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# **Qutuhah'21 Coding Challenge**

**Grade 9-12**

**Age 14-17**

**24<sup>th</sup> October'21 - 30<sup>th</sup> October'21**

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## Ever imagined...How these news channel do weather forecasting for all cities...

- Do you want to create a project that tell you current weather report and future weather report for different cities ?
  - Anybody Can Code!!!
    - Problem Solving
      - How should it be done
    - Expression/ Coding
      - How can I make it happen through coding

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So how these new channels get weather report of all cities....

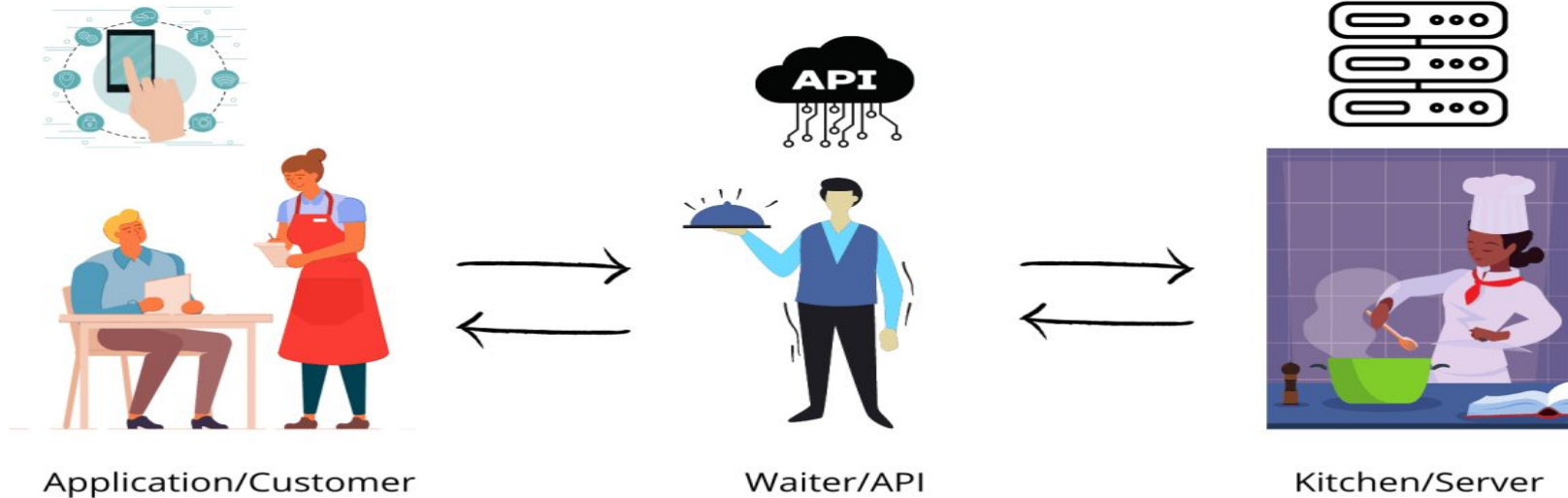
Through programs..

Have you heard about APIs...?

API is the acronym for Application Programming Interface, which is a software intermediary that allows two applications to talk to each other.

# Do you know how these API's work...

## What is API ?



Here , The waiter is the messenger – or API – that takes your request or order and tells the kitchen – the system – what to do

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Would you like to make a  
Weather App using API?

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# Algorithms

**Get the API of  
weather and it  
access token**



**Send Request  
to API**



**Get Response  
in Json format**

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## Step 1

**Get the API of  
weather and it  
access token**

Step1 :-Go to the weather API

URL:-<https://openweathermap.org/api>

Step2:- After making your account you have to login into Weather API URL

Step3:-Once you are successfully login you have to choose API from navigation bar to see all API available

Step4:-For getting access token You see your name in navigation bar and from there open that drop down and choose 'My API Keys' Option

Step5:- You will get a default API Key for fetching any weather detail from above weather URL



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## Step 2

### Send Request to API

-Environment- IDE (Google Colab) and the Libraries...General Purpose Programming Language

#### Libraries:-

- pip install requests

#### Let's do it by coding:-

```
#import requests library  
import requests
```

#### #Send request to API

```
def getCurrentWeather():  
    city = input("Enter City Name to see it's weather detail")  
    api =  
    "https://api.openweathermap.org/data/2.5/weather?q=" +  
    city+"&appid=06c921750b9a82d8f5d1294e1586276f"  
    j
```

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#Get response from API in json format and then get some weather information from API

## Step 3

**Get Response in  
Json format**

```
def getCurrentWeather():  
    city = input("Enter City Name to see it's weather detail")  
    api =  
    "https://api.openweathermap.org/data/2.5/weather?q=" +  
    city+"&appid=06c921750b9a82d8f5d1294e1586276f"  
    json_data = requests.get(api).json()  
    description = str(json_data["weather"][0]["description"])  
    print('Description',description)  
    temp = str(json_data['main']['temp'] - 273.15)  
    print('Temperature',temp)  
    pressure = str(json_data['main']['pressure'])  
    print('Pressure',pressure)  
    humidity = str(json_data['main']['humidity'])  
    print('Humidity',humidity)
```

```
getCurrentWeather()
```

# Output

```
Enter City Name to see it's weather detailDubai  
Description clear sky  
Temperature 27.790000000000002  
Pressure 1012  
Humidity 65
```

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## It's your turn now...

- **Problem Statement:-** In this project you have to make a weather app that can show future weather details using weather API
- **Weather Api link:-**<https://openweathermap.org/api>
- **Future weather API :-**<https://openweathermap.org/forecast5>
- **Tutorial-**Follow the steps shown in Demo example for current weather prediction. In the similar way you have to perform all steps for future weather prediction on the basis of city Name.
- **Submit a 2 minute running video of your project in execution at the email address [giis\\_clevered@clevered.com](mailto:giis_clevered@clevered.com)**

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## Reach Us..

- For any Questions/Concerns/Doubts/Suggestions, please feel free to reach us at:
- Telegram-<https://t.me/joinchat/QnE8aYlwvqA1MTkx>
- WhatsApp-<https://chat.whatsapp.com/Fq8dz0PZdTgFxVH7zJxz4d>

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**Happy Coding!!!!**

