Explanatory file

about the **open data API** usage in my project

In this project, I made a single-page responsive weather website.

I have used the **OpenWeatherMap API** for the weather information.

To make it work, we need to call the weather API and load the dynamic data from there.

I have followed several steps during the implementation of this project:

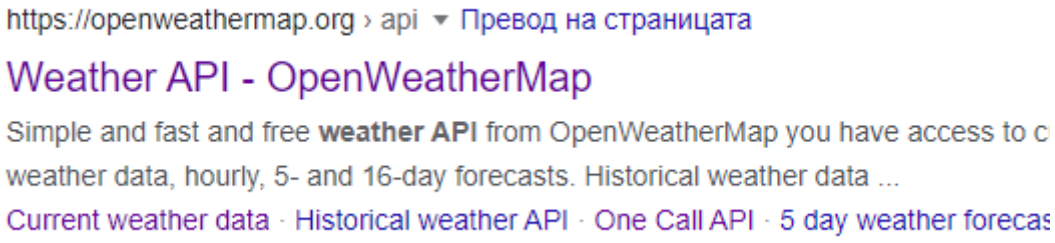
First, I have created my html file, after I`ve styled it with css properties and finally to make it dynamic I`ve created a javascript file where I have used the API from the OpenWeatherMap.

How I have inserted the API into my project?

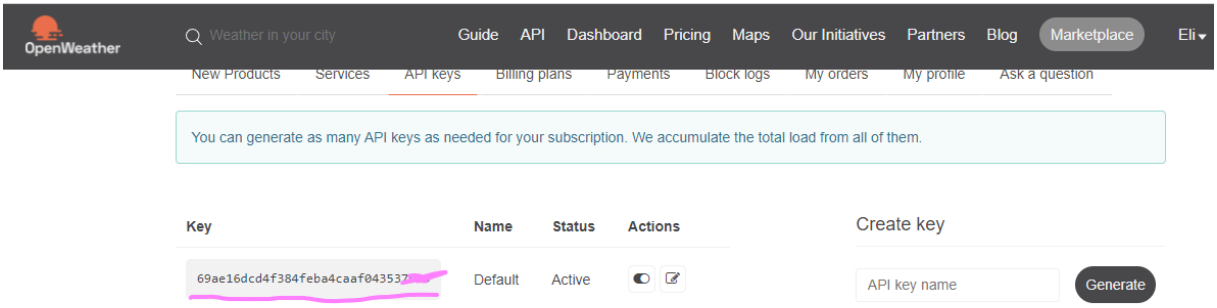
In the javascript file I have loaded the html elements:

```
const currentweatheritemsEl = document.getElementById('current-weather-
items');
const timezone = document.getElementById('time-zone');
const countryEl = document.getElementById('country');
const weathercastEl = document.getElementById('weather-forecast');
const currentTempEl = document.getElementById('current-temp');
```

After that in the website of the openweathermap…



After signing up with an email we have got our **API key**, we just copy and paste it into our javascript file.

