Weather Widget

Make a borderless app, that can be dragged around the desktop and resized responsivly.

The app should have 3 view:

- Today's Weather: display the current tempurature, icon depicting (rain/sun/snow/ect), todays tempurature high, todays tempurature low, short forecast description, detailed forecast hidden behind a hover information icon.

Weather API - <https://openweathermap.org/>

DAILY WEATHER FORECAST API EXAMPLE

### **By ZIP code**

##### Description:

Please note if country is not specified then the search works for USA as a default.

API call:

api.openweathermap.org/data/2.5/weather?zip={zip code},{country code}

Examples of API calls:

api.openweathermap.org/data/2.5/weather?zip=94040,us

Daily Forecast Parameters:

* coord
  + coord.lon City geo location, longitude
  + coord.lat City geo location, latitude
* weather (more info Weather condition codes)
  + weather.id Weather condition id
  + weather.main Group of weather parameters (Rain, Snow, Extreme etc.)
  + weather.description Weather condition within the group
  + weather.icon Weather icon id
* base Internal parameter
* main
  + main.temp Temperature. Unit Default: Kelvin, Metric: Celsius, Imperial: Fahrenheit.
  + main.feels\_like Temperature. This temperature parameter accounts for the human perception of weather. Unit Default: Kelvin, Metric: Celsius, Imperial: Fahrenheit.
  + main.pressure Atmospheric pressure (on the sea level, if there is no sea\_level or grnd\_level data), hPa
  + main.humidity Humidity, %
  + main.temp\_min Minimum temperature at the moment. This is deviation from current temp that is possible for large cities and megalopolises geographically expanded (use these parameter optionally). Unit Default: Kelvin, Metric: Celsius, Imperial: Fahrenheit.
  + main.temp\_max Maximum temperature at the moment. This is deviation from current temp that is possible for large cities and megalopolises geographically expanded (use these parameter optionally). Unit Default: Kelvin, Metric: Celsius, Imperial: Fahrenheit.
  + main.sea\_level Atmospheric pressure on the sea level, hPa
  + main.grnd\_level Atmospheric pressure on the ground level, hPa
* wind
  + wind.speed Wind speed. Unit Default: meter/sec, Metric: meter/sec, Imperial: miles/hour.
  + wind.deg Wind direction, degrees (meteorological)
* clouds
  + clouds.all Cloudiness, %
* rain
  + rain.1h Rain volume for the last 1 hour, mm
  + rain.3h Rain volume for the last 3 hours, mm
* snow
  + snow.1h Snow volume for the last 1 hour, mm
  + snow.3h Snow volume for the last 3 hours, mm
* dt Time of data calculation, unix, UTC
* sys
  + sys.type Internal parameter
  + sys.id Internal parameter
  + sys.message Internal parameter
  + sys.country Country code (GB, JP etc.)
  + sys.sunrise Sunrise time, unix, UTC
  + sys.sunset Sunset time, unix, UTC
* timezone Shift in seconds from UTC
* id City ID
* name City name
* cod Internal parameter

5 day forecast api example

### **By ZIP code**

##### Description:

Please note if country is not specified then the search works for USA as a default.

##### API call:

api.openweathermap.org/data/2.5/forecast?zip={zip code},{country code}

##### Parameters:

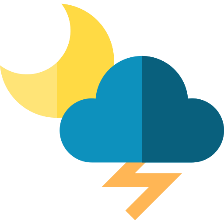
**zip** zip code

##### Examples of API calls:

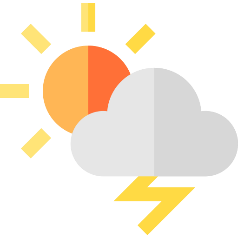
[api.openweathermap.org/data/2.5/forecast?zip=94040,us](http://samples.openweathermap.org/data/2.5/forecast?zip=94040&appid=b6907d289e10d714a6e88b30761fae22)

