Assignment No-2

CODE:-

```
# Install necessary libraries (only needed in Colab)
!pip install requests matplotlib seaborn

import requests
import matplotlib.pyplot as plt
import seaborn as sns

# Your OpenWeatherMap API key here
API_KEY ='389845a1152038fb5f02c4023210a487'  # <-- Replace with your
actual API key

# Location coordinates (example: New York City)
latitude = 40.7128
longitude = -74.0060

# API URL with units=metric for Celsius
url =
f"https://api.openweathermap.org/data/2.5/weather?lat={latitude}&lon={long
itude}&appid={API_KEY}&units=metric"

# Call the API
response = requests.get(url)
data = response.json()

# Check if request was successful
if response.status_code == 200:
    # Extract key weather info
    temp = data['main']['temp']
    temp_min = data['main']['temp_min']
    temp_max = data['main']['temp_max']
    humidity = data['main']['humidity']
    wind_speed = data['wind']['speed']
    weather_desc = data['weather'][0]['description']
```

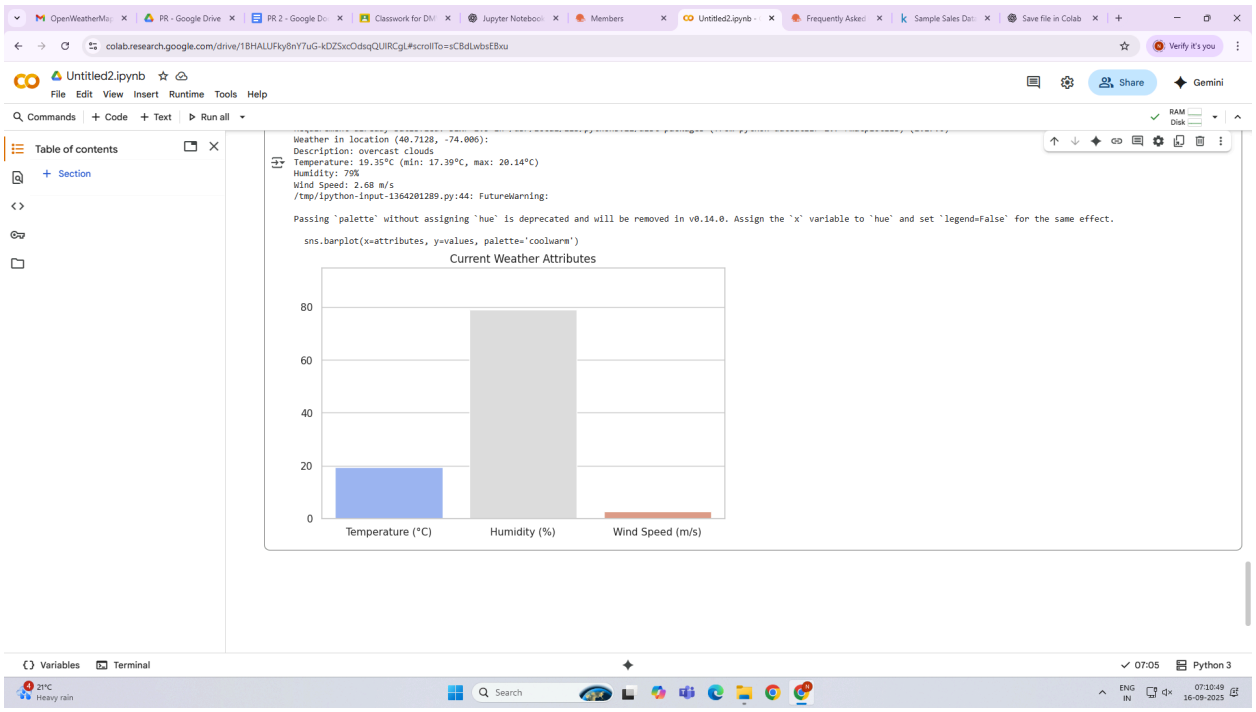
```
    # Print weather info
    print(f"Weather in location ({latitude}, {longitude}):")
    print(f"Description: {weather_desc}")
    print(f"Temperature: {temp}°C (min: {temp_min}°C, max: {temp_max}°C)")
    print(f"Humidity: {humidity}%")
    print(f"Wind Speed: {wind_speed} m/s")

    # Visualization
    attributes = ['Temperature (°C)', 'Humidity (%)', 'Wind Speed (m/s)']
    values = [temp, humidity, wind_speed]

    plt.figure(figsize=(8,5))
    sns.barplot(x=attributes, y=values, palette='coolwarm')
    plt.title('Current Weather Attributes')
    plt.ylim(0, max(values)*1.2)
    plt.show()

else:
    print("Failed to retrieve data. Error code:", response.status_code)
    print("Message:", data.get("message", "No message available"))
```

OUTPUT : –


Untitled2.ipynb
File Edit View Insert Runtime Tools Help
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Commands + Code + Text Run all
Table of contents
+ Section
Weather in location (40.7128, -74.006):
Description: overcast clouds
Temperature: 19.35°C (min: 17.39°C, max: 20.14°C)
Humidity: 79%
Wind Speed: 2.68 m/s
/tmp/ipython-input-1364201289.py:44: FutureWarning:
Passing `palette` without assigning `hue` is deprecated and will be removed in v0.14.0. Assign the `x` variable to `hue` and set `legend=False` for the same effect.
sns.barplot(x=attributes, y=values, palette='coolwarm')
Current Weather Attributes
80
60
40
20
0
Temperature (°C)
Humidity (%)
Wind Speed (m/s)
Variables
Terminal
07:05
Python 3