# ExperimentNo:10

**Aim:**-Design weather app using Flask.

# Theory:-

Flask is a lightweight framework written in Python. It is lightweight because it does not require particular tools or libraries and allows rapid web development. We will create a weather app using flask as a web framework.This weather web app will provide current weather updates of cities searched.

## Basic setup:-

* Create a file andnameitasapp.py
* Create html file as feedback.html and put it in templates folder
* Create feedback.css and put it in static/css folder

# Code:

## Filename:-app.py

## *from flask import Flask, render\_template, request*

## *import requests*

## *app = Flask(\_\_name\_\_)*

## *# OpenWeatherMap API Key (Replace with your own key)*

## *API\_KEY = "your\_api\_key"*

## *BASE\_URL = "https://api.openweathermap.org/data/2.5/weather"*

## *@app.route("/", methods=["GET", "POST"])*

## *def index():*

## *weather\_data = None*

## *error\_message = None*

## *if request.method == "POST":*

## *city = request.form.get("city")*

## *if city:*

## *params = {"q": city, "appid": API\_KEY, "units": "metric"}*

## *response = requests.get(BASE\_URL, params=params)*

## *if response.status\_code == 200:*

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

## *else:*

## *error\_message = "City not found! Please enter a valid city name."*

## *return render\_template("index.html", weather=weather\_data, error=error\_message)*

## *if \_\_name\_\_ == "\_\_main\_\_":*

## *app.run(debug=True)*

## Filename:-index.html

*<!DOCTYPE html>*

*<html lang="en">*

*<head>*

*<meta charset="UTF-8">*

*<meta name="viewport" content="width=device-width, initial-scale=1.0">*

*<title>Weather App</title>*

*<link rel="stylesheet" href="{{ url\_for('static', filename='style.css') }}">*

*</head>*

*<body>*

*<div class="container">*

*<h1>Weather App</h1>*

*<form method="POST">*

*<input type="text" name="city" placeholder="Enter city name" required>*

*<button type="submit">Get Weather</button>*

*</form>*

*{% if error %}*

*<p class="error">{{ error }}</p>*

*{% endif %}*

*{% if weather %}*

*<div class="weather-info">*

*<h2>{{ weather.name }}, {{ weather.sys.country }}</h2>*

*<p>Temperature: {{ weather.main.temp }}°C</p>*

*<p>Weather: {{ weather.weather[0].description }}</p>*

*<p>Humidity: {{ weather.main.humidity }}%</p>*

*<p>Wind Speed: {{ weather.wind.speed }} m/s</p>*

*</div>*

*{% endif %}*

*</div>*

*</body>*

*</html></html>*

**Filename:-style.css**

body {

font-family: Arial, sans-serif;

text-align: center;

background-color: #f4f4f4;

}

.container {

margin-top: 50px;

}

input {

padding: 10px;

width: 250px;

margin-right: 10px;

}

button {

padding: 10px 20px;

background-color: #007BFF;

color: white;

border: none;

cursor: pointer;

}

button:hover {

background-color: #0056b3;

}

.weather-info {

margin-top: 20px;

padding: 10px;

background: white;

display: inline-block;

border-radius: 5px;

}

.error {

color: red;

margin-top: 10px;

}

# Output:

