





What are APIs?

- The method in which web applications connect to each other to communicate data
- Able to be accessed using programming tools to obtain, update, or delete data.
- Application Protocol Interfaces



Types of APIs



REST

Websocket

Webhook

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Works the same way as typing a link into a browser

Streaming data, communication of live data

Application sends request to you to notify of data change





REST API Request Types

GET

Used to obtain data

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POST

Used to create/update data

PATCH

Used to update data

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DELETE

Used to delete data



GET VS POST

GET

No data is sent in payload

Any data to be sent is a Query Parameter

POST

Data is sent in the payload

Query Parameters can be used



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Parts

Parts of a Request

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▼ General

Request URL: https://example.com/

Request Method: GET

Status Code:
200

Remote Address: 93.184.216.34:443

Referrer Policy: strict-origin-when-cross-origin

▼ Response Headers

accept-ranges: bytes

age: 562463

cache-control: max-age=604800

content-encoding: gzip

content-length: 648

content-type: text/html; charset=UTF-8

date: Sat, 28 Jan 2023 00:01:26 GMT

etag: "3147526947"

expires: Sat, 04 Feb 2023 00:01:26 GMT

last-modified: Thu, 17 Oct 2019 07:18:26 GMT

server: ECS (chb/0286)

vary: Accept-Encoding

x-cache: HIT

▼ Request Headers

:authority: example.com

:method: GET :path: /

:scheme: http

accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3;q=

0.9

accept-encoding: gzip, deflate, br

accept-language: en-US, en; q=0.9

cache-control: no-cache

pragma: no-cache

sec-ch-ua: "Not?A_Brand";v="8", "Chromium";v="108", "Google Chrome";v="108"

sec-ch-ua-mobile: ?0

sec-ch-ua-platform: "mac0S"

sec-fetch-dest: document

sec-retch-dest: document

sec-fetch-mode: navigate

sec-fetch-site: none

sec-fetch-user: ?1

upgrade-insecure-requests: 1

user-agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/108.0.0.0 Safari/537.36

URL Request Method Status Code

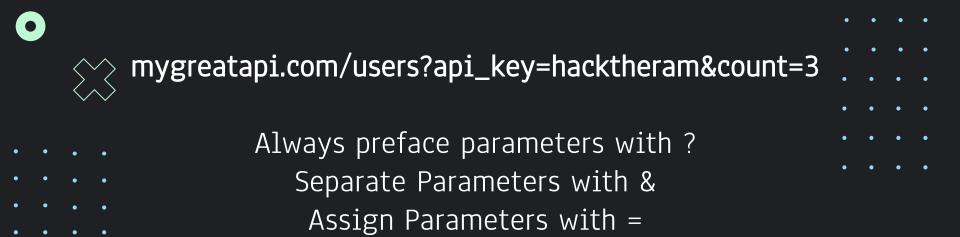
Request Headers

Authorization Cookies





URL Query Parameters







- If its a public API, you do not need to provide any authorization
- If you are dealing with a service that has
 - Authentication
 - Rate Limiting
 - User Data

You will need a KEY

- Usually sent in the Query Parameters or a Header with Authorization Title
- OAuth2
- API Key



Response Codes



200

404

403

Good!

Not Found

Forbidden

Request made successfully

The api endpoint you are trying to reach does not exist

You forgot an API key or authorization!





APIS in Code

- Python: Requests Module
 - requests.get()
 - requests.session()
- JavaScript: fetch() function
 - Cool shortcut with Google
 Chrome





GitHub public-apis/public-apis

List of APIs that you can use in projects



API Documentation

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Get some facts

Retrieve one or more Facts.

Endpoint

GET /facts/random

Query parameters

| Parameter | Туре | Default | Limit | Description |
|-------------|-------------------------------|---------|-------|--|
| animal_type | Comma- separated String | 'cat' | | Type of animal the fact will describe |
| amount | Number | 1 | 500 | Number of Facts to retrieve. If set to one, response will be a fact object. If many, response will be an array of Fact s |

