COLLEGE CODE 9518

COLLEGE NAME Nellai college of engineering

DEPARTMENT

STUDENT NM-ID aut2395180105

ROLL NO 951823104034,01,46,59,61

DATE 13/10/2025

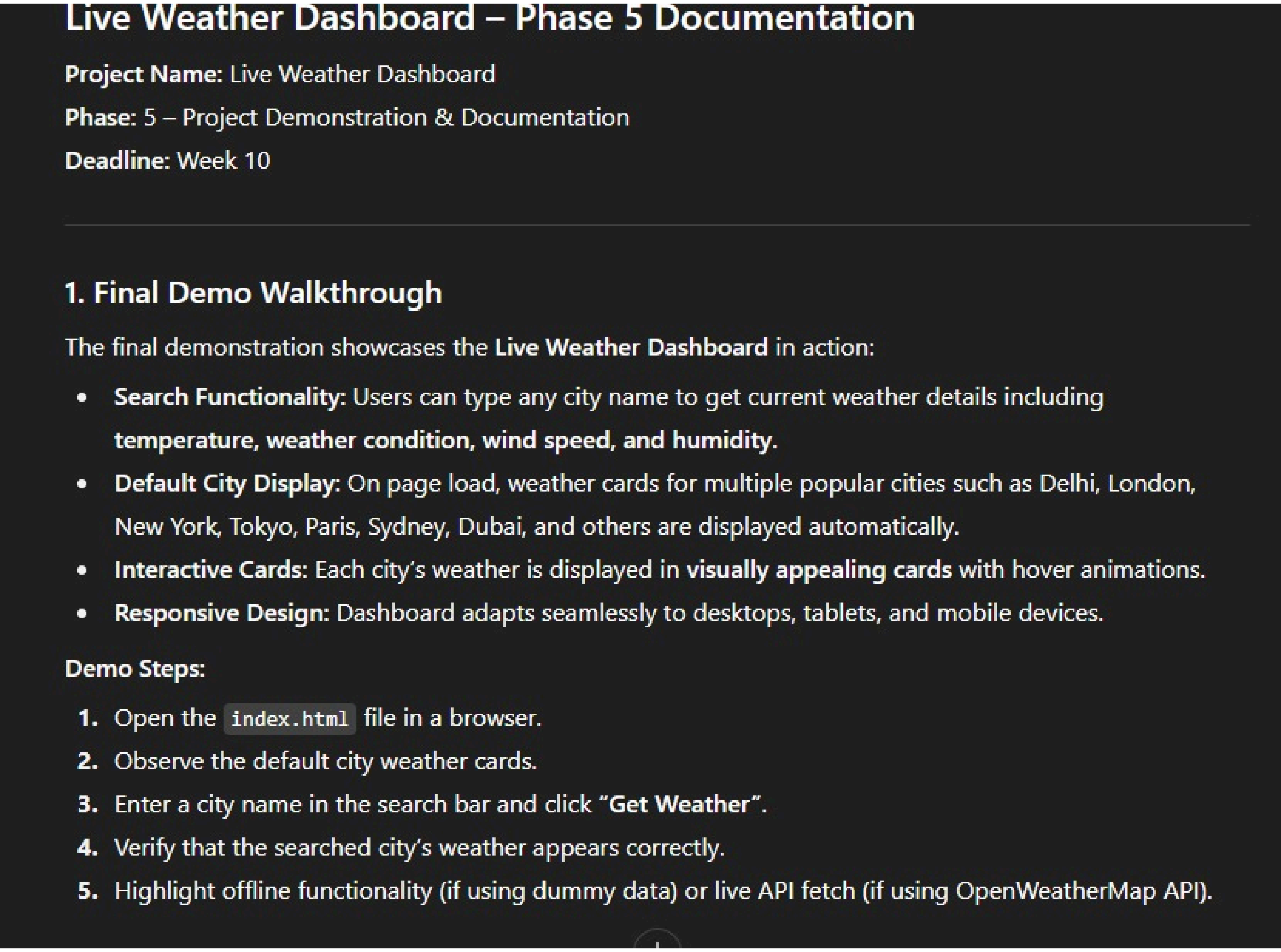
Completed the project named as Phase

TECHNOLOGY PROJECT NAME : Front end technology
Live weather dashboard

SUBMITTED BY,

NAME Shafie, sharuk, sankar,
Aathif, muthu vignesh

MOBILE NO 8870130667



Live Weather Dashboard – Phase 5 Documentation

Project Name: Live Weather Dashboard

Phase: 5 – Project Demonstration & Documentation

Deadline: Week 10

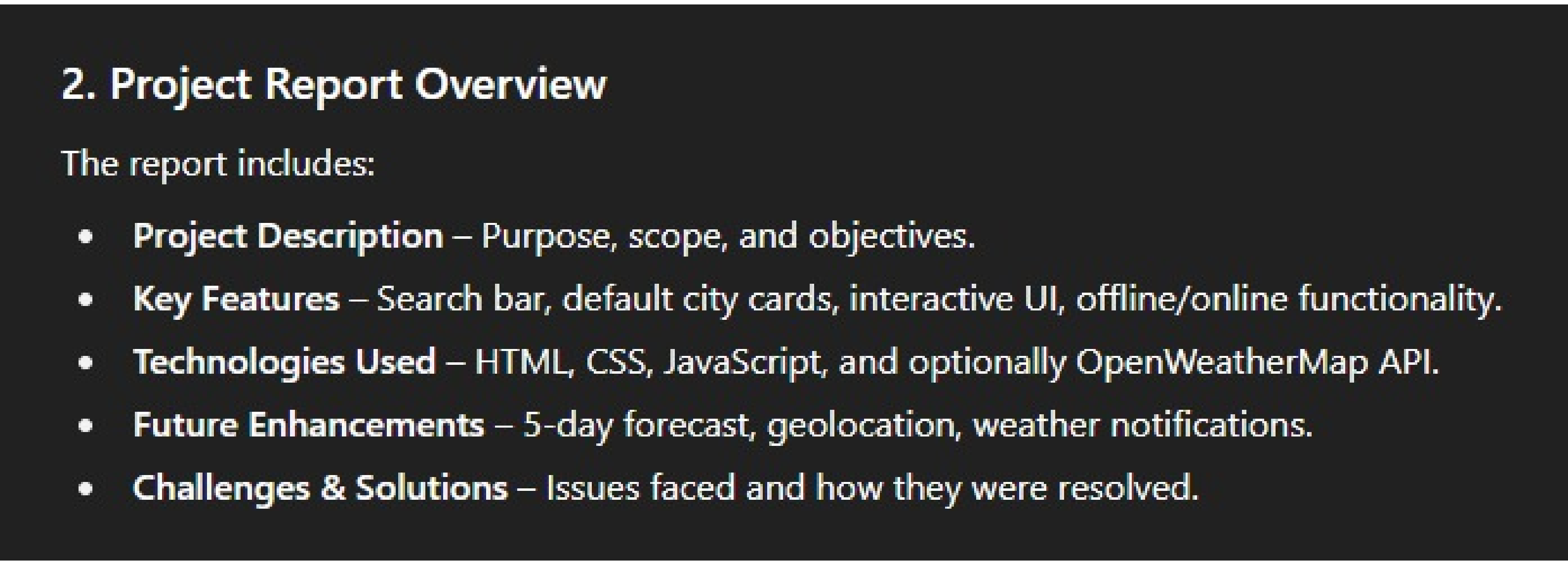
1. Final Demo Walkthrough

The final demonstration showcases the **Live Weather Dashboard** in action:

- **Search Functionality:** Users can type any city name to get current weather details including **temperature, weather condition, wind speed, and humidity.**
- **Default City Display:** On page load, weather cards for multiple popular cities such as Delhi, London, New York, Tokyo, Paris, Sydney, Dubai, and others are displayed automatically.
- **Interactive Cards:** Each city's weather is displayed in **visually appealing cards** with hover animations.
- **Responsive Design:** Dashboard adapts seamlessly to desktops, tablets, and mobile devices.