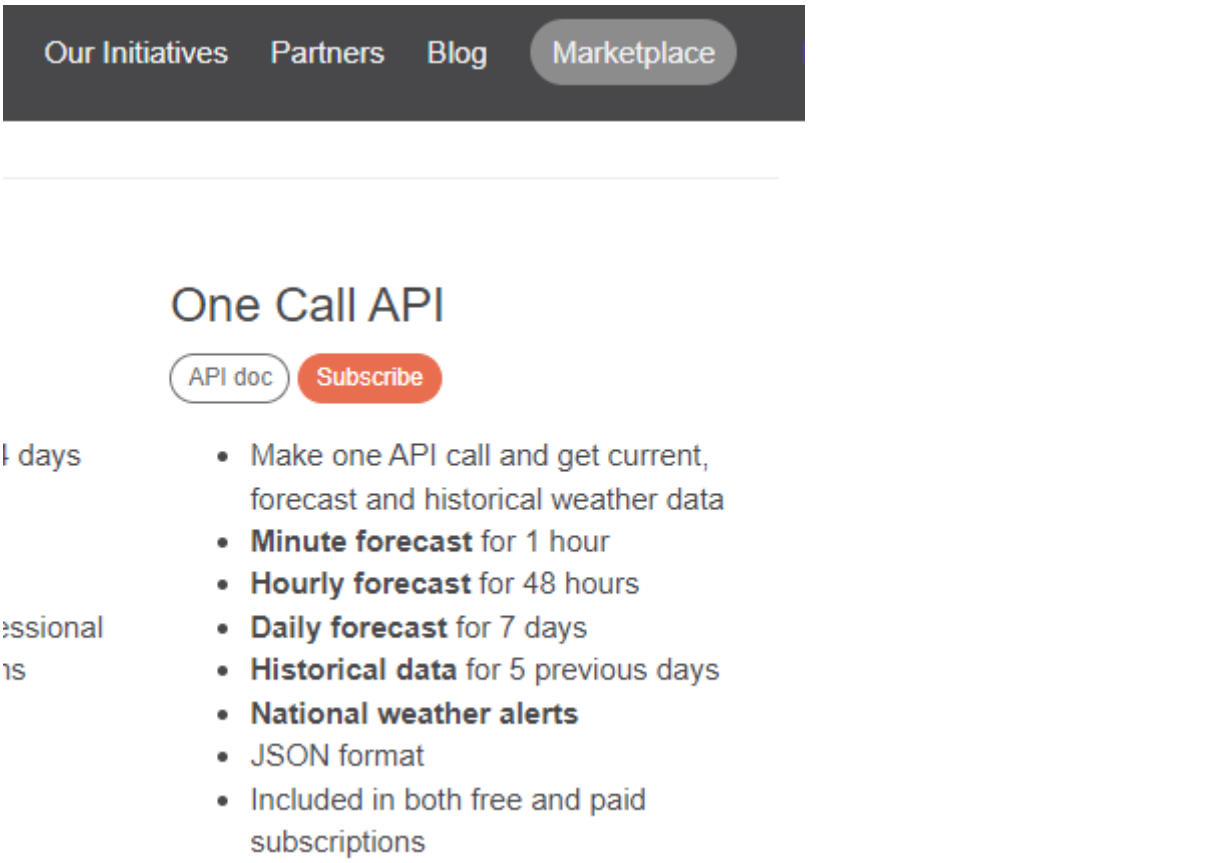


I set the API value in a variable, that I will need for all the calls I will do in my project.

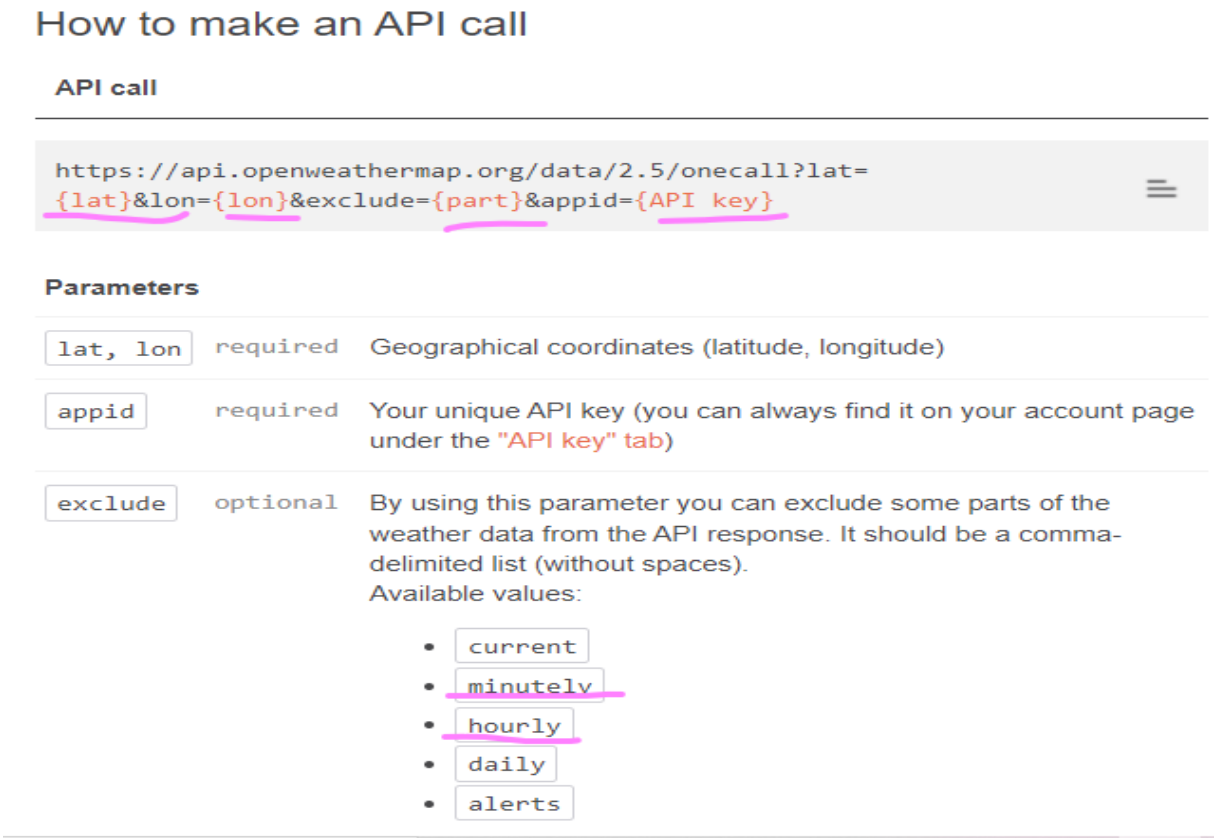
```
const API_KEY = "6366e0ddd90f543bc07b185cd8fc14e9";
```

