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CSCI-UA-0004
Intro to Web Design + Computer Principles

Introduction + Overview

Professor Emily Zhao

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There are two primary aspects to this course:

1) Learning how to **build websites** and prepare the various elements that comprise them

→ *What is a website?*

2) Understanding concepts behind computers in general and **the web** in particular

→ *What is the internet?*

Agenda

— Introductions
— Syllabus Overview
— Classroom Agreements
— ***What is a website?***
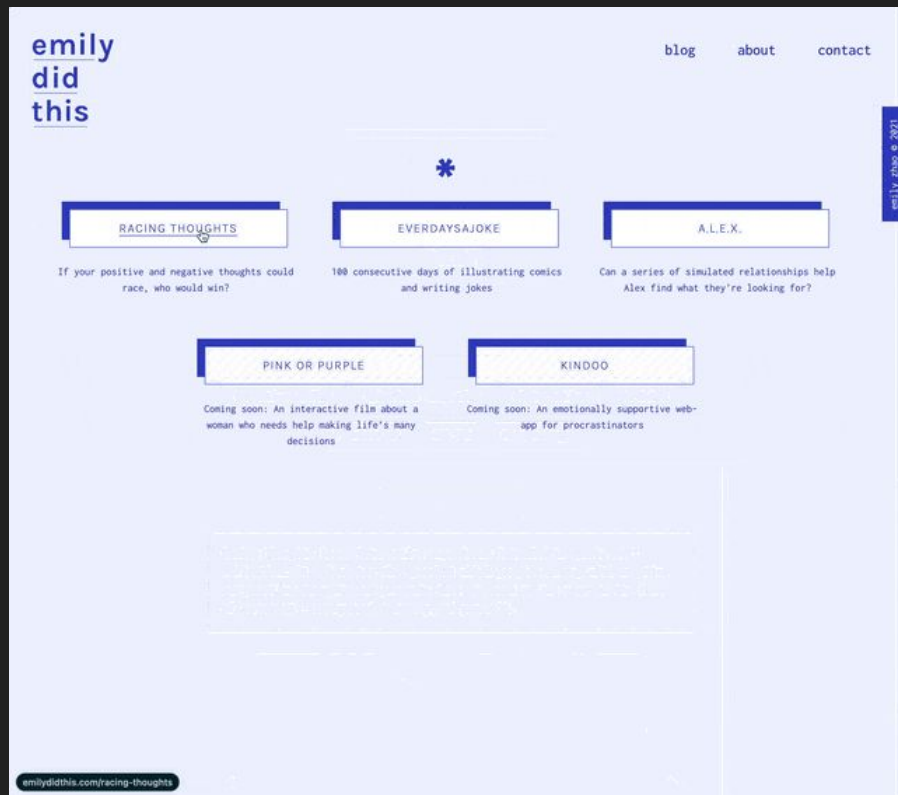— ***What is the internet?***

Emily Zhao (she/her)

Background
— BFA in Film + Television Production
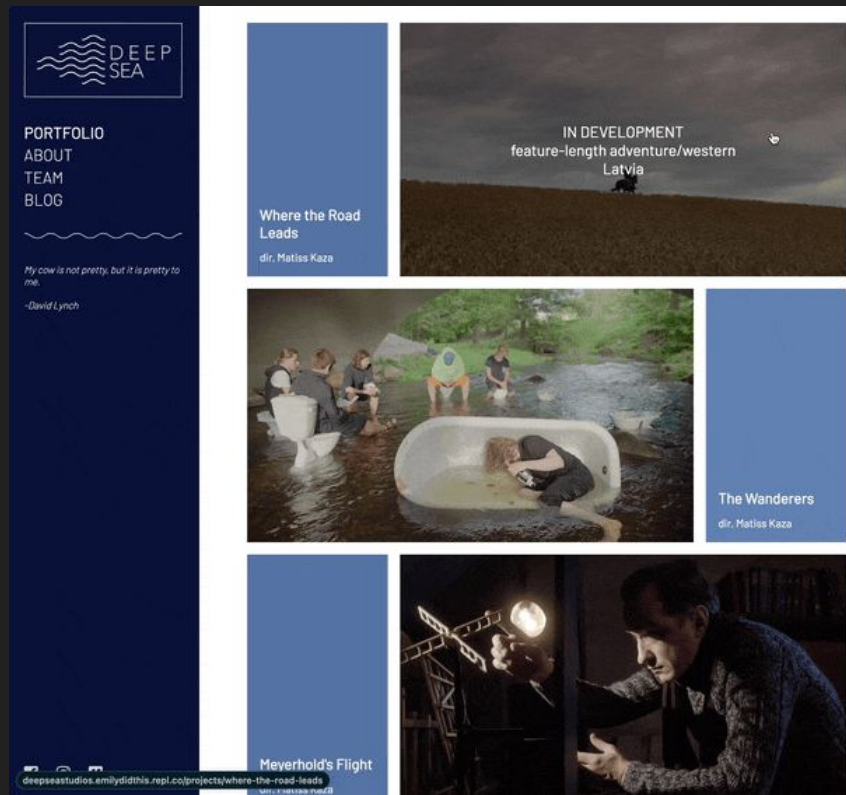— MPS in Interactive Telecommunications (aka Art + Tech)

Where I've Taught:
— Scholastic
— GirlsWhoCode
— Tisch ITP/IMA:
　　— 100 Days of Making
　　— Intro to Computational Media
— CAS Computer Science
　　— Intro to Programming
　　— Intro to Web Design + Computer Principles
　　— Web Development + Programming

I love making websites!

emily
did
this

blog   about   contact

*

RACING THOUGHTS

If your positive and negative thoughts could
race, who would win?

