

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

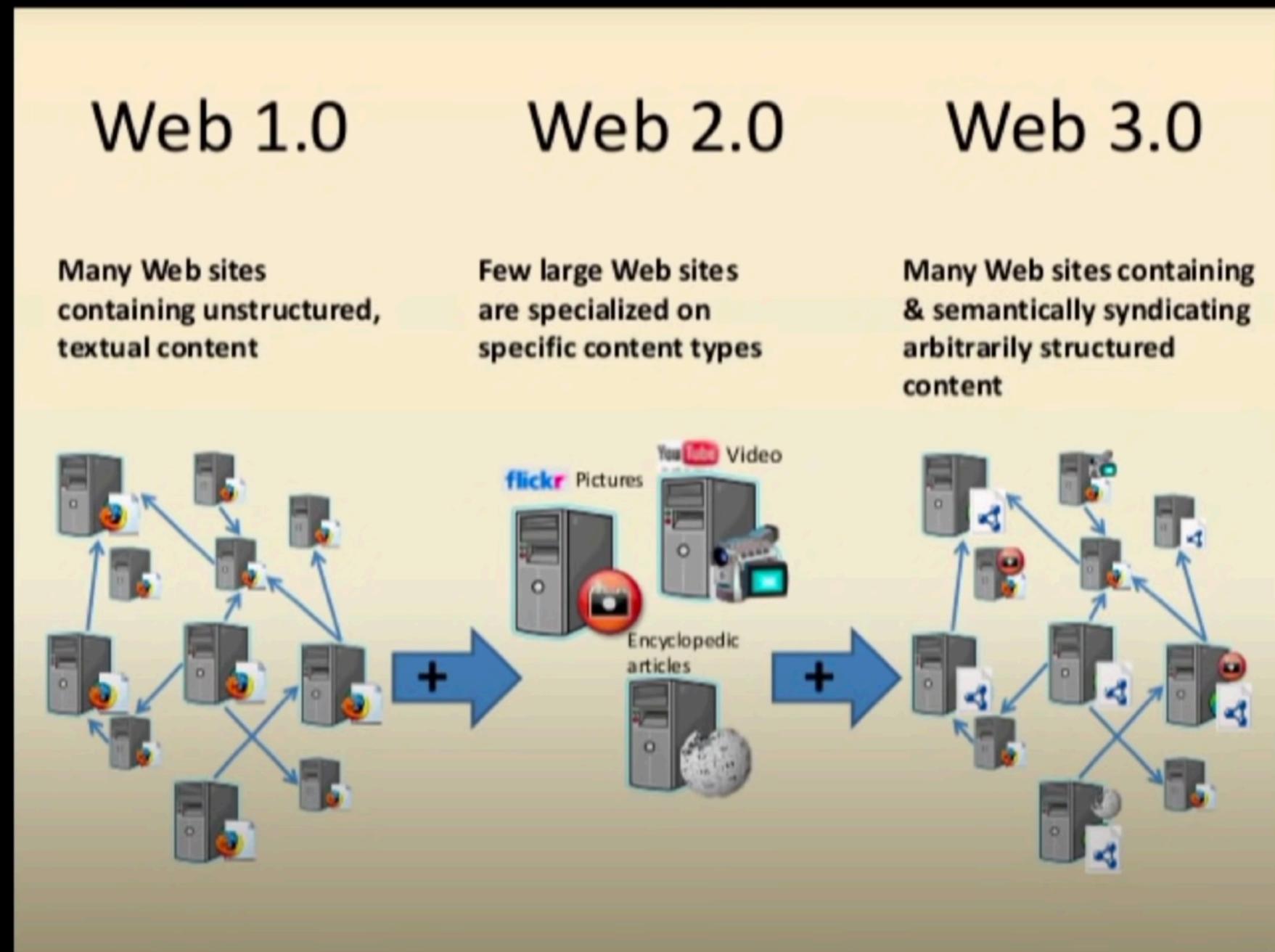
<https://native-land.ca/>



Intro to Web Development

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

Monday + Wed IDM room 310
Section B - 10:00 am
Instructor: rebecca (marks) leopold
rebleo@nyu.edu || rml444@nyu.edu
[@rebeccaleopold](https://www.twitter.com/rebeccaleopold) on most platforms