In the API portion, we can see all the documentation corresponding to the Weather API.

The one I have used is One Call API. This API has the daily forecast, the current forecast, ect..a lot of data just in one single API.



The URL to call the API we copy and paste in our javascript file.



We need the **latitude{lat}**, the **longitude{lon}** and in the {**part}** I will exclude the minutely and hourly data that I don`t need.

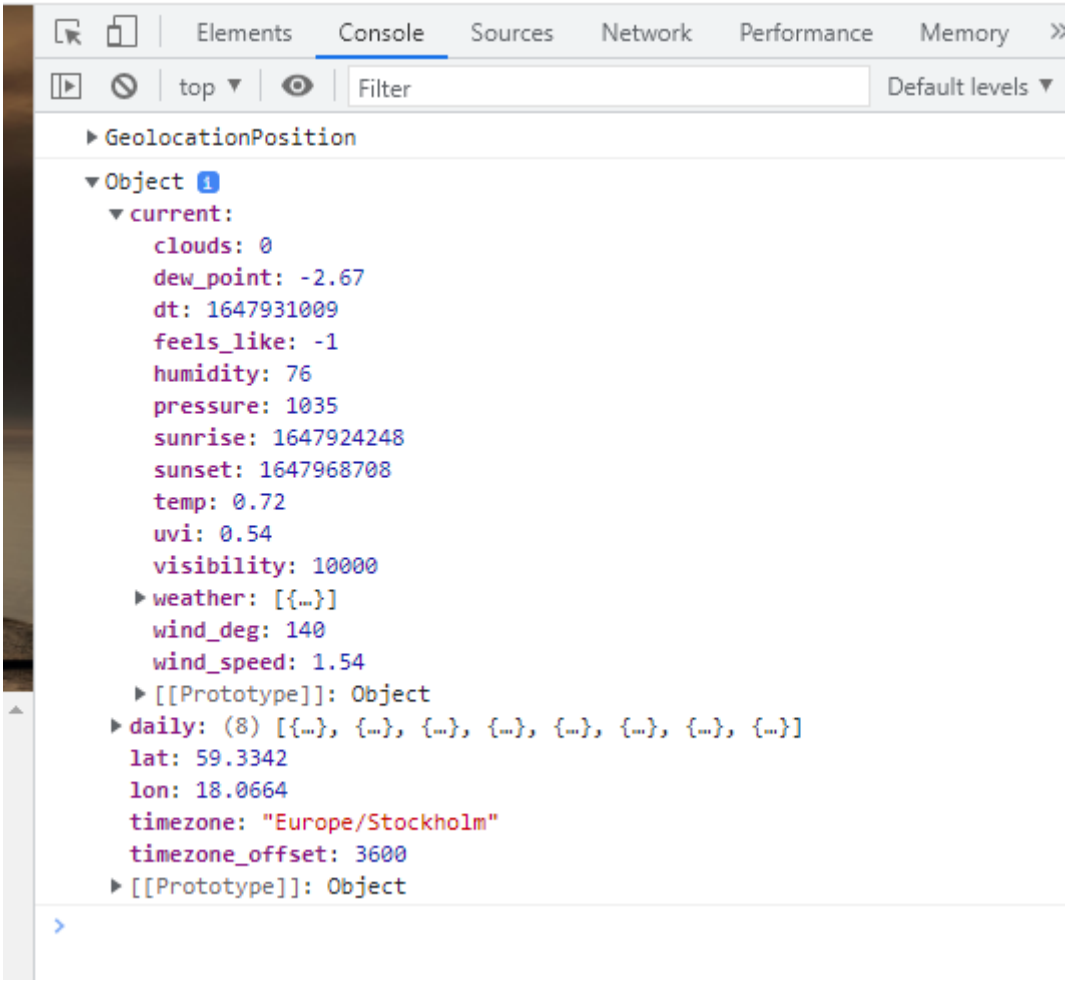
To call the API I used a function and to get the longitude and latitude I used the navigator to get the geolocation and based on the geolocation I have done the API call.

```
getWeatherData();
function getWeatherData () {
    navigator.geolocation.getCurrentPosition((success)  => {
        console.log(success);
        let {latitude, longitude} = success.coords;

       fetch(`https://api.openweathermap.org/data/2.5/onecall?lat=${lati
tude}&lon=${longitude}&exclude=hourly,minutely&units=metric&appid=${API_
KEY}`).then(res => res.json()).then(data => {

        console.log(data);
        showWeatherData(data);
       })
    })
}
```