EVERDAYSAJOKE

100 consecutive days of illustrating comics
and writing jokes

A.L.E.X.

Can a series of simulated relationships help
Alex find what they're looking for?

PINK OR PURPLE

Coming soon: An interactive film about a
woman who needs help making life's many
decisions

KINDOO

Coming soon: An emotionally supportive web-
app for procrastinators

emilydidthis.com/racing-thoughts

I love making websites!

What is a website?

→ What purposes do they serve?

What is a website?

→ What purposes do they serve?

NEWS

EDUCATION

BUSINESS

ENTERTAINMENT

SOCIAL NETWORKING

Websites for this class

Intro to Web Design & Computer Principles – Fall 2024

Syllabus   **Ed Discussion**
Schedule + Notes   **Poll Everywhere**
Assignments   **Brightspace**

Professor

Emily Zhao
email: emilyzhao@nyu.edu
office hours: calendar link

Common Course Syllabus

General information regarding the course, topics covered, required textbooks, course tutors, i6 accounts, etc. can be found on the common course syllabus.

Course Description

There are two primary aspects to this course. The first is learning how to build websites and prepare the various elements that comprise them. The second is understanding concepts behind computers in general and the web in particular.

Topics Covered

What is the internet?
Unix command line
HTML
CSS
Raster graphics
Vector graphics
Design and accessibility
Page layout
Responsive design
Interactivity with JavaScript
Audio and video
Forms

Class Format

The class will meet twice a week for one hour and fifteen minutes. Typically, each week will include a blend of lecture material, asynchronous video lessons, interactive class discussions, and a project-based assignment. To support your learning and progress on assignments, dedicated workshop time will be provided during class. These workshops offer an opportunity to work collaboratively with your peers and receive direct support from me, the professor.

Grading

Assignments: 40%
Final Project: 10%
Midterm Exam: 20%
Final Exam: 20%
Attendance + Participation: 10%

Exams

Midterm
Tuesday, October 22 | 3:30PM-4:45PM | In-class

Final
Thursday, December 19 | 2:00PM-3:15PM | Room TBA

Attendance + Participation

Due to the sequential nature of this course, consistent and punctual in-person attendance is essential and will be factored into your grade. If you plan on missing a class due to religious observance, military commitment or an NYU athletic commitment, please fill out the short term absence form, as these are considered excused absences as per NYU attendance policy. Filling out the form must be done prior to the absence and cannot be filled out retroactively. If you are feeling ill, please notify me the day of via Ed by posting a private thread under the Admin category.

Participation is also a significant part of your grade. The best way to participate, aside from attending

Emily Zhao

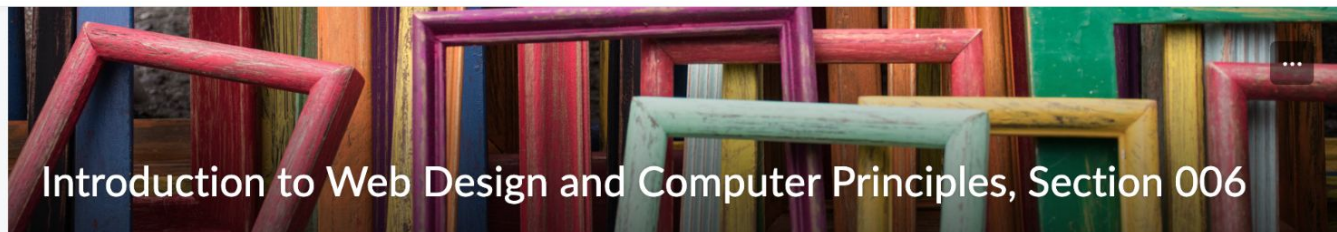Content   Announcements   Assignments   Discussions   Quizzes   Grades   Zoom   More Tools ⌄   Course Reports ⌄   Help ⌄

Introduction to Web Design and Computer Principles, Section 006

Table of Contents ⌄

Important Links

29%   2 of 7 Topics Completed

Class Notes

0%   0 of 1 Topics Completed

Assignments

Exam Information

Calendar ⌄

Tuesday, September 3, 2024   ▷

Upcoming events   ▼

There are no events to display.   Create an event

Welcome to Ed!

Emily Zhao
3 minutes ago in General

Welcome to Ed!

Ed will be our designated communication platform for the class. You will be using it to participate in discussion threads, share code during class, and most of all, ask any questions you may have about the course, whether curricular or administrative. You will get faster answers here from me and your peers than through email.

