A Response Header Field (server):

Absolute URL - Scheme and domain name are always required

Accept – a Request Header Field (client) for specifying acceptable file type; server responds with negotiation, accept if other type can be delivered.

Accept-Charset – a Request Header Field (client) that indicates which character sets are acceptable for the response

Accept-Encoding – a Request Header Field (client) that restricts the content-codings that are acceptable in the response.

Accept-Language – a Request Header Field (client) that restricts the set of natural languages that are preferred as a response to the request.

Accept-Ranges – A Response Header Field (server) that allows partial resources

Accept-Ranges – a Response Header Field where you can give specific bytes

Age – A Response Header Field (server) that shows how long ago the response has been generated

Age – a Response Header Field for how long the response from fetching in the origin server or in the cache

Allow – An Entity Header Field that allows methods to be called

An Entity Header Field:

Authentication/ authorization -

Authority - User information/ information credentials

Authorization - a Request Header Field (client) that ensures protection from unauthorized access; When proper credentials are entered, another request will be sent with authorization; Without authorization, www-authenticate challenge will be sent and a pop-up authorization will appear

Cache control – storage for easy and fast access

Cacheable Methods - Requests that generate cache

Cache-control – a General Header Field used for controlling cache and telling whether a resource needs to be cached or not

Circuit Switch Connection - Establish circuit and maintain it to communicate; Not scalable

Clients - user agent; Web browsers, web crawlers/spiders, other end user tools and applications; any application that communicates with HTTP protocol

Client-server protocol negotiation – asking server if it can handle higher version and if yes, the server will upgrade

CONNECT - Establishment of an encryption tunnel to communicate with https; Converts the request connection to a transparent TCP/IP tunnel

Connection – a General Header Field to control whether connection is persistent or not and allows the sender to specify options that are desired for that particular connection

Content media type – (MIME: Multipurpose Internet Mail Extension) specification;

Content negotiation – talk to tell what the recipient can handle

Content/ transfer coding -

Content-Encoding – An Entity Header Field that shows when server changed form of entity

Content-Language – An Entity Header Field that shows language characteristics; for accessibility purposes

Content-Length – An Entity Header Field that shows size of payload

Content-Location – An Entity Header Field that shows when content is from somewhere else; actual location of the resource

Content-MD5 (deprecated header) - An Entity Header Field that …

Content-Range – An Entity Header Field when doing range request

Content-Type – MIME type; An Entity Header Field that …

COPY – creates a duplicate of the source resource

CRLF –

DARPA - Defense Advanced Research Project Agency

Date – a General Header Field that represents the date and time at which the request was generated

DELETE - Remove the resource associated with the specified URI; Like PUT, the method is not allowed by default

Device drivers - a program that controls a particular type of device that is attached to your computer.

Email – electronic mail

Entity Headers –

ETag – a Response Header Field for identifier

ETag (entity tag) - A Response Header Field (server) that …

Expect – a Request Header Field (client) for two-face connection; Indicates that particular server behaviors are required by the client; If any of the expectations cannot be met the server must respond with a 417 (Expectation Failed).

Expires – An Entity Header Field for controlling cache access; cache-control; (e.g. max-age = ??)

Extension Methods

Fragment identifier – “bookmark”

From – a Request Header Field (client) that contains contact credentials of sender – an internet e-mail address; May be used for logging purposes and as a means for identifying the source of invalid or unwanted requests.