Demo Steps:

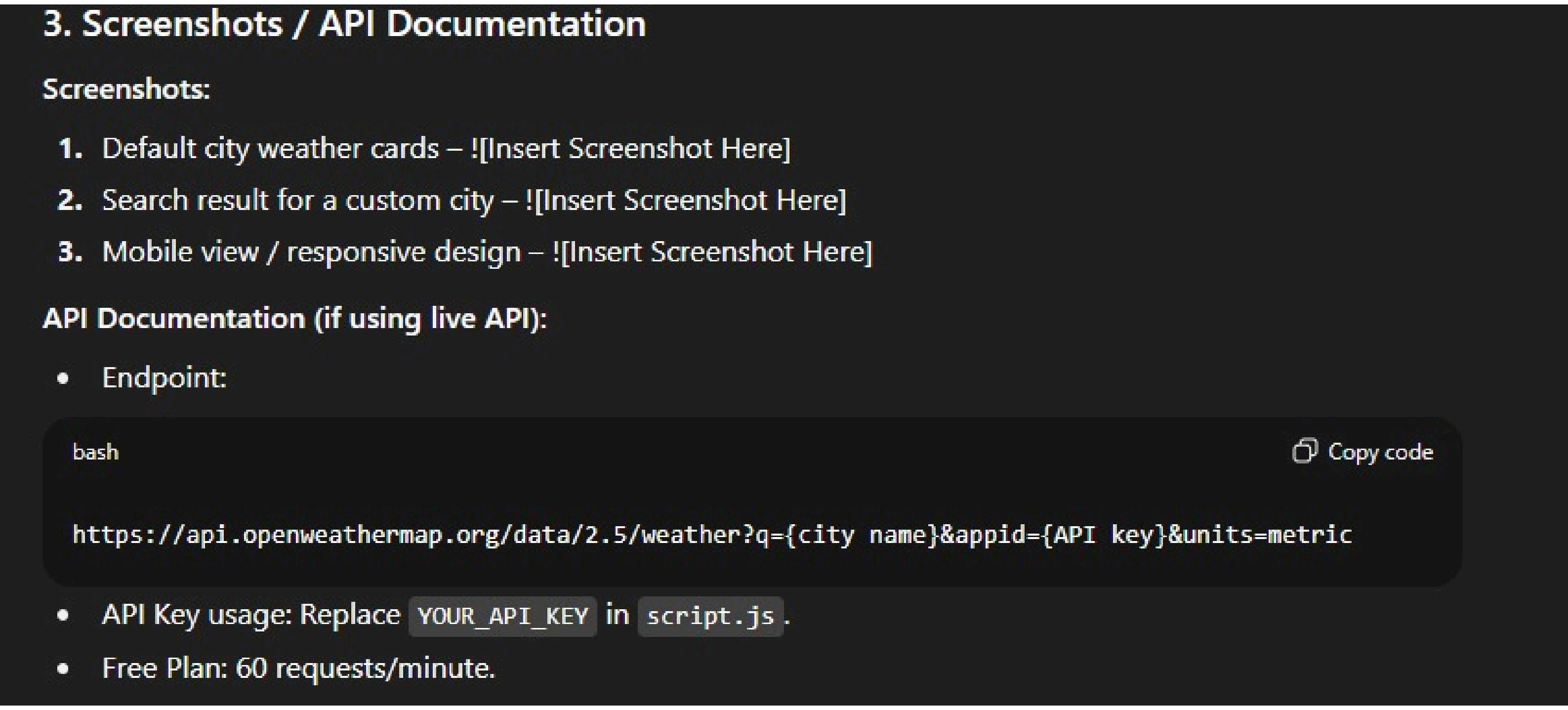
1. Open the `index.html` file in a browser.
2. Observe the default city weather cards.
3. Enter a city name in the search bar and click **"Get Weather"**.
4. Verify that the searched city's weather appears correctly.
5. Highlight offline functionality (if using dummy data) or live API fetch (if using OpenWeatherMap API).



2. Project Report Overview

The report includes:

- **Project Description** – Purpose, scope, and objectives.
- **Key Features** – Search bar, default city cards, interactive UI, offline/online functionality.
- **Technologies Used** – HTML, CSS, JavaScript, and optionally OpenWeatherMap API.
- **Future Enhancements** – 5-day forecast, geolocation, weather notifications.
- **Challenges & Solutions** – Issues faced and how they were resolved.



3. Screenshots / API Documentation

Screenshots:

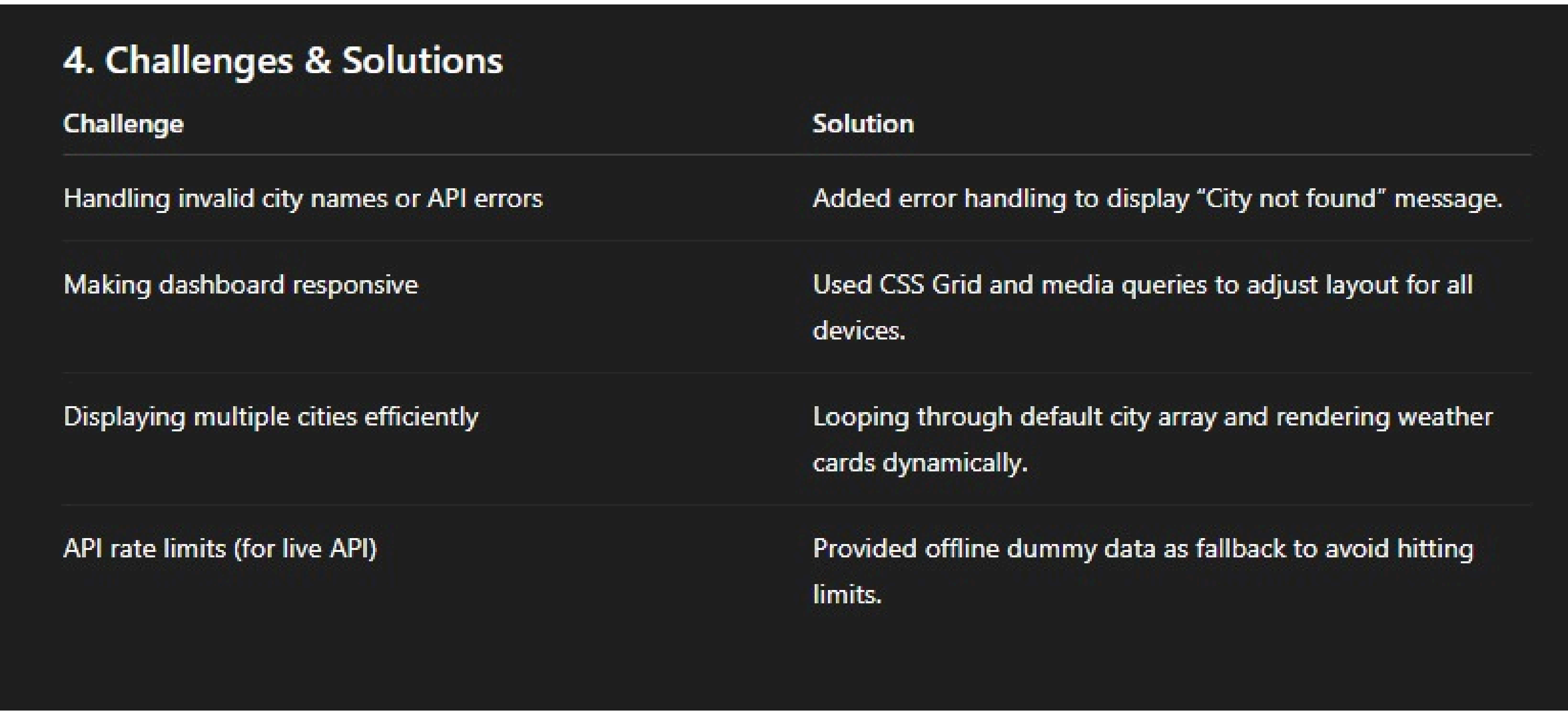
1. Default city weather cards – ![Insert Screenshot Here]
2. Search result for a custom city – ![Insert Screenshot Here]
3. Mobile view / responsive design – ![Insert Screenshot Here]

API Documentation (if using live API):

- Endpoint:

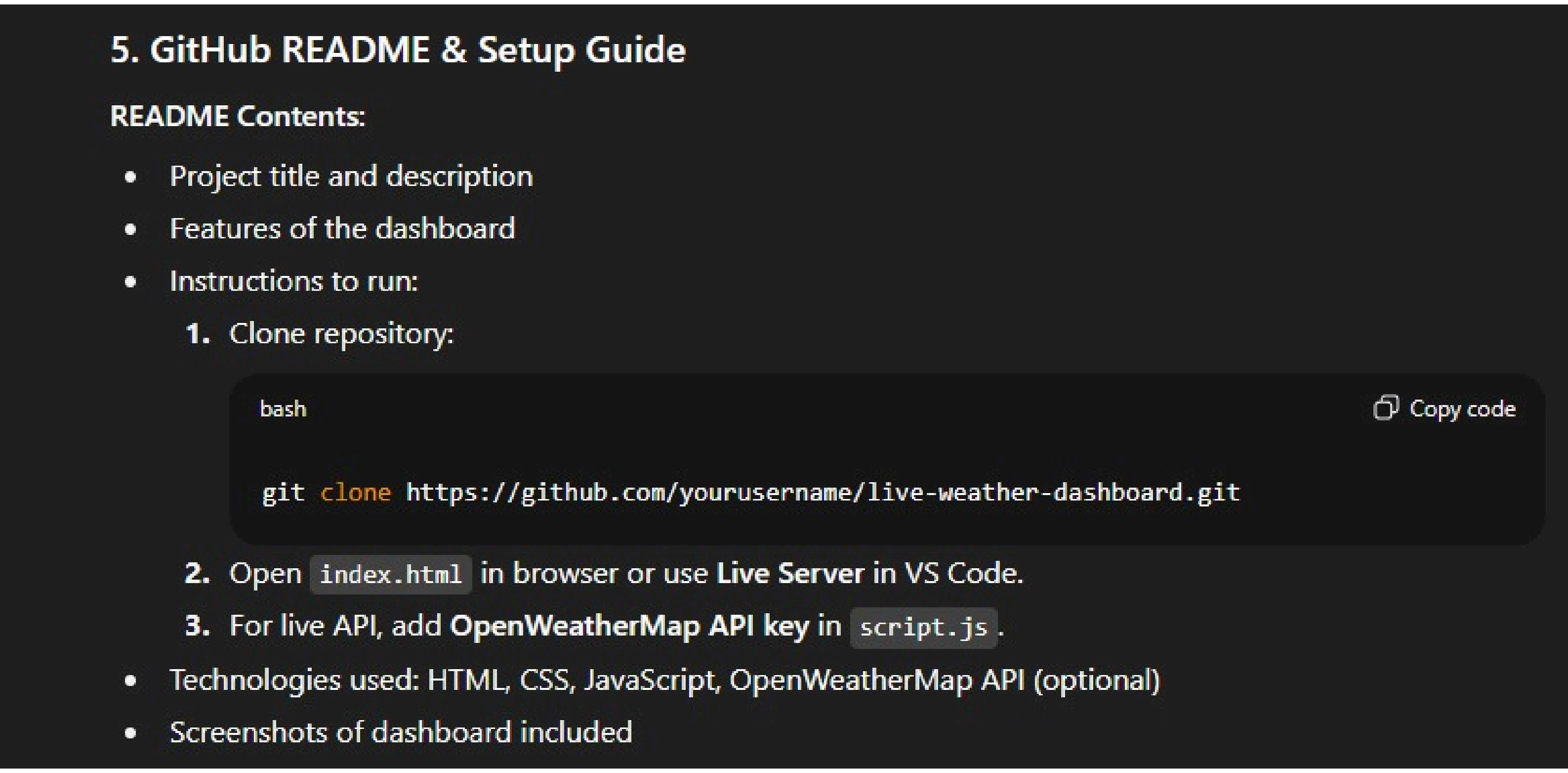
```bash
https://api.openweathermap.org/data/2.5/weather?q={city name}&appid={API key}&units=metric
```

- API Key usage: Replace `YOUR_API_KEY` in `script.js`.
- Free Plan: 60 requests/minute.



4. Challenges & Solutions

Challenge	Solution
Handling invalid city names or API errors	Added error handling to display “City not found” message.
Making dashboard responsive	Used CSS Grid and media queries to adjust layout for all devices.
Displaying multiple cities efficiently	Looping through default city array and rendering weather cards dynamically.
API rate limits (for live API)	Provided offline dummy data as fallback to avoid hitting limits.



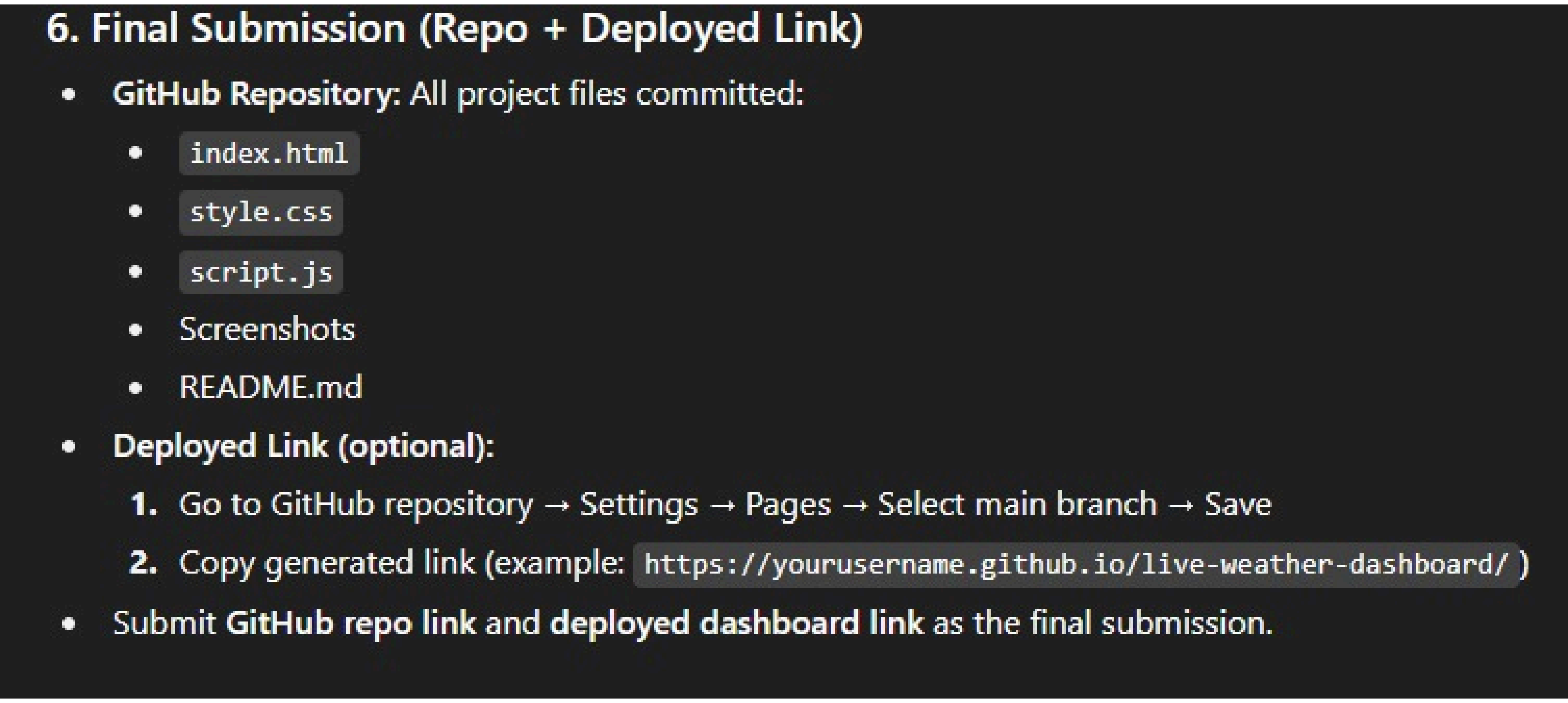
5. GitHub README & Setup Guide

README Contents:

- Project title and description
- Features of the dashboard
- Instructions to run:
  1. Clone repository:

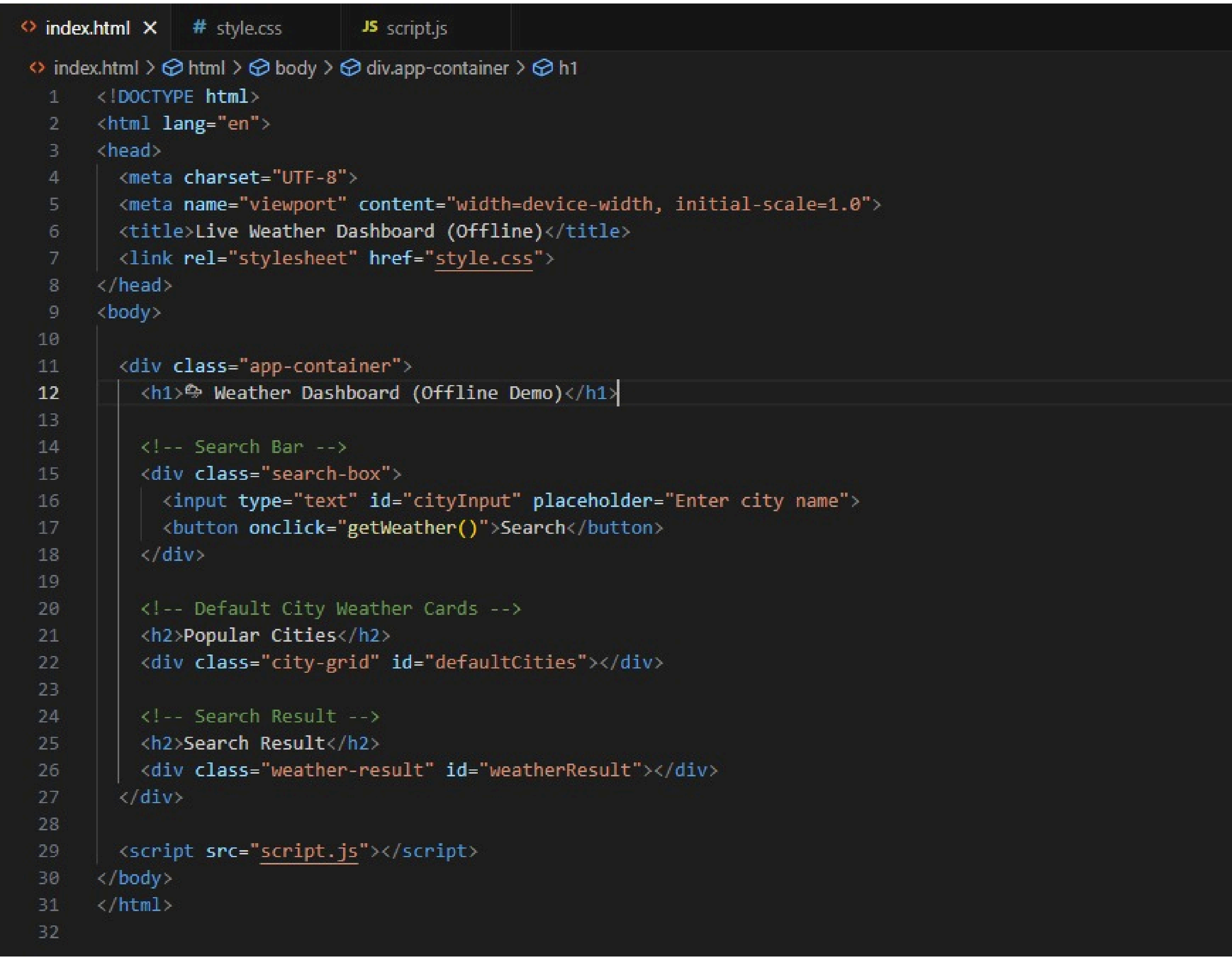
     ```bash
     git clone https://github.com/yourusername/live-weather-dashboard.git
     ```

  2. Open `index.html` in browser or use **Live Server** in VS Code.
  3. For live API, add **OpenWeatherMap API key** in `script.js`.
- Technologies used: HTML, CSS, JavaScript, OpenWeatherMap API (optional)
- Screenshots of dashboard included

