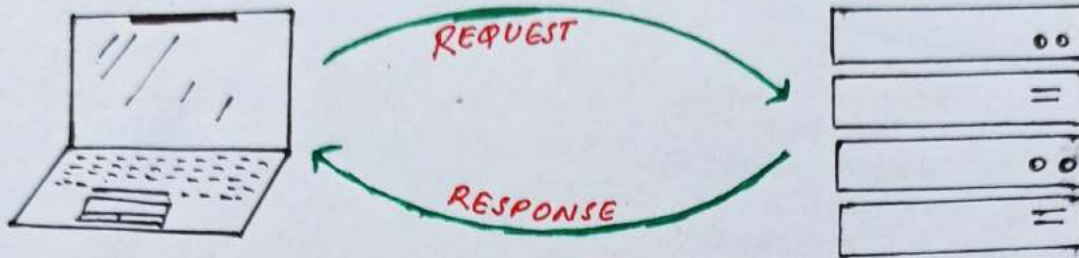


# REST API

Rest stands for REPRESENTATIONAL STATE TRANSFER  
REST APIs OPERATE ON A SIMPLE REQUEST/RESPONSE SYSTEM



CLIENT CAN MAKE A REQUEST  
USING HTTP METHODS

SERVER RETURNS A RESPONSE WITH  
AN HTTP STATUS CODE

THESE METHODS ARE:

GET, POST, PUT, PATCH, DELETE,  
HEAD, TRACE, OPTIONS, CONNECT.

POPULAR HTTP STATUS CODE:

EX, 200, 202, 403, 404, 500 ETC.

HTTP REQUEST CONTAINS



HTTP RESPONSE CONTAINS



## ★ REST API CONSTRAINTS ★

CLIENT-SERVER ARCHITECTURE  
• NO THIRD PARTY INTERPRETATION.

ATUL KUMAR (LINKEDIN)  
• TELEGRAM- NOTES GALLERY.

UNIFORM INTERFACE

• FOLLOW A COMMON PROTOCOL

LAYERING

• MULTIPLE INTERMEDIARIES  
BETWEEN CLIENT AND  
SERVER.

CACHEABILITY

• RESPONSE CAN BE  
CACHEABLE

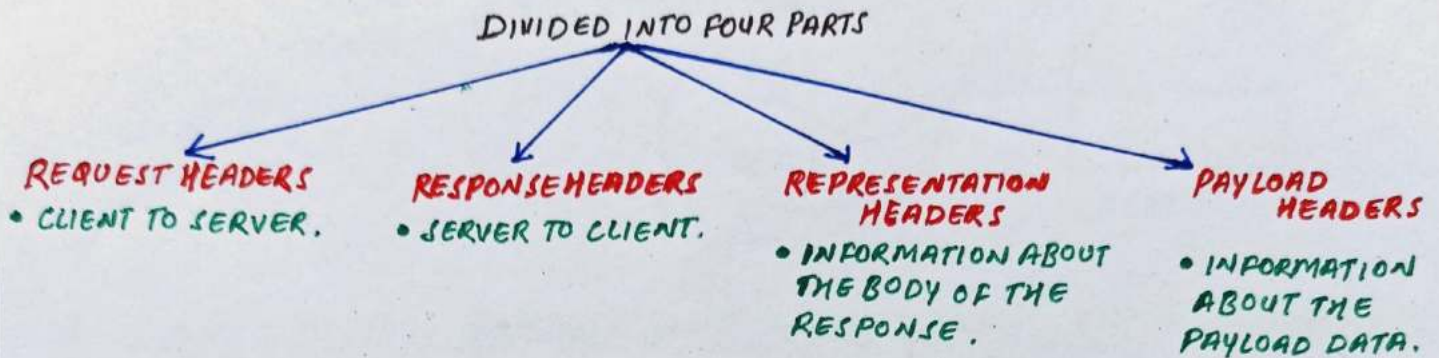
STATELESSNESS

• THERE IS NO STATE.  
CLIENT AND SERVER ARE  
COMPLETELY SEPARATED.



# HTTP HEADERS

CLIENT AND SERVER CAN PASS THE EXTRA BIT OF INFORMATION WITH THE REQUEST AND RESPONSE USING HTTP HEADERS.



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## WIDELY USED HTTP HEADERS

### Accept

TYPE OF DATA CLIENT CAN UNDERSTAND.

### Content - Type

SPECIFIES THE MEDIA TYPE OF THE RESOURCE.

### Accept - Encoding

WHICH ENCODING METHOD CLIENT CAN UNDERSTAND.

### Host

SPECIFIES THE DOMAIN NAME.

### Authorization

USED TO PASS CREDENTIALS SO THAT SERVERS CAN AUTHENTICATE.

