Web Technologies Project

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W69041

Weather Application Documentation

Welcome to the documentation for the Weather Application! This application provides real-time weather information based on user input or geolocation. Users can enter a city to retrieve current weather conditions, or use the "Determine Location" button to get weather details for their current location. The user-friendly interface displays essential weather metrics, such as temperature, humidity, and weather description.

Introduction

The Weather Application consists of three main components: HTML, CSS, and JavaScript. The HTML file defines the structure of the application, CSS styles the visual elements, and JavaScript manages the functionality, including API interactions and dynamic updates to the user interface.

HTML Structure

The HTML document establishes the layout of the application, featuring a header section, an input part for user interaction, and a weather display section for presenting weather details. The script reference links the JavaScript file for seamless integration.

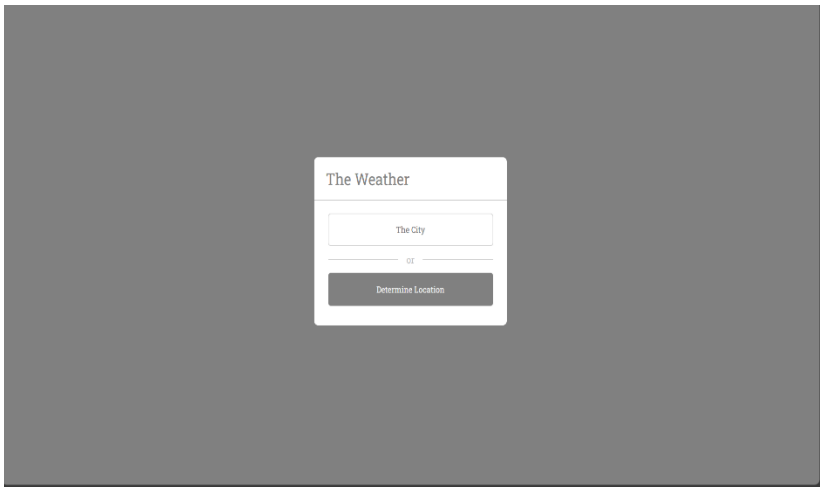
CSS Styling

CSS is responsible for styling the visual aspects of the application. It provides a clean and user-friendly interface, ensuring a responsive design for various screen sizes.

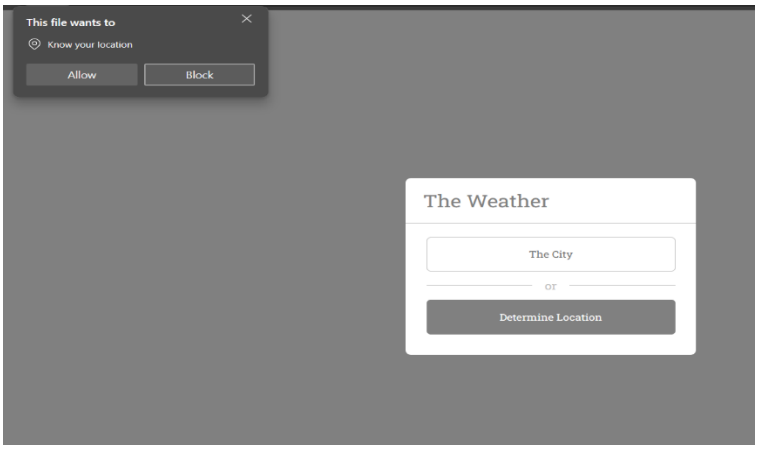
JavaScript Functionality

JavaScript governs the core functionality of the Weather Application. It handles user input, geolocation requests, API interactions with OpenWeatherMap, and dynamically updates the UI based on the received data.

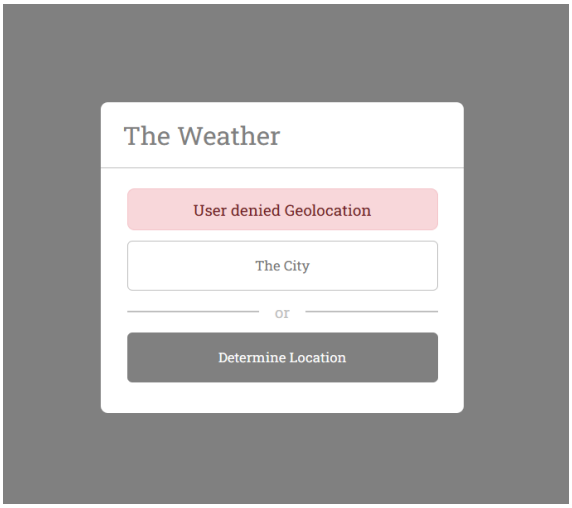
Screen Shots



This Main Screen which you can write any city name that you want to see the weather results or you can determine your location and results will show up.

