TITLE: CodTech IT Solutions Internship - Task Documentation: “Weather App” Using CSS, HTML, JAVASCRIPT.

INTERN INFORMATION:

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INTRODUCTION

In the realm of digital tools and applications, weather forecast apps play a vital role in providing users with up-to-date weather information for planning activities and staying prepared. This project aims to create a weather forecast app using HTML, CSS, and JavaScript, leveraging the capabilities of modern web technologies to deliver a user-friendly and informative weather experience.

Implementation

HTML Structure: The HTML file defines the structure of the weather forecast app, including elements like the main container, weather information display area, search form with input field and button, and the necessary script link for JavaScript functionality.

CSS Styles: The CSS file provides styling to enhance the visual presentation of the app, including background colors, font styles, input field and button designs, container layouts, and responsive design principles for optimal viewing across devices.

JavaScript Logic: The JavaScript file handles the dynamic behavior of the app, integrating with the OpenWeatherMap API to fetch weather data based on user input (city name), displaying the weather information in the designated area, and providing error handling for failed API requests.

CODE EXPLAINATION

HTML Structure:

 Acts as the main container for the weather forecast app, containing the app's heading, weather information display, and search form.

<h1>Weather Forecast</h1> Displays the title of the app, providing a clear indication of its purpose.

 Serves as the area where weather information fetched from the API will be dynamically displayed.

<form id="search-form"> Includes an input field (<input type="text" id="city-input" placeholder="Enter city">) for users to enter the city name and a submit button (<button type="submit">Search</button>) to trigger the weather search.

CSS Styling:

Global styles are applied to set the font family, background color, padding, and box shadow for the entire app, ensuring a visually appealing and consistent design.

Specific styles are applied to the container, headings, form elements, and button to improve readability, usability, and interactivity.

JavaScript Functionality:

API Integration: Utilizes the OpenWeatherMap API to fetch weather data based on the user's input (city name), using the provided API key for authentication.

Event Handling: Listens for form submission events (submit), prevents the default behavior, retrieves the city name entered by the user, and calls the getWeatherData() function to fetch weather information from the API.

Asynchronous Operations: Uses async and await to handle asynchronous API requests, ensuring smooth execution and responsiveness of the app.

Display Weather Info: Updates the HTML content of the weather information area ( ) with data retrieved from the API, including city name, country, temperature, weather description, humidity, and wind speed.

Error Handling: Implements error handling to alert users in case of failed API requests or empty input fields, ensuring a seamless user experience.

USAGE

Users enter the desired city name in the input field and click the "Search" button.

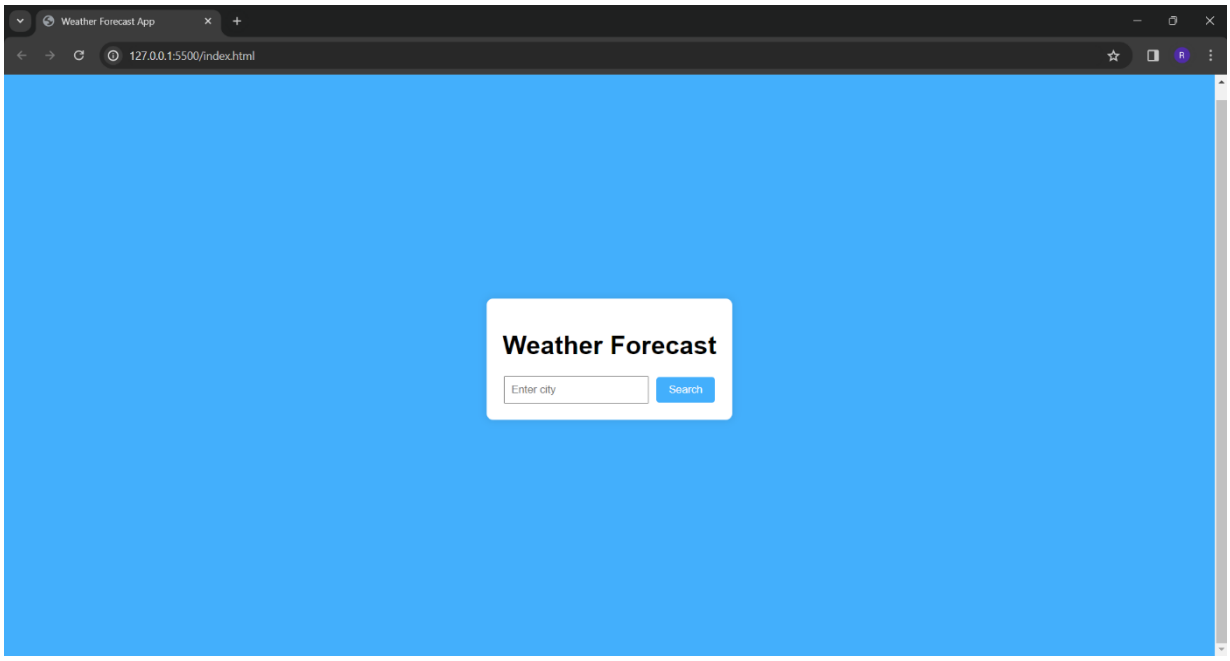
The app fetches weather data from the OpenWeatherMap API based on the entered city name.

