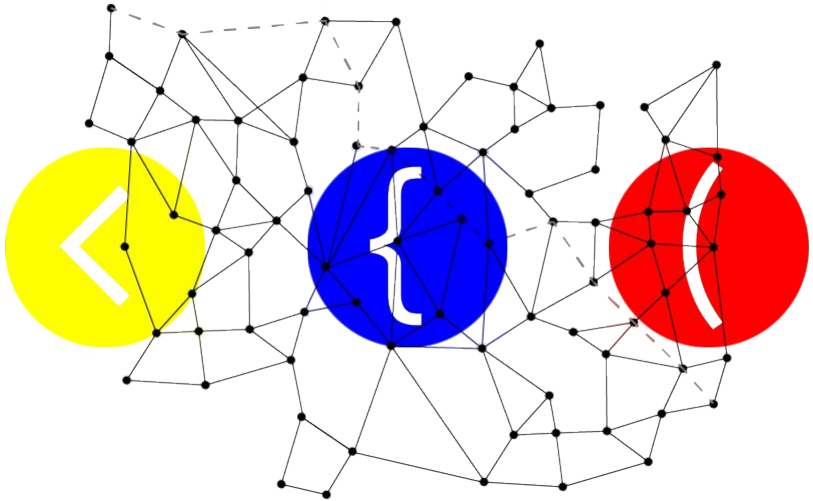
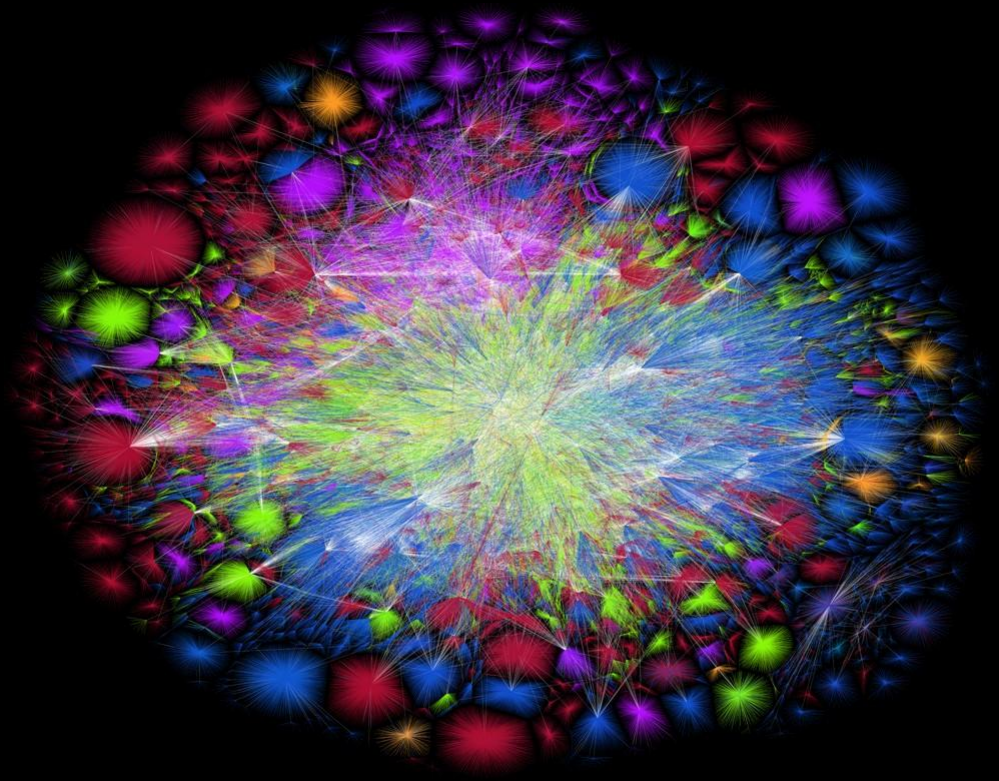
Introduction to Web Design