Gateway tunnel - blind relay between two points; forwards communication without knowing what it does; can be used for authentication

General Headers –

GET - Transfer a current selected representation of the resource identified by the request URI; Requests data from a specified resource; Most commonly used method; Must be supported by all compliant general-purpose servers; Can be stored; Can be bookmarked; Must never be utilized when managing delicate information; Are ought to be utilized just to recover information; Asks for have length limitations; Remains in the browser history

Gopher Protocol - Distributing, searching and retrieving documents over the internet; Hierarchy is involved with the index having sub-indexes

HEAD - Same as GET but the entity is not sent; Used to retrieve metadata about the entity; Must also be supported by all

Host – a Request Header Field (client) that is required in HTTP 1.1; Specifies the internet host and port number of the resource being requested. This enables the origin server to distinguish among resources while servicing requests for multiple host names on a single IP address

Host - domain name (resolved to an IP address using DNS) of the server where the resource resides, or will be created

HTTP Message Headers

HTTP protocol version –

HTTP protocol version – shows what HTTP version of the Client uses

HTTP Resource Accessing - HTTP resources are identified using URIs (Uniform Resource Identifier), which tells what the resource is, or more, specifically HTTP URL (Uniform Resource Locator), which tells where the resource is.

HTTP Response Message –

HTTP Status Codes - return values and its corresponding description

Hypertext Markup Language

Hypertext Transfer Protocol (HTTP) - Application layer communications protocol used to access resources; Standard way of communicating through applications

IANA – allocates certain ports to certain applications

Idempotent Methods - Repeated request result to the same response

IETF (internet Engineering Task Force) -

If-Match – a Request Header Field (client) that compares the file in the cache and server to check if file is unmodified to avoid state entity.

If-None-Match – a Request Header Field (client) that requests the server to perform the requested method only if one of the given value in a tag matches the given entity tags represented by the Etag; Used to update caches or to prevent to upload a new resource when one is already existing

If-Range – “is what I have a portion of what you have”; a Request Header Field (client) that can be used with a conditional GET to request only the portion of the entity that is missing; allows the client to “short circuit” the second request

If-unmodified-since –

If-Unmodified-Since – a Request Header Field (client) that is used with a method to make it conditional; Expects the entity to be transmitted only if it has not been modified after the given date

Inter– outside the boundary

Interconnection technology – coaxial, fiber, UTP, infrared

Internet - global network of networks

IoT- Internet of things

IP – Internet Protocol

IPv4 - Internet Protocol version 4. It is the underlying technology that makes it possible for us to connect our devices to the web. It utilizes 32-bit addresses.

IPv6 - is the sixth revision to the Internet Protocol and the successor to IPv4. It tilizes 128-bit addresses.

Language and character set specification -

Last-Modified – An Entity Header Field that shows possible reference value to check if resource is fresh

Location – A Response Header Field (server) for redirection. If present, the server will fetch the latest resource from location

Location – a Response Header Field for redirection

LOCK - lock resources

Max-Forwards – a Request Header Field (client) for tracing and limiting a trace; Limit the number of proxies or gateways that can forward the request to the next inbound server; Contains a decimal integer indicating the remaining number of times a request message may be forwarded

Message body – a.k.a. payload; optional

Message headers –

MKCOL – make collection (new folder)

MOVE – does not guarantee the ability to move a resource to a particular destination

Network – interconnection of devices

Nodes – actual devices

OPTIONS - Request information on what can be done with the resource specified; Returns the HTTP methods that the server supports

Origin server – where original resources are actually stored

Path to resource (resolved relative to the document root) – may refer to a static or dynamic resource

Persistent connections – telling the server to not close the connection for further requests

Port number (HTTP) – default is 80

POST - Performing resource-specific processing of entities enclosed in the message body; Submits data to be processed to a specified resource; Has a payload; Are never cached; Cannot be bookmarked; Do not remain in the browser history; No restrictions on the data length

Pragma – a General Header Field that is from an older version, a generic directive, and indicates that something is cacheable; used to include implementation specific directives that might apply to any recipient along the request/response chain.

PROPFIND - method recovers properties characterized on the asset recognized by the Request-URI

PROPPATCH – method forms guidelines indicated in the demand body to set and additionally or expel properties characterized on the asset recognized by the Demand URI

Protocols - a set of technical rules for the transmission and receipt of information between computers

Proxy authentication- a Response Header Field for authentication to access a proxy

Proxy Authorization – a Request Header Field (client) that allows the client to identify itself (or its user) to a proxy which requires authentication; Consists of credentials containing the authentication information of the user agent for the proxy and/or realm of the resource being requested.

