INTRODUCTION TO
WEB DESIGN & COMPUTER PRINCIPLES

WHAT IS THE INTERNET?

THE GLOBAL SYSTEM OF INTERCONNECTED COMPUTER NETWORKS.

It is a *network of networks* that consists of private, public, academic, business, and government networks of local to global scope, linked by a broad array of electronic, wireless, and optical networking technologies.

The internet carries an extensive range of information resources and services, such as the inter-linked hypertext documents and applications of the world wide web(www), electronic mail, telephony, and file sharing.

WHAT IS THE INTERNET?

CENTRALIZED, DECENTRALIZED, AND DISTRIBUTED NETWORKS

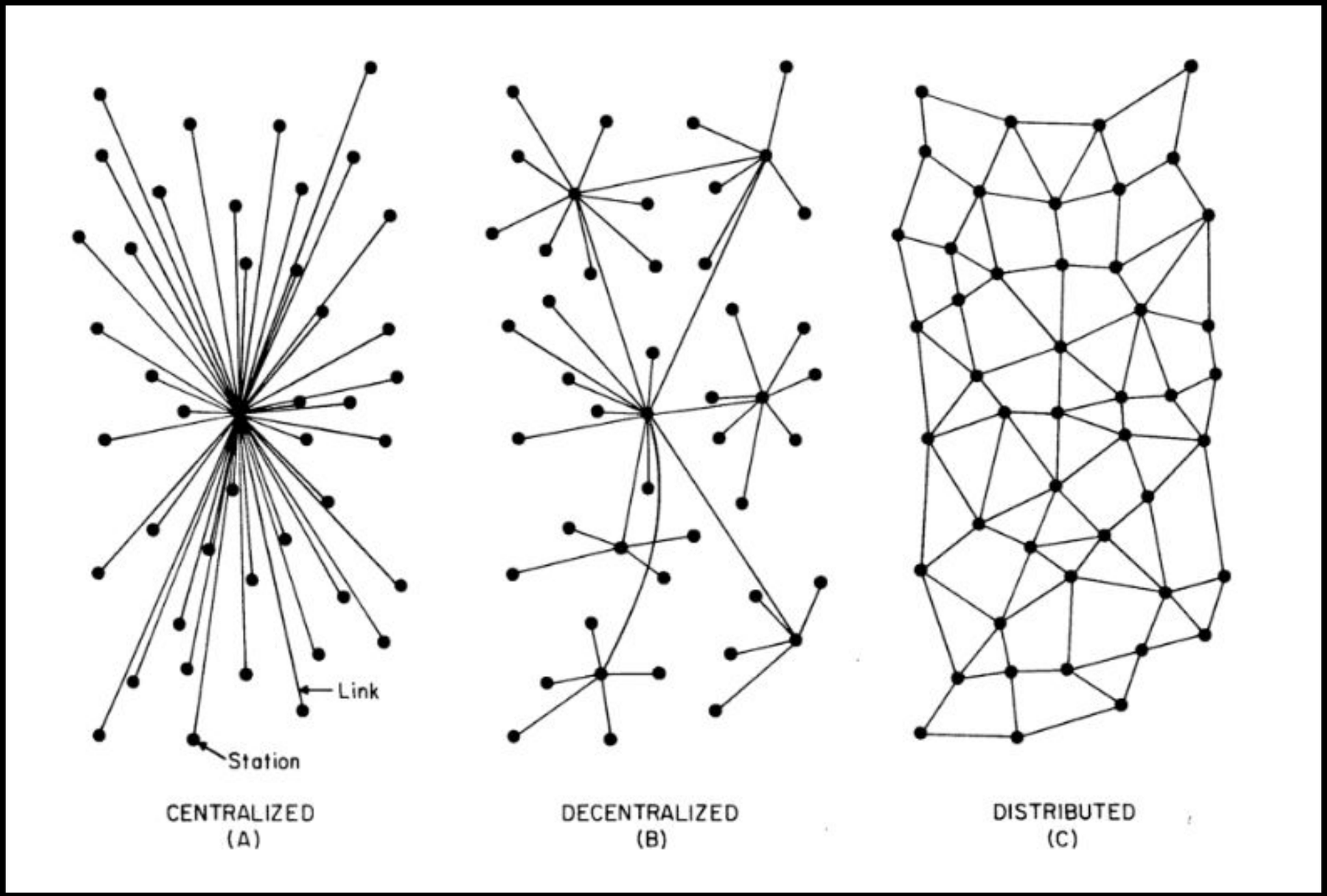
In a centralized network all users are connected to a central network owner or “server”.

A decentralized network represents a less-hierarchical structure than a centralized network. Complete reliance on a single point is not required and each point usually stores a copy of the resources users can access.

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.

Distributed networks goes one step further. Users have equal access to data. Basically, the internet as we know it is distributed - as well as decentralized. Also, the blockchain! And things built on the blockchain like, BITCOIN.

WHAT IS THE INTERNET?



INTERNET AND THE WEB

THESE TERMS ARE DISTINCT BUT RELATED AND ERRONEOUSLY USED INTERCHANGEABLY!

THE WEB IS JUST ONE WAY OF ACCESSING INFORMATION OVER THE INTERNET BUT IT WILL BE THE SUBJECT OF THIS CLASS.

INTERNET ACCESS: 1980’S - PRESENT

PERSONAL COMPUTING

INTERNET ACCESS: 1980’S - PRESENT

PORTABLE COMPUTING

INTERNET ACCESS: 1980’S - PRESENT

MOBILE COMPUTING

INTERNET ACCESS: 1980’S - PRESENT

UBIQUITOUS COMPUTING

INTERNET ACCESS: 1980’S - PRESENT

AI AND AMBIENT COMPUTING

THE DIGITAL REVOLUTION

SHIFT FROM ANALOG AND ELECTRIC TO DIGITAL

MASS PRODUCTION OF DEVICES INCLUDING THE COMPUTER, MOBILE PHONE, AND INTERNET AND ITS DEPENDANCE ON DIGITAL CIRCUITS- WHICH DRIVE ALL OF THE ABOVE.

THE DARK WEB

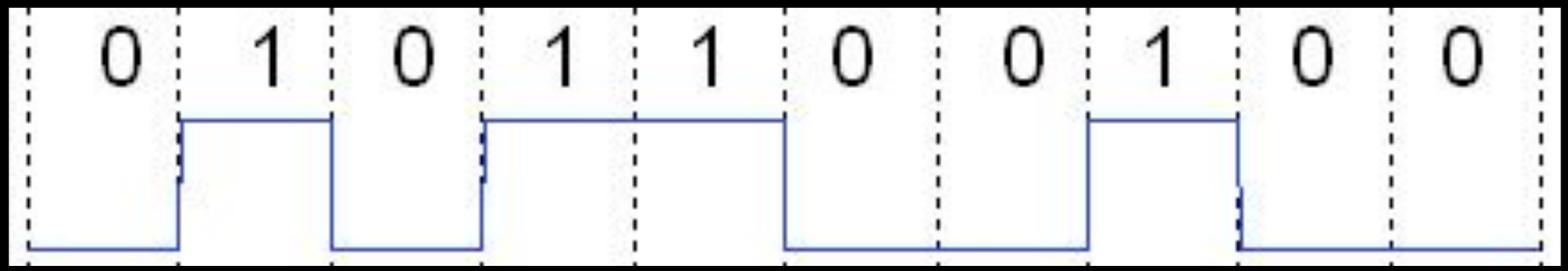
THE AFTERGLOW OF THE TECHNOLOGICAL PROMISE OF FREEDOM AND OPENNESS.

Part of the web not indexed by search engines. You need Tor to access the Dark Web.

The Dark Web stresses anonymity so Tor anonymizes your identity by directing through countless servers around the globe.

DIGITAL MEDIA SIGNAL

1 AND 0
…USUALLY



ON AND OFF / TRUE FALSE

ELECTRICAL IMPULSES +5V AND -5V

ACOUSTIC PRESSURE

SINGLE 0 OR 1 = 1 BIT

8 BITS = 1 BYTE

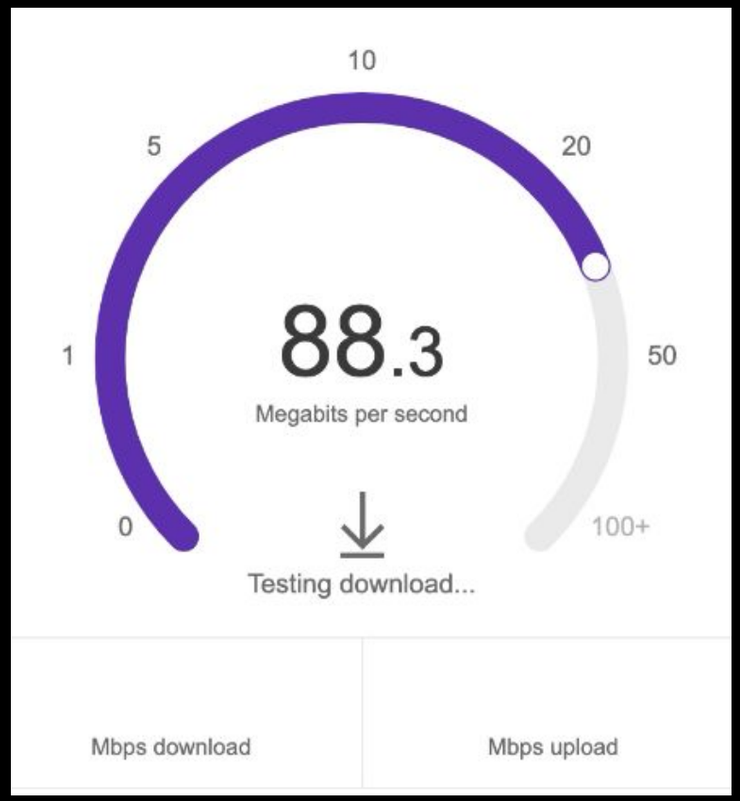
1000 BYTES = 1 KILOBYTE (KB)

1 MILLION BYTES = 1 MEGABYTE (MB)

1024 MEGABYTES = 1 GIGABYTE (GB)

DIGITAL MEDIA TRANSFER

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.

OPEN SOURCE

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

ACCESSIBILITY

- Inclusiveness
- In regards to not only language, but the markup and code itself
- Availing our products to the widest population set
- We do this through certain html leveraging and intelligent building for fallbacks.

NET NEUTRALITY

- the principle that Internet service providers should enable access to all content and applications regardless of the source

- does not favor particular products or sites

COURSE CONTENT

UNIX COMMAND LINE

COURSE CONTENT

UNIX COMMAND LINE
HTML

COURSE CONTENT

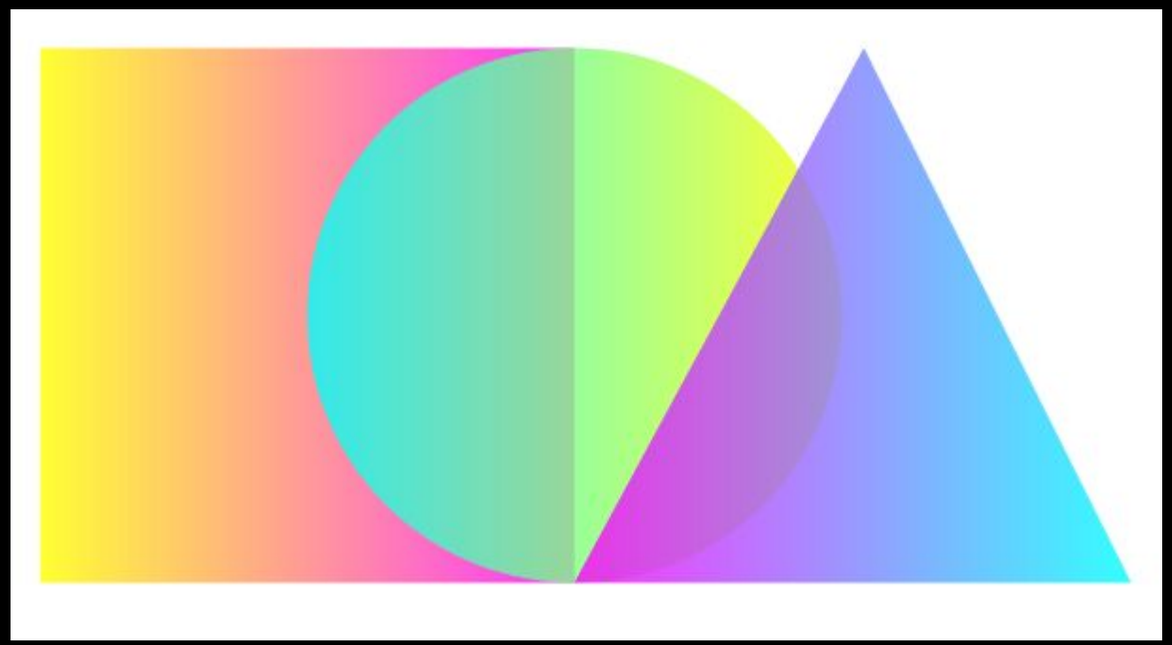
UNIX COMMAND LINE
HTML
CSS

COURSE CONTENT

UNIX COMMAND LINE
HTML
CSS
RASTER IMAGES

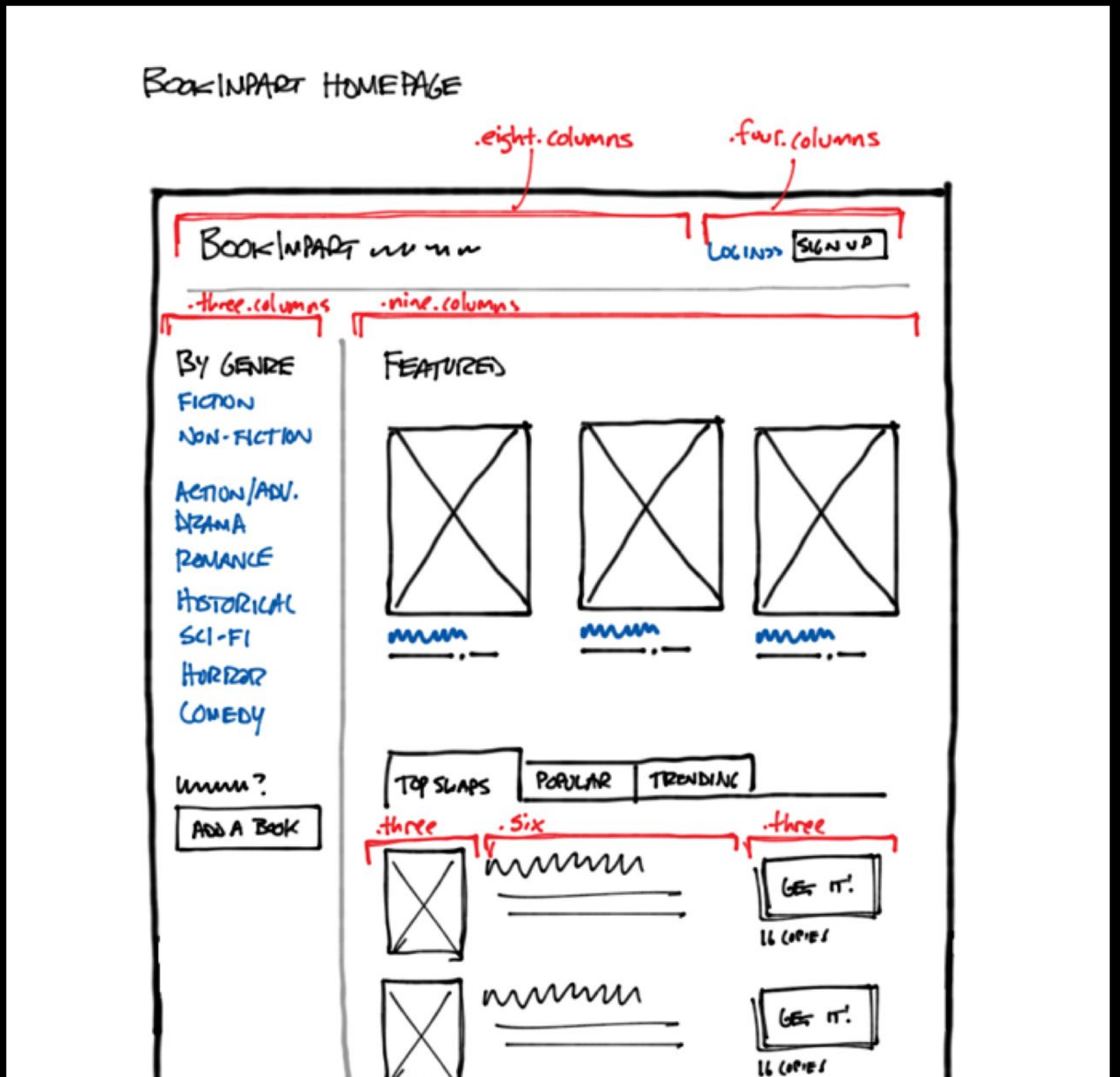
COURSE CONTENT

UNIX COMMAND LINE
HTML
CSS
RASTER IMAGES
VECTOR IMAGES



COURSE CONTENT

UNIX COMMAND LINE
HTML
CSS
RASTER IMAGES
VECTOR IMAGES
DESIGN AND WIREFRAMING



COURSE CONTENT

UNIX COMMAND LINE
HTML
CSS
RASTER IMAGES
VECTOR IMAGES
DESIGN AND WIREFRAMING
RESPONSIVE WEB DESIGN

COURSE CONTENT

UNIX COMMAND LINE
HTML
CSS
RASTER IMAGES
VECTOR IMAGES
DESIGN AND WIREFRAMING
RESPONSIVE WEB DESIGN
JAVASCRIPT

COURSE CONTENT

UNIX COMMAND LINE
HTML
CSS
RASTER IMAGES
VECTOR IMAGES
DESIGN AND WIREFRAMING
RESPONSIVE WEB DESIGN
JAVASCRIPT
WEB AUDIO AND VIDEO

COURSE CONTENT

UNIX COMMAND LINE
HTML
CSS
RASTER IMAGES
VECTOR IMAGES
DESIGN AND WIREFRAMING
RESPONSIVE WEB DESIGN
JAVASCRIPT
WEB AUDIO AND VIDEO
WEB FORMS

SYLLABUS

ATTENDANCE

YOU ARE EXPECTED TO COME TO ALL CLASSES AND ARRIVE ON TIME.

PLEASE LET ME KNOW IN ADVANCE IF YOU WILL BE OUT FOR ANY REASON.

PLEASE LET ME KNOW IF YOU MISS CLASS DUE TO ILLNESS.

COMPUTERS ARE WELCOME IN CLASS BUT NOT REQUIRED.

IF YOU EVER FEEL OVERWHELMED OR NEED EXTRA HELP, I WILL BE AVAILABLE.

SYLLABUS

ASSISTANCE

TUTORS TUTORS TUTORS. USE THEM. I HAVE RECEIVED GREAT FEEDBACK FROM THIS RESOURCE SO PLEASE USE IT. THEIR HOURS WILL BE UPDATED SOON.

DO NOT FEEL TIMID IN ASKING THE CLASS QUESTIONS OR FOR HELP. WE SHOULD ALL HELP EACH OTHER AS MUCH AS POSSIBLE

I STARTED A SLACK CHANNEL SO THAT STUDENTS AS WELL AS MYSELF CAN TALK WITH EVERYONE IN A MORE IMMEDIATE WAY. THE INVITE IS IN THE FIRST ASSIGNMENT.

I ONLY HAVE ONE HOUR OF OFFICE HOURS PER WEEK SO SCHEDULE WISELY. IDEALLY I'D LIKE TO ENCOUNTER EACH STUDENT AT LEAST ONCE SO THAT I CAN CEMENT A FACE WITH A NAME!

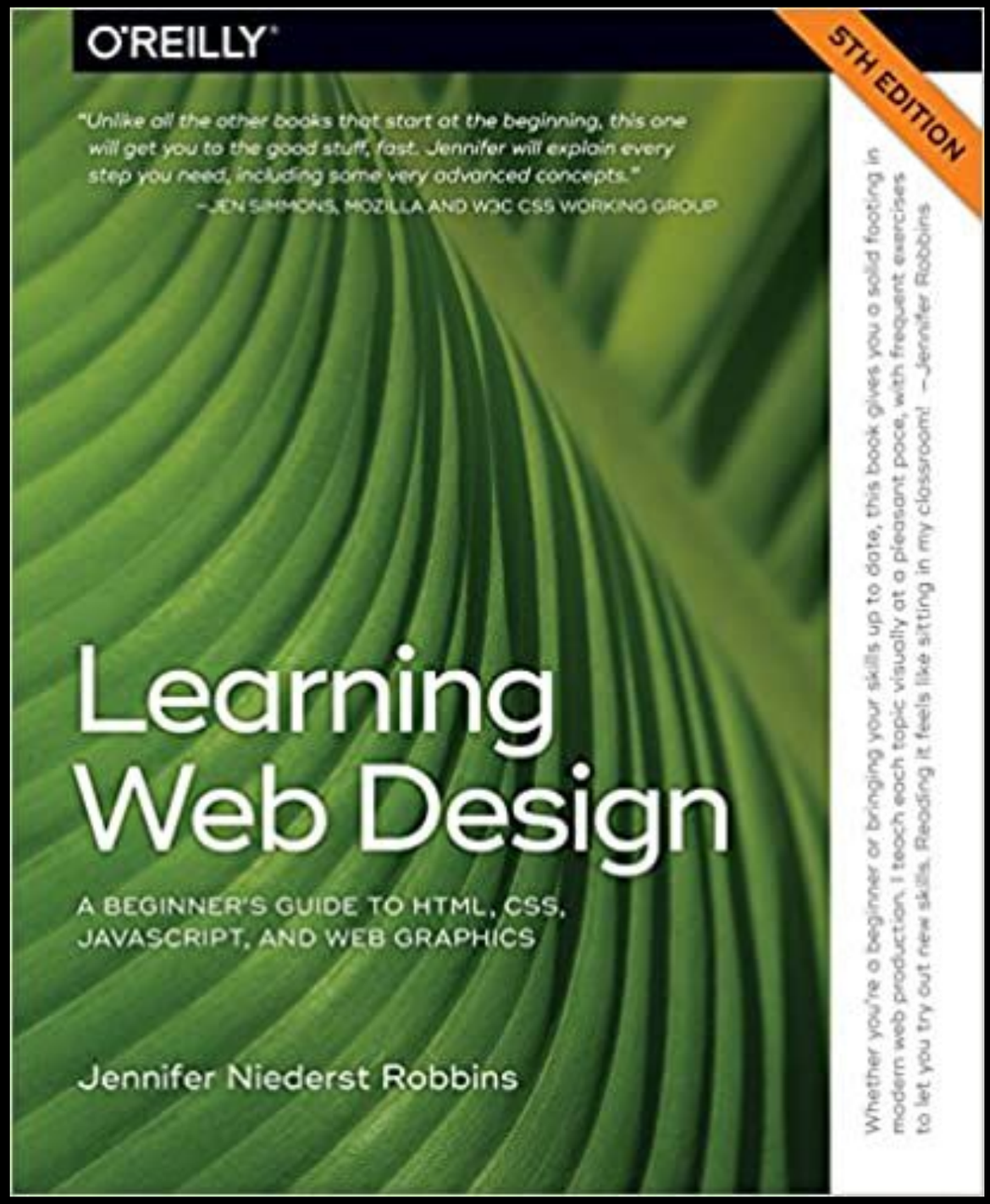
SYLLABUS

TEXTBOOK

Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript, and Web Graphics 5th Edition

Jennifer Robbins

ISBN:
978-1-491-96020-2



SYLLABUS

ASSIGNMENTS

THERE WILL BE NINE ASSIGNMENTS OVER THE COURSE OF THE SEMESTER. DETAILS OF EACH ASSIGNMENT WILL BE POSTED ON THE CLASS WEBSITE.

ALL ASSIGNMENTS ARE TO 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!!!!!!!

SYLLABUS

GRADING

ASSIGNMENTS: 40%

MIDTERM EXAM: 25%

FINAL EXAM: 35%

ME

Jason Aston
Adjunct Professor

aston@cs.nyu.edu

Office Hours:
Mondays 12:15PM - 1:15PM
Make an appointment or else!

GRADER

DEEP SANGHAVI

DHS408@NYU.EDU

WEEKLY SCHEDULE

Mondays are ASYNCHRONOUS (aside from today and our Midterm - March 15 and Final Review - May 10)

(I'll leave my AMAZON wishlist at the beginning of the syllabus)

Every Wednesday we will zoom and talk about the previous released lectures. Lectures will be a mix of video and pdf. Then I will release the next set of lectures on Wednesday.

HOMEWORK

REVIEW THE CLASS WEBSITE!

HTTP://onetimeuser.github.io/intro-web-comp-principles

AND

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

GET YOUR I6 ACCOUNT SET UP!!!!!!