Introduction and Overview





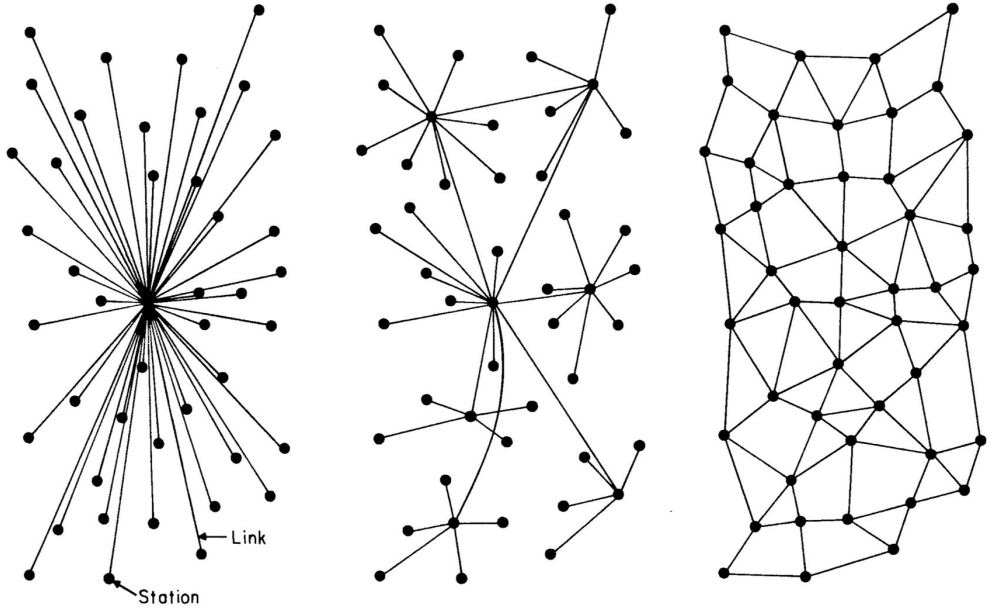
2015. Opte Project

Introduction to Web Design

What is the Internet?

Introduction and Overview

A computer network consisting of a worldwide network of computer networks that use standardized network protocols to facilitate data transmission and exchange



1964, On Distributed Communications

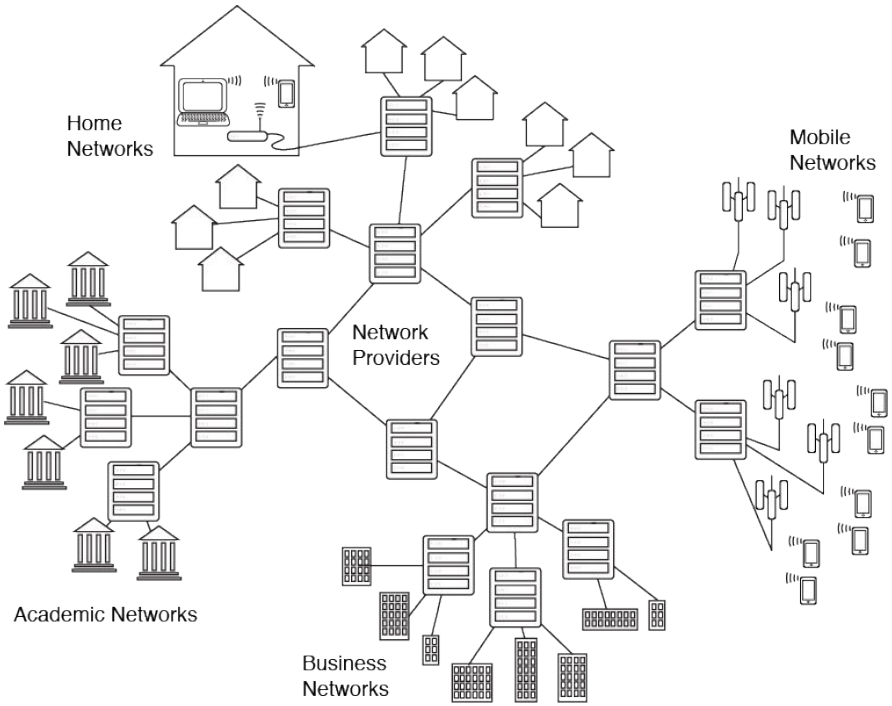
Introduction to Web Design

Centralized, Decentralized, and Distributed Networks

Introduction and Overview

A decentralized network represents a less-hierarchical structure than a centralized network. Complete reliance on a single point is not required.