Ed is especially useful if you are unable to make it to office hours or drop-in tutoring hours. Instead of emailing me, you can ask questions relating to the course material on E... benefit from your question. I will actively monitor the forum to ensure ... in a timely manner.

Feel free to go anonymous.

Shy? No problem. You can always opt to post or edit anonymously so ... identity (the instructor can still see who you are, though).

Question Guidelines

- Search before you post! It's possible that your question has alre...
- Questions should be associated with your section and category (... "Lectures → Responsive Design")
- You may post pieces of your code in an effort to support your qu...

General

Show All Threads

Welcome to Ed!
Welcome to Ed! Ed will be our designated communication platform for the class. You will be using it...

General

New Thread

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ed

Lessons | Slides | Prev | Next | **Unix Commands** | Edit Slide

Unix Basics

- What is Unix? ✓
- Unix Commands ✓
- Practicing Unix Commands
- Practicing on Your Own Computer

Unix Commands

Learning Unix commands is not only essential for interacting with Unix-based systems, but also serves as a fundamental skill in broader areas of computer science, information technology, and software development.

Common Unix Commands

- `cd <directory name>` Change directory (e.g. `cd pictures` brings you to the sub-directory "pictures")
- `cd ..` Change directory up one level to the parent directory
- `cd` Return to the home directory
- `chmod` Modifies the permissions on a file or directory
- `cp <current filename> <new file name>` Copy (e.g. `cp cats1.jpg cats2.jpg` makes a copy of the picture "cats1.jpg" and calls it "cats2.jpg")
- `cp -i <current filename> <new file name>` Use `cp -i` to be prompted before over-writing another file. This is a safer method.
- `ls` Lists a directory of your files
- `ls -l` Lists a directory with more information about the files
- `ls -a` Lists a directory including the hidden files
- `man` This is the online Unix help documentation (as in "manual"). Type `man` + the command (e.g. `man ls`) for a detailed explanation of the command. Type `q` to leave the manual pages.
- `mkdir <directory name>` Creates a new directory (e.g. `mkdir pictures` creates a directory called "pictures")
- `pico` Use `pico <filename>` to edit a text file

Today's Attendance
(via PollEverywhere)

pollev.com/emilyzhao

→ Where are you from?

→ What are you majoring in?

→ Do you know any programming languages?

→ Do you have any favorite websites?

→ What kind of websites do you want to make?

→ How are you feeling about the class?

Classroom Agreements

What does a teacher in this classroom look like?

What does a student in this classroom look like?

What are our agreed upon expectations?

My expectations

Engagement

— Listening to me when I speak without interruption
— Effort (not perfection) in assignments and participation
— Just showing up

Communication

If you need anything, please ask:

— You can ask me after class
— You can post a private thread on Ed
— You can book an office hour
— Secret hand signal
— Just talk to me, I promise I will listen

Any questions?

Agenda

— Introductions
— Syllabus Overview
— Classroom Agreements
— ***What is a website?***
— ***What is the internet?***

* How are you able to view our class website from your computer?

→ What is a website, technically speaking?
→ What is the internet?
    – How do we get access it?
    – How do we put websites on the internet?

What is a website?

→ What is it made out of?

What is a website?

A collection of various types of files that together create the content, visual appearance, and functionality of a site

html

css

js

media
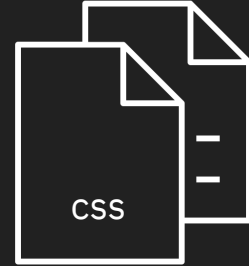
Here are all my files associated with the class website:

Browser

— Allows users to retrieve and display web pages containing various types of content, such as text, images, videos, and interactive elements, both <u>locally</u> and <u>via the web</u>

— Users can navigate to the internet by entering web addresses (URLs) or clicking on hyperlinks, and they then fetch and render the requested web pages

Safari Apple

Firefox Mozilla

Chrome Google

Edge new Microsoft

Opera Opera Software

What is the internet?

The Internet

a global network of interconnected computers that communicate and share information with each other
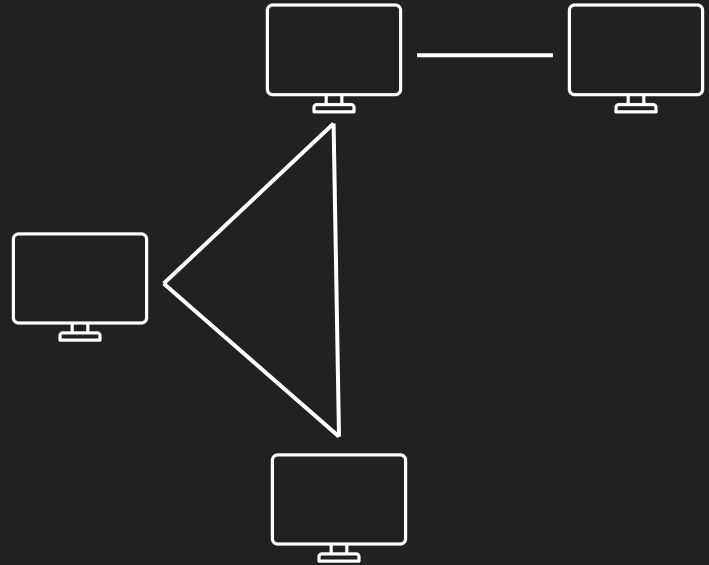
ARPANET

