 **API Key and URL**:

javascript

Copy code

const apiKey = "d73ca1ff266b81160a8f0222ece6da79";

const apiUrl = "https://api.openweathermap.org/data/2.5/weather?units=metric&q=";

* apiKey: Your unique key to access the OpenWeatherMap API.
* apiUrl: The base URL for the weather API with the query parameter to specify the city and units (metric for Celsius).

 **Selecting HTML Elements**:

javascript

Copy code

const searchBox = document.querySelector(".search-box input");

const searchBtn = document.querySelector(".search-box button");

const weatherIcon = document.querySelector(".weather-icon");

* searchBox: The input field where the user types the city name.
* searchBtn: The button that the user clicks to initiate the weather search.
* weatherIcon: The image element that displays the weather icon.

 **Fetching and Displaying Weather Data**:

javascript

Copy code

async function checkweather(city) {

console.log("Fetching weather for", city);

try {

const response = await fetch(apiUrl + city + `&appid=${apiKey}`);

if (response.status == 404) {

document.querySelector(".error").style.display = "block";

document.querySelector(".weather").style.display = "none";

} else {

const data = await response.json();

document.querySelector(".city").innerHTML = data.name;

document.querySelector(".temp").innerHTML = Math.round(data.main.temp) + "&degC";

document.querySelector(".humidity").innerHTML = data.main.humidity + "%";

document.querySelector(".wind").innerHTML = data.wind.speed + " km/hr";

if (data.weather[0].main == "Clouds") {

weatherIcon.src = "images/clouds.png";

} else if (data.weather[0].main == "Clear") {

weatherIcon.src = "images/clear.png";

} else if (data.weather[0].main == "Rain") {

weatherIcon.src = "images/rain.png";

} else if (data.weather[0].main == "Drizzle") {

weatherIcon.src = "images/drizzle.png";

} else if (data.weather[0].main == "Mist") {

weatherIcon.src = "images/mist.png";

}

document.querySelector(".weather").style.display = "block";

document.querySelector(".error").style.display = "none";

localStorage.setItem("city", data.name);

}

} catch (error) {

console.log("An error occurred:", error);

}

}

* checkweather(city): An asynchronous function that fetches weather data for the given city.
  + Logs the city to the console.
  + Makes a request to the weather API.
  + If the response status is 404 (city not found), displays an error message and hides the weather information.
  + Otherwise, parses the JSON response and updates the HTML elements with the city name, temperature, humidity, and wind speed.
  + Sets the src attribute of the weather icon based on the weather condition.
  + Displays the weather information and hides the error message.
  + Saves the city name to localStorage.

 **Event Listener for Search Button**:

javascript

Copy code

searchBtn.addEventListener("click", () => {

checkweather(searchBox.value);

});

* Adds a click event listener to the search button. When clicked, it calls the checkweather function with the value from the search box.

 **Loading Stored City on Page Load**:

javascript

Copy code

document.addEventListener("DOMContentLoaded", () => {

const storedCity = localStorage.getItem("city");

if (storedCity) {

searchBox.value = storedCity;

checkweather(storedCity);

}

});

* Adds an event listener for the DOMContentLoaded event, which fires when the initial HTML document has been completely loaded.
* Retrieves the stored city name from localStorage.
* If a city name is found, it sets the search box value to the stored city name and calls the checkweather function to fetch and display the weather for that city.