

## What is HTTP?

- Hyper Text Transfer Protocol
- Communication Between web servers and clients
- HTTP Requests / Responses

## HTTP is STATELESS

- Every request is completely INDEPENDENT
- Similar to transactions
- Programming, Local Storage, Cookies, Sessions are used to create enhanced user experiences

## What is HTTPS?

- Hyper Text Transfer Protocol Secure
- Data sent is encrypted
- SSL(Secure Socket Layer) / TLS(Transport Security Layer)
- Install certificate on web host

## HTTP Methods

- GET : Retrieves data from the server (ex: Loading assets, Loading data, Loading a page)
- POST : Submit data to the server (ex: Submitting a form , Submitting A blog post)
- PUT : Update Data already on the server (ex: Editing a blog post, Changing an image)
- DELETE : Delete data from the server (ex: Deleting an image, Deleting anything)

## HTTP Header Fields

```
method      path      protocol
GET /tutorials/other/top-20-mysql-best-practices/ HTTP/1.1
Host: net.tutsplus.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.1
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 300
Connection: keep-alive
Cookie: PHPSESSID=r2t5uvjq435z4q7ib3vtdjq120
Pragma: no-cache
Cache-Control: no-cache
```

HTTP headers as Name: Value

### General:

Request URL  
Request Method  
Status Code  
Remote Address  
Referrer Policy

### Response:

Server  
Set-Cookie  
Content-Type  
Content-Length  
Date

### Request:

Cookies  
Accept-xxx  
Content-Type  
Content-Length  
Authorization  
User-Agent  
Referrer

## HTTP Status Codes

### 1xx : Informational

Request recieved / processing

### 2xx: Success

Successfully Recieved, understood and accepted

### 3xx: Redirect

Further action must be taken / redirect

### 4xx: Client Error

Request does not have what it needs

### 5xx: Server Error

Server failed to fulfil an apparent valid request

200 - OK

201 - OK created

301 - Moved to new URL

304 - Not modified (Cached version)

400 - Bad request

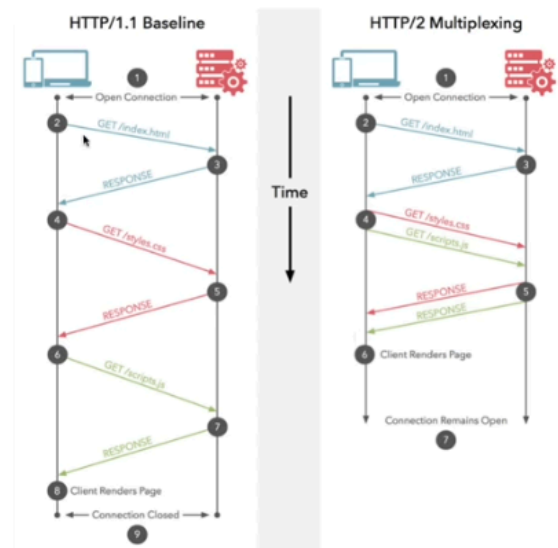
401 - Unauthorized

404 - Not found

500 - Internal server error

## HTTP/2

- › Major revision of HTTP
- › Under the hood changes
- › Respond with more data
- › Reduce latency by enabling full request and response multiplexing
- › Fast, efficient & secure



Supports Multiplexing