Practical – 6

API Documentation

Open Weather API

# GET Current weather data

Example Request

Example

curl --location --request GET 'https://api.openweathermap.org/data/2.5/weather?lat=44.34&lon=10.99&appi

Example Response

200 OK

Body Header (9)

{

"coord": {

"lon": 10.99,

"lat": 44.34

},

No request URL found. It will show up here once added.

Access current weather data for any location on Earth including over 200,000 cities! We collect and process weather data from di erent sources such as global and local weather models, satellites, radars and a vast network of weather stations. Data is available in JSON, XML, or HTML format.

Parameters

|  |  |
| --- | --- |
| Parameters | Description |
| lat, lon | Geographical coordinates (latitude, longitude). If you need the geocoder to automatic convert city names and zip-codes to geo coordinates and the other way around, please use our [Geocoding API](https://openweathermap.org/api/geocoding-api). |
| appid | Your unique API key (you can always nd it on your account page under the "API key" tab) |
| mode | Response format. Possible values are xml and html. If you don't use the mode parameter format is JSON by default. |
| units | Units of measurement. standard, metric and imperial units are available. If you do not use the units parameter, standard units will be applied by default. |
| lang | You can use this parameter to get the output in your language. |

Documentation Settings

"main": "Clear",

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"weather": [

{

"id": 800,



# GET Air polution

<http://api.openweathermap.org/data/2.5/air_pollution?lat=50&lon=50&appid=f50b236e9d4317b8afd2c0223121143f>

Air Pollution API provides current, forecast and historical air pollution data for any coordinates on the globe

Besides basic Air Quality Index, the API returns data about polluting gases, such as Carbon monoxide (CO), Nitrogen monoxide (NO), Nitrogen dioxide (NO2), Ozone (O3), Sulphur dioxide (SO2), Ammonia (NH3), and particulates (PM2.5 and PM10).

Air pollution forecast is available for 5 days with hourly granularity. Historical data is accessible from 27th November 2020.

Here is a description of Air Quality index levels:

|  |  |  |
| --- | --- | --- |
| Qualitative name | Index | Pollutant concentration in μg/m3 |
|  | NO2 | PM10 |
| Good | 1 | 0-50 |
| Fair | 2 | 50-100 |
| Moderate | 3 | 100-200 |
| Poor | 4 | 200-400 |
| Very Poor | 5 | >400 |

PARAMS

lat 50

lon 50

appid f50b236e9d4317b8afd2c0223121143f

Example Request Example

curl --location --request GET ['http://api.openweathermap.org/data/2.5/air\_pollution?lat=50&lon=50&appid](http://api.openweathermap.org/data/2.5/air_pollution?lat=50&lon=50&appid)

Example Response 200 OK

Documentation Settings

Body Header (9)

{

"coord": {

"lon": 50,

"lat": 50

},

"list": [

{

"main": {

"aqi": 4

View More

},



# GET Geocoding

<http://api.openweathermap.org/geo/1.0/direct?q=London&limit=5&appid=f50b236e9d4317b8afd2c0223121143f>

Geocoding API is a simple tool that we have developed to ease the search for locations while working with geographic names and coordinates.

[Direct geocoding](https://openweathermap.org/api/geocoding-api#direct) converts the speci ed name of a location or zip/post code into the exact geographical coordinates;

[Reverse geocoding](https://openweathermap.org/api/geocoding-api#reverse) converts the geographical coordinates into the names of the nearby locations.

|  |  |  |
| --- | --- | --- |
| Parameters |  |  |
| q | required | City name, state code (only for the US) and country code divided by comma. Please use ISO 3166 country codes. |
| appid | required | Your unique API key (you can always nd it on your account page under the "API key" tab) |
| limit | required | Number of the locations in the API response (up to 5 results can be returned in the API response) |

PARAMS

q London

limit 5

appid f50b236e9d4317b8afd2c0223121143f

Example Request Example

Documentation Settings

curl --location --request GET ['http://api.openweathermap.org/geo/1.0/direct?q=London&limit=5&appid=f50b](http://api.openweathermap.org/geo/1.0/direct?q=London&limit=5&appid=f50b)



Example Response 200 OK

Body Header (9)

[

{

"name": "London", "local\_names": {

"am": "ለንደን",

"az": "London",

"bg": "Лондон",

"de": "London",

"lo": "ລອນດອນ",

"be": "Лондан",

View More

# GET 5 day / 3 hour forecast data

api.openweathermap.org/data/2.5/forecast?lat=44.34&lon=10.99&appid=f50b236e9d4317b8afd2c0223121143fx

5 day forecast is available at any location on the globe. It includes weather forecast data with 3-hour step.

|  |  |  |
| --- | --- | --- |
| Parameters |  |  |
| lat, lon | required | Geographical coordinates (latitude, longitude). If you need the geocoder to automatic convert city names and zip-codes to geo coordinates and the other way around, please use our Geocoding API. |
| appid | required | Your unique API key (you can always nd it on your account page under the "API key" tab) |
| units | optional | Units of measurement. standard, metric and imperial units are available. If you do not use the units parameter, standard units will be applied by default. Learn more |
| mode | optional | Response format. JSON format is used by default. To get data in XML format use mode=xml. Learn more |
| cnt | optional | A number of timestamps, which will be returned in the API response. Learn more |
| units | optional | Units of measurement. standard, metric and imperial units are available. If you do not use the units parameter, standard units will be applied by default. Learn more |
| lang | optional | You can use the lang parameter to get the output in your language. Learn more |

PARAMS

lat 44.34

lon 10.99

Documentation Settings

appid

f50b236e9d4317b8afd2c0223121143fx



Example Request Example

curl --location --request GET 'api.openweathermap.org/data/2.5/forecast?lat=44.34&lon=10.99&appid=f50b2

Example Response 200 OK

Body Header (9)

{

"cod": "200",

"message": 0,

"cnt": 40,

"list": [

{

"dt": 1664776800,

"main": {

"temp": 285.11,

"feels like": 284.63,

View More

# GET 7Timer!

<http://www.7timer.info/bin/api.pl?lon=113.17&lat=23.09&product=astro&output=json>

*7Timer!* is a series of web-based meteorological forecast products, mainly derived from the NOAA/NCEP-based numeric weather model, the Global Forecast System (GFS). *7Timer!* was rstly established in July 2005 as an exploration product under supported of the National Astronomical Observatories of China and had been largely renovated in 2008 and 2011. Currently it is supported by the Shanghai Astronomical Observatory of Chinese Academy of Sciences.

The 2nd version of *7Timer!* - APanel, the predecessor of ASTRO

*7Timer!* produces high-resolution forecast for the entire globe that covering about 1.5 million geographic points, and would be updated four times a day. It also produces specialized products for users with di erent concentrations such as astronomy or meteorology.

PARAMS

lon 113.17

lat 23.09

product astro

Documentation Settings

output

json



Example Request Example

curl --location --request GET ['http://www.7timer.info/bin/api.pl?lon=113.17&lat=23.09&product=astro&out](http://www.7timer.info/bin/api.pl?lon=113.17&lat=23.09&product=astro&out)

Example Response 200 OK

Body Header (9)

{

"product": "astro", "init": "2022101400",

"dataseries": [

{

"timepoint": 3,

"cloudcover": 4,

"seeing": 6,