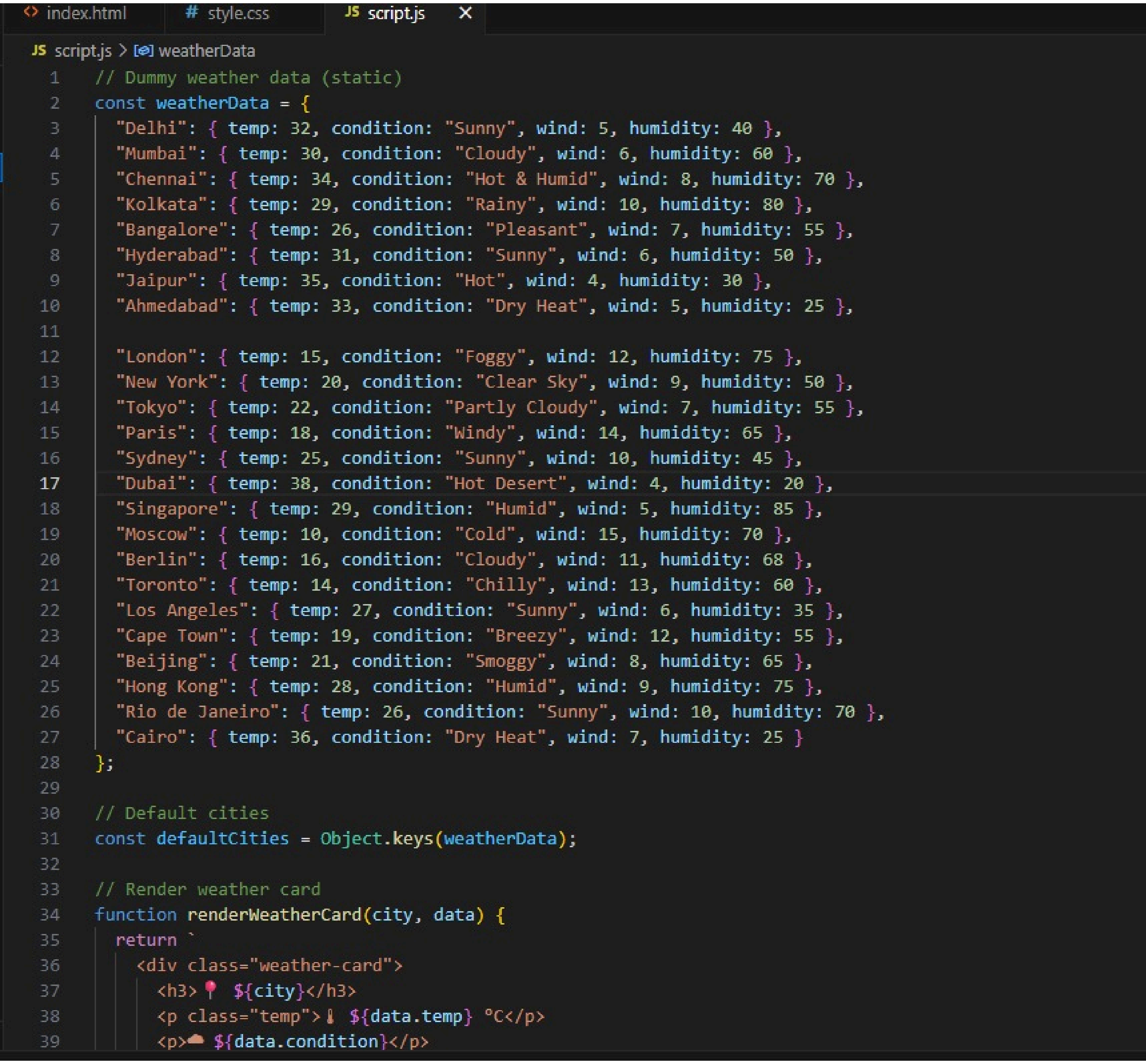


6. Final Submission (Repo + Deployed Link)

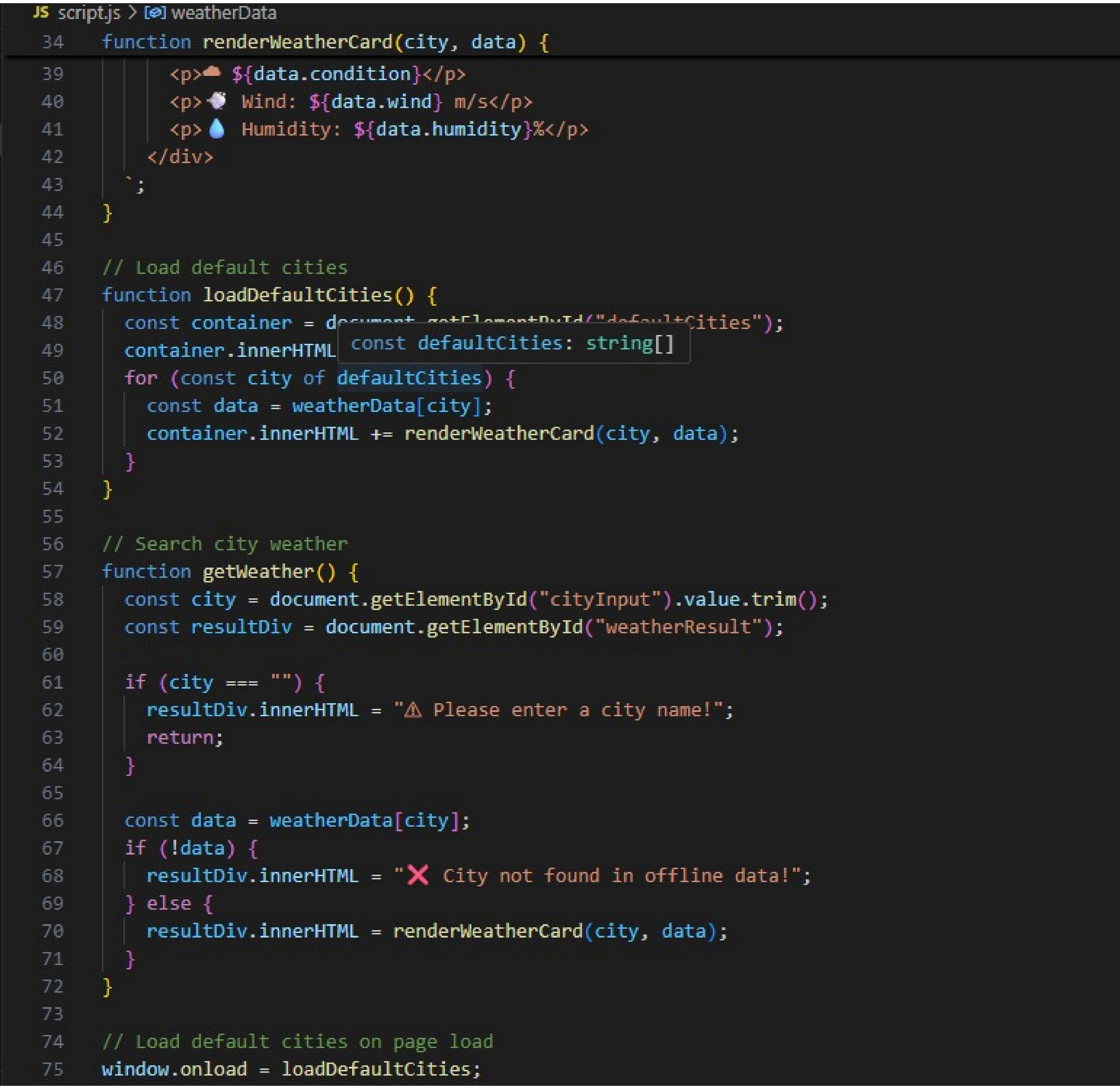
- **GitHub Repository:** All project files committed:
  - `index.html`
  - `style.css`
  - `script.js`
  - Screenshots
  - README.md
- **Deployed Link (optional):**
  1. Go to GitHub repository → Settings → Pages → Select main branch → Save
  2. Copy generated link (example: `https://yourusername.github.io/live-weather-dashboard/`)
- Submit **GitHub repo link** and **deployed dashboard link** as the final submission.



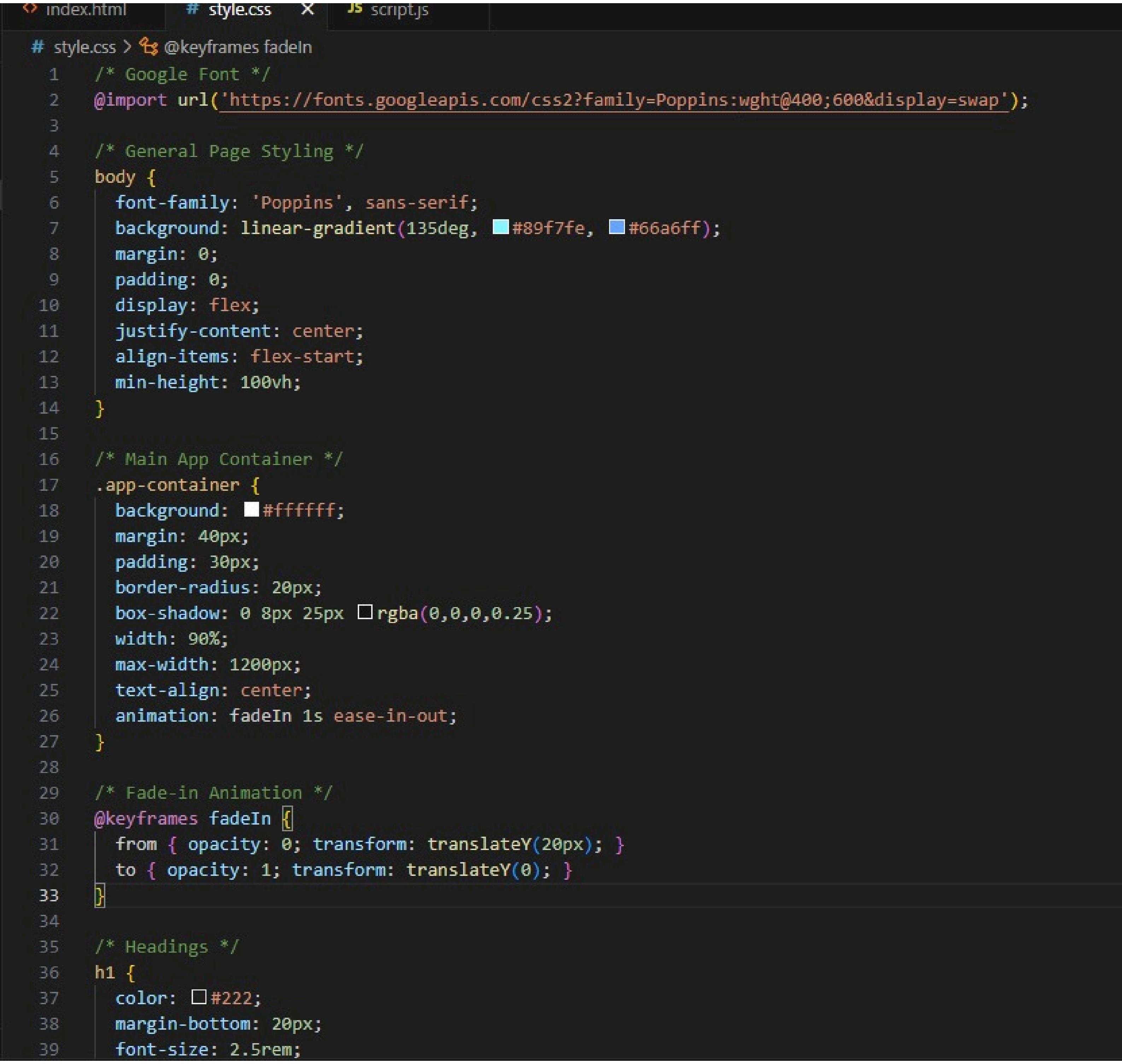
```html
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Live Weather Dashboard (Offline)</title>
  <link rel="stylesheet" href="style.css">
</head>
<body>

  <div class="app-container">
    <h1>🌦 Weather Dashboard (Offline Demo)</h1>

    <!-- Search Bar -->
    <div class="search-box">
      <input type="text" id="cityInput" placeholder="Enter city name">
      <button onclick="getWeather()">Search</button>
    </div>

    <!-- Default City Weather Cards -->
    <h2>Popular Cities</h2>
    <div class="city-grid" id="defaultCities"></div>

    <!-- Search Result -->
    <h2>Search Result</h2>
    <div class="weather-result" id="weatherResult"></div>
  </div>

  <script src="script.js"></script>
</body>
</html>

