Technical Task Instructions:

General Guidelines:

- **Use coding best practices and patterns** throughout the implementation.
- **Implement unit-tests** to ensure the correctness of your code.
- **Document** each task separately, covering:
    - Time taken to complete the task (in hours from start to finish).
    - Challenges, ideas, and comments on each task.

Part 1: Azure Function & Storage Integration

Must Use:

- **Azure Function** (Cloud/Local)
- **Azure Storage** (Cloud/Local storage emulator)
    - **Table Storage**
    - **Blob Storage**
- **.Net Core 6**

Achieve:

1. **Data Fetching & Logging:**
    - Every minute, fetch data from the API: https://api.publicapis.org/random?auth=null.
    - **Log each attempt** (success/failure) in **Azure Table Storage**.
    - Store the **full payload** of successful attempts in **Azure Blob Storage**.
2. **Create two GET API endpoints**:
    - **Log listing**: Retrieve all logs for a specific time period (from/to).
    - **Blob payload retrieval**: Fetch the full payload from blob storage for a specific log entry.
3. **Publish your code** to a **public GitHub repository**.

Part 2: ASP.NET Core & Weather Data Visualization

Must Use:

- **ASP.NET Core MVC 6**
- **C#**
- **JavaScript or TypeScript**
- **React**

Achieve:

1. **Weather Data Fetching & Storage:**
    - Fetch weather data from any **public weather API**.
    - Retrieve the following information for at least **10 cities** in **5 different countries**:
        - Country
        - City
        - Temperature
        - Clouds
        - Wind Speed
    - **Update the data every minute** and store it in the database.
2. **Graphical Representation:**
    - Display **two graphs**:
        - **Min temperature graph**:
            - Show the **country, city, temperature**, and **last update time**.
        - **Max wind speed graph**:
            - Show the **country, city, wind speed**, and **last update time**.
3. **Trend Visualization**:
    - On clicking the graphs, show the **temperature & wind speed trends** for the last 2 hours.

Storage Procedures to Implement

1. Max Wind Speed by Country

- **Create a stored procedure** that provides:
    - The **maximum wind speed** and the corresponding **country name** for a given country (`N` as a parameter).

2. Min Temperature & Max Wind Speed Filter

- **Create a stored procedure** that provides:
    - The **minimum temperature** and **maximum wind speed** in a country where the **minimum temperature** is less than a specific value (`N` as a parameter).

Ensure that you keep track of:

- **How long each task takes**.

- Any **challenges**, ideas, or comments related to the tasks during the process.