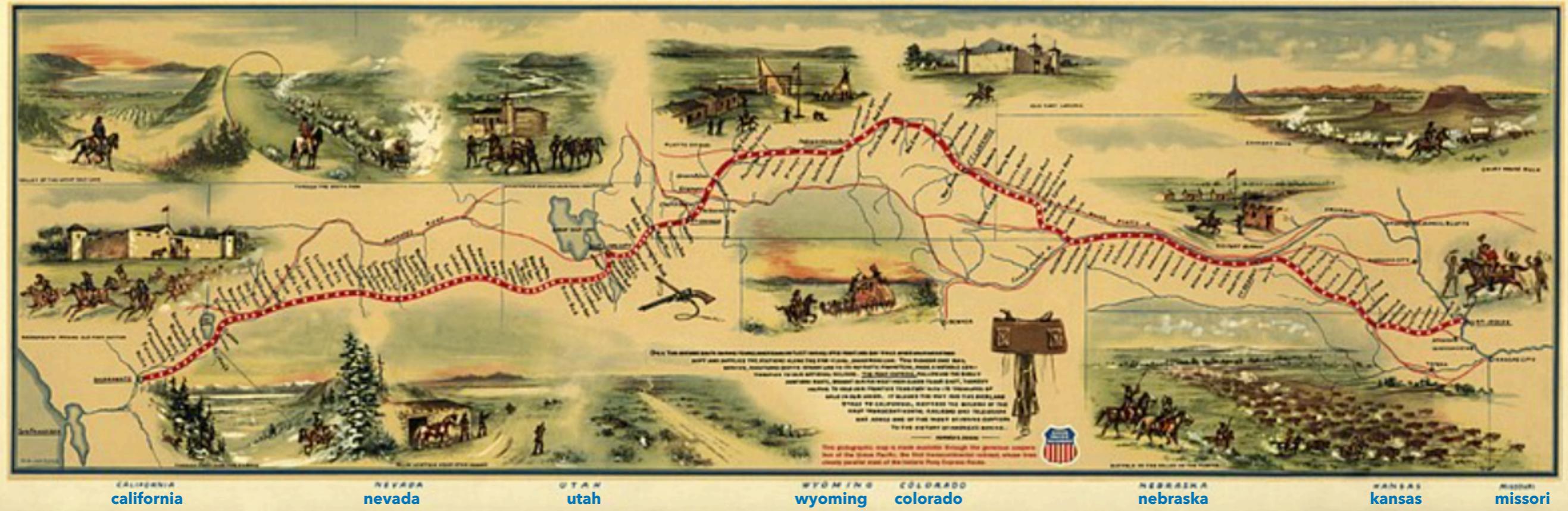


Great Wall of China Signal Towers

400 BC - fire/smoke or drum beats

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

PONY EXPRESS ROUTE APRIL 3, 1860 — OCTOBER 24, 1861



map of the Pony Express mail route - 1860 - 1861
company went bankrupt with the advent of the...



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

A decorative horizontal separator consisting of two rows of pink dots and dashes, separated by a thick pink diagonal line.

“What hath God wrought?”

EASTERN TELEGRAPH CO'S SYSTEM AND ITS GENERAL CONNECTIONS.