### Access - Control - Allow - Origin.

WHICH ORIGIN IS ALLOWED TO ACCESS THE RESOURCES.

### Accept - Language

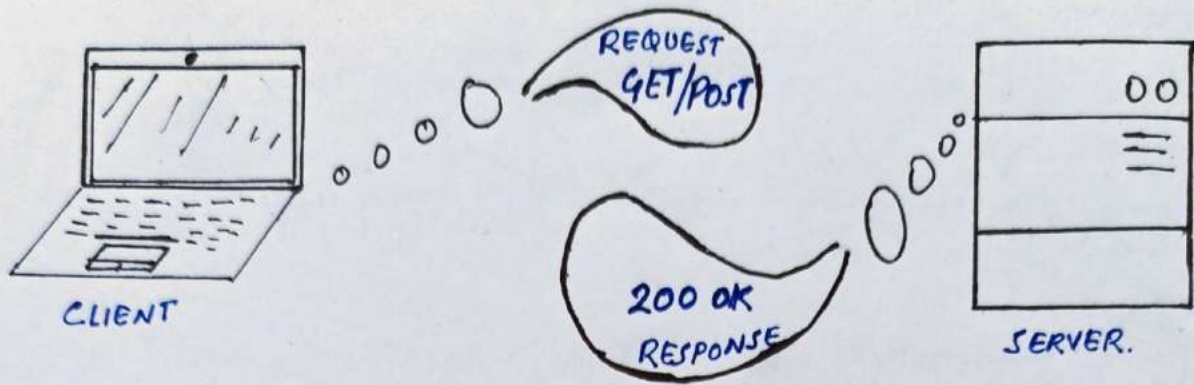
CLIENT IS EXPECTING THE RESPONSE IN THE MENTIONED LANGUAGE

### Access - Control - Allow - Methods.

WHICH METHODS ARE ALLOWED TO ACCESS THE CROSS-ORIGIN RESOURCES.



# HTTP STATUS CODE



★ SERVER ALWAYS RETURNS HTTP STATUS CODE WITH THE RESPONSE ★

## SUCCESSFUL RESPONSES

200 OK  
EVERYTHING IS FINE

201 CREATED  
NEW RESOURCE WAS  
CREATED.

## REDIRECTION MESSAGES

301 MOVED PERMANENTLY  
THE RESOURCE HAS BEEN MOVED  
PERMANENTLY TO THE NEW URL.

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## CLIENT ERROR

400 BAD REQUEST  
INVALID SYNTAX.

403 FORBIDDEN  
YOU DON'T HAVE PERMISSION TO ACCESS THE RESOURCES

404 NOT FOUND  
INVALID URL

• TELEGRAM-NOTES GALLERY  
401 UNAUTHORIZED  
CREDENTIALS ARE INCORRECT.

429 TOO MANY REQUESTS  
USER HAS SENT TOO MANY REQUESTS  
IN A GIVEN AMOUNT OF TIME.

## SERVER ERROR

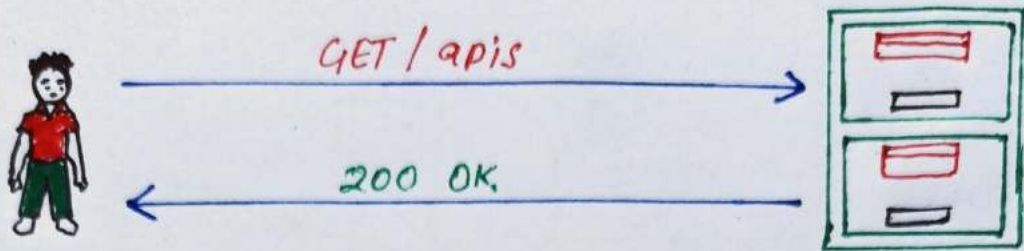
500 INTERNAL SERVER ERROR

SERVER DOES NOT KNOW HOW TO HANDLE THE UNEXPECTED SITUATION.

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# HTTP REQUEST METHODS



## GET

THE **GET** method is the most common of all these request methods.

It is used to fetch the desired resources from the server.

## POST

The **POST** method is used to submit the information to the server.

As we're submitting the data, the **POST** method often changes the state of the server.

## PUT

The **PUT** method is used whenever you need to change the resource. The resource, which is already a part of resource collection.

## PATCH

The **PATCH** request method is used to modify only the necessary part of the data or response.

The **PATCH** method doesn't modify the entire response.