5 Day Forecast Parameters:

* code Internal parameter
* message Internal parameter
* city
  + city.id City ID
  + city.name City name
  + city.coord
    - city.coord.lat City geo location, latitude
    - city.coord.lon City geo location, longitude
  + city.country Country code (GB, JP etc.)
  + city.timezone Shift in seconds from UTC
* cnt Number of lines returned by this API call
* list
  + list.dt Time of data forecasted, unix, UTC
  + list.main
    - list.main.temp Temperature. Unit Default: Kelvin, Metric: Celsius, Imperial: Fahrenheit.
    - list.main.feels\_like Temperature. This temperature parameter accounts for the human perception of weather. Unit Default: Kelvin, Metric: Celsius, Imperial: Fahrenheit.
    - list.main.temp\_min Minimum temperature at the moment of calculation. This is deviation from 'temp' that is possible for large cities and megalopolises geographically expanded (use these parameter optionally). Unit Default: Kelvin, Metric: Celsius, Imperial: Fahrenheit.
    - list.main.temp\_max Maximum temperature at the moment of calculation. This is deviation from 'temp' that is possible for large cities and megalopolises geographically expanded (use these parameter optionally). Unit Default: Kelvin, Metric: Celsius, Imperial: Fahrenheit.
    - list.main.pressure Atmospheric pressure on the sea level by default, hPa
    - list.main.sea\_level Atmospheric pressure on the sea level, hPa
    - list.main.grnd\_level Atmospheric pressure on the ground level, hPa
    - list.main.humidity Humidity, %
    - list.main.temp\_kf Internal parameter
  + list.weather (more info Weather condition codes)
    - list.weather.id Weather condition id
    - list.weather.main Group of weather parameters (Rain, Snow, Extreme etc.)
    - list.weather.description Weather condition within the group
    - list.weather.icon Weather icon id
  + list.clouds
    - list.clouds.all Cloudiness, %
  + list.wind
    - list.wind.speed Wind speed. Unit Default: meter/sec, Metric: meter/sec, Imperial: miles/hour.
    - list.wind.deg Wind direction, degrees (meteorological)
  + list.rain
    - list.rain.3h Rain volume for last 3 hours, mm
  + list.snow
    - list.snow.3h Snow volume for last 3 hours
  + list.dt\_txt Time of data forecasted, ISO, UTC

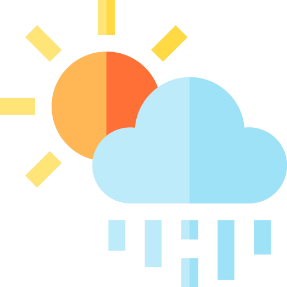
Thunderstorms – 2xx

i. storm-night.png



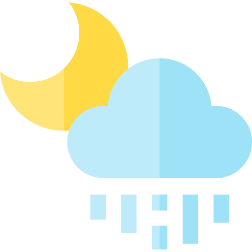
ii. storm-day.png

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Main** | **Description** | **Icon (x = day or night)** |
| 200 | Thunderstorm | thunderstorm with light rain | storm-x.png |
| 201 | Thunderstorm | thunderstorm with rain | storm-x.png |
| 202 | Thunderstorm | thunderstorm with heavy rain | storm-x.png |
| 210 | Thunderstorm | light thunderstorm | storm-x.png |
| 211 | Thunderstorm | thunderstorm | storm-x.png |
| 212 | Thunderstorm | heavy thunderstorm | storm-x.png |
| 221 | Thunderstorm | ragged thunderstorm | storm-x.png |
| 230 | Thunderstorm | thunderstorm with light drizzle | storm-x.png |
| 231 | Thunderstorm | thunderstorm with drizzle | storm-x.png |
| 232 | Thunderstorm | thunderstorm with heavy drizzle | storm-x.png |

 Drizzle – 3xx

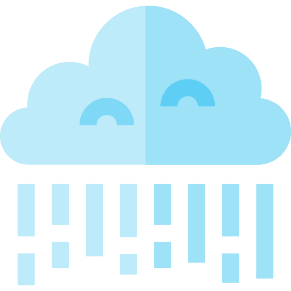
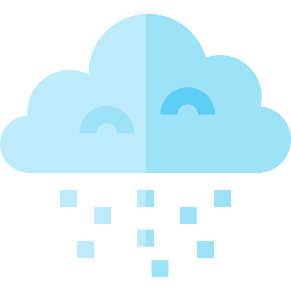
iii. rain-day.png

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Main** | **Description** | **Icon (x = day or night)** |
| 300 | Drizzle | light intensity drizzle | rain-x.png |
| 301 | Drizzle | drizzle | rain-x.png |
| 302 | Drizzle | heavy intensity drizzle | rain-x.png |
| 310 | Drizzle | light intensity drizzle rain | rain-x.png |
| 311 | Drizzle | drizzle rain | rain-x.png |
| 312 | Drizzle | heavy intensity drizzle rain | rain-x.png |
| 313 | Drizzle | shower rain and drizzle | rain-x.png |
| 314 | Drizzle | heavy shower rain and drizzle | rain-x.png |
| 321 | Drizzle | shower drizzle | rain-x.png |