The foundational concept of decentralized networks would be deployed in tandem with what came to be known as “packet-switching,” which entails breaking up communications into small parts, sending them along, and reconstructing them at the end.



Simplified model of the internet. It's made of routers.

Introduction to Web Design

Routers

Introduction and Overview

A router is a networking device that relays data packets between computer networks.

Routers 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 (IP stands for Internet Protocol).

Introduction to Web Design

The Internet and the World Wide Web

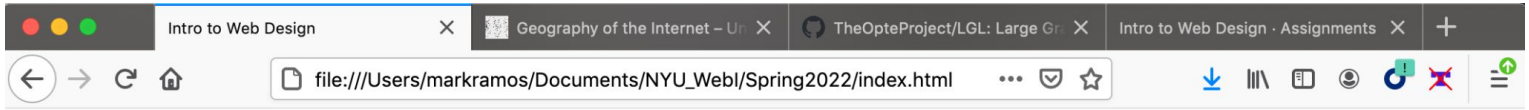
Introduction and Overview

The Internet and the Web are separate but related things.

The Internet is a massive network of networks, a networking infrastructure that connects computers globally.

The Web is a way of accessing information over the medium of the Internet, an information sharing model that is built on top of the Internet.

The Web is just one of the ways that information can be disseminated over the Internet but it is the one we are focused on in this class.



Introduction to Web Design and Computer Principles

CSCI-UA 4-4

Monday/Wednesday, 11:00 a.m.–12:15 p.m.

Room 808, Kimmel Center, 60 Washington Sq South

Professor: Mark Ramos

Overview

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.

Grading and Exams

The following rubric serves as a guideline for how grades will be calculated. The final percentage allotted to each category is at the instructor's discretion.

- Assignments: 40%
- Final Project: 10%
- Midterm Exam: 20%
- Final Exam: 30%

Our exam schedule for the semester is as follows.

TBA


on the internet, no one knows you're a cat.

Introduction to Web Design

The New Dark Web

Introduction and Overview

In many ways we are experiencing the afterglow of the technological promise of freedom and openness.

Networked tools and digital media still offer lots of possibilities but also significant problems.

What are some of the dystopian aspects of the Internet and the web today?