```



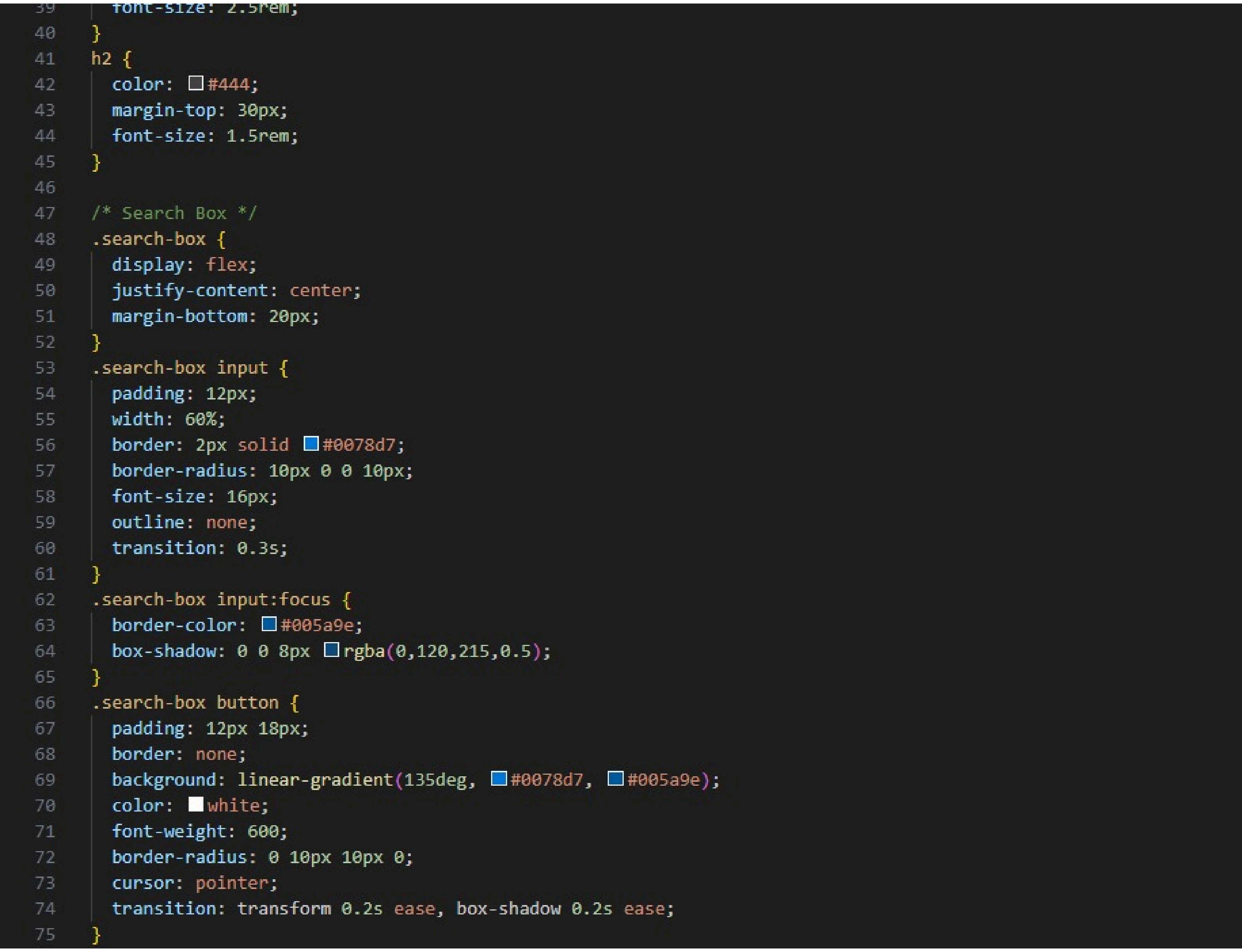
```javascript
// Dummy weather data (static)
const weatherData = {
  "Delhi": { temp: 32, condition: "Sunny", wind: 5, humidity: 40 },
  "Mumbai": { temp: 30, condition: "Cloudy", wind: 6, humidity: 60 },
  "Chennai": { temp: 34, condition: "Hot & Humid", wind: 8, humidity: 70 },
  "Kolkata": { temp: 29, condition: "Rainy", wind: 10, humidity: 80 },
  "Bangalore": { temp: 26, condition: "Pleasant", wind: 7, humidity: 55 },
  "Hyderabad": { temp: 31, condition: "Sunny", wind: 6, humidity: 50 },
  "Jaipur": { temp: 35, condition: "Hot", wind: 4, humidity: 30 },
  "Ahmedabad": { temp: 33, condition: "Dry Heat", wind: 5, humidity: 25 },

  "London": { temp: 15, condition: "Foggy", wind: 12, humidity: 75 },
  "New York": { temp: 20, condition: "Clear Sky", wind: 9, humidity: 50 },
  "Tokyo": { temp: 22, condition: "Partly Cloudy", wind: 7, humidity: 55 },
  "Paris": { temp: 18, condition: "Windy", wind: 14, humidity: 65 },
  "Sydney": { temp: 25, condition: "Sunny", wind: 10, humidity: 45 },
  "Dubai": { temp: 38, condition: "Hot Desert", wind: 4, humidity: 20 },
  "Singapore": { temp: 29, condition: "Humid", wind: 5, humidity: 85 },
  "Moscow": { temp: 10, condition: "Cold", wind: 15, humidity: 70 },
  "Berlin": { temp: 16, condition: "Cloudy", wind: 11, humidity: 68 },
  "Toronto": { temp: 14, condition: "Chilly", wind: 13, humidity: 60 },
  "Los Angeles": { temp: 27, condition: "Sunny", wind: 6, humidity: 35 },
  "Cape Town": { temp: 19, condition: "Breezy", wind: 12, humidity: 55 },
  "Beijing": { temp: 21, condition: "Smoggy", wind: 8, humidity: 65 },
  "Hong Kong": { temp: 28, condition: "Humid", wind: 9, humidity: 75 },
  "Rio de Janeiro": { temp: 26, condition: "Sunny", wind: 10, humidity: 70 },
  "Cairo": { temp: 36, condition: "Dry Heat", wind: 7, humidity: 25 }
};

// Default cities
const defaultCities = Object.keys(weatherData);

// Render weather card
function renderWeatherCard(city, data) {
  return `
    <div class="weather-card">
      <h3>📍 ${city}</h3>
      <p class="temp">🌡 ${data.temp} °C</p>
      <p>☁ ${data.condition}</p>
```



