

API Example

API

Application programming interface

From Wikipedia, the free encyclopedia

"API" redirects here. For other uses, see [API \(disambiguation\)](#).

An **application programming interface (API)** is an [interface](#) or [communication protocol](#) between different parts of a [computer program](#) intended to simplify the implementation and maintenance of software.

An API may be for a web-based system, [operating system](#), [database system](#), computer hardware, or [software library](#).

An API specification can take many forms, but often includes specifications for [routines](#), [data structures](#), [object classes](#), [variables](#), or [remote calls](#). [POSIX](#), [Windows API](#) and [ASPI](#) are examples of different forms of APIs. Documentation for the API usually is provided to facilitate usage and implementation.

More recently, the term has been often used to refer to a specific kind of interface between a [client and a server](#), which has been described as a “contract” between both - such that if the client makes a request in a specific format, it will always get a response in a specific format or initiate a defined action.^[1] This is a specialized form of API though, more precisely defined as a [WEB API](#).

APIs and API wrapper

- API wrappers allow you to connect APIs with using programming language libraries instead of connecting them directly

For example Wikipedia API can be accessed by Wikipedia library in Python

API call vs API wrapper call

```
wikipedia | https://wikimedia.org/api/rest | User Guide — urllib3 1.25.6 d | Content | MediaWiki API
en.wikipedia.org/w/api.php
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"continue": ""
},
"query": {
  "pages": {
    "736": {
      "pageid": 736,
      "ns": 0,
      "title": "Albert Einstein",
      "categories": [
        {
          "ns": 14,
          "title": "Category:1879 births"
        },
        {
          "ns": 14,
          "title": "Category:1955 deaths"
        },
        {
          "ns": 14,
          "title": "Category:20th-century American engineers"
        },
        {
          "ns": 14,
          "title": "Category:20th-century American writers"
        },
        {
          "ns": 14,
          "title": "Category:20th-century German engineers"
        }
      ]
    }
  }
}
```

```
In [42]: 1 #!pip3 install wikipedia

In [275]: 1 import wikipedia

In [280]: 1 einstein=wikipedia.page('Albert Einstein')
          2 einstein.categories

Out[280]: ['1879 births',
            '1955 deaths',
            '20th-century American engineers',
            '20th-century American writers',
            '20th-century German engineers',
            '20th-century German writers',
            '20th-century physicists',
            'AC with 27 elements',
            'Activists from New Jersey',
            'Albert Einstein',
            'All Wikipedia articles written in American English',
            'American Nobel laureates',
            'American Zionists',
            'American agnostics',
            'American inventors',
            'American letter writers',
            'American pacifists',
            'American people of German-Jewish descent',
            'American physicists',
```

List of python api wrappers

- <https://github.com/realpython/list-of-python-api-wrappers>

List of Python API Wrappers

Hi. Below you will find a list of web services along with links to their docs and Python wrappers/libraries.

3taps - Data Exchange

- [API Documentation](#)
- [Python wrapper for 3taps](#)

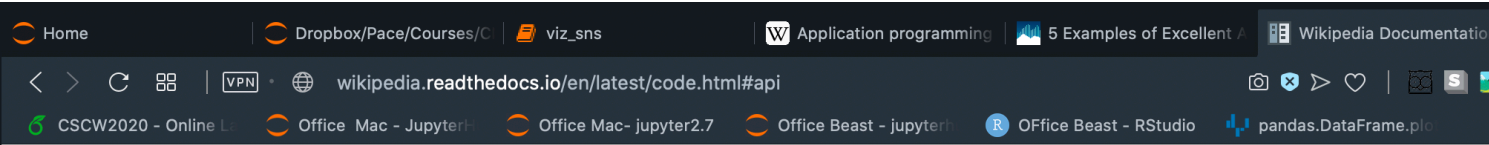
Alexa Web - Web traffic data

- [API Documentation](#)
- [Python wrapper for Alexa Web](#)

Amazon - Online Shopping

Example API wrapper: Wikipedia library

- <https://wikipedia.readthedocs.io/en/latest/code.html#api>



The screenshot shows a web browser window with the URL `wikipedia.readthedocs.io/en/latest/code.html#api`. The page title is "Wikipedia Documentation". Below the title, it says "Here you can find the full developer API for the wikipedia project." and "Contents:". The contents list includes "Wikipedia Documentation" with sub-items "Functions and Classes", "Exceptions", and "Indices and tables". Below this, the section "Functions and Classes" is shown, featuring the `wikipedia.search` function signature: `wikipedia.search(query, results=10, suggestion=False)`. A description follows: "Do a Wikipedia search for *query*." Then, "Keyword arguments:" are listed, including "results" (maximum number of results returned) and "suggestion" (if True, return results and suggestion).

Wikipedia Documentation

Here you can find the full developer API for the wikipedia project.

Contents:

- [Wikipedia Documentation](#)
 - [Functions and Classes](#)
 - [Exceptions](#)
 - [Indices and tables](#)

Functions and Classes

`wikipedia.search(query, results=10, suggestion=False)`

Do a Wikipedia search for *query*.

Keyword arguments:

- results - the maximum number of results returned
- suggestion - if True. return results and suggestion (if any) in a