There are hundreds of APIs out there for doing almost anything you could imagine. Some are better than others, and some are definitely more useful than others, finding an api is not an easy job, and finding a free api is more difficult, After doing lots of search I got an api for oxford dictionary, they had very clear description for how to use api , the api requested header in the http request, after searching I figured it out how to pass header with http request, but it did not go well for me as I was able to get json response when tried in postman but unfortunately the api was not accessible from chrome browser I got an error saying  No 'Access-Control-Allow-Origin', after consulting with professor I got to know the request was not made by web server instead it was made by chrome which the api doesn’t treat as authentic source, so I decided to go with some other api.

My API search started again and suddenly it came to my mind I can create a weather app which can tell current weather and forecast weather for any city. Luckily I got a free API and a free key with limited request per day, the API from openweathermap is really a great API and very easy to use, using API we can access current weather data for any location on Earth including over 200,000 cities! Current weather is frequently updated based on global models and data from more than 40,000 weather stations. Data is available in JSON, XML, or HTML format. It provide lots of option to get the city weather by city name, city id, by geographic co – ordinates and many more, I decided to take a city name as input parameter to show current weather for given city, api responds JSON data with temperature, latitude, longitude, wind speed, etc. Here I faced another challenge with data it was having different format which was not easily understandable to end user so I did conversion for almost all field which an end user can understand, for ex the sunset and sunrise time was in Unix time format I converted it to local time format, for temperature default unit was Kelvin, converted it to Celsius, wind speed default unit meter/sec, converted it to km/hr.

I tried my best to explore the openweathermap API and I was able to create an app which shows current weather and weather forecast for any city around the world.

More API Details

Api Name: openweathermap

Api Documentation link: <https://openweathermap.org/current>

Api HTTP link: [api.openweathermap.org/data/2.5/weather?q=London](http://samples.openweathermap.org/data/2.5/weather?q=London,uk&appid=b6907d289e10d714a6e88b30761fae22)