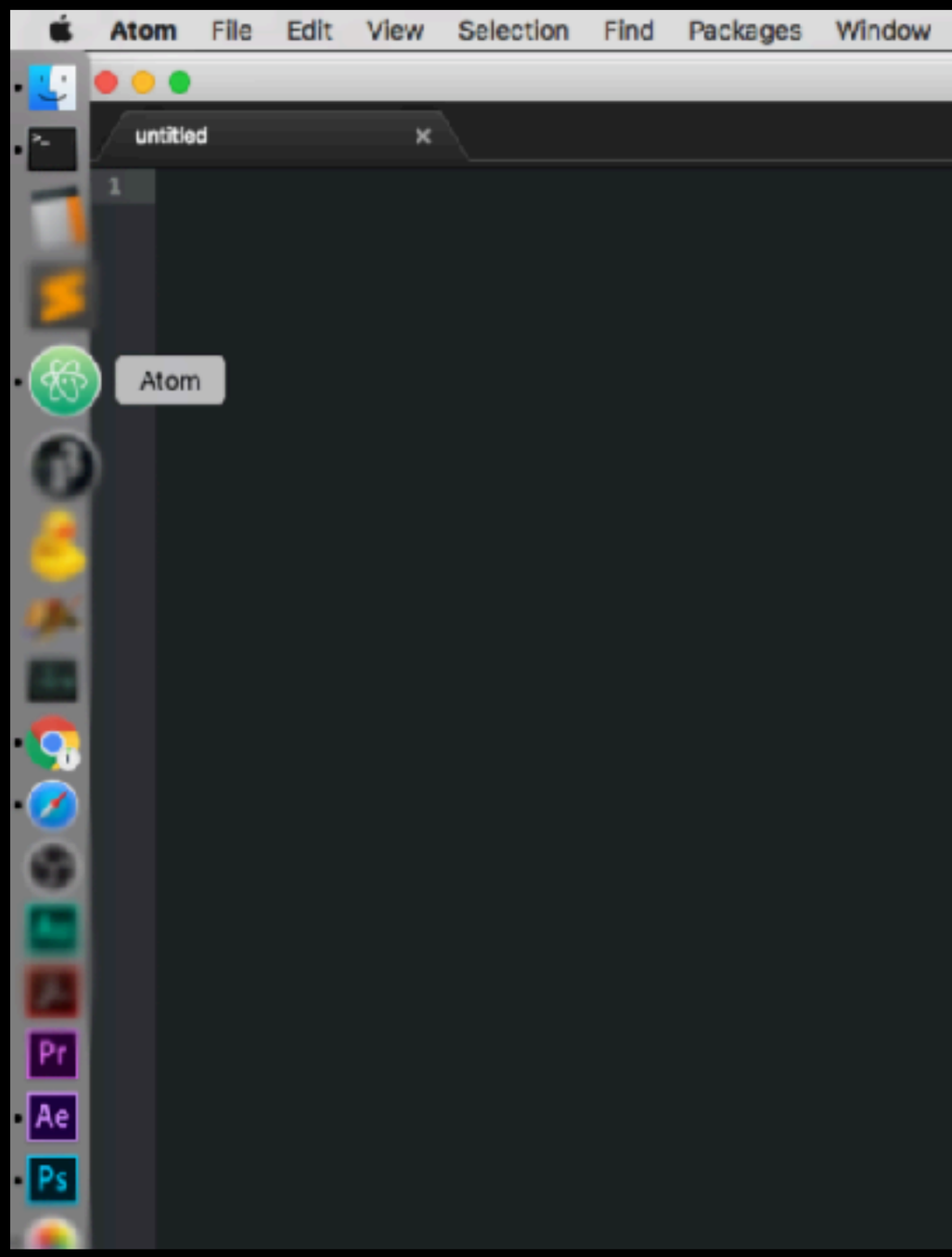
+ w/ css


Info + Web - Week 01
localhost:8080
This Webpage thoughz.
here is a page of text. here is a page of text. here…

Web pages are made
of three different file types. All of which we
are capable of creating on our machines!

It’s easier than you think…

.html (hyper text mark up)
.css (cascading style sheet)
.js (javascript)



We can create + write these files with a text editor.
Like Visual Studio Code.
Mimic a server w/ our command line
And look at our work in the browser.

Assignment for Monday- get your workspace ready

1. Sign up for Github + email me - rebleo@nyu.edu - your username from the address you intend to check in this class. Make sure to respond to my request to collaborate.

2. Download + install a text editor

3. Download + install Google Chrome.

4. Add the above two tools to yr local UI a long with your command line.
   * Wndws OS - this could be a shortcut on yr Desktop
   * Mac OS - this is likely yr "Doc" bar.