Proxy server – checks authentication; forwards requests and gives back requests

Proxy-Authenticate - A Response Header Field (server) that …

PUT - Store the enclosed entity in the message body under a specified URI; By default, the method is not allowed; When allowed, authentication must be provided; Uploads a representation of the specified URI

Query – typically provided as key = value pairs, with ampersand separators between key/ value pairs, and may be URL-encoded

Ranges – a Request Header Field (client) for Specifying portions of the resource the client wants to receive

Reason phrase – descriptive meaning of the status code

Referer – a Request Header Field (client) that specifies the address (URI) where the request was originated; to check where traffic is coming from

Relative URL - Scheme, user info, and domain name can be omitted

Request Header Fields – information about the request and the client

Request Header Fields (client):

Request Line (CRLF – terminated line consisting of three spaced-separated items)

Request pipelining – sending requests one after another

Request URI – location of the requested resource

Response Header Fields –

Response Headers –

Retry-After – A Response Header Field (server) that shows the amount of time the client has to wait before trying again

Retry-After – a Response Header Field where it is used when under maintenance of a web server; timeouts; indicate to a client that the server is currently not available; 503 Service not Available

Safe Methods- Doesn’t change the resources

Scheme (http or https) –

Semantic Web - Next step in the evolution of the web; Makes use of artificial intelligence to understand the question given by user

Server – A Response Header Field (server) that shows information about the server

Server – a Response Header Field that displays what server.

Socket - IP Address and Port number

SSL/TLS – takes HTTP traffic and transmits it in an encrypted form

Stateless communication – A communication where it does not keep information about clients in between requests

Status code – 3-digit code that designates the status

Status line (CRLF) –

Store and Forward - Send messages to the next hub until destination is reached

TE – trailer encoding; a Request Header Field (client) that specifies the transfer encodings the user agent is willing to accept

TRACE - Perform or request a loopback of the requested message (echo back); Typically used for testing/diagnosis of the request/response chain; Allows the customer to perceive what is being gotten at the flip side of the demand chain and use the data for testing

Trailer – a General Header Field that indicates that a header is present at the end of the data to supply metadata that might be dynamically generated while the message body is sent.

Transfer-encoding – a General Header Field that indicates what type of transformation has been applied to the message body to safely transfer it between the sender and the recipient.

Universal Resource Identifier

Universal Resource Locator –

UNLOCK – unlock resources

Upgrade – a General Header Field used for protocol negotiation \*; Allows the client to upgrade or change to a different protocol on the same connection.

Usenet - Similar to an online discussion group

User-Agent – a Request Header Field (client) that contains additional information about the clients, identity

Uses request-response protocol – Client sends an HTTP request message to server (pull protocol); Server volunteers new information via notifications (push protocol); Checks server at regular intervals (polling); Server processes the request and replies with HTTP response message; In HTTP 2, server can push resources to client without client requesting.

Vary – A Response Header Field (server) for content negotiation

Vary – a Response Header Field where changing header values that is used in content negotiations.

Via – a General Header Field to indicate where the request passed through; Used for tracking message forwards, avoiding request loops, and identifying the protocol capabilities of senders along the request/response chain.

W3C (World Wide Web Consortium) –

Warning – a General Header Field that carries additional information about the status or transformation of a message error in the message \*

Web Client - Example is web browser; Gives requests to web servers; Follows HTTP to communicate with the server

Web Server - Hosts web resources; Listens for requests

WebDAV -

Wide Area Information Services (WAIS) - Connected to servers from different locations to get data from each server periodically and index these data

World Wide Web (WWW) - Information system that allows documents to be connected to other documents; an arrangement of web servers that boost particularly designed records

www-Authentication - a Response Header Field for authentication to access a site