**HTTP Message Headers**

**General Header Fields**

* Cache-Control – used to specify directives to be obeyed at all times by the website caching system (determines local data storage).
* Connection – used to specify settings for website connection and establish persistent connections.
* Date – used to specify the date (GMT) of the request.
* Pragma – HTTP 1.0 general directive. Pragma: no-cache is the only directive defined in HTTP 1.0 and maintained in 1.1.
* Trailer – header at the end of the message instead of start.
* Transfer-Encoding – specifies the type of encoding done to the message to safely deliver it from the sender to the receiver.
* Upgrade – specifies conversion to a new protocol (http:// --> htpps://
* Via – identity/Watermarking. Passes through proxy, like stamp identity, onto the next.
* Warning – identifier for encoding problems

**Request Header Fields**

* Accept – used for accepted content negotiations.
* Accept-Charset – request for a specific character set (Unicode, ASCII, ANSI).
* Accept-Encoding – request for specific encoding (compression type).
* Accept-Language – request for specific language for the webpage (English, Japanese, French).
* Authorization – contains credentials of the request of the user-agent (authorization handshake).
* Expect – checks if the server can handle the request (triggers status code 100 or 417).
* From – email of the user-agent sending the request.
* Host – specifies the host and port of the requested resource. Virtualhost support. No host = bad request (400)
* If-Match – specifies request to be followed if the server resources matches the entity tag.
* If-Modified-Since – conditional request; if resource has not been modified since the given time, the resource is not returned.
* If-None-Match – conditional request; resource is only returned when the entity tag is matched.
* If-Range – specifies portions of the resource to be returned; resource is only returned when the specified range meets the request.
* If-Unmodified-Since – conditional request; server performs operation only if the resource has not been modified since the specified time.
* Max-Forwards – limits the number of proxies a trace will request go through (trace until 2nd/3rd proxy).
* Proxy-Authorization – authentication with a proxy as the middleman (identification of user-agent to a proxy).
* Range – specified partial range of content to be returned.
* Referrer – shows the link where the resource is from (URI).
* TE – trailer encoding; indicates the Transfer-Enoding to be accepted by the user agent.
* User-Agent – information about the sender of the request (name, compatibility, OS).

**Response Header Fields**

* Accept-Ranges – specifies the server’s acceptance of range requests for its resources.
* Age – informs the user-agent of how long since the response was generated by the server (how old the response is).
* ETag (Entity Tag) – identifier for the resource.
* Location – redirection of the request to the location of the resource.
* Proxy-Authenticate – part of the 407 status code response (user-agent is required authentication).
* Retry-After – part of the 503 status code response (sets time before the request can be made again).
* Server – server information (Apache, nginx).
* Vary – content negotiation; specified different sources of the entity.
* WWW-Authenticate – part of the 401 status code response (issues a challenge that indicates required authentication parameters).

**Entity Header Fields**

* Allow – specifies operations that can be done on an entity (PUT, POST, DELETE, etc.)
* Content-Encoding – indicates encoding of media type (gzip).
* Content-Language – indicates the intended language of the resource.
* Content-Length – indicates the length of the resource (bytes).
* Content-Location – indicates the location of the resource, where it’s from.
* Content-MD5 (Message Digest) – hashing: change in data is a change in hash (deprecated).
* Content-Range – indicates the range of bytes; resource is sent partially to specify where it belongs in full resource body.
* Content-Type – indicates the extension of the resource (.html, .css, .jpg, .gif, etc.)
* Expires – indicates how long the user-agent can keep the content in the cache.
* Last-Modified – indicates when the resource was last changed.

Sources:

Notes from class.

https://www.tutorialspoint.com/http/pdf/http\_header\_fields.pdf