

chmod

- Unix system call to change file permissions
- `ls -l` : see file permissions
- `chmod - - -` (each `-` is from 0-7)
- `r` : readable : 4
- `w` : writeable : 2
- `x` : executable : 1

drwx-----

d



(Directory)

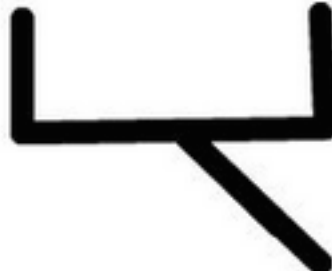
rwx



(User)



(Group)



(World)

- `chmod group+permissions`
 - + adds permissions
 - - takes away permissions
- u: user or owner
- g: group
- o: others

Example

- `rwX --- ---` can also be represented as `700`
- `chmod 444 file` would give what permissions?
 - What's another way we could write this?

Example

- `rwX --- ---` can also be represented as `700`
- `chmod 444 file` would give what permissions?
 - Readable to everyone!
 - Could also do `chmod a+r file`

Translations

- `chmod 555`
- `chmod u+x`
- `chmod 640`

Translations

- `chmod 555`
 - `Chmod a+rx`
 - Gives everyone read and execute access
- `chmod u+x`
 - `Chmod 100`
 - Gives the owner execute access
- `chmod 640`
 - `Chmod u+rw, chmod g+r`
 - Gives owner read and write permissions
 - Gives group read permission

Common cases

- `chmod 711 directory`: Use for any directory
- `chmod 644 file.txt`: Use for any non-PHP file you create
- `chmod 600 file.php`: Use for PHP files

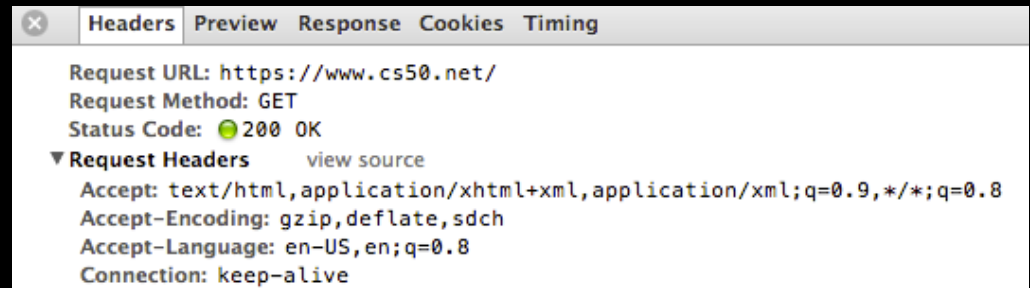
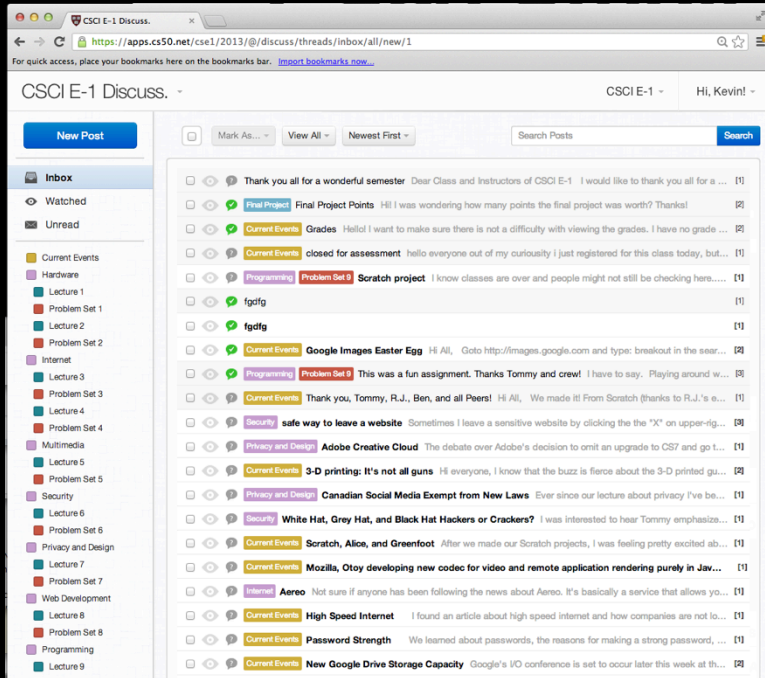
TCP/IP

- Transmission Control Protocol/Internet Protocol
- Gives a set of standards that govern how data should be packetized, transmitted, routed and received
 - Increases chances the data will get where you want it to!

Ports

- Need to tell our end destination what type of data is in the packet; packets might be routed in various ways/paths
 - 21: FTP: File transfer protocol
 - 25: SMTP: Email
 - 53: DNS: Domain Name System
 - What is the IP address of a domain name?
 - 80: HTTP: Webpage
 - 443: HTTPS: Secure webpage

HTTP



HyperText Transfer Protocol

HyperText

[Hypertext Transfer Protocol - Wikipedia, the free encyclopedia](https://en.wikipedia.org/wiki/Hypertext_Transfer_Protocol)

en.wikipedia.org/wiki/Hypertext_Transfer_Protocol ▼

The Hypertext Transfer Protocol (HTTP) is an application protocol for distributed, collaborative, hypermedia information systems. HTTP is the foundation of data ...

[Technical overview](#) - [History](#) - [HTTP session](#) - [Request methods](#)

[HTTP - Hypertext Transfer Protocol Overview - W3C](https://www.w3.org/Protocols/)

www.w3.org/Protocols/ ▼

This is the overview materials related to the W3C HTTP activity, one of the W3C Architecture domain activities. HTTP has been in use by the World Wide Web ...

[What is HTTP? - A Word Definition From the Webopedia Computer ...](https://www.webopedia.com/TERM/H/HTTP.html)

www.webopedia.com/TERM/H/HTTP.html ▼

This page describes the term HTTP and lists other pages on the Web where you can find additional information.

[RFC 2616 - IETF](https://www.ietf.org/rfc/rfc2616.txt)

www.ietf.org/rfc/rfc2616.txt ▼

Abstract The Hypertext Transfer Protocol (HTTP) is an application-level protocol for ... This specification defines the protocol referred to as "HTTP/1.1", and is an ...

Day	Time	Location
Sunday	4:00-5:30pm	Pierce 301
Monday	2:30-4:00pm	SC 221
Monday	5:30-7:00pm	MD 223
Tuesday	2:30-4:00pm	Lamont 240
Tuesday	2:30-4:00pm	NW B150
Tuesday	4:00-5:30pm	NW B150

Check out

[this](https://www.cs50.net)

really cool website!

Transfer Protocol

1 Introduction

1.1 Purpose

The Hypertext Transfer Protocol (HTTP) is an application-level protocol for distributed, collaborative, hypermedia information systems. HTTP has been in use by the World-Wide Web global information initiative since 1990. The first version of HTTP, referred to as HTTP/0.9, was a simple protocol for raw data transfer across the Internet. HTTP/1.0, as defined by RFC 1945 [6], improved the protocol by allowing messages to be in the format of MIME-like messages, containing meta-information about the data transferred and modifiers on the request/response semantics. However, HTTP/1.0 does not sufficiently take into consideration the effects of hierarchical proxies, caching, the need for persistent connections, or virtual hosts. In addition, the proliferation of incompletely-implemented applications calling themselves "HTTP/1.0" has necessitated a protocol version change in order for two communicating applications to determine each other's true capabilities.

This specification defines the protocol referred to as "HTTP/1.1". This protocol includes more stringent requirements than HTTP/1.0 in order to ensure reliable implementation of its features.

Introduction to the HTTP specification, from <http://www.ietf.org/rfc/rfc2616.txt>.

An Example Request

GET / HTTP/1.1

User-Agent: curl/7.24.0

Host: www.apple.com

<name>: <value>

Key:

MethodRequest URI

Protocol Version

field name

field value

An Example Response

HTTP/1.1 200 OK

Server: Apache

Content-Type: text/html; charset=UTF-8

Server: Apache

Content-Length: 16286

Connection: keep-alive

Key:

Status Code

Protocol Version

field name

field value

HTML & CSS

- HyperText Markup Language
 - Practice and experiment!
- Best practices:
 - Close all your tags!
 - Validate your page with W3 Validator
 - Separate markup (HTML) and style (CSS)
 - MVC paradigm to come!

CSS

- Instead of tags, CSS uses selectors
 - Match tags with attributes
- Selectors can be
 - id : unique
 - #id in a CSS file
 - class: can refer to multiple blocks
 - .class in a CSS file