

**370 Jay street is the former land of the:
Munsee Lenape + Canarsie**

<https://native-land.ca/>



Intro to Web Development

Technology, Culture + Society
Integrated Digital Media (<3 IDM)

Monday + Wednesdays IDM room 311
Section B - 8:00 am
Section C - 10:00 am
Instructor: rebecca (marks) leopold
rebleo@nyu.edu || rml444@nyu.edu
@rebeccaleopold on most platforms

syllabus + class admin:

class repo: https://github.com/IDMNYU/webDev_C_Fall2021

class wiki: https://github.com/IDMNYU/webDev_B_Fall2021/wiki

if you do not already have a github account:

!! <https://education.github.com/pack> !!

**what do you think of when you
hear the terms: remote + local**



Great Wall of China Signal Towers

400 BC - fire/smoke or drum beats

200 BC - 220 AD - Han dynasty - flags, lights, gunshots



First message sent from Washington D.C. to Baltimore
Samuel Morse 1844

... --- / - / / - - . - - -

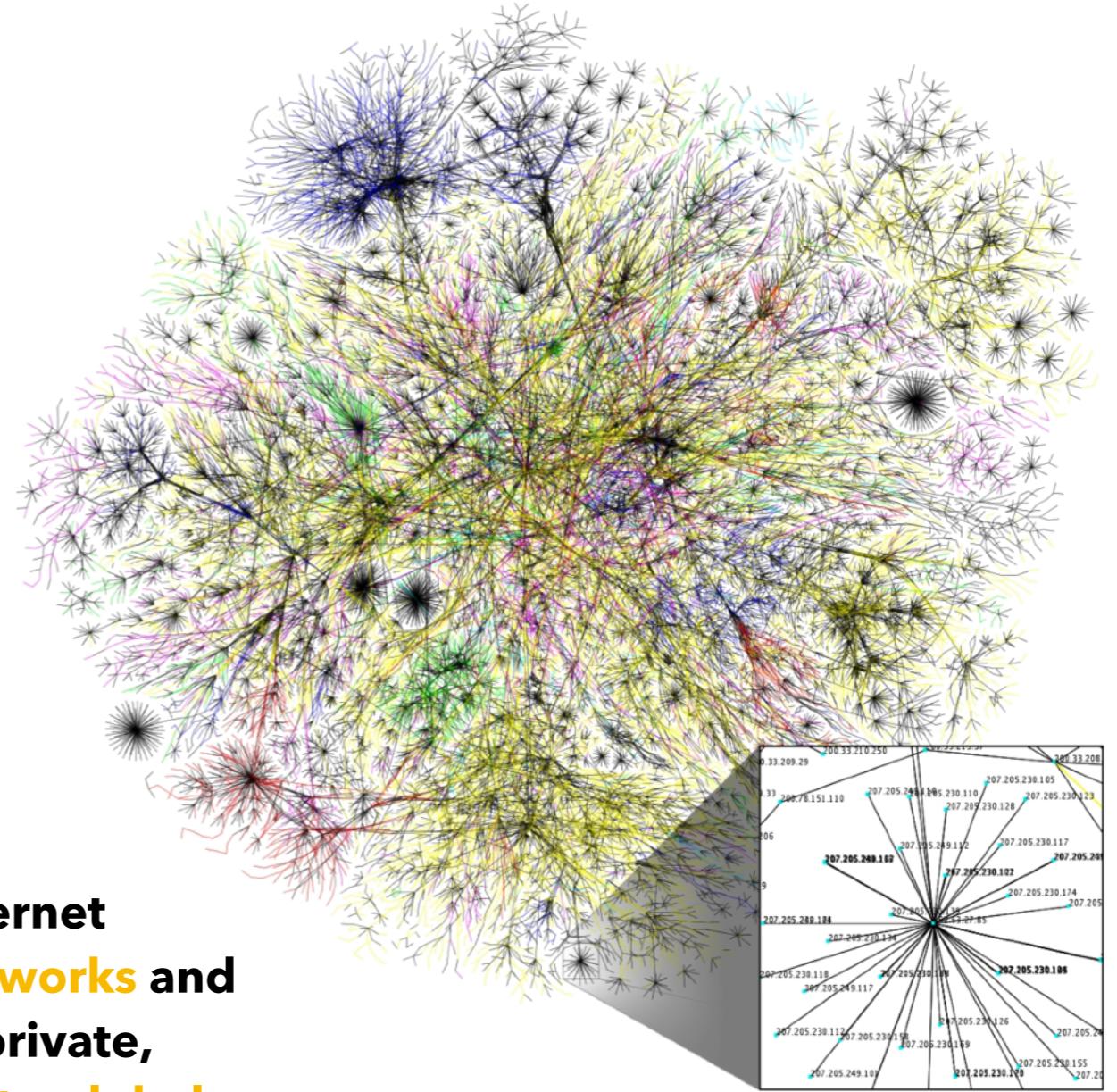
- - - / - . - - . . - - - . - - - . - - - . - - -