Advanced Research Projects Agency Network

The first prototype of internet developed in the late 1960s

To allow researchers from UCLA, Standard Research Institute(SRI), UCSB, and the University of Utah to work together and share resources
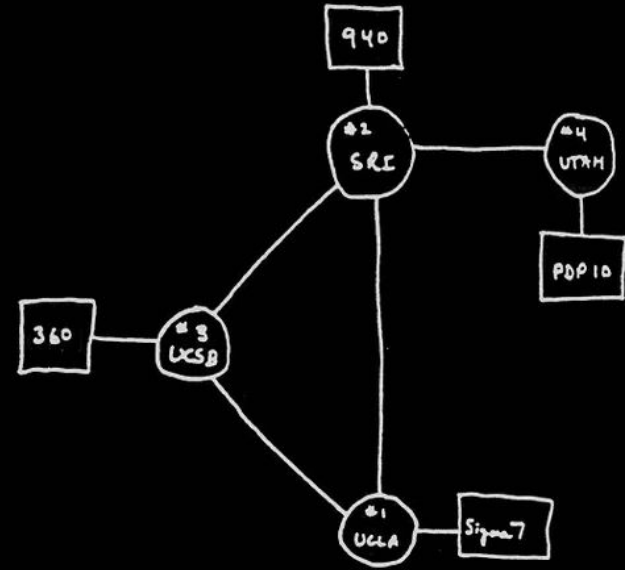
Networking

Establishing common standards to facilitate communication through different systems

What's the difference between the internet and the web?

