Topic : Custom Hook

Assignment: Weather Data Fetching

Scenario:

You are tasked with building a simple weather application where users can view the current weather for a specific city.

The application will allow users to enter a city name and fetch the weather data for that city. To make the data fetching logic reusable, you will create a custom hook.

This assignment will help you practice creating and using custom hooks in React with TypeScript.

Requirements:

- ➢ Project Setup:
- Create a new React project with a TypeScript template and name it WeatherApp.
- ➢ Component Structure:
- o Create a useWeather Custom Hook:
- This hook should take a city name as an argument and fetch the current weather data for that city.
- The hook should return the weather data and a loading state.
- Use the OpenWeatherMap API or any other free weather API for fetching the data.
- o Create a WeatherDisplay Component:
- This component should use the useWeather hook to fetch and display the weather data for a given city.
- It should show a loading message while the data is being fetched and display the weather information once it's available.
- o Create an App Component:
- This component should manage the state for the city name.

- Include an input field for the user to enter the city name and a button to trigger the data fetch.
- When the user enters a city name and clicks the button, the WeatherDisplay component should be updated to show the weather for that city.

Tasks:

1. Custom Hook Creation:
- Implement the useWeather hook to handle the logic of fetching weather data based on the city name.
2. State Management and Event Handling:
- Manage the city name state in the App component.
- Pass the city name to the WeatherDisplay component to fetch and display the weather data.
3. Loading State:
- Ensure that the WeatherDisplay component shows a loading message while the data is being fetched and only displays the weather data once it is available.
4. Expected Outcome:
o A simple weather application where users can:
- Enter a city name.
- Click a button to fetch and display the current weather for the city.
- See a loading message while the data is being fetched.