## **HTTP:** Response Messages

Let's look at what HTTP response messages look like!



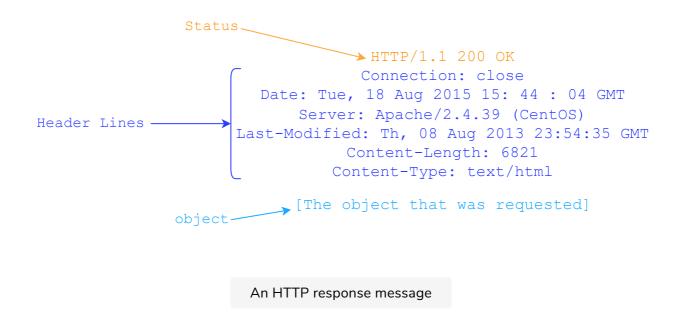
## Introduction #

Let's start with a typical example of an HTTP response message:

```
HTTP/1.1 200 OK
Connection: close
Date: Tue, 18 Aug 2015 15: 44: 04 GMT
Server: Apache/2.2.3 (CentOS)
Last-Modified: Tue, 18 Aug 2015 15:11:03 GMT
Content-Length: 6821
Content-Type: text/html

[The object that was requested]
```

It has 3 parts: an initial status line, some header lines and an entity body.



Note: HTTP response messages don't have the URL or the

method fields. Those are strictly for request messages.

## Status Line #

• HTTP response status lines start with the **HTTP version**.

#### Status Code

- The **status code** comes next which tells the client if the request succeeded or failed.
- There are a lot of status codes:
  - 1xx codes fall in the informational category
  - 2xx codes fall in the success category
  - 3xx codes are for redirection
  - 4xx is client error
  - ∘ 5xx is server error

Here is a list of some common status codes and their meanings:

- **200 OK**: the request was successful, and the result is appended with the response message.
- **404 File Not Found**: the requested object doesn't exist on the server.

- 400 Bad Request: generic error code that indicates that the request was in a format that the server could not comprehend.
- 500 HTTP Internal Server Error: the request could not be completed because the server encountered some unexpected error.
- **505 HTTP Version Not Supported**: the requested HTTP version is not supported by the server.

Have a look at pages 39 and 40 of RFC 2616 for a comprehensive list.

## **Header Lines** #

Let's study the header lines.

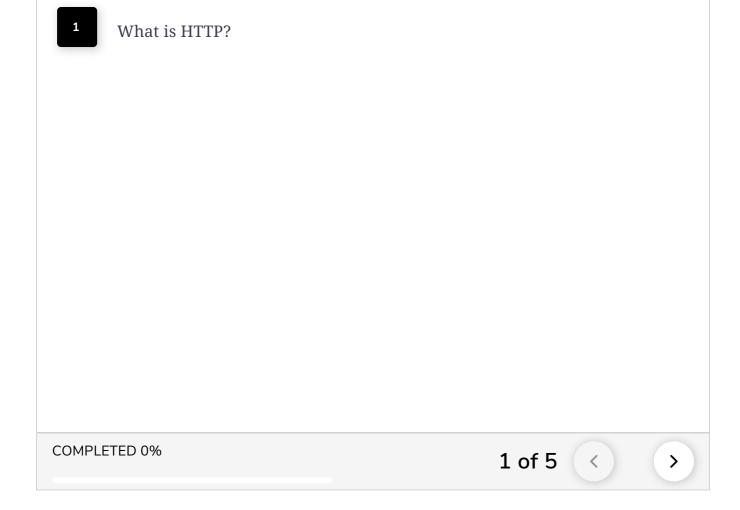
- **Connection type**. In this case, indicates that the server will close the TCP connection after it sends the response.
- Date. The date at which the response was generated.
- **Server**. Gives server software specification of the server that generated the message. Apache in this case.
- Last-Modified. The date on which the object being sent was last modified.
- Content-Length. The length of the object being sent in 8-bit bytes.
- **Content-Type.** The type of content. The type of the file is not determined by the file extension of the object, but by this header.

The **response** body contains the file requested.

#### How HTTP Headers Are Chosen #

Lastly, you must be wondering how browsers decide which HTTP headers to include in requests and how servers decide which headers to return in the response. That **depends on a complex mix of factors such as the browser, the user configurations and products**.

# Quick Quiz on HTTP! #



In the next lesson, we'll look at real HTTP responses via a simple command-line tool!