## DELETE

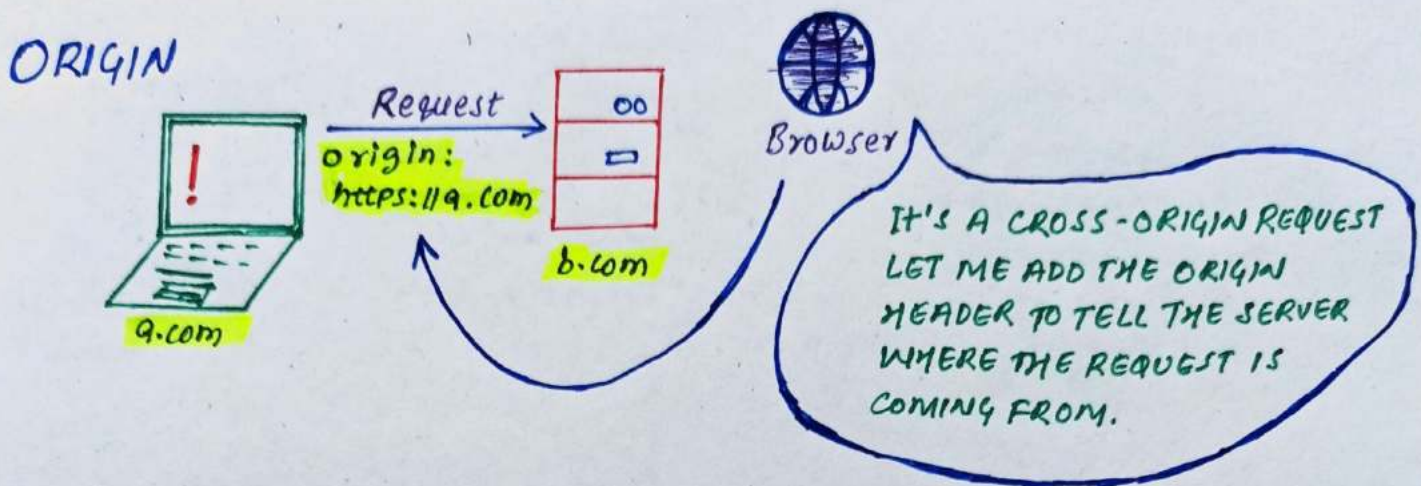
As the name says, the **DELETE** request method is used to delete the specified resource.

It requests that the origin server delete the resource identified by the Request-URL.

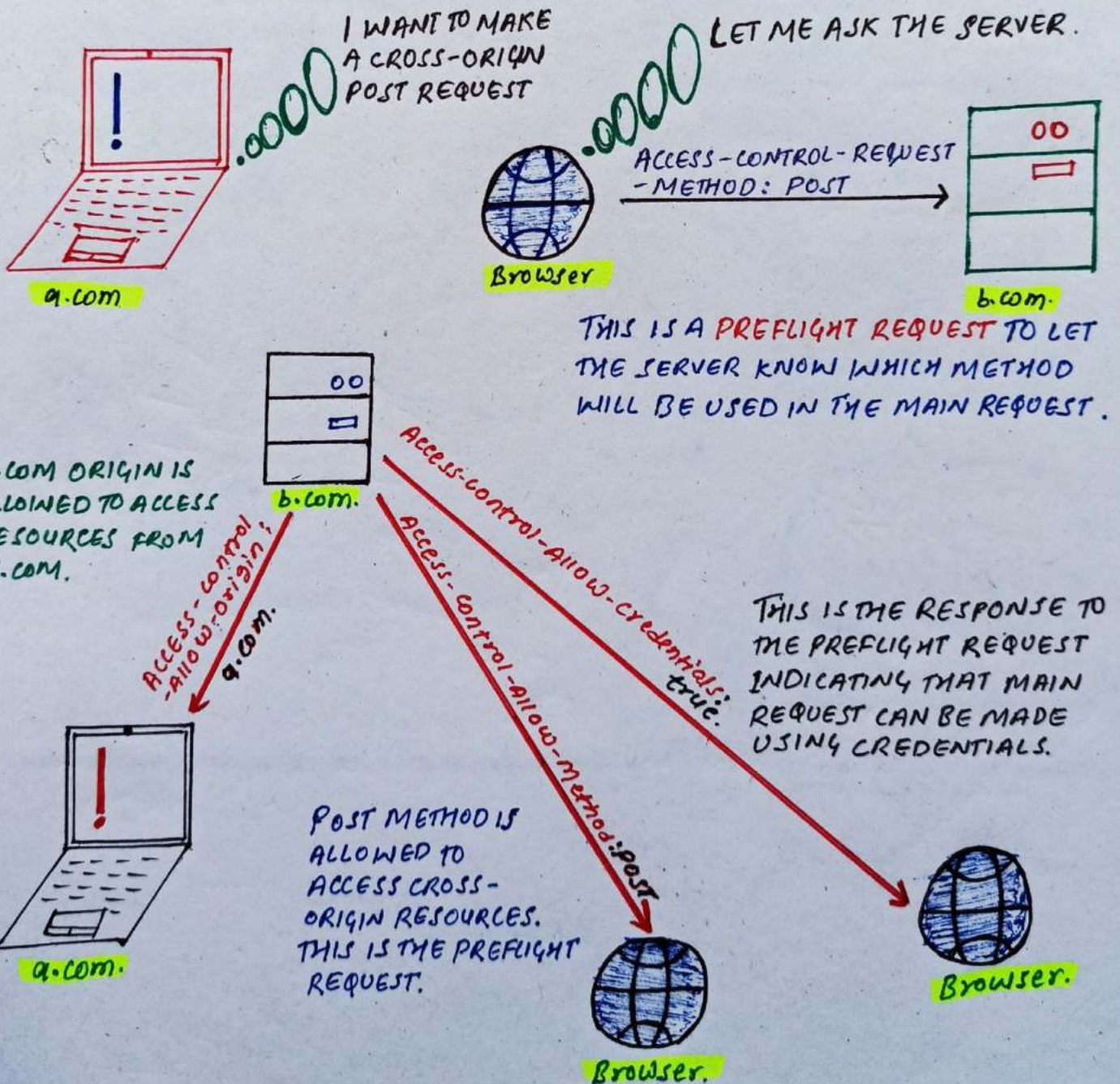
ATUL KUMAR (LINKEDIN),  
TELEGRAM - NOTES GALLERY.