After this API call, we have got a response that we can inspect:



We have got the timezone, the daily data, the current data,etc..

I have just used this data to load all the data to my project. I have passed all the data to my javascript file using a function:

```
      showWeatherData(data);
       })
    })
}
```

To show the weather data for this section,

I used this function:

```
function showWeatherData(data) {
    let {humidity, pressure, sunrise, sunset, wind_speed} =
data.current;
    timezone.innerHTML = data.timezone;
    countryEl.innerHTML = data.lat + 'N' + ' ' + data.lon + 'E';

timezone.innerHTML = data.timezone;
countryEl.innerHTML = data.lat + 'N' + data.lon + 'E'

    currentweatheritemsEl.innerHTML =

 `<div class="weather-item">
    <div>Humidity</div>
    <div>${humidity}%</div>
</div>
<div class="weather-item">
    <div>Pressure</div>
    <div>${pressure}</div>
</div>
<div class="weather-item">
    <div>Wind speed</div>
    <div>${wind_speed}</div>
</div>
<div class="weather-item">
    <div>Sunrise</div>
    <div>${window.moment(sunrise* 1000).format('HH:mm a')}</div>
</div>
<div class="weather-item">
    <div>Sunset</div>
    <div>${window.moment(sunset* 1000).format('HH:mm a')}</div>
</div>`;
```

!!! To format the sunrise and sunset values I have used the moment package

For this part of my website,

I have used this function:

```
let otherDayForcast = ''
data.daily.forEach((day, i) => {
    if(i == 0){
currentTempEl.innerHTML = `
<img
src="http://openweathermap.org/img/wn/${day.weather[0].icon}@2x.png"
alt="weather icon" class="w-icon">
<div class="other">
<div class="day">${window.moment(day.dt* 1000).format('ddd')}</div>
<div class="temp">Night - ${day.temp.night}&#176 C</div>
<div class="temp">Day - ${day.temp.day}&#176 C</div>
</div>
`

    }else{

otherDayForcast += `
<div class="weather-forecast-item">
<div class="day">${window.moment(day.dt* 1000).format('ddd')}</div>
    <img
src="http://openweathermap.org/img/wn/${day.weather[0].icon}@2x.png"
alt="weather icon" class="w-icon">
    <div class="temp">Night - ${day.temp.night}&#176 C</div>
    <div class="temp">Day - ${day.temp.day}&#176 C</div>
</div> `

    }

})

weathercastEl.innerHTML = otherDayForcast;
}
```

Developers use an open API to gain access to certain features of a software program that would be difficult to access without taking the time to develop a large amount of code.