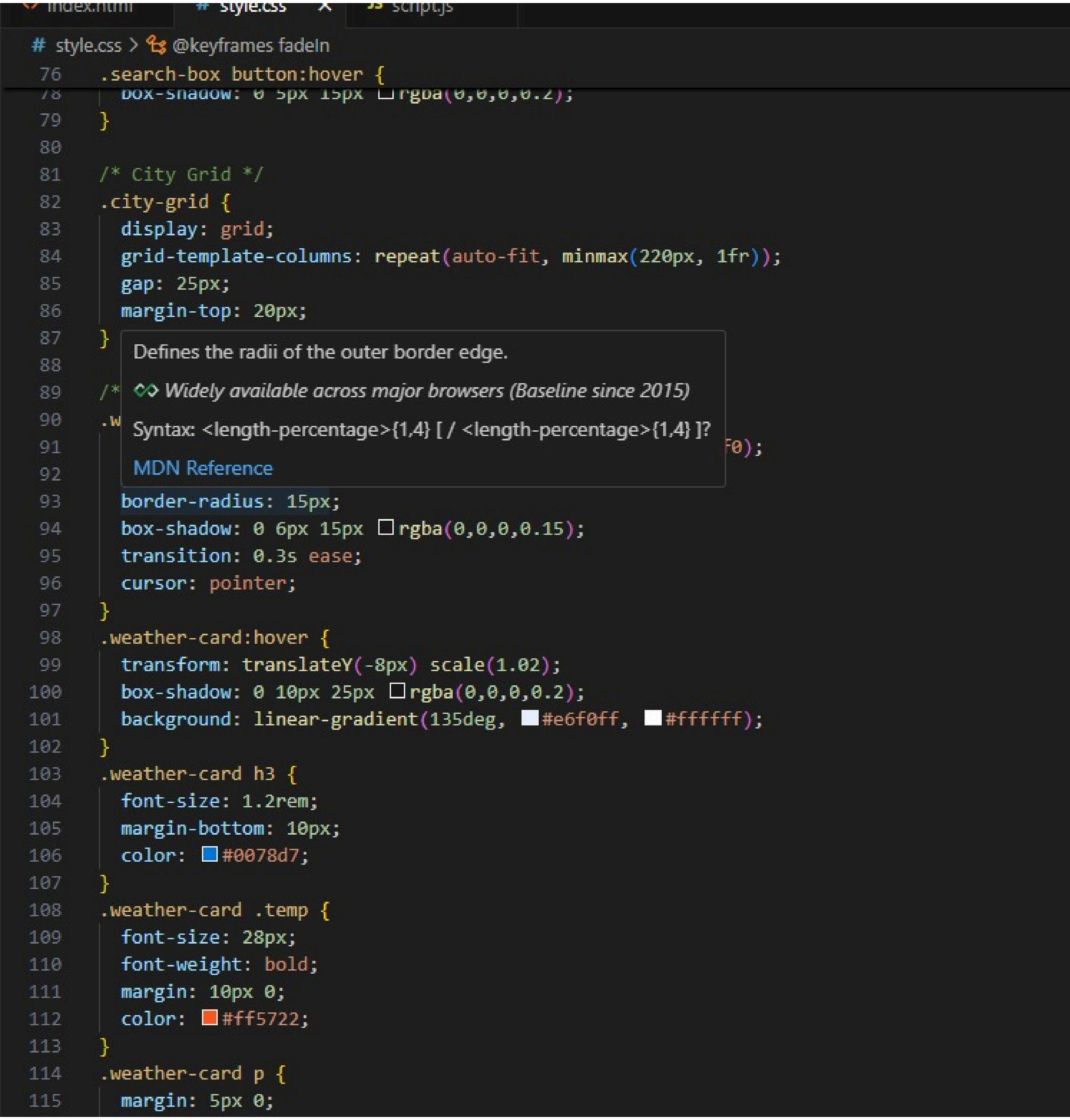
```
function renderWeatherCard(city, data) {
      <p>☁ ${data.condition}</p>
      <p>🌬 Wind: ${data.wind} m/s</p>
      <p>💧 Humidity: ${data.humidity}%</p>
    </div>
  `;
}

// Load default cities
function loadDefaultCities() {
  const container = document.getElementById("defaultCities");
  container.innerHTML
  for (const city of defaultCities) {
    const data = weatherData[city];
    container.innerHTML += renderWeatherCard(city, data);
  }
}

// Search city weather
function getWeather() {
  const city = document.getElementById("cityInput").value.trim();
  const resultDiv = document.getElementById("weatherResult");

  if (city === "") {
    resultDiv.innerHTML = "⚠ Please enter a city name!";
    return;
  }

  const data = weatherData[city];
  if (!data) {
    resultDiv.innerHTML = "❌ City not found in offline data!";
  } else {
    resultDiv.innerHTML = renderWeatherCard(city, data);
  }
}

// Load default cities on page load
window.onload = loadDefaultCities;
```



```css
/* Google Font */
@import url('https://fonts.googleapis.com/css2?family=Poppins:wght@400;600&display=swap');

/* General Page Styling */
body {
  font-family: 'Poppins', sans-serif;
  background: linear-gradient(135deg, #89f7fe, #66a6ff);
  margin: 0;
  padding: 0;
  display: flex;
  justify-content: center;
  align-items: flex-start;
  min-height: 100vh;
}

/* Main App Container */
.app-container {
  background: #ffffff;
  margin: 40px;
  padding: 30px;
  border-radius: 20px;
  box-shadow: 0 8px 25px rgba(0,0,0,0.25);
  width: 90%;
  max-width: 1200px;
  text-align: center;
  animation: fadeIn 1s ease-in-out;
}

/* Fade-in Animation */
@keyframes fadeIn {
  from { opacity: 0; transform: translateY(20px); }
  to { opacity: 1; transform: translateY(0); }
}

/* Headings */
h1 {
  color: #222;
  margin-bottom: 20px;
  font-size: 2.5rem;
```



```css
  font-size: 2.5rem;
}
h2 {
  color: #444;
  margin-top: 30px;
  font-size: 1.5rem;
}

/* Search Box */
.search-box {
  display: flex;
  justify-content: center;
  margin-bottom: 20px;
}
.search-box input {
  padding: 12px;
  width: 60%;
  border: 2px solid #0078d7;
  border-radius: 10px 0 0 10px;
  font-size: 16px;
  outline: none;
  transition: 0.3s;
}
.search-box input:focus {
  border-color: #005a9e;
  box-shadow: 0 0 8px rgba(0,120,215,0.5);
}
.search-box button {
  padding: 12px 18px;
  border: none;
  background: linear-gradient(135deg, #0078d7, #005a9e);
  color: white;
  font-weight: 600;
  border-radius: 0 10px 10px 0;
  cursor: pointer;
  transition: transform 0.2s ease, box-shadow 0.2s ease;
}
```