# Access Control HTTP Headers

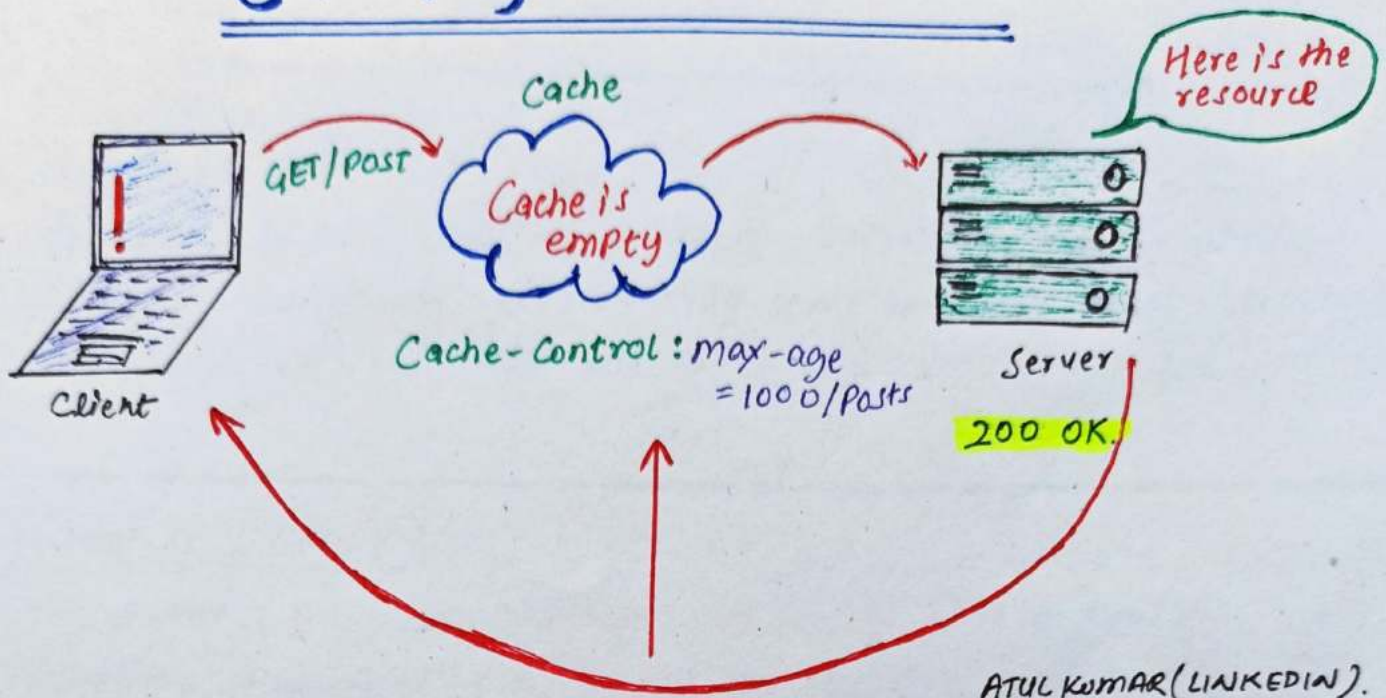


## ACCESS-CONTROL-REQUEST-METHOD





# Caching in API calls.



After 200 Seconds