iv. rain-night.png

Rain – 5xx

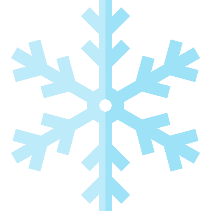
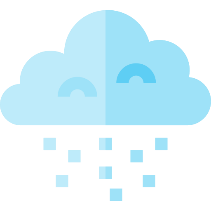


v. snowing.png

vi. raining.png

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Main** | Description | Icon |
| 500 | Rain | light rain | raining.png |
| 501 | Rain | moderate rain | raining.png |
| 502 | Rain | heavy intensity rain | raining.png |
| 503 | Rain | very heavy rain | raining.png |
| 504 | Rain | extreme rain | raining.png |
| 511 | Rain | freezing rain | snowing.png |
| 520 | Rain | light intensity shower rain | raining.png |
| 521 | Rain | shower rain | raining.png |
| 522 | Rain | heavy intensity shower rain | raining.png |
| 531 | Rain | ragged shower rain | raining.png |

Snow – 6xx

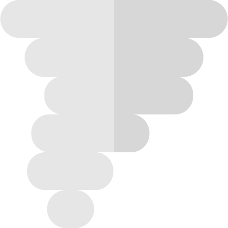
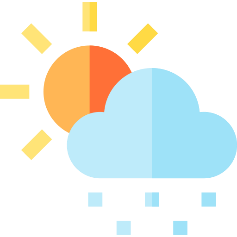
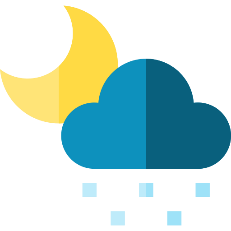


vii. snowing.png

viii. snowflake.png

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Main** | Description | Icon |
| 600 | Snow | light snow | snowflake.png |
| 601 | Snow | Snow | snowflake.png |
| 602 | Snow | Heavy snow | snowflake.png |
| 611 | Snow | Sleet | snowing.png |
| 612 | Snow | Light shower sleet | snowing.png |
| 613 | Snow | Shower sleet | snowing.png |
| 615 | Snow | Light rain and snow | snowing.png |
| 616 | Snow | Rain and snow | snowing.png |
| 620 | Snow | Light shower snow | snowing.png |
| 621 | Snow | Shower snow | snowing.png |
| 622 | Snow | Heavy shower snow | snowing.png |

Atmosphere – 7xx

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ix. tornado.png

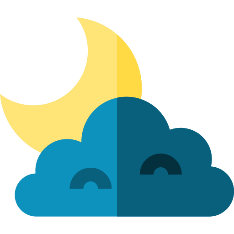
x. dust.png

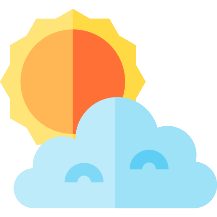
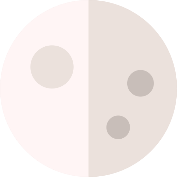
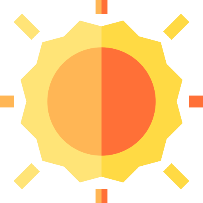
xi. smoke.png

xii. mist-night.png

xiii. mist-day.png

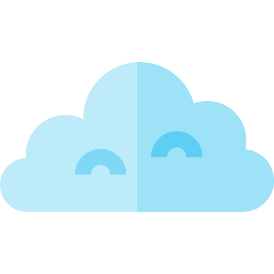
|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Main** | Description | Icon **(x = day or night)** |
| 701 | Mist | Mist | mist-x.png |
| 711 | Smoke | Smoke | smoke.png |
| 721 | Haze | Haze | smoke.png |
| 731 | Dust | sand/ dust whirls | dust.png |
| 741 | Fog | Fog | smoke.png |
| 751 | Sand | Sand | dust.png |
| 761 | Dust | Dust | dust.png |
| 762 | Ash | volcanic ash | dust.png |
| 771 | Squall | Squalls | tornado.png |
| 781 | Tornado | tornado | tornado.png |

Clear – 80x

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**xiv**. sun.png

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Main** | **Description** | **Icon (x = day or night)** |
| 800 | Clear | clear sky | sun.png | full-moon.png |
| 801 | Clouds | few clouds: 11-25% | cloudy-x.png |
| 802 | Clouds | scattered clouds: 25-50% | cloudy-x.png |
| 803 | Clouds | broken clouds: 51-84% | cloudy.png |
| 804 | Clouds | overcast clouds: 85-100% | cloudy.png |



xv. cloudy.png

xvi. full-moon.png

xvii. cloudy-day.png

xviii. cloudy-night.png