Introduction to Web Design

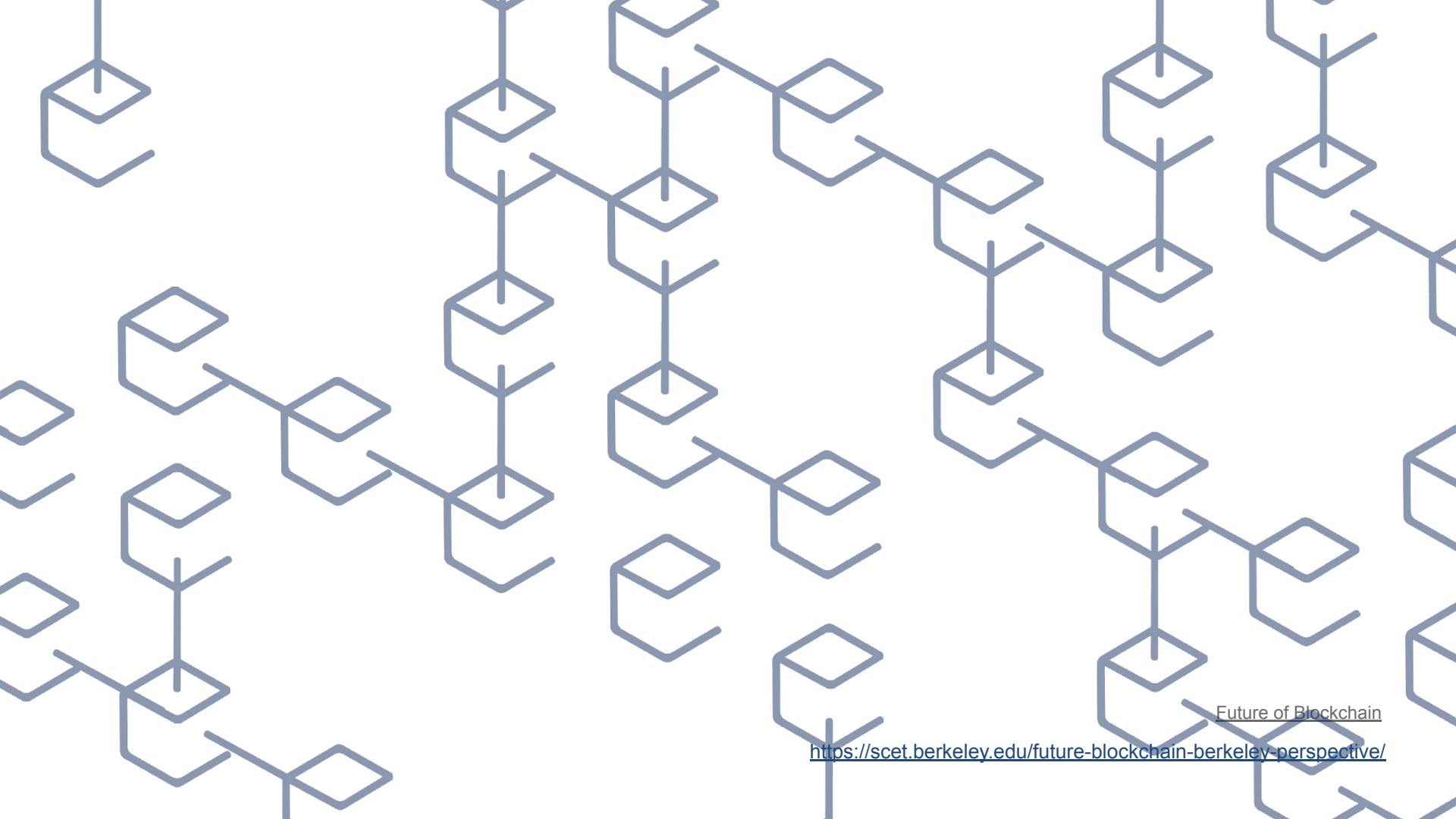
Re-Decentralization of the Web

Introduction and Overview

“A new Decentralized Web has the potential to be open, empowering users around the globe to control and protect their own personal data better than before.”

