**Weather Data Analysis - README**

***Introduction***

This project is about analyzing weather data to find trends in temperature, rainfall, and seasonal patterns. The goal is to understand how weather changes over time using a simple dataset.

***Requirements***

* A weather dataset in CSV format.
* Google Colab to run the code.
* Basic Python knowledge.

***How to Use***

1. Open the code in Google Colab.
2. Upload the weather dataset when prompted.
3. The dataset should have these columns:
   * Date: The day the data was recorded (format: YYYY-MM-DD)
   * Temperature: The recorded temperature in Celsius
   * Rainfall: The amount of rain in mm
   * Month: The month number (1-12)
4. Run the code to generate graphs that show temperature trends, rainfall trends, and seasonal changes.

***Libraries Used***

* pandas for handling data
* matplotlib for plotting graphs
* seaborn for better-looking visualizations

If any library is missing, install it using:

!pip install pandas matplotlib seaborn

***What the Code Does***

* Reads the dataset and displays the first few rows.
* Sorts the data by date (if applicable).
* Creates a **line graph** to show temperature changes over time.
* Creates a **bar chart** to show rainfall trends.
* Creates a **box plot** to see temperature variations for different months.

***Expected Output***

After running the code, you will see:

1. A temperature trend line
2. A bar chart for rainfall
3. A seasonal temperature box plot

***Conclusion***

This project helps visualize weather data in an easy way. The graphs make it simple to understand how temperature and rainfall change over time. This can be useful for studying climate patterns.