**Description**:  
This project will be a weather dashboard that allows users to search for weather information by city or their current location. The app will display the current weather conditions as well as a 5-day forecast, including details like temperature, humidity, and wind speed. The dashboard will be a simple, user-friendly web application that uses the Open-Meteo API for real-time data.

**Stack**:

* **Front-end**: React (for building the user interface and managing state)
* **Back-end**: Node.js with Express (for serving the API data to the front-end)
* **API**: Open-Meteo (for retrieving weather data based on the user's search)

**Focus**:  
The project will have an evenly focused full-stack approach. The React front-end will handle the UI and data presentation, while the Node/Express back-end will manage API requests and deliver the weather data.

**Type**:  
This will be a **traditional website**, accessible via desktop.

**Goal**:  
The main goal of the app is to provide users with real-time weather information for a specific location (via search or location-based search). Users can view current conditions and plan their week with a 5-day forecast.

**Users**:  
The target users for the app are anyone who wants quick access to weather information. This could be students, professionals, travelers, or general users who are looking to plan their day or week based on weather conditions.

**Data**:

* The application will use the **OpenMeteo API(**subject to change) to fetch real-time weather data.
* Users will be able to search by city name to retrieve weather data for their current location.
* The data fetched will include current conditions (temperature, weather state) and a 5-day forecast.

### **Approach Outline:**

1. **Database Schema**:
   * No database is required since the app only fetches data from an external API.
2. **Potential API Issues**:
   * Might need to implement error handling for invalid city names.
   * API responses may need minor formatting before being passed to the front-end.
3. **Sensitive Information**:
   * The OpenMeteo API does not require an API key, so there are no sensitive tokens to secure.
4. **Functionality**:
   * **City search**: Users can search for weather by entering a city name.
   * **Weather display**: Shows current weather conditions and a 5-day forecast.
5. **User Flow**:
   * Users visit the app and see a search bar.
   * After entering a city or allowing location access, weather data is fetched and displayed (current and forecast).
   * Users can perform additional searches for different cities.
6. **Beyond CRUD**:
   * The project focuses on fetching and displaying data from an API, which involves more than basic CRUD operations.
   * **Stretch goals**: If time allows, features like saving favorite cities, search history, or implementing a dark mode could be added.