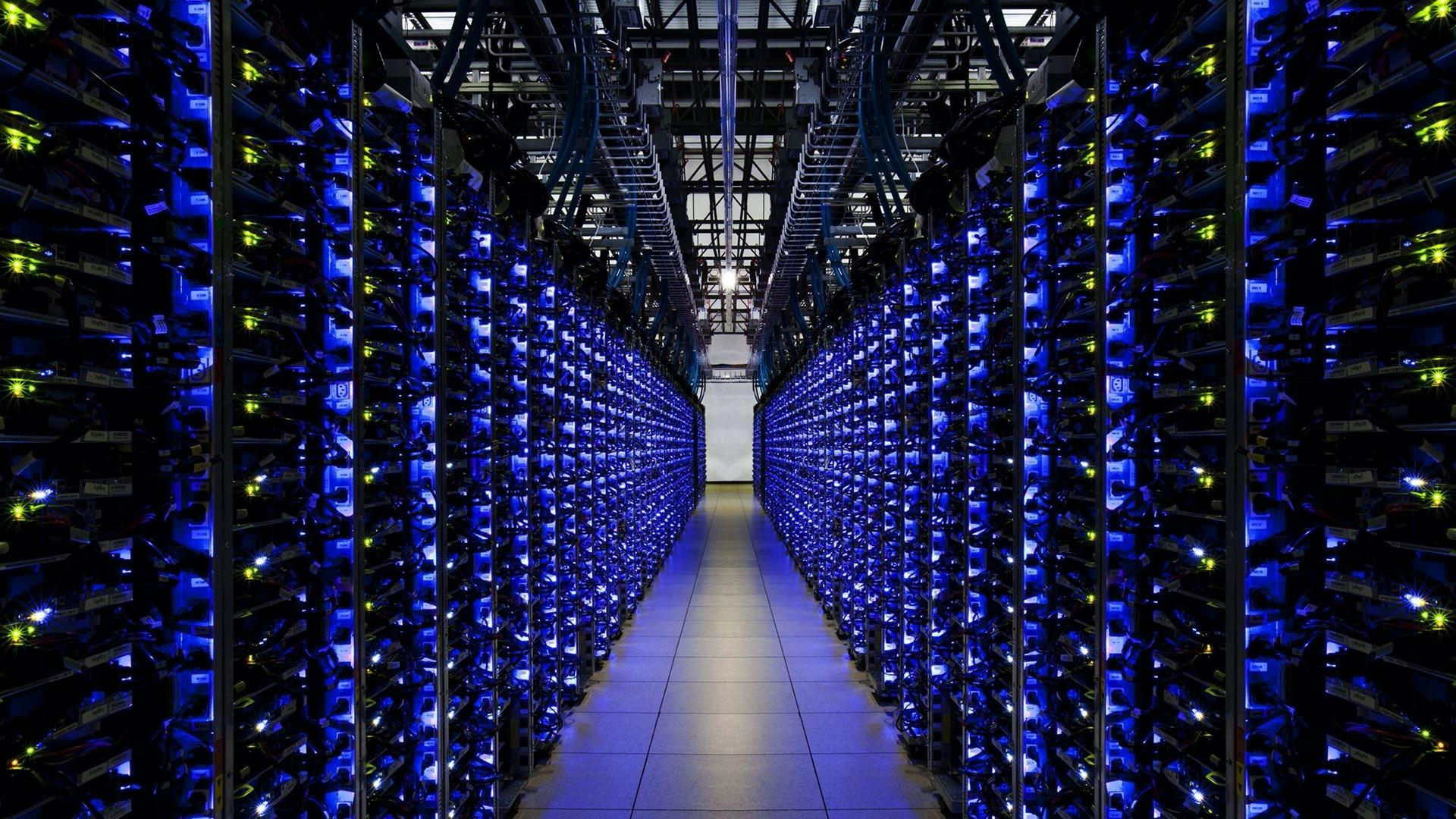
—Decentralized Web Summit

AKA “WEB 3.0”



Future of Blockchain

https://scet.berkeley.edu/future-blockchain-berkeley-perspective/



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Introduction to Web Design

Digital Media Storage

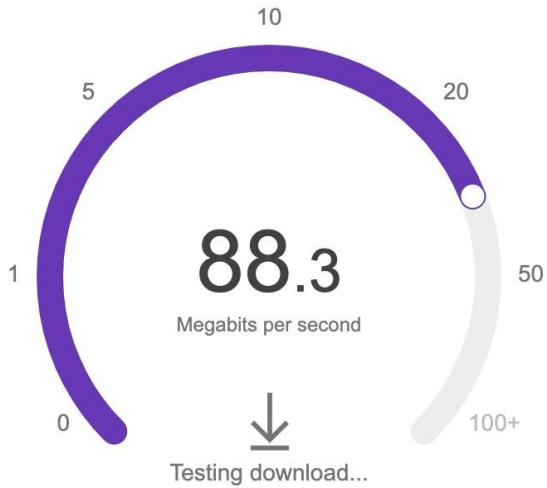
Introduction and Overview

On/Off

Electrical impulses (+5v / -5v)

- Single 0 or 1 = 1 “bit”
- A group of 8 bits = 1 “byte”
- 1 million bytes ≈ 1 “megabyte”
- 1,024 megabytes = 1 “gigabyte”
- 1,000 gigabytes = 1 “terabyte”

00101011



Mbps download	Mbps upload

CANCEL

Introduction to Web Design

Digital Media Transfer

Introduction and Overview

Internet connection speed is normally measured in megabits.

Megabits (Mb) are not the same as megabytes (MB).

8 bits = 1 byte; therefore, a megabyte is 8 times the size of a megabit.

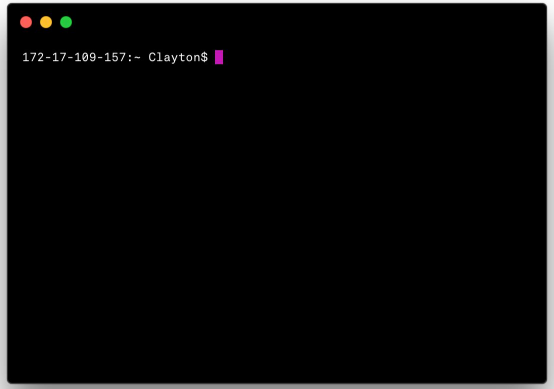
For fixed broadband connections, the average download speed in the United States is around 96 Mb/second; average upload speed is around 33 Mb/s

For mobile connections, the average download speed in the United States is around 34 Mb/second; average upload speed is around 10 Mb/s

Speedtest Reports

Introduction to Web Design

Introduction and Overview



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Introduction and Overview

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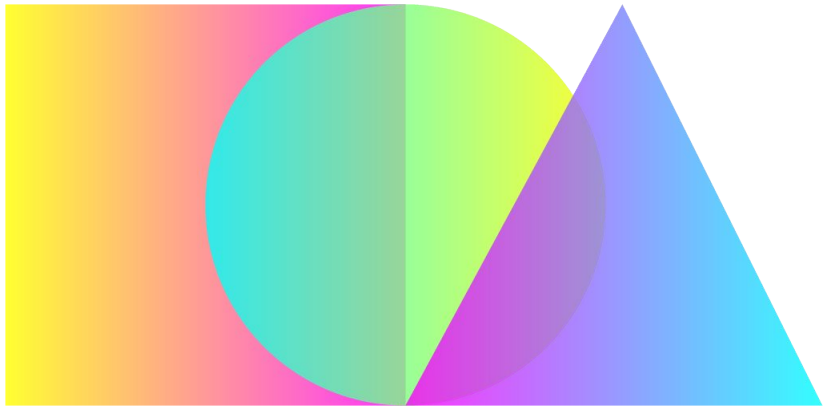

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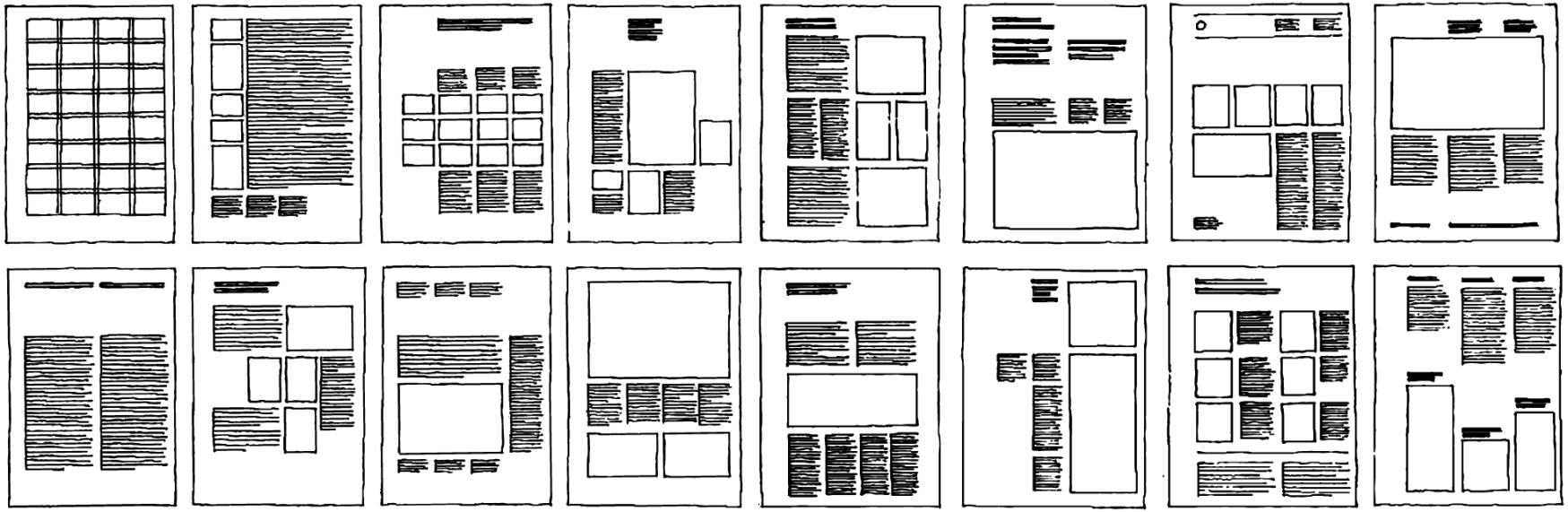
Introduction and Overview



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Introduction and Overview

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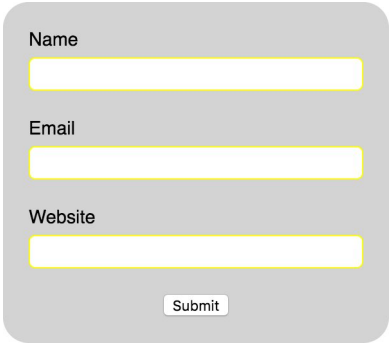

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Introduction and Overview

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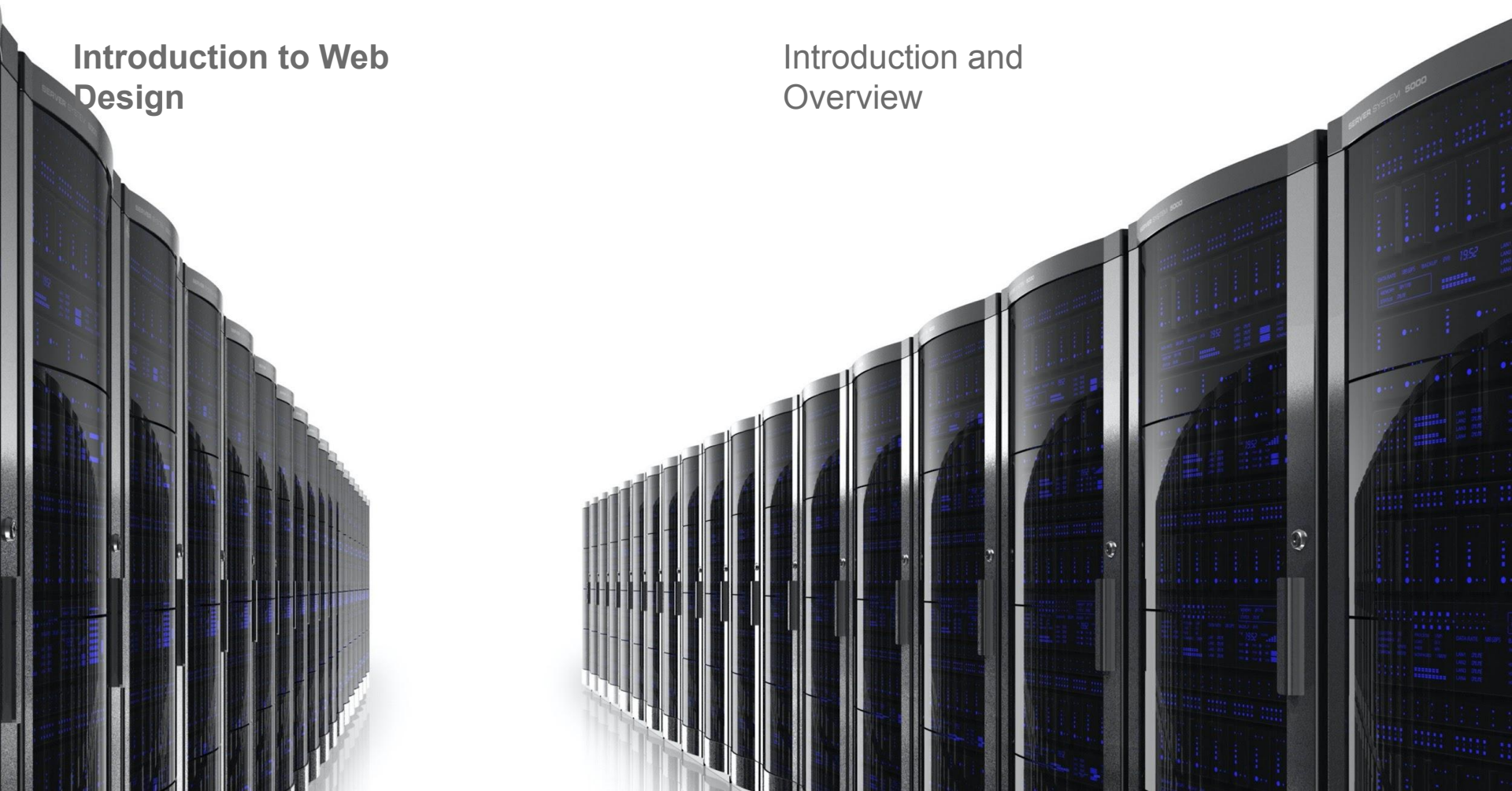

