Fidenz - Backend Assignment

We highly encourage you to **follow the instructions accordingly** to increase the success rate of getting selected for the training program.

> **Part 1:** First we want you to implement a simple **web/api application** to retrieve and display the weather information

Output: Web application which will retrieve and display the weather information.

Web Application (or API Application) to Display Weather Information (4 Hours)

Read the **cities.json** file and extract the 'CityCode' codes from it. Using CityCode as reference then you will call openweathermap.org weather APIs to get the latest weather information and list its Browser.

Below are the steps you have to follow in order to complete part one of your assignment. Suggested time to complete this part is **4 Hours**. You are free to use any resource and library files as needed.

Step 1: Extract City codes from **cities.json** file and load it into an array.
(Link to download cities.json:
https://drive.google.com/file/d/1RsprTXnwRRKq64jo5zJFk-_ycXVf3S7M/view?usp=sharing)

Step 2: Referencing the City Codes, you now have to call openweathermap.org RESTful APIs to get the latest weather information from the servers. First, you may need to register with the openweathermap.org to access the APIs.

To get the weather info call the following API method (**Note:** You may need to register with openweathermap.org to access the APIs.)

> API Method
> GET http://api.openweathermap.org/data/2.5/group
>
> Parameters
> **id** City ID , **units** unit type (ex; metric), **appid** API Token

Example request
https://samples.openweathermap.org/data/2.5/group?id=524901,703448,2643743&units=metric&appid=439d4b804bc8187953eb36d2a8c26a02

```
GET
/data/2.5/group?id=524901,703448,2643743&units=metric&appid=439d4b804bc8187953eb36d2a8c26a02
HTTP/1.1
Host: api.openweathermap.org
Cache-Control: no-cache
```

Step 3: After getting the latest weather information, you will list name, description, and temp information on the screen with a good looking UI design. Below is a sample object return from the API, you will only have to show/extract content highlighted in yellow;


```
"coord":{
  "lon":37.62,
  "lat":55.75
},
"sys":{
  "type":1,
  "id":7323,
  "message":0.044,
  "country":"RU",
  "sunrise":1457582106,
  "sunset":1457623444
},
"weather":[
  {
    "id":800,
    "main":"Clear",
    "description":"Sky is Clear",
    "icon":"01d"
  }
],
"main":{
  "temp":7.75,
  "pressure":1026,
  "humidity":57,
  "temp_min":7,
  "temp_max":9
},
"visibility":10000,
"wind":{
  "speed":3,
  "deg":130
},
"clouds":{
  "all":0
},
```

"dt":1457609400,
"id":524901,
"name":"Moscow"

Step 3: Implement a data caching mechanism in your application by storing data coming from openweathermap.org and serving it when the user requests the same data in subsequent requests. Caching of a particular data should expire in 5 minutes.

Special Note: You can create a repository for this application on Github/Gitlab and share with us (careers@fidenz.com,academy@fidenz.com) once you've completed the assignment.