WEATHER DATA MANAGEMENT SYSTEM

CODE :-

#include <stdio.h>

#include <stdlib.h>

#define MAX\_DAYS 5 // You can change this to a larger number for more days

// Structure to store weather data for each day

struct WeatherData {

char date[15]; // Date in "DD-MM-YYYY" format

float temperature; // Temperature in Celsius

float humidity; // Humidity in percentage

float windSpeed; // Wind speed in km/h

};

// Function to input weather data for a given day

void inputWeatherData(struct WeatherData data[], int index) {

printf("\nEnter data for Day %d:\n", index + 1);

printf("Date (DD-MM-YYYY): ");

scanf("%s", data[index].date);

printf("Temperature (in Celsius): ");

scanf("%f", &data[index].temperature);

printf("Humidity (in percentage): ");

scanf("%f", &data[index].humidity);

printf("Wind Speed (in km/h): ");

scanf("%f", &data[index].windSpeed);

}

// Function to display weather data for all days

void displayWeatherData(struct WeatherData data[], int totalDays) {

printf("\nWeather Data for %d Days:\n", totalDays);

for (int i = 0; i < totalDays; i++) {

printf("\nDay %d (Date: %s):\n", i + 1, data[i].date);

printf(" Temperature: %.2f°C\n", data[i].temperature);

printf(" Humidity: %.2f%%\n", data[i].humidity);

printf(" Wind Speed: %.2f km/h\n", data[i].windSpeed);

}

}

int main() {

int totalDays;

// Ask user for the number of days

printf("Enter the number of days (max %d): ", MAX\_DAYS);

scanf("%d", &totalDays);

// Limit the number of days to MAX\_DAYS

if (totalDays > MAX\_DAYS) {

printf("Exceeded maximum number of days (%d).\n", MAX\_DAYS);

return 1;

}

// Create an array of structures to store the weather data

struct WeatherData weatherData[MAX\_DAYS];

// Input weather data for each day

for (int i = 0; i < totalDays; i++) {

inputWeatherData(weatherData, i);

}

// Display the collected weather data

displayWeatherData(weatherData, totalDays);

return 0;

}

OUTPUT :-

Enter the number of days (max 5): 3

Enter data for Day 1:

Date (DD-MM-YYYY): 01-04-2025

Temperature (in Celsius): 42

Humidity (in percentage): 32

Wind Speed (in km/h): 12

Enter data for Day 2:

Date (DD-MM-YYYY): 02-04-2025

Temperature (in Celsius): 33

Humidity (in percentage): 23

Wind Speed (in km/h): 13

Enter data for Day 3:

Date (DD-MM-YYYY): 03-04-2025

Temperature (in Celsius): 39

Humidity (in percentage): 24

Wind Speed (in km/h): 15

Weather Data for 3 Days:

Day 1 (Date: 01-04-2025):

Temperature: 42.00°C

Humidity: 32.00%

Wind Speed: 12.00 km/h

Day 2 (Date: 02-04-2025):

Temperature: 33.00°C

Humidity: 23.00%

Wind Speed: 13.00 km/h

Day 3 (Date: 03-04-2025):

Temperature: 39.00°C

Humidity: 24.00%

Wind Speed: 15.00 km/h

