**INTRODUCTION :-**

**Step 1: Install the Required Libraries**

**To create this weather app, you'll need to install the requests library. You can install it using pip:**

**bash**

**VerifyOpen In EditorEditCopy code**

**1pip install requests**

**Step 2: Get Your OpenWeatherMap API Key**

**To use the OpenWeatherMap API, you'll need to get an API key. You can get one for free by creating an account on the OpenWeatherMap website.**

**Step 3: Create a New Python File**

**Create a new Python file and import the required libraries:**

**python**

**VerifyOpen In EditorEditCopy code**

**1from tkinter import \***

**2import requests**

**3import json**

**Step 4: Define the Function to Get Weather Data**

**Define a function get\_weather\_data that takes the API key and city name as arguments and returns the weather data:**

**python**

**VerifyOpen In EditorEditCopy code**

**1def get\_weather\_data(api\_key, city):**

**2 base\_url = f"http://api.openweathermap.org/data/2.5/weather?q={city}&appid={api\_key}&units=metric"**

**3 response = requests.get(base\_url)**

**4 weather\_data = response.json()**

**5 return weather\_data**

**Step 5: Define the Function to Show Weather**

**Define a function show\_weather that gets the city name from the input field, calls the get\_weather\_data function, and displays the weather data:**

**python**

**VerifyOpen In EditorEditCopy code**

**1def show\_weather():**

**2 api\_key = "YOUR\_API\_KEY" # Replace with your OpenWeatherMap API key**

**3 city = city\_value.get()**

**4**

**5 try:**

**6 weather\_data = get\_weather\_data(api\_key, city)**

**7**

**8 if weather\_data["cod"] != "404":**

**9 main\_data = weather\_data["main"]**

**10 temperature = main\_data["temp"]**

**11 humidity = main\_data["humidity"]**

**12 weather\_description = weather\_data["weather"][0]["description"]**

**13**

**14 weather\_now = Label(root, text = "The Weather is: ", font = 'arial 12 bold').pack(pady=10)**

**15 tfield = Text(root, width=46, height=10)**

**16 tfield.pack()**

**17 tfield.insert(INSERT, f"Weather in {city}:")**

**18 tfield.insert(INSERT, f"\nTemperature: {temperature}°C")**

**19 tfield.insert(INSERT, f"\nHumidity: {humidity}%")**

**20 tfield.insert(INSERT, f"\nWeather Description: {weather\_description}")**

**21 else:**

**22 weather\_now = Label(root, text = "The Weather is: ", font = 'arial 12 bold').pack(pady=10)**

**23 tfield = Text(root, width=46, height=10)**

**24 tfield.pack()**

**25 tfield.insert(INSERT, f"City not found. Please try again.")**

**26 except requests.exceptions.RequestException as e:**

**27 weather\_now = Label(root, text = "The Weather is: ", font = 'arial 12 bold').pack(pady=10)**

**28 tfield = Text(root, width=46, height=10)**

**29 tfield.pack()**

**30 tfield.insert(INSERT, f"An error occurred: {e}")**

**31 except Exception as e:**

**32 weather\_now = Label(root, text = "The Weather is: ", font = 'arial 12 bold').pack(pady=10)**

**33 tfield = Text(root, width=46, height=10)**

**34 tfield.pack()**

**35 tfield.insert(INSERT, f"An unexpected error occurred: {e}")**

**Step 6: Create the Tkinter GUI**

**Create the Tkinter GUI with an input field, a button, and a text field to display the weather data:**

**python**

**VerifyOpen In EditorEditCopy code**

**1root = Tk()**

**2root.geometry("400x400")**

**3root.resizable(0,0)**

**4root.title("Weather App - AskPython.com")**

**5**

**6city\_head= Label(root, text = 'Enter City Name', font = 'Arial 12 bold').pack(pady=10)**

**7city\_value = StringVar()**

**8inp\_city = Entry(root, textvariable = city\_value, width = 24, font='Arial 14 bold').pack()**

**9**

**10Button(root, command = show\_weather, text = "Check Weather", font="Arial 10", bg='lightblue', fg='black', activebackground="teal", padx=5, pady=5 ).pack(pady= 20)**

**11**

**12root.mainloop()**

**Step 7: Run the App**

**Run the app by executing the Python file. Enter a city name in the input field and click the "Check Weather" button to display the weather data.**

**That's it! You've created a simple weather app using Tkinter and OpenWeatherMap API.**