HTTP (Methods & Response codes)

HTTP
Hyper text transport protocol

•History

•HTTP Methods

•HTTP Headers (General/Request/Response)

•HTTP Response Codes

History

•HTTP was created in the early 1990s and has been extended several times.
HTTP/0.9, HTTP/1.0, HTTP/1.1, and the modern HTTP/2

•A textual format to represent hypertext documents, the *HyperText Markup Language* (HTML).

•A simple protocol to exchange these documents, the *HyperText Transfer Protocol* (HTTP).

HTTP Methods

The set of common methods for HTTP/1.1 is defined below and this set can be expanded based on requirements. These method names are case sensitive and they must be used in uppercase.

S.N.	Method and Description
1	**GET :** The GET method is used to retrieve information from the given server using a given URI. Requests using GET should only retrieve data and should have no other effect on the data.
2	**HEAD :** Same as GET, but transfers the status line and header section only.
3	**POST :** A POST request is used to send data to the server, for example, customer information, file upload, etc. using HTML forms.
4	**PUT :** Replaces all current representations of the target resource with the uploaded content.
5	**DELETE :** Removes all current representations of the target resource given by a URI.
6	**CONNECT :** Establishes a tunnel to the server identified by a given URI.
7	**OPTIONS :** Describes the communication options for the target resource.
8	**TRACE :** Performs a message loop-back test along the path to the target resource.

HTTP Headers

HTTP header fields provide required information about the request or response, or about the object sent in the message body. There are four types of HTTP message headers:

•**General-header:** These header fields have general applicability for both request and response messages.

•**Client Request-header:** These header fields have applicability only for request messages.

•**Server Response-header:** These header fields have applicability only for response messages.

•**Entity-header:** These header fields define meta information about the entity-body or, if no body is present, about the resource identified by the request.

HTTP Response Codes

The Status-Code element in a server response, is a 3-digit integer where the first digit of the Status-Code defines the class of response and the last two digits do not have any categorization role. There are 5 values for the first digit:

S.N.	Code and Description
1	**1xx: Informational** It means the request has been received and the process is continuing.
2	**2xx: Success** It means the action was successfully received, understood, and accepted.
3	**3xx: Redirection** It means further action must be taken in order to complete the request.
4	**4xx: Client Error** It means the request contains incorrect syntax or cannot be fulfilled.
5	**5xx: Server Error** It means the server failed to fulfill an apparently valid request.

1xx: Information

Message	Description
100 Continue	Only a part of the request has been received by the server, but as long as it has not been rejected, the client should continue with the request.
101 Switching Protocols	The server switches protocol.

2xx: Successful

Message	Description
200 OK	The request is OK.
201 Created	The request is complete, and a new resource is created .
202 Accepted	The request is accepted for processing, but the processing is not complete.
203 Non-authoritative Information	The information in the entity header is from a local or third-party copy, not from the original server.
204 No Content	A status code and a header are given in the response, but there is no entity-body in the reply.
205 Reset Content	The browser should clear the form used for this transaction for additional input.
206 Partial Content	The server is returning partial data of the size requested. Used in response to a request specifying a Range header. The server must specify the range included in the response with the Content-Range header.

3xx: Redirection

Message	Description
300 Multiple Choices	A link list. The user can select a link and go to that location. Maximum five addresses .
301 Moved Permanently	The requested page has moved to a new url .
302 Found	The requested page has moved temporarily to a new url .
303 See Other	The requested page can be found under a different url .
304 Not Modified	This is the response code to an If-Modified-Since or If-None-Match header, where the URL has not been modified since the specified date.
305 Use Proxy	The requested URL must be accessed through the proxy mentioned in the Location header.
306 Unused	This code was used in a previous version. It is no longer used, but the code is reserved.
307 Temporary Redirect	The requested page has moved temporarily to a new url.

4xx: Client Error

Message	Description
400 Bad Request	The server did not understand the request.
401 Unauthorized	The requested page needs a username and a password.
402 Payment Required	You can not use this code yet.
403 Forbidden	Access is forbidden to the requested page.
404 Not Found	The server can not find the requested page.
405 Method Not Allowed	The method specified in the request is not allowed.
406 Not Acceptable	The server can only generate a response that is not accepted by the client.
407 Proxy Authentication Required	You must authenticate with a proxy server before this request can be served.
408 Request Timeout	The request took longer than the server was prepared to wait.
409 Conflict	The request could not be completed because of a conflict.
400 Bad Request	The server did not understand the request.
401 Unauthorized	The requested page needs a username and a password.
402 Payment Required	You can not use this code yet.
403 Forbidden	Access is forbidden to the requested page.
404 Not Found	The server can not find the requested page.
405 Method Not Allowed	The method specified in the request is not allowed.
406 Not Acceptable	The server can only generate a response that is not accepted by the client.
407 Proxy Authentication Required	You must authenticate with a proxy server before this request can be served.
408 Request Timeout	The request took longer than the server was prepared to wait.
409 Conflict	The request could not be completed because of a conflict.

5xx: Server Error

Message	Description
500 Internal Server Error	The request was not completed. The server met an unexpected condition.
501 Not Implemented	The request was not completed. The server did not support the functionality required.
502 Bad Gateway	The request was not completed. The server received an invalid response from the upstream server.
503 Service Unavailable	The request was not completed. The server is temporarily overloading or down.
504 Gateway Timeout	The gateway has timed out.
505 HTTP Version Not Supported	The server does not support the "http protocol" version.

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