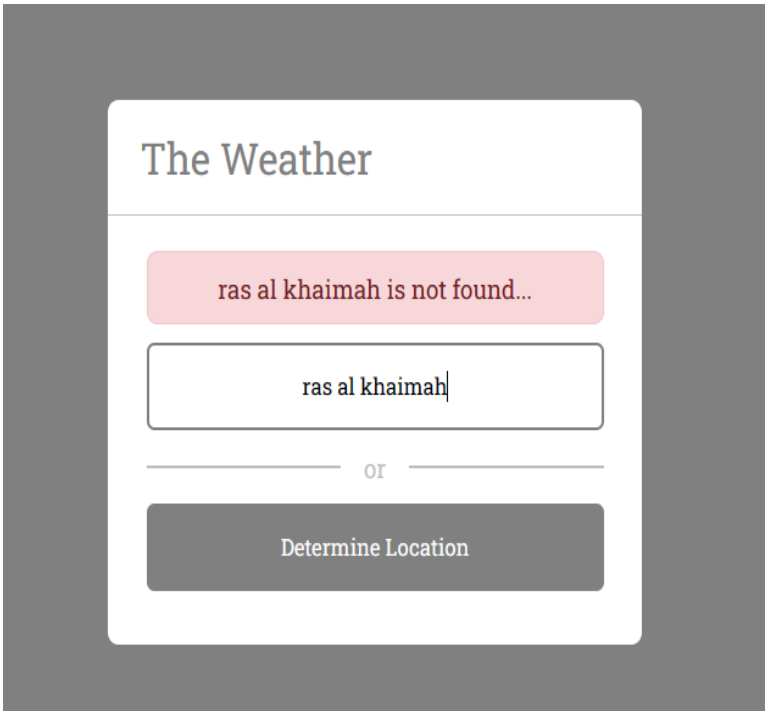


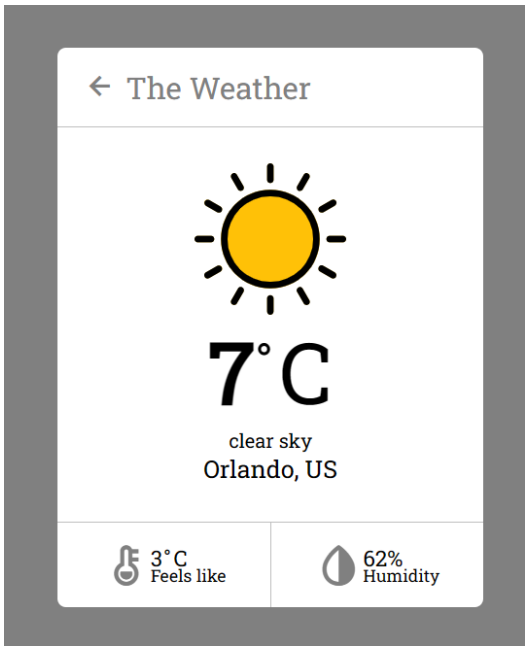
If you want to determine your location, app will ask you to allow geolocation operation.