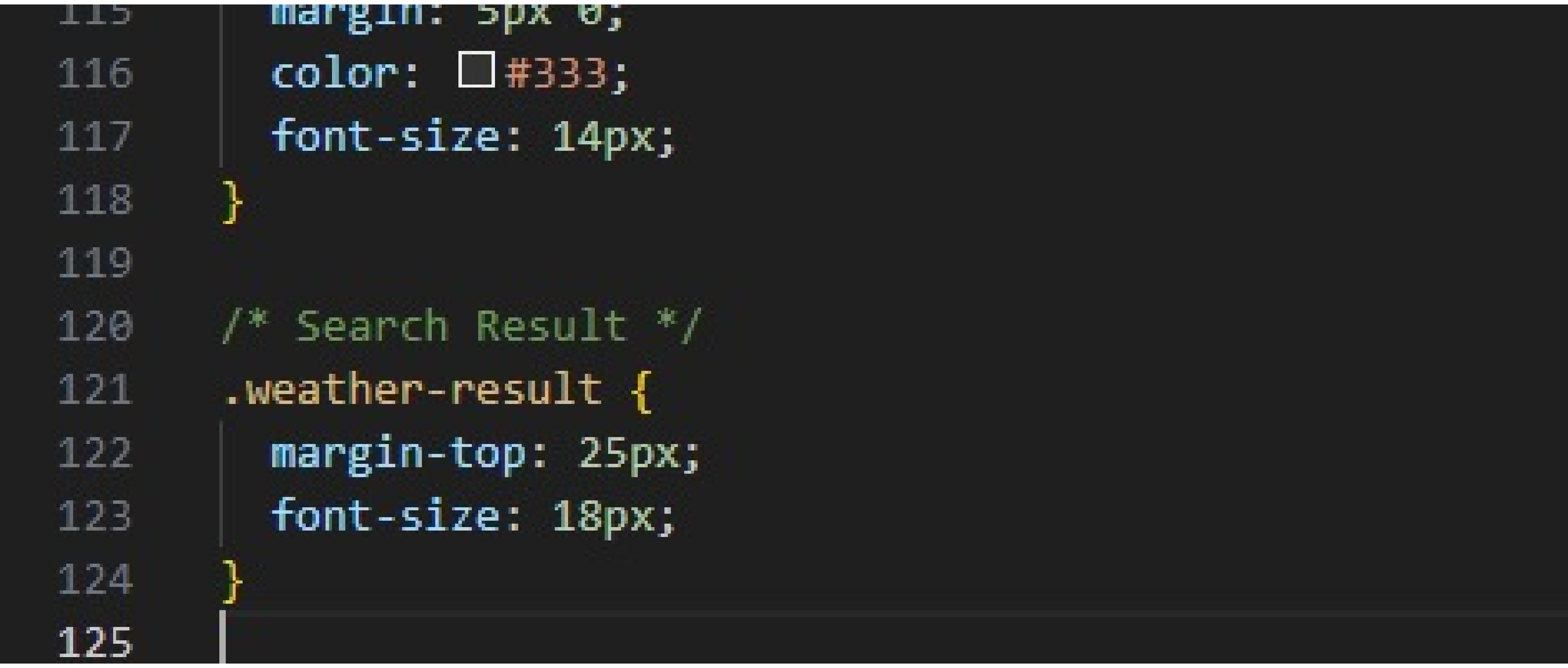
```
.search-box button:hover {
  box-shadow: 0 5px 15px □rgba(0,0,0,0.2);
}

/* City Grid */
.city-grid {
  display: grid;
  grid-template-columns: repeat(auto-fit, minmax(220px, 1fr));
  gap: 25px;
  margin-top: 20px;
}

/*
.w
                                                          f0);

  border-radius: 15px;
  box-shadow: 0 6px 15px □rgba(0,0,0,0.15);
  transition: 0.3s ease;
  cursor: pointer;
}
.weather-card:hover {
  transform: translateY(-8px) scale(1.02);
  box-shadow: 0 10px 25px □rgba(0,0,0,0.2);
  background: linear-gradient(135deg, □#e6f0ff, □#ffffff);
}
.weather-card h3 {
  font-size: 1.2rem;
  margin-bottom: 10px;
  color: 🟦#0078d7;
}
.weather-card .temp {
  font-size: 28px;
  font-weight: bold;
  margin: 10px 0;
  color: 🟧#ff5722;
}
.weather-card p {
  margin: 5px 0;
```

Defines the radii of the outer border edge.

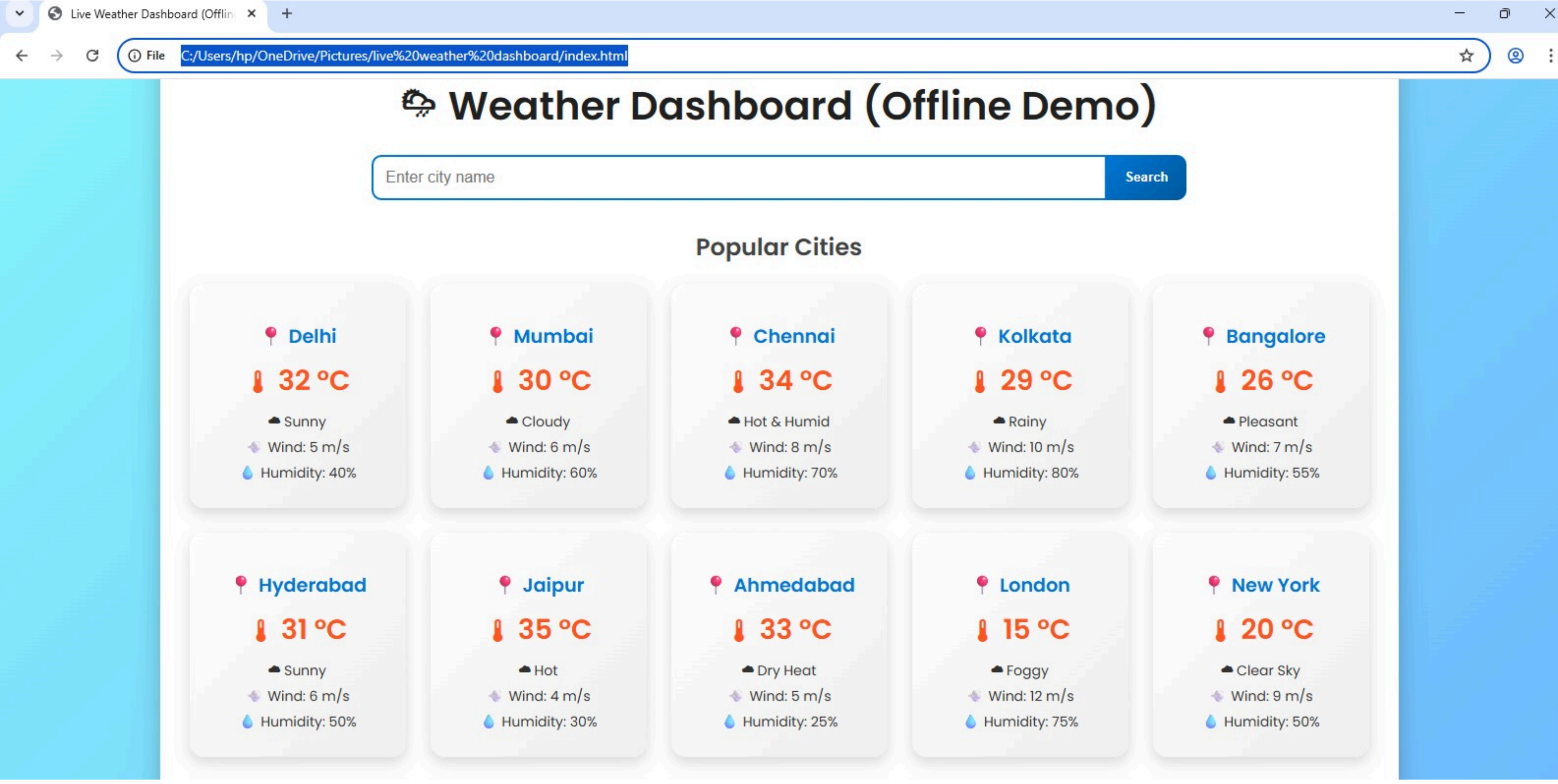
Widely available across major browsers (Baseline since 2015)

Syntax: <length-percentage>{1,4} [/ <length-percentage>{1,4}]?

MDN Reference



```
  margin: 5px 0;
  color: □#333;
  font-size: 14px;
}

/* Search Result */
.weather-result {
  margin-top: 25px;
  font-size: 18px;
}

```



Live Weather Dashboard (Offlin
File
C:/Users/hp/OneDrive/Pictures/live%20weather%20dashboard/index.html

🌦 Weather Dashboard (Offline Demo)

Enter city name | Search

Popular Cities

📍 Delhi
🌡 32 °C
☁ Sunny
💨 Wind: 5 m/s
💧 Humidity: 40%

📍 Mumbai
🌡 30 °C
☁ Cloudy
💨 Wind: 6 m/s
💧 Humidity: 60%

📍 Chennai
🌡 34 °C
☁ Hot & Humid
💨 Wind: 8 m/s
💧 Humidity: 70%

📍 Kolkata
🌡 29 °C
☁ Rainy
💨 Wind: 10 m/s
💧 Humidity: 80%

📍 Bangalore
🌡 26 °C
☁ Pleasant
💨 Wind: 7 m/s
💧 Humidity: 55%

📍 Hyderabad
🌡 31 °C
☁ Sunny
💨 Wind: 6 m/s
💧 Humidity: 50%

📍 Jaipur
🌡 35 °C
☁ Hot
💨 Wind: 4 m/s
💧 Humidity: 30%

📍 Ahmedabad
🌡 33 °C
☁ Dry Heat
💨 Wind: 5 m/s
💧 Humidity: 25%

📍 London
🌡 15 °C
☁ Foggy
💨 Wind: 12 m/s
💧 Humidity: 75%

📍 New York
🌡 20 °C
☁ Clear Sky
💨 Wind: 9 m/s
💧 Humidity: 50%