The Web

— born in 1989 by **Tim Berners-Lee**
— originally called the **World Wide Web** (www)
— a **subset of the internet**; just one of the ways information can be shared
— documents are shared using a protocol called **HTTP** (HyperText Transfer Protocol)
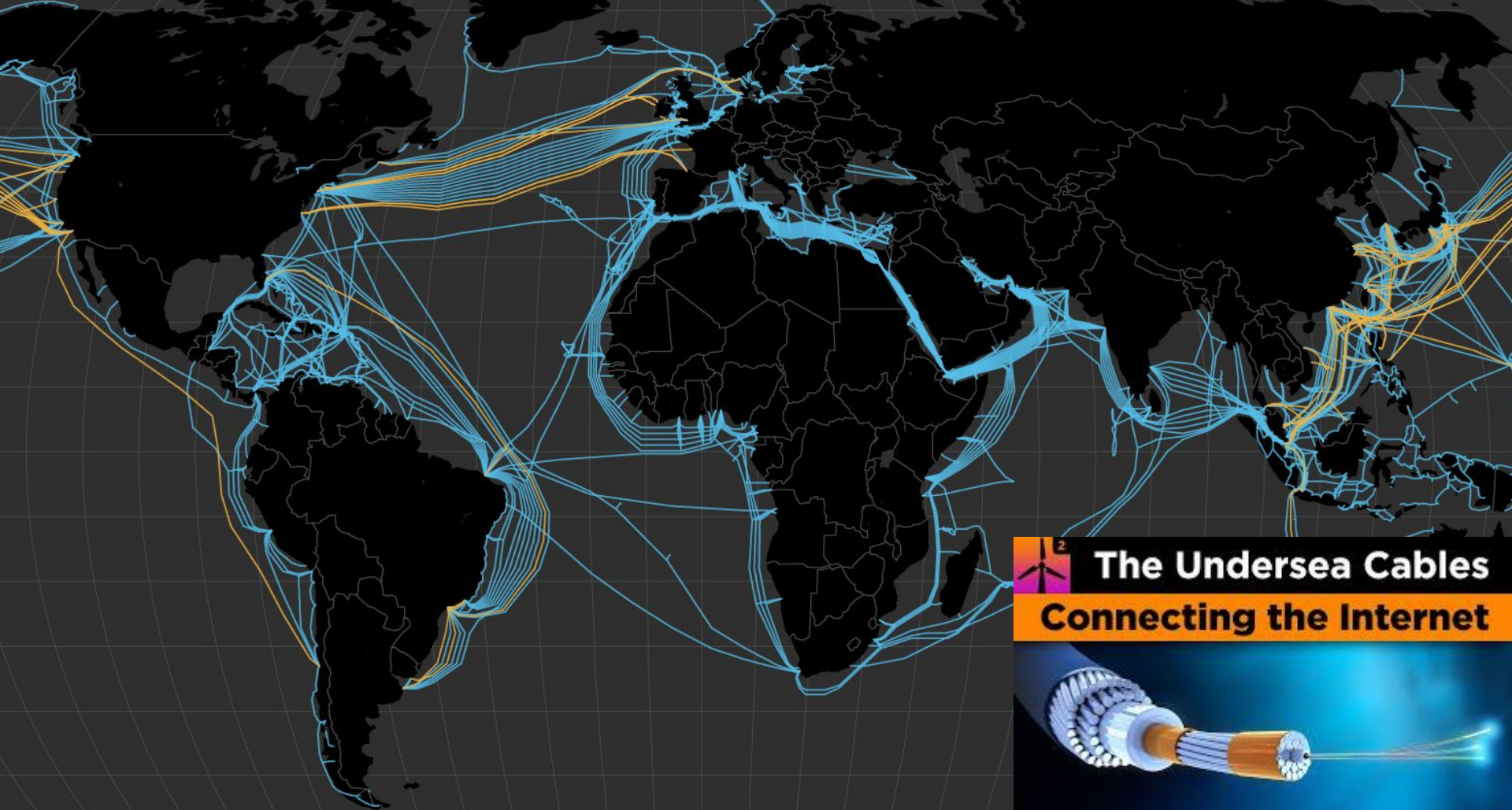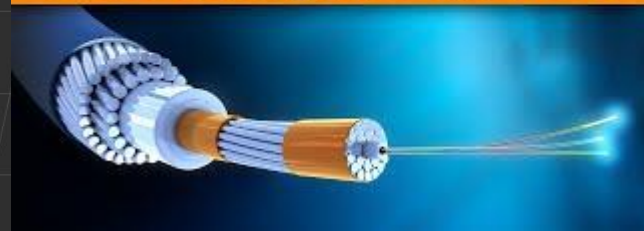 — Other protocols include: POP3/IMAP/SMTP, FTP, SSH
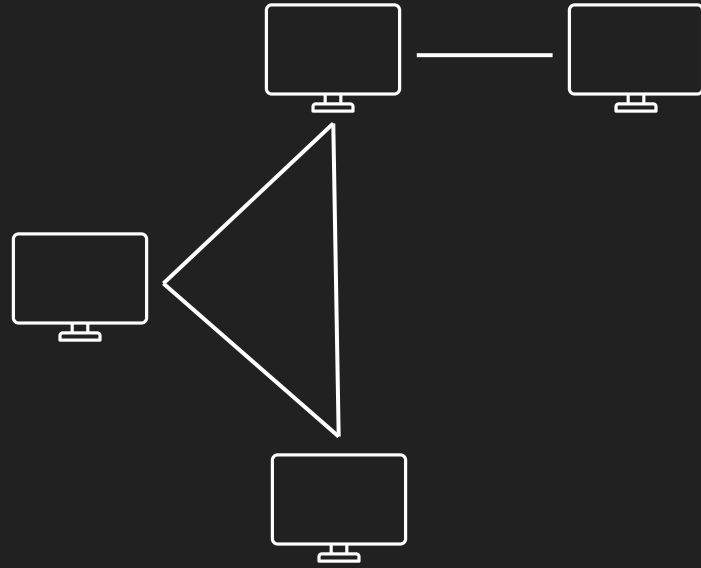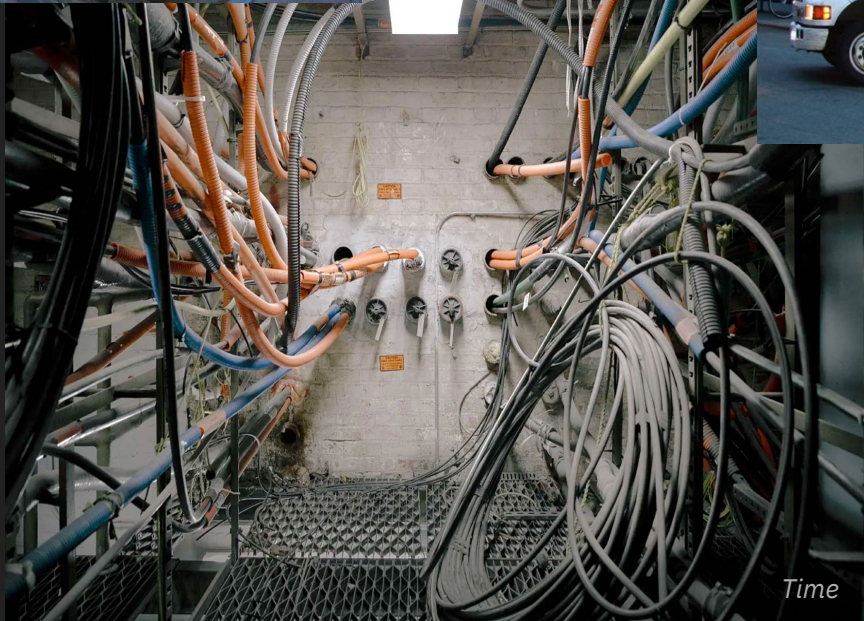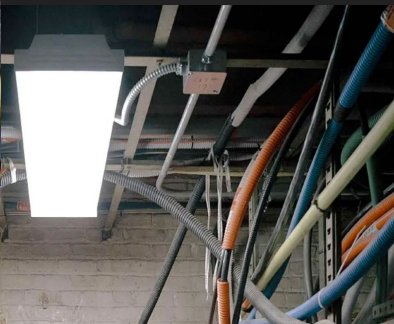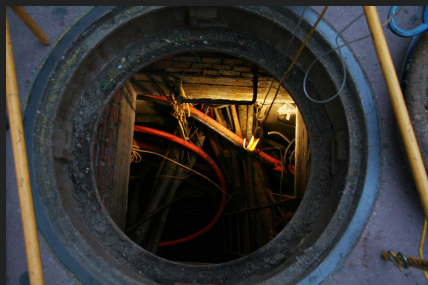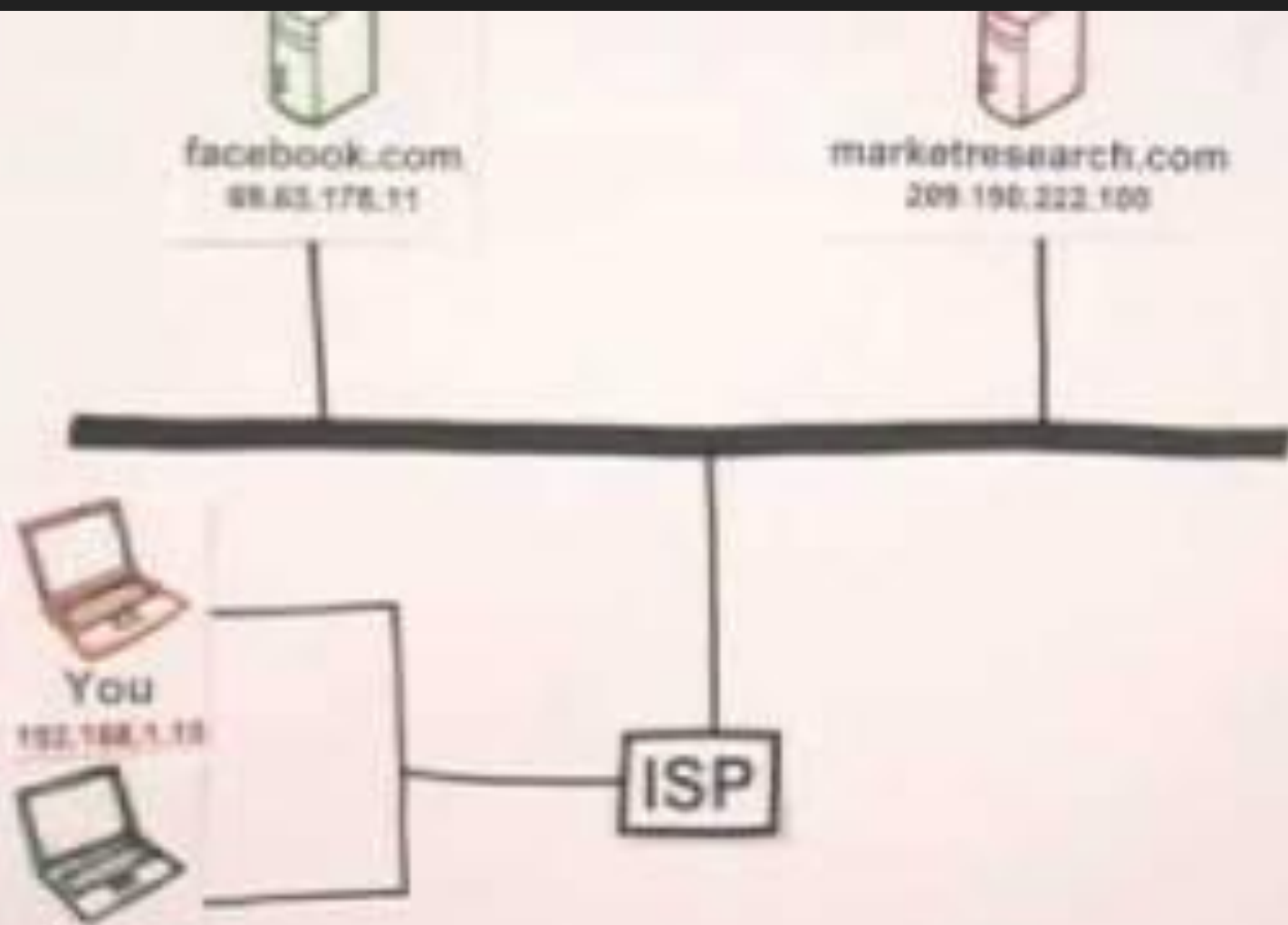
Time