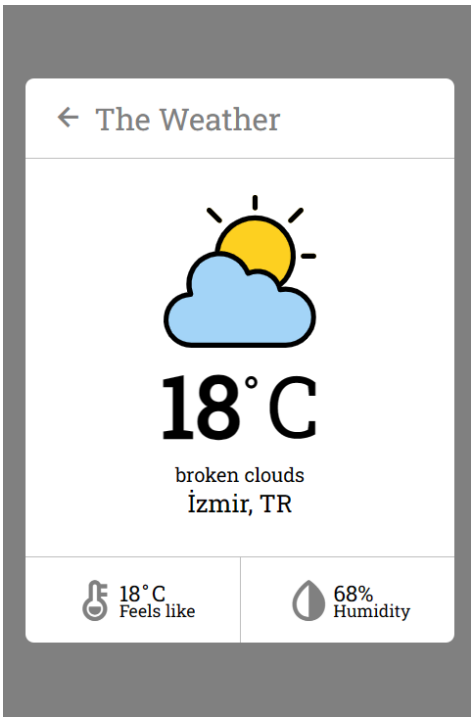


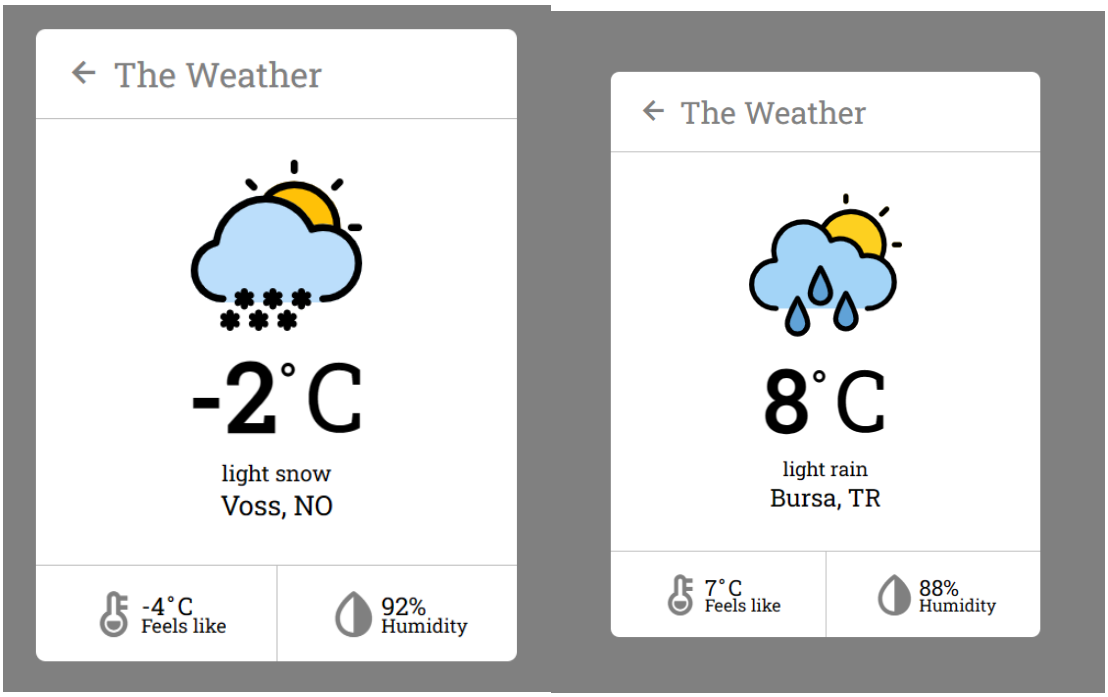
If you block the geolocation, this error screen will show up.

Or entering wrong city names will active error pages either.

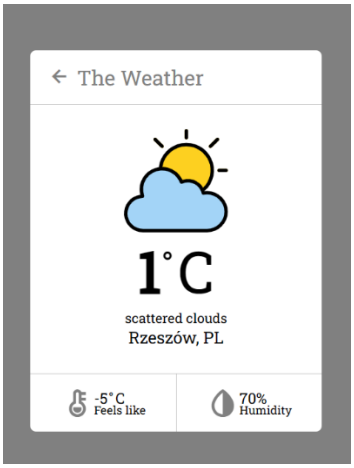




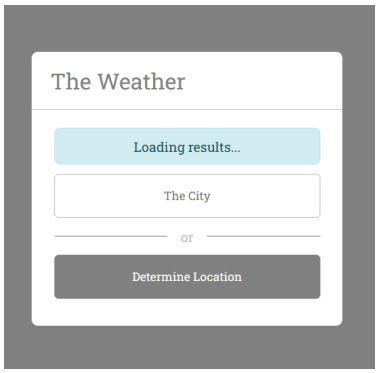




These are some examples of icons and results. The result is if you allow geolocation is here,



Aslo The app has loading screen.



HTML (index.html)

The HTML document defines the basic structure of the weather application:

Header Section (<header>):

Contains the title The Weather.

Displays a back arrow icon in the top-left corner.

Input Section (<section class="input-part">):

Includes a text box (<input>) where users can input a city.

A button (<button>) to determine the location.

A paragraph (<p class="info-txt">) to display informational messages.

Weather Display Section (<section class="weather-part">):

Displays weather information.

Includes an image tag (<img>) for the weather icon.

Other elements displaying temperature, weather description, location, and additional details.

Script Reference (<script src="script.js"></script>):

Links the JavaScript file to the page.

CSS (style.css)

The CSS file styles the appearance of the application:

General Styling:

Defines general styling properties like box-sizing, margin, padding.

Body Style:

Centers the page and sets the background color.

Wrapper Style:

Specifies the general properties of the application window (width, border-radius).

Header Style:

Styling properties for the header section.

Input Part Style:

Styling for the input section.

Style properties for info messages (info-txt).

Weather Part Style:

Styling properties for the weather information section.

Styling for temperature, weather, location, and other details.

JavaScript (script.js)

The JavaScript file manages the functionality of the application and interacts with the API:

Variables (let, const):

Variables representing DOM elements (wrapper, inputPart, etc.).

The api variable stores the API endpoint.

Event Listeners:

Calls the requestApi function when Enter key is pressed on inputField.

Retrieves geolocation when locationBtn is clicked.

Hides detailed weather screen when arrowBack is clicked.

Geolocation Functions (onSuccess, onError):

Functions called when geolocation is successful or encounters an error.

API Request Functions (requestApi, fetchData):

Functions for sending requests to the OpenWeatherMap API and processing the data.

Weather Details Function (weatherDetails):

Processes the API response and updates the UI.

Determines the weather icon based on conditions in the API response.