1901 Telegraph cables

2017 GLOBAL INTERNET MAP

TeleGeography



METRO AREAS



240.4 TBPS



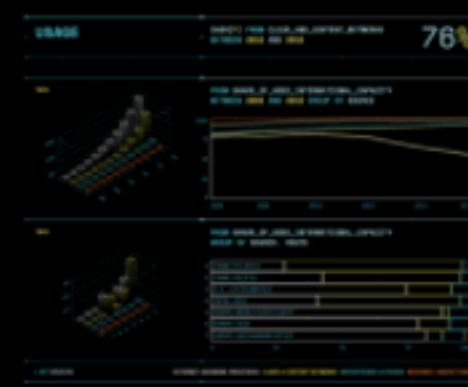
-21%



421IXs



76%



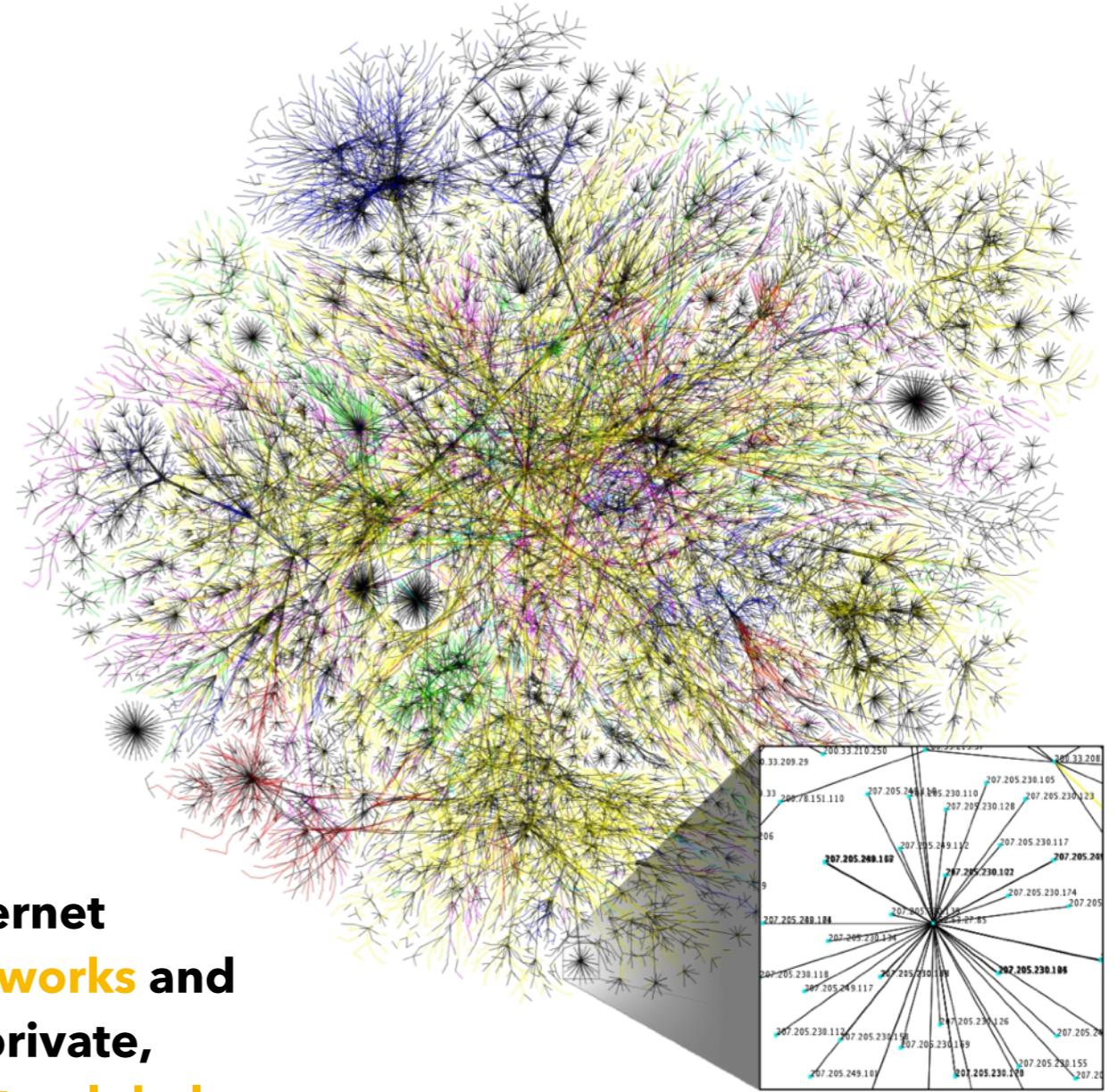
42AWS



what is the **internet?**

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)

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.

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**

The screenshot shows a web browser window with a dark theme. The title bar reads "rebecca <marks> leopold". The address bar shows the URL "rebeccaleopold.com/reb.html". The main content area displays a bio page for "rebecca (marks) leopold" featuring a portrait sketch and text about her work. A large blue arrow points from the left text to this bio page. Another large blue arrow points from the bio page to the right-hand sidebar, which displays the raw HTML code of the page. The sidebar includes navigation icons and a "Reading List" button.

rebecca (marks) leopold



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.