The Internet is not magic, it's a physical thing.
It has buildings, hubs and infrastructure.
Our international connections pass through cables
that run across ocean floors… Inside those conduits
and cables, the Internet is, ultimately, pulses of light
traveling along strands of glass. Light and glass that
is laid down by the workers you pass by every night…
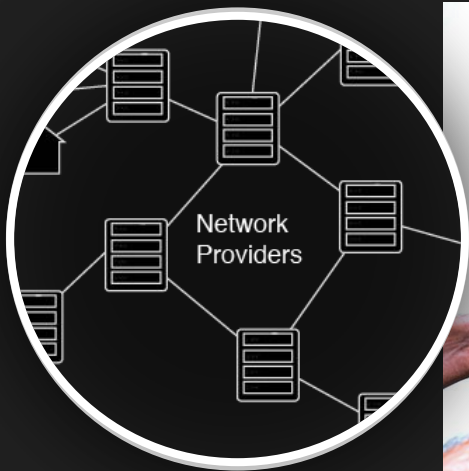It is both extraordinary and ordinary.

- Urban Omnibus

The Undersea Cables

Connecting the Internet

The New York Times

facebook.com
69.63.176.11

marketresearch.com
209.190.222.100

You
192.168.1.11

ISP

Key terms

— Servers
— Clients
— Internet Service Providers (ISPs)
— Routers
— IP Addresses
— URLs

Servers

A computer connected directly to the internet

— Special computers that "serve up" documents upon request
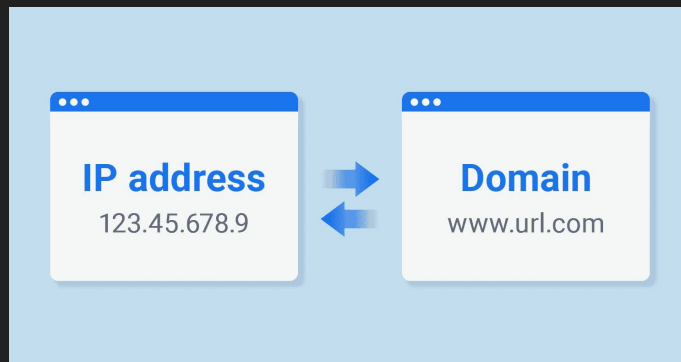— Web servers are called HTTP servers

The New York Times

Internet Service Provider (ISP)

— a company that provides Internet access to users, or clients

— provides the physical infrastructure that allows users to connect to the Internet
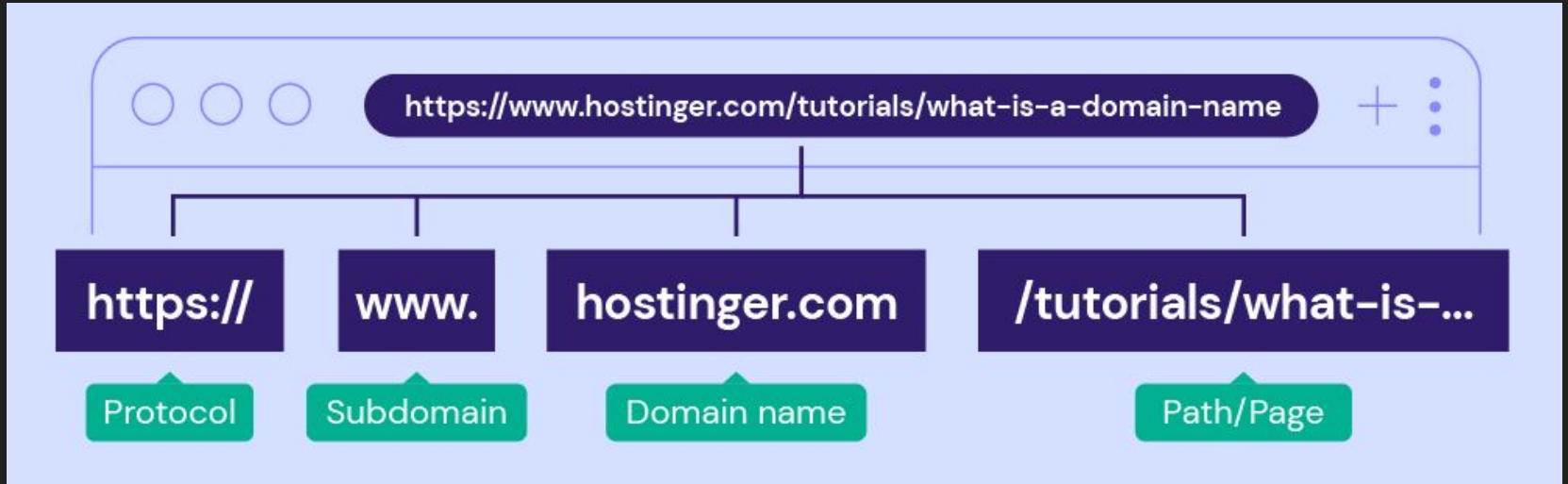
IP Addresses

— every computer and device connected to the internet is assigned a unique IP (Internet Protocol) numeric address (i.e. 123.45.678.90)

— Domain Name System (DNS) was created so developers can refer to servers by domain names (i.e. emilydidthis.com)

URLs

https://	www.	hostinger.com	/tutorials/what-is-...
Protocol	Subdomain	Domain name	Path/Page