“What hath God wrought?”

what is the inter / net?

The Internet (or internet) is the global system of interconnected computer networks that uses the Internet protocol suite (TCP/IP) to communicate between networks and devices. It is a network of networks that consists of private, public, academic and government networks of local to global scope, linked by a broad array of electronic, wireless, and optical networking technologies.

The Internet carries a vast range of information resources and services, such as the inter-linked hypertext documents and applications of the World Wide Web (WWW), electronic mail and file sharing.



the internet was
invented to enable
access to remote
computers

who invented the **internet?**



the Defense Advanced Research Projects Agency
(aka DARPA)

the Defense Advanced Research Projects Agency (aka DARPA)

organized and funded **ARPANET**

"most of the significant advances in computer technology—including the work that my group did at Xerox PARC—were simply extrapolations of Lick's [[Joseph Licklider](#)] vision. They were not really new visions of their own. So he was really the father of it all""

—Robert (Bob) Taylor
head of ARPANET + founder of Xerox Parc



1969 - Arpanet (Advanced Research Projects Agency)

first message sent from UCLA to Stanford via **TCP/IP protocol**

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



System crashed before rest of the message was transmitted



1974 - Arpanet network map

what is the web?

www

The World Wide Web is an
information system where
documents and other
resources are identified by
Uniform Resource Locators
which may be interlinked by
hyperlinks, and are
accessible over the internet.

we colloquially call a URL an address

the URL for this web page is: <https://www.google.com>

Google

https://www.google.com

About Store Gmail Images

Apps idm prtt js Reading List

Google Search I'm Feeling Lucky

Carbon neutral since 2007

Advertising Business How Search works

what is a web page?