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

[cv](#)

```
<!DOCTYPE html>
<html>
  <head>...</head>
  <!--
    https://getbootstrap.com/d
    -->
  <body class="theBody">
    <nav class="navbar sticky navbar-dark" style="background-color: #333; color: white; padding: 10px; font-size: 1.2em; font-weight: bold; border-bottom: 1px solid black; margin-bottom: 10px; position: relative; z-index: 1;>
      <div class="container">
        <div class="row">
          <div class="col-12 col-md-6">
            <img alt="Portrait sketch of rebecca (marks) leopold" data-bbox="505 250 595 365"/>
          </div>
          <div class="col-12 col-md-6">
            <div style="display: flex; justify-content: space-between; align-items: center; gap: 10px; font-size: 0.9em; font-weight: bold; color: white; margin-bottom: 10px; position: relative; z-index: 1;>
              <div>rebecca (marks) leopold</div>
              <div>≡</div>
            </div>
            <div style="font-size: 0.8em; color: white; margin-bottom: 10px; position: relative; z-index: 1;>
              <div style="display: flex; justify-content: space-between; align-items: center; gap: 10px; font-size: 0.8em; color: white; margin-bottom: 10px; position: relative; z-index: 1;>
                <div>Apps</div>
                <div>idm</div>
                <div>prtt</div>
                <div>js</div>
                <div>green</div>
                <div>red</div>
                <div>blue</div>
              </div>
            </div>
            <div style="font-size: 0.8em; color: white; margin-bottom: 10px; position: relative; z-index: 1;>
              <div style="display: flex; justify-content: space-between; align-items: center; gap: 10px; font-size: 0.8em; color: white; margin-bottom: 10px; position: relative; z-index: 1;>
                <div>Back</div>
