

You are my coding assistant. I have an internship assignment with three parts. Please help me build working code and documentation. Follow the steps carefully.

### Part 1: Web Utility

Build a simple Weather Data Viewer.

Requirements:

A web page where a user can input/select a city.

Fetch current weather using a free API (like OpenWeatherMap).

Display temperature, humidity, and wind speed.

Add a simple dashboard layout with some styling.

Bonus: Plot a graph (e.g., temperature changes or probability of rain) if possible using a free API endpoint.

Make sure the code has separate files: HTML, CSS, and JS.

And give me whole code here separate for html, css and js

### ChatGpt –

Great — I'll help you build **Part 1: Weather Data Viewer** with a clean separation of HTML, CSS, and JavaScript.

We'll use the **OpenWeatherMap API** (free with signup, you'll get an API key).

Here's the complete working prototype code:

#### **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 Data Viewer</title>

  <link rel="stylesheet" href="style.css">

  <!-- Chart.js for plotting graphs -->
```

```
<script src="https://cdn.jsdelivr.net/npm/chart.js"></script>
</head>
<body>
  <div class="container">
    <h1>Weather Data Viewer</h1>
    <div class="search-box">
      <input type="text" id="cityInput" placeholder="Enter city name">
      <button onclick="getWeather()">Get Weather</button>
    </div>
    <div id="weatherInfo" class="weather-card">
      <h2 id="cityName">City: -</h2>
      <p id="temperature">Temperature: - °C</p>
      <p id="humidity">Humidity: - %</p>
      <p id="wind">Wind Speed: - m/s</p>
    </div>
    <div class="chart-container">
      <canvas id="tempChart"></canvas>
    </div>
  </div>
  <script src="script.js"></script>
</body>
</html>
```

## **style.css**

```
body {  
    font-family: Arial, sans-serif;  
    background: linear-gradient(to right, #74ebd5, #9face6);  
    margin: 0;  
    padding: 0;  
}  
  
.container {  
    max-width: 600px;  
    margin: 50px auto;  
    background: white;  
    padding: 20px;  
    border-radius: 15px;  
    box-shadow: 0 4px 10px rgba(0,0,0,0.2);  
    text-align: center;  
}  
  
h1 {  
    color: #333;  
    margin-bottom: 20px;  
}  
  
.search-box {  
    margin-bottom: 20px;  
}  
  
input {  
    padding: 10px;
```

```
width: 70%;  
  
border-radius: 10px;  
border: 1px solid #ccc;  
}  
  
button {  
  padding: 10px 15px;  
  border: none;  
  border-radius: 10px;  
  background-color: #007BFF;  
  color: white;  
  cursor: pointer;  
}  
  
button:hover {  
  background-color: #0056b3;  
}  
  
.weather-card {  
  margin: 20px 0;  
  padding: 15px;  
  border-radius: 10px;  
  background-color: #f0f8ff;  
}  
  
.chart-container {  
  margin-top: 20px;  
}
```

## script.js

```
const apiKey = "YOUR_API_KEY"; // Replace with your OpenWeatherMap
API key

let chart;

// Fetch current weather + forecast

async function getWeather() {

  const city = document.getElementById("cityInput").value || "Pune"; //
default city

  try {

    // Current weather

    const weatherRes = await fetch(

`https://api.openweathermap.org/data/2.5/weather?q=${city}&units=metri
c&appid=${apiKey}`

    );

    const weatherData = await weatherRes.json();

    document.getElementById("cityName").innerText = ` City:
${weatherData.name}` ;

    document.getElementById("temperature").innerText = ` Temperature:
${weatherData.main.temp} °C` ;

    document.getElementById("humidity").innerText = ` Humidity:
${weatherData.main.humidity} %` ;

    document.getElementById("wind").innerText = ` Wind Speed:
${weatherData.wind.speed} m/s` ;
```

```

// 5-day forecast (3-hour interval)

const forecastRes = await fetch(

  `https://api.openweathermap.org/data/2.5/forecast?q=${city}&units=metric&appid=${apiKey}`

);

const forecastData = await forecastRes.json();

// Take next 8 data points (24 hours)

const labels = forecastData.list.slice(0, 8).map(item =>
  new Date(item.dt_txt).getHours() + ":00"
);

const temps = forecastData.list.slice(0, 8).map(item => item.main.temp);

renderChart(labels, temps);
} catch (error) {
  alert("City not found or API error!");
  console.error(error);
}
}

// Render temperature chart

function renderChart(labels, temps) {
  const ctx = document.getElementById("tempChart").getContext("2d");
  if (chart) chart.destroy(); // Clear old chart

```

```
chart = new Chart(ctx, {  
  type: "line",  
  data: {  
    labels: labels,  
    datasets: [{  
      label: "Temperature (°C)",  
      data: temps,  
      borderColor: "blue",  
      backgroundColor: "rgba(0, 123, 255, 0.3)",  
      fill: true,  
      tension: 0.3  
    }]  
  },  
  options: {  
    responsive: true,  
    plugins: {  
      legend: { display: true }  
    }  
  }  
});  
}
```

**Features included:**

- Input city name.
- Fetch weather data from OpenWeatherMap.
- Show **temperature, humidity, wind speed**.
- Dashboard-style card layout.
- Bonus: **line chart** of temperature forecast for the next 24 hours.

**Setup steps:**

1. Sign up on OpenWeatherMap and get a free API key.
2. Replace YOUR\_API\_KEY in script.js with your key.
3. Open index.html in a browser.