Weather App – Project Report

Project Overview

The Weather App is a web-based application developed to fetch and display real-time weather information for any city using the OpenWeatherMap API. The application focuses on simplicity, usability, and visual appeal by dynamically changing background videos based on weather conditions.

Technologies Used

HTML, CSS, JavaScript, OpenWeatherMap API

Problem Statement

Users often require quick access to accurate weather information for planning daily activities. This project provides a simple interface to retrieve live weather data using an external API.

System Architecture

The application follows a client-side architecture where the frontend interacts directly with the OpenWeatherMap API using JavaScript fetch calls.

Functional Modules

• City Search
• Weather Data Fetching
• Dynamic Background Update
• Error Handling

Execution Steps

1. User enters a city name
2. Application fetches weather data from API
3. Data is processed and displayed
4. Background video updates based on weather condition

Error Handling

The application handles invalid city names, API failures, and network issues gracefully by displaying appropriate messages.

Testing

Tested with valid city names, invalid inputs, and different network conditions.

Conclusion

The Weather App successfully meets its objective of providing real-time weather information with an interactive UI.