Practical – 6
API Documentation

Open Weather API

GET Current weather data

> 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 different 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.
`appid`	Your unique API key (you can always find 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.

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

Header (9)

```
{
  "coord": {
    "lon": 10.99,
    "lat": 44.34
  },
```

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

at

50

on

50

38

appid

50b236e9d4317b8afd2c0223121143f

Example Request

```
curl --location --request GET 'http://api.openweathermap.org/data/2.5/air_pollution?lat=50&lon=50&appid
```

Example Response

```
"weather": [
    { "main": "Clear",
      "id": 800,

      "lo": "ამინდი",
      "be": "Лондан",
```

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

at

l4.34

on

l0.99

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": {

                                                    View More

                                                feels_like . 201.05,

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 firstly 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 different concentrations such as astronomy or meteorology.

PARAMS

on

l13.17

at

23.09

product

astro

Example Request

```
curl --location --request GET '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
```