



Advanced Certification in Full Stack Web Development - Project

Problem Statement:

You are working as a React JS developer at ForcastInsights, which specializes in weather applications. You are required to leverage your React skills to develop a state-of-the-art Weather Application. This project aims to create a robust, user-friendly web application that delivers real-time weather information, accurate forecasts, and actionable insights to users.

Objective:

The objective is to:

- Build a weather application that allows users to search for and view the current weather conditions for a specific location.
- Utilize the `useEffect` hook to fetch weather data from an API and update the UI accordingly.
- Implement additional hooks, such as `useCallback` or `useMemo`, to optimize the performance of your application.

Tasks to be Performed:

- Create a search input field where users can enter a location.
- Display the current weather information for the searched location, including:
 - City name
 - Current temperature
 - Weather description (e.g., "Sunny", "Cloudy", "Rainy")
 - Minