What is the Internet?

A computer network consisting of a worldwide network of computer networks that use standardized network protocols to facilitate data transmission and exchange.
**Node**  
From the Latin for “knot”

A point at which lines or pathways intersect or branch; a central connecting point

In computing, a piece of equipment, such as a PC or peripheral, attached to a network
The Internet and the World Wide Web
The Internet and the World Wide Web

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.
Internet Access
1980s–Present

- Personal Computing
- Portable Computing
- Mobile Computing
- Ubiquitous Computing
- Ambient Computing
IBM 5150
1981
Apple PowerBook 540c
1993
Apple iPhone
2007
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- **Arduino Uno**
  - Year: 2010

- **Nike+ Fuelband**
  - Year: 2012

- **Apple Watch**
  - Year: 2015
Ambient Intelligence (AmI)
2010–
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**Digital Revolution**

**Afterglow**

Represents a shift from analog and electronic technology to digital.

These technological developments build upon and continue to inform each other today.
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Digital Media
Modern vernacular of 1s and 0s

On/Off
Electrical impulses (+5v / -5v)
- Single 0 or 1 = 1 “bit”
- A group of 8 bits = 1 “byte”
- 1 million bytes \(\approx\) 1 “megabyte”
- 1,024 megabytes = 1 “gigabyte”
- 1,000 gigabytes = 1 “terabyte”
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The graph shows the transistor count doubling every two years from 1971 to 2011. The x-axis represents the date of introduction, while the y-axis represents the transistor count.
Moore’s Law
Describes a constant rate of change in computer processor speed

The number of transistors that can be placed inexpensively on an integrated circuit doubles every two years.

The number of transistors is closely connected to processor speed, memory, etc.

Computer processor speed has doubled approximately every two years.

Moore’s Law seems to be plateauing but held steady for the past 40 years.

Digital media is in a constant state of flux.
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Class 1
Introduction and Overview
Course Content

Web Design and Computer Principles

• Operating systems and Unix
• HTML
• CSS
• Image editing and animation
• Website wireframing
• Responsive web design
• Web framework
• Web audio and video
• jQuery
• Web hosting and domain names
Anyone is free to use it
Usually free of charge
Source code is made available
Can be modified and redistributed
Introductions

Me

Joshua Clayton
jclayton@cs.nyu.edu
Room 420, Warren Weaver Hall
Office hours
• Tuesday, 11:00 a.m.–12:30 p.m.
• Wednesday, 2:00–3:30 p.m.
cs.nyu.edu/cs/faculty/clayton
Introductions

You

- Name
- Where you’re from (or where you identify most closely with)
- Describe your code literacy
- What interests you about this class
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 to you.
Syllabus

Texts

Required textbook

*HTML and CSS: Design and Build Websites*

Jon Duckett

ISBN: 978-1-118-00818-8

Optional textbook


Elaine Weinmann, Peter Lourekas

ISBN: 978-0-134-30889-0
Syllabus

Assignments

There will be eight or 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 week after the deadline.

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

Grading Rubric

Assignments: 40%
Midterm exam: 25%
Final exam: 35%
For Next Class

Review class website
Get access to *HTML and CSS* book and read the “Introduction” chapter
Introduction to Web Design & Computer Principles
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Class 1
Introduction and Overview

cs.nyu.edu/courses/fall16/CSCI-UA.0004-003/