HTML



CSS



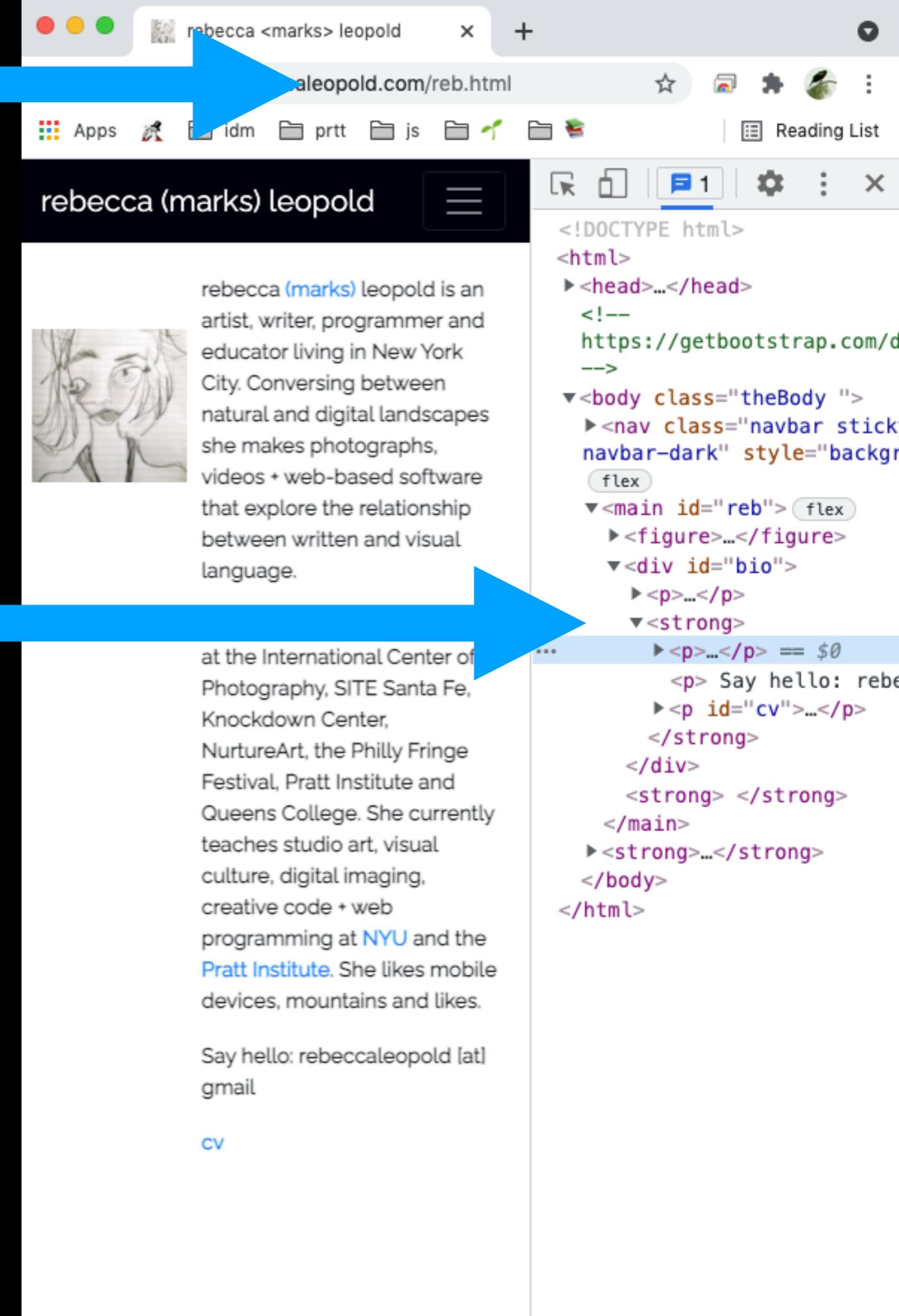
JS



**Web content may be any
type of downloadable media
(text, img, video, pdf) but
web pages are hypertext
documents formatted in
Hypertext Markup Language.**

this page ends in the extension dot **HTML**. As it is an **html** file, much like a **Microsoft Word** document is **.docx**. Though unlike Word - **html files are open source** protocol and can be read by any browser software.

and here is some of the **HTML** "code" under the hood



A screenshot of a web browser window showing a bio page. The URL in the address bar is `rebeccaleopold.com/reb.html`. The page title is "rebecca (marks) leopold". On the left, there is a portrait of a woman with long hair. To the right of the portrait is a bio text: "rebecca (marks) leopold is an artist, writer, programmer and educator living in New York City. Conversing between natural and digital landscapes she makes photographs, videos + web-based software that explore the relationship between written and visual language." Below this is another block of text: "at the International Center of Photography, SITE Santa Fe, Knockdown Center, NurtureArt, the Philly Fringe Festival, Pratt Institute and Queens College. She currently teaches studio art, visual culture, digital imaging, creative code + web programming at [NYU](#) and the [Pratt Institute](#). She likes mobile devices, mountains and likes. Say hello: rebeccaleopold [at] gmail". At the bottom are two links: "cv" and "cv". A blue arrow points from the top-left text to the browser window, and another blue arrow points from the bottom-left text to the browser's sidebar where the HTML code is visible.

```
<!DOCTYPE html>
<html>
  <head>...</head>
  <!--
    https://getbootstrap.com/d
    -->
  <body class="theBody">
    <nav class="navbar sticky navbar-dark" style="backgr
      flex
    <main id="reb"> flex
      <figure>...</figure>
      <div id="bio">
        <p>...</p>
        <strong>
          <p>...</p> == $0
          <p> Say hello: rebe
          <p id="cv">...</p>
        </strong>
      </div>
      <strong> </strong>
    </main>
    <strong>...</strong>
  </body>
</html>
```