                <div>Forward</div>
                <div>≡ 1</div>
                <div>Settings</div>
                <div>More</div>
                <div>X</div>
              </div>
            </div>
          </div>
        </div>
      </div>
    </nav>
    <main id="reb" style="flex: 1; padding: 10px; background-color: #f0f0f0; border-radius: 10px; margin-bottom: 10px; position: relative; z-index: 1;>
      <figure>...</figure>
      <div id="bio" style="margin-bottom: 10px; position: relative; z-index: 1;>
        <p>...</p>
        <strong>
          <p>...</p> == $0
          <p> Say hello: rebeccaleopold [at] gmail
          <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!)

Integrated Design & Media NYU

https://www.instagram.com/idmnyu/

Instagram

idmnyu

Message

356 posts 1,335 followers 692 following

Integrated Design & Media NYU
Creative practice, design research & multidisciplinary experimentation w/ emerging media technologies
linktr.ee/idmnyu

Followed by llaurolazin, dirtyfitz, katattakacs +6 more

SpringShow... Spotlights Meet the T...

POSTS IGTV TAGGED

welcome back from the IDM social media team

Nice To See You All Again!

In Person Class Checklist

- Mask, Sanitizer, Hand Lotion
- Reusable Water Bottle
- Phone Charger
- Journal

4 tips on how to create something

Excited?

TIPS FOR TRANSITIONING FROM ZOOM TO IN-PERSON CLASSES

the url for this webpage is:

<https://www.instagram.com/idmnyu/>

Integrated Design & Media NYU

https://www.instagram.com/p/CTVMwq_FMuf/

Instagram

idmnyu

Message

356 posts 1,335 followers 692 following

Integrated Design & Media NYU
Creative practice, design research & multidisciplinary experimentation w/ emerging media technologies

welcome back from the IDM social media team

Nice To See You All Again!

idmnyu • Following

idmnyu Happy first day of classes