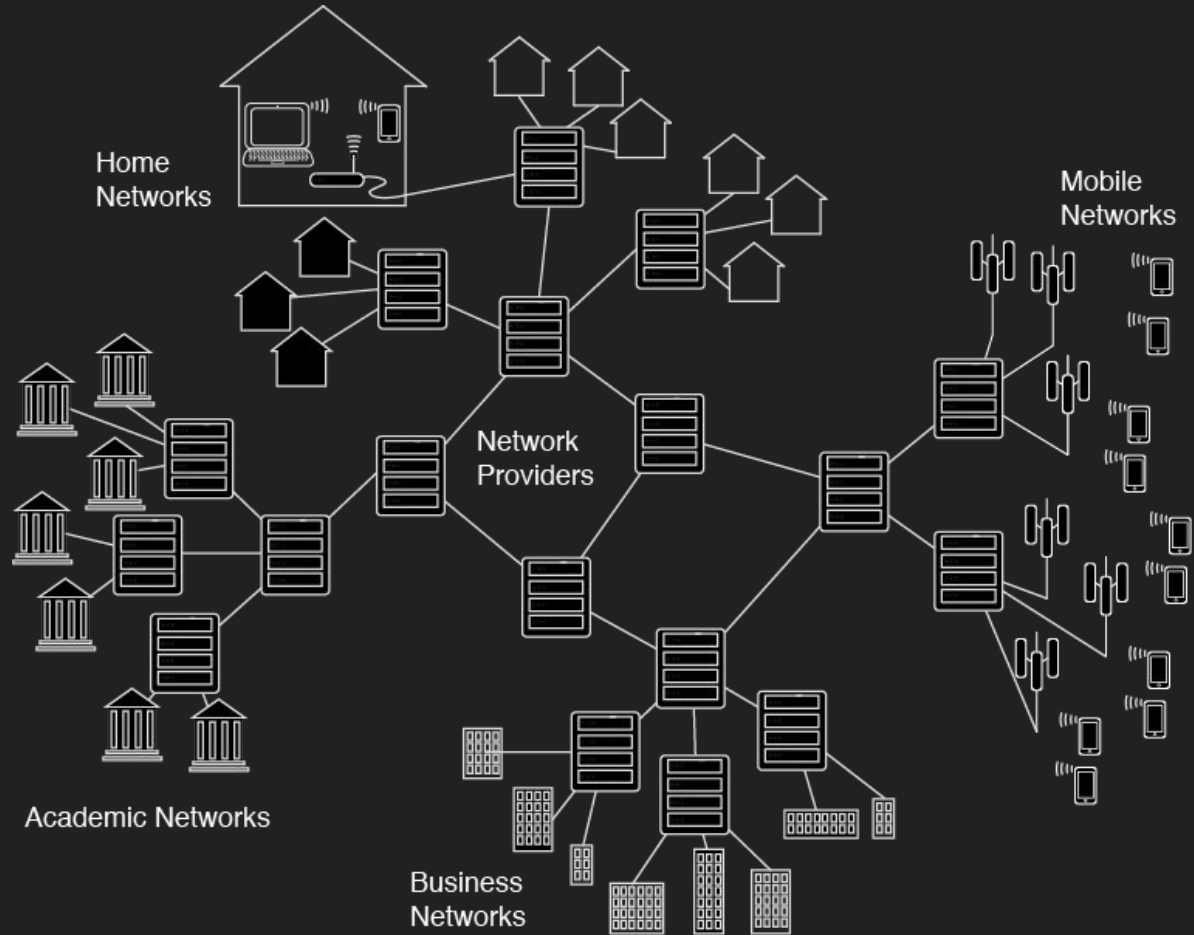URL shown: https://www.hostinger.com/tutorials/what-is-a-domain-name

Router

— A router is a networking device that relays data packets between computer networks
— direct the flow of Internet traffic so that packets arrive at their appropriate destination
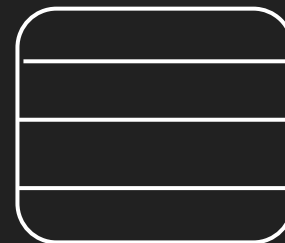— the address to which data is sent is normally in the form of a numeric IP address

Wireless Technology (radio waves)

— WiFi
— radio and television broadcasting
— cellular communication (3G, 4G, 5G)
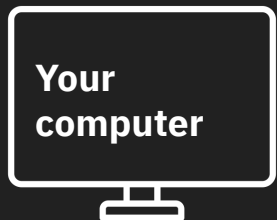— global position systems (GPS)
— Bluetooth

Home
Networks

Mobile
Networks

Network
Providers

Academic Networks

Business
Networks

How are you able to view our class website from your computer?

Emily's computer → INTERNET SERVICE PROVIDER → Server (Github)

Your computer ← INTERNET SERVICE PROVIDER ← web site

That two computers can "talk" to each other and exchange information is the precisely kind of magic we are liable to take for granted in today's world of technological marvels.

- Urban Omnibus

For next time

— Peruse class website/syllabus, Brightspace, and Ed
— Ask a question, if you have one!
— Read Chapter 2
— Complete Ed Lesson: Unix Basics
— Bring your laptop to class