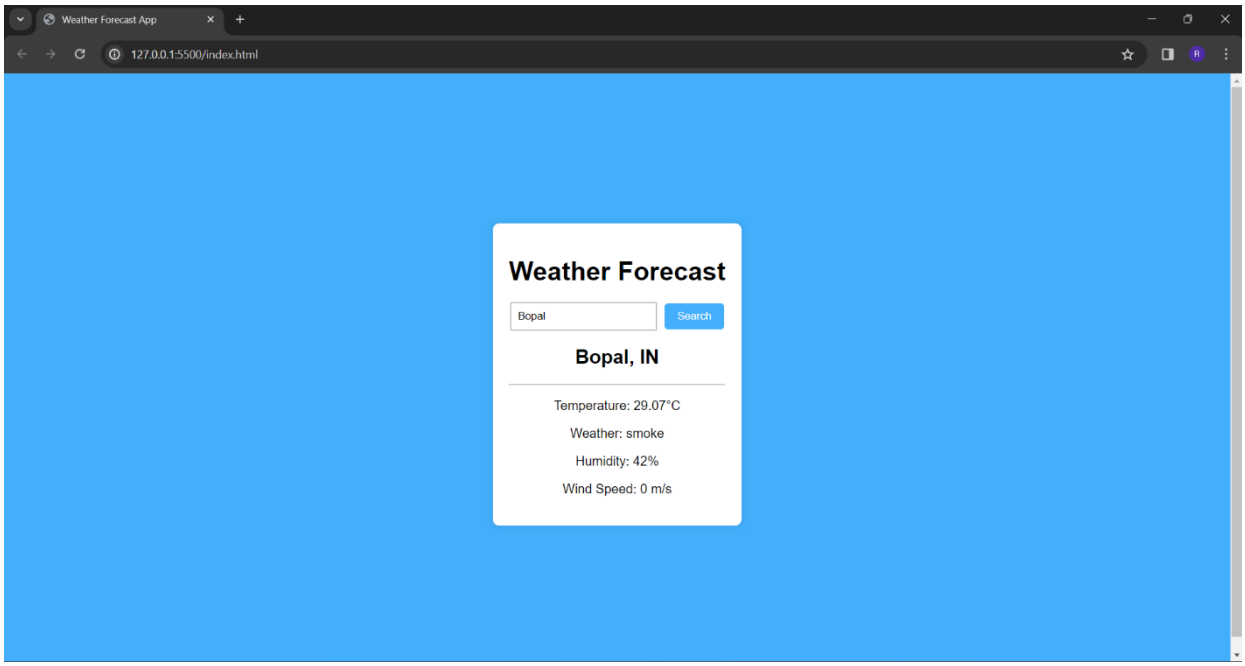
Weather information (temperature, weather description, humidity, wind speed) is displayed in the designated area on the app interface.

CONCLUSION

In conclusion, the weather forecast app project has successfully utilized HTML, CSS, and JavaScript to create a functional and user-friendly application for accessing weather information. By integrating with the OpenWeatherMap API, implementing responsive design, and providing intuitive user interactions, the app offers users a convenient way to stay informed about current weather conditions. With further enhancements and optimizations, the weather forecast app has the potential to become a valuable tool for users seeking reliable weather updates for planning their daily activities.

OUTPUT




Weather Forecast App
127.0.0.1:5500/index.html
Weather Forecast
Bopal
Search
Bopal, IN
Temperature: 29.07°C
Weather: smoke
Humidity: 42%
Wind Speed: 0 m/s