Introduction to Web Design

Course Outline

Introduction and Overview

Unix command line

HTML

CSS

Web graphics

Design and accessibility
Website layout and responsive design

Interactivity with JavaScript

Web forms
Web audio and video

Version control

Web hosting and domain names

Guiding Principles: Open Source

- Anyone is free to use it
- Usually free of charge
- Source code is made available
- Can be modified and redistributed

Introduction to Web Design

Guiding Principles: Accessibility and Net Neutrality

Introduction and Overview

"When we talk about accessible code, what we are really talking about at its core is inclusiveness. . . . Inclusive development means making something valuable, not just accessible, to as many people as we can.” —Carie Fisher

Net neutrality is the principle that Internet service providers should enable access to all content and applications regardless of the source, and without favoring or blocking particular products or websites.

Introduction to Web Design

Guiding Principles: Web Standards

Introduction and Overview

The formal, non-proprietary standards and technical specifications that define and describe aspects of the World Wide Web and its interoperability.

These include:

- HTML
- CSS
- JavaScript
- SVG
- WOFF

Introduction to Web Design

Introductions

Introduction and Overview

Mark Ramos(he/him/his)
Adjunct Professor

mr6465@nyu.edu

Office hours:

- Thursday, 3:00–6:00 p.m.

Pls. email me to schedule a meeting over Zoom

Introduction to Web Design

Class Format

Introduction and Overview

- Synchronous, interactive lectures
- Asynchronous, assignments and exercises
- In-person and remote tutoring with the Computer Science Department tutors

Attendance

You are expected to keep up with all classes.

You are encouraged to participate to the fullest extent you're able to.

If you ever feel overwhelmed or need extra help, we will be available to you.

Introduction to Web Design

Tutoring

Introduction and Overview

Tutors will be available in person (for those on campus) and remotely (for those on and off campus).

You are required to sign up for in-person tutoring sessions through NYU Connect.

Remote tutoring is on a drop-in basis and does not require signing up.

Introduction to Web Design

Required Textbook

Introduction and Overview

Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript, and Web Graphics

5th Edition

Jennifer Robbins

ISBN: 978-1-491-96020-2

Assignments

Introduction and Overview

There will be nine assignments over the course of the semester.

Details of each will be posted on the class website.

All assignments are due before class and should be submitted via NYU Classes.

Do your best to turn work in on time; 10% will be deducted for each class day after the deadline.

No assignments will be accepted after three classes or after the final exam.

Introduction to Web Design

Grading Rubric

Introduction and Overview

Assignments: 40%

Final Project: 10%

Midterm Exam: 20%

Final Exam: 30%

Introduction to Web Design

Introduction and Overview

Next

Review class website:
https://cs.nyu.edu/courses/spring22/CSCI-UA.0004-004/syllabus/

Read chapter 2 of *Learning Web Design*:
“How the Web Works”

Introduction to Web Design

Introduction and Overview