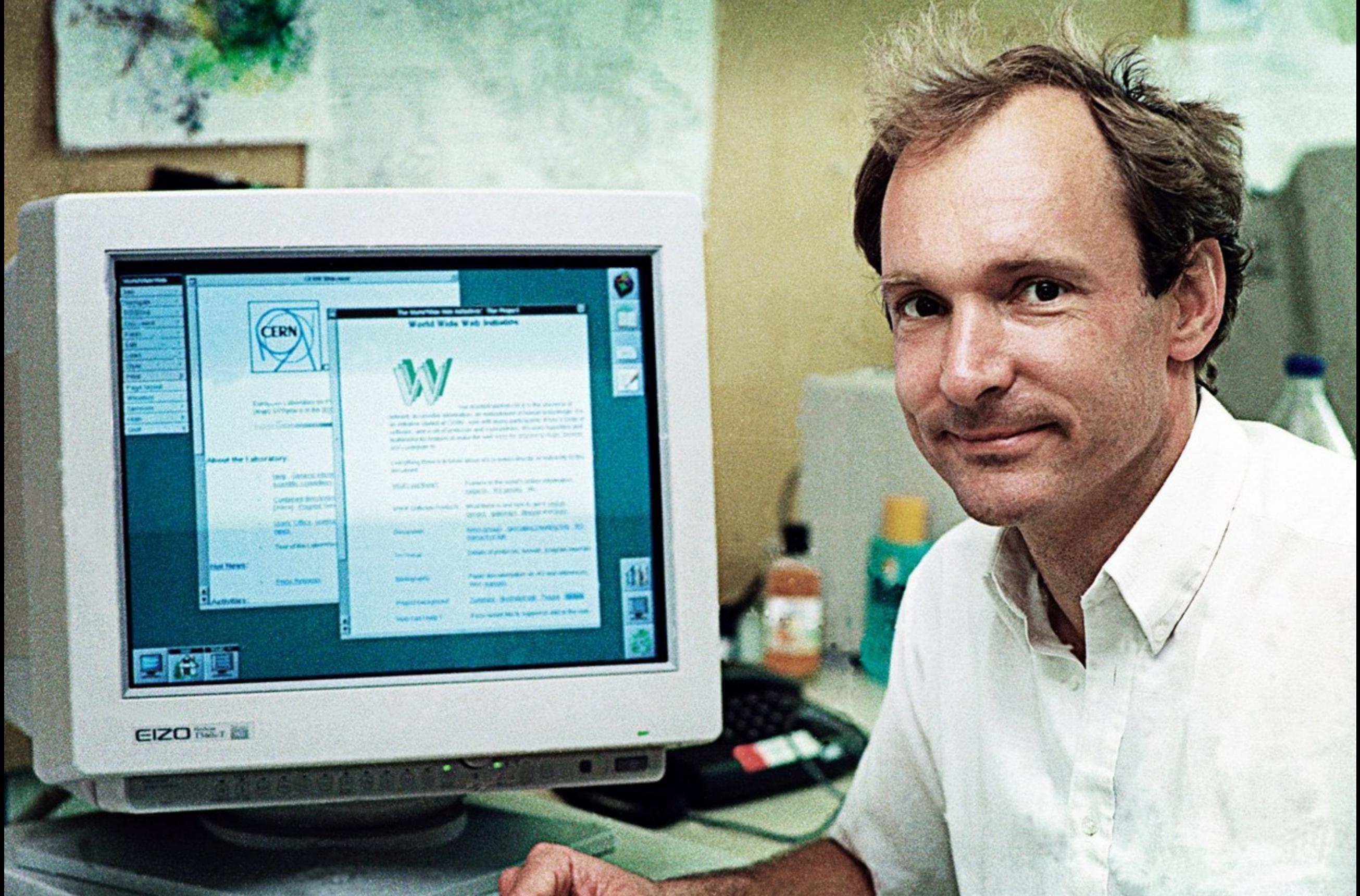


.html files almost always live on a server in a directory with other open source “code” files with the extensions: .css and .js. Server storage works much like the local storage on yr laptop (which is why we need to avoid having our class work on any kind of “cloud” as it could (and will!) interfere with your work.

omg so now what the what is a Hyper Text Markup Langauge?

The resources for the Web are transferred via the Hypertext Transfer Protocol may be accessed by users by a software application called a browser, and are published by a software application called a server. HTML pages + the servers they communicate with can vary from relatively simple (ie what we'll be doing) to very sophisticated web applications but in any case they must be written in proper HTML syntax in a file with .html extension (although a user might not always see it!)

who invented the web?



1989 - Tim Berners Lee invents the WWW

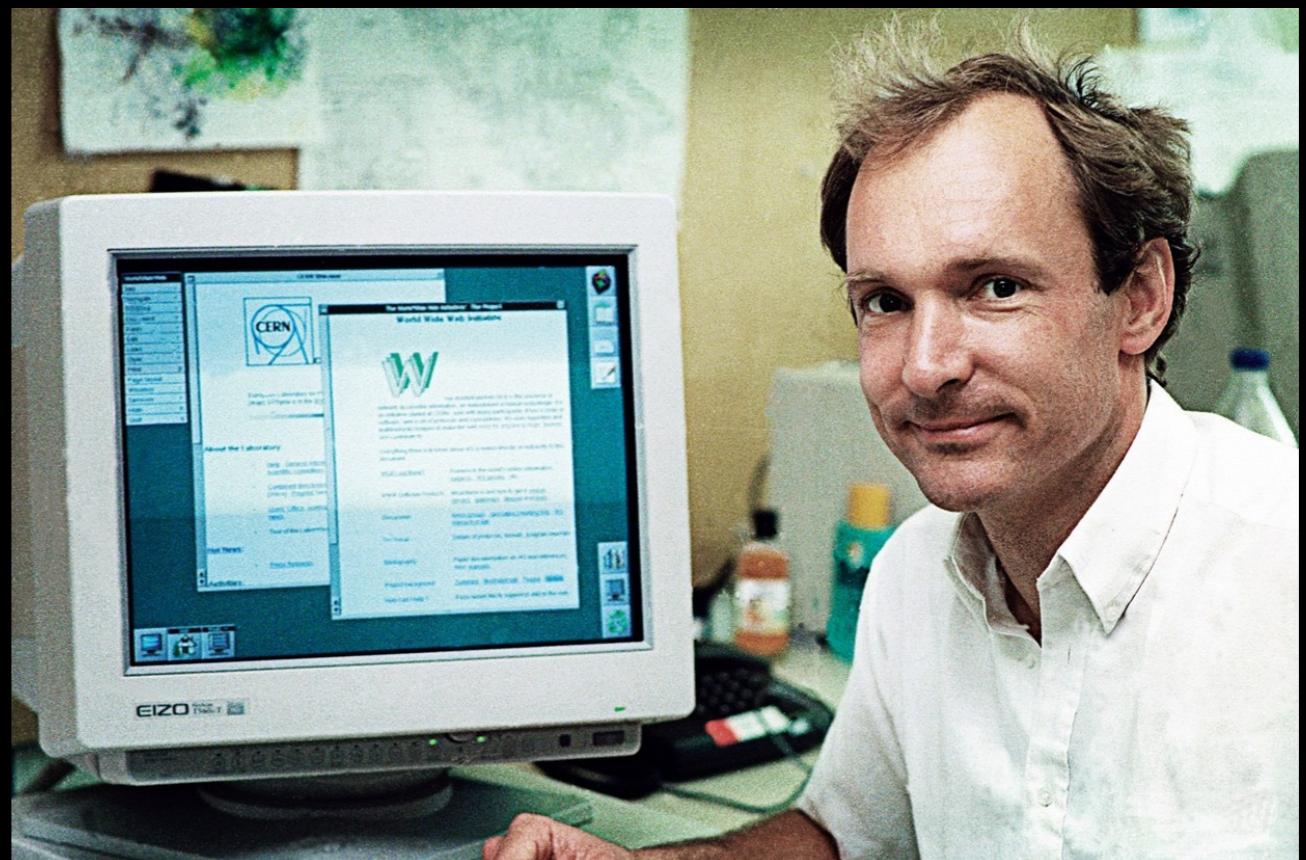
1990 - Tim Berners writes the first web browser at CERN in Switzerland

1991 - The browser released outside CERN + to the general public

1993 -4 - Web begins to enter everyday use

"I still has to find a way to turn text into hypertext, though. This required being able to distinguish text that was a link from text that wasn't. I delved into the files that defined the internal workings of the text editor, and happily found a spare thirty-two bit piece of memory, which the developers of NeXT had graciously left open for future use by tinkerers like me. I was able to use the spare space as a pointer from each span of text to the address for any hypertext link. With this, hypertext was easy. "

—Berners Lee, *Weaving the Web*





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