IDM! Can't wait to show you all what we have in store for this school year ;)

4h

1 heart 1 comment 1 share Liked by rlukedubois and 37 others 4 HOURS AGO

Add a comment... Post

Nice To See You All Again!

rlukedubois

Reusable Water bottle
Phone Charger
Journal

“ 4 tips on how to create something

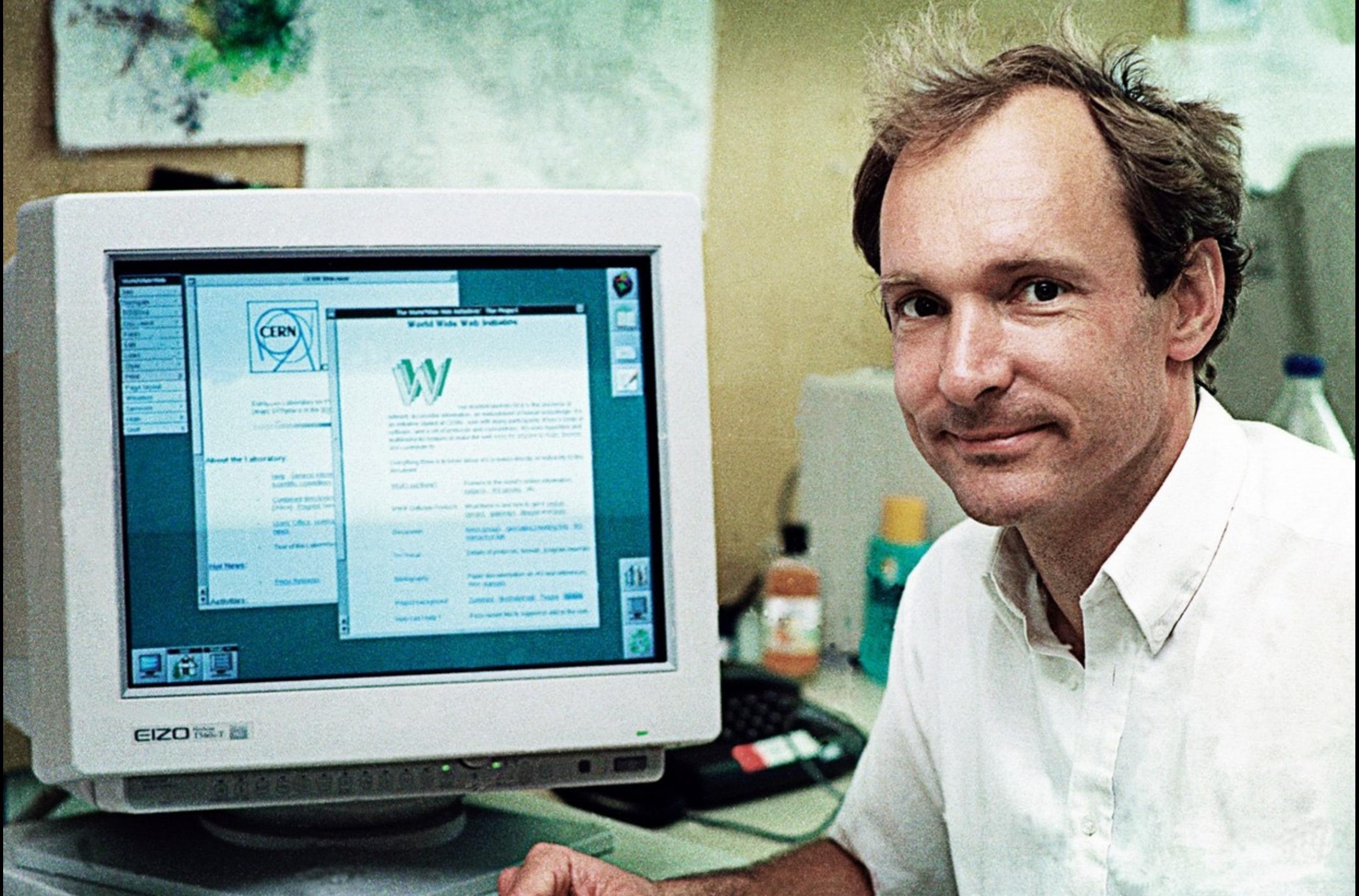
Excited?

4 TIPS FOR TRANSITIONING FROM ZOOM TO IN-PERSON CLASSES

the url for this webpage is:

https://www.instagram.com/p/CTVMwq_FMuf/

who invented the web?



1989 - Tim Berners Lee invents the WWW

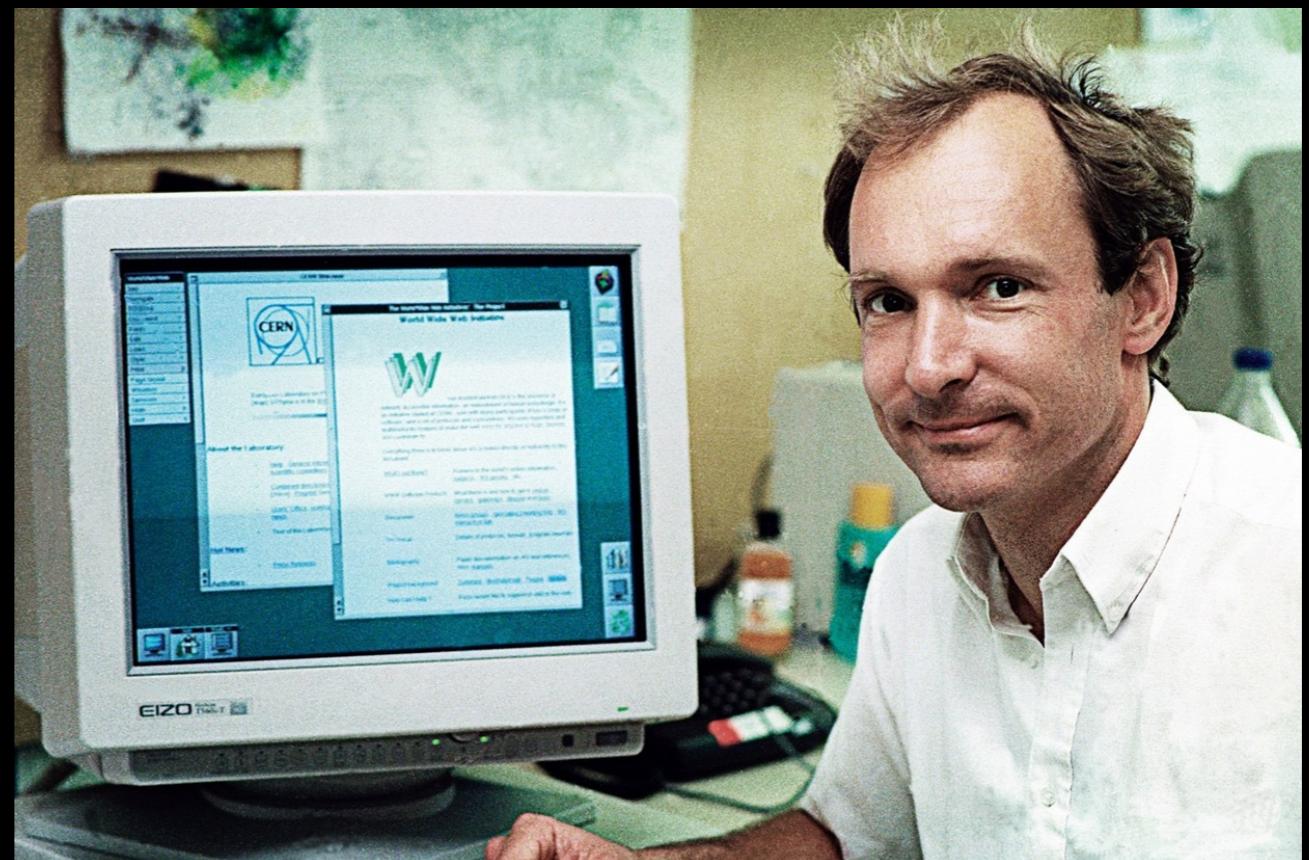
1990 - Tim Berners writes the first web browser at CERN in Switzerland

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

what do you think of when you hear the phrase **web 1.0?**



Search the web using Google!

[Google Search](#)

[I'm feeling lucky](#)

Special Searches

[Stanford Search](#)

[Linux Search](#)

[Help!](#)

[About Google!](#)

[Company Info](#)

[Google! Logos](#)

Get Google!
updates monthly:

your e-mail

[Subscribe](#)

[Archive](#)

Copyright ©1998 Google Inc.

**Google, init(): September 1998
went public August 2004**

Web. 1.0

HTML + CSS + JS

1989 - 2004

what do you think of when you hear the phrase **web 2.0?**

Web. 1.0

HTML + CSS + JS

1989 - 2004

Web. 2.0

HTML + CSS + AJAX

c. 2004

Web. 1.0

HTML + CSS + JS

1989 - 2004

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, positioning, typeface, layout and even timing. It can be used to consider the design of your page across different platforms and screen sizes.

```
<!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/
IYf4uAJEWVo1FffnVD/giphy.gif">
  </body>
</html>
```

This Webpage though....

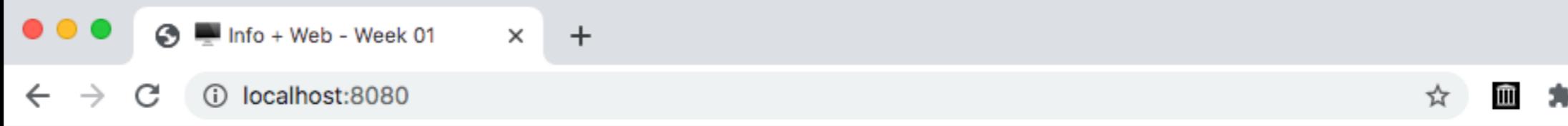
here is a page of text. here is a page of text. here...



html looks like this:

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';  
}
```



html + css: