Hypermedia and the Web
Overview of HTTP

HTTP is a request-response protocol.

HTTP/1.1 verbs:

GET
HEAD
POST
PUT
DELETE
OPTIONS
TRACE

WebDAV verbs:

COPY
MOVE
MKCOL
LOCK
UNLOCK
PROPFIND
PROPPATCH

More on these in a few weeks.

HTTP headers

General headers:

Can appear on request or response:

*Date:* date and time of message origination
*Pragma:* send directives to recipient of the message
(Pragma: no-cache – informs proxies in the path not to return a cached copy)

Request headers

*Authorization:* send authentication credentials
*From:* provide email address as identification (used by spiders, or agents)
*If-Modified-Since:* {date} - only send resource if modified since the given date. If resource hasn’t changed, return 304 Not Modified response.
*Referer:* URI of the resource from which the Request-URI was obtained (source page of a link)
*User-Agent:* information about browser version, client machine operating system:

User-Agent: Mozilla/4.03 (Macintosh; I; 68K, Nav)

Often used by servers to provide browser-specific versions of Web pages.

Response headers:

*Location:* {url} – used to redirect the request to another location, or to identify where a new resource was created
*Server:* provides details about the server implementation
Server: Apache/1.x.y mod_perl mod_ssl mod_dav

WWW-Authenticate: used to issue a challenge to the client to provide authentication credentials

**Entity headers:**

Provides information about the body of the message.

Content-Type: MIME media type of the body

text/…
application/…

Content-Encoding: compression kind, if any

Content-Encoding: x-gzip

Content-Length: length of entity body, in bytes

Expires: after the given time, caches should consider the results to be stale

Last-Modified: the time at which the resource was last changed

Etag: entity tag – a unique identifier for the state of a resource

**Response classes:**

1xx informational
2xx success
200 OK
201 Created

3xx Redirection
301 Moved Permanently
302 Moved Temporarily

4xx client error
401 Unauthorized
403 Forbidden – often an OS permissions problem
404 Not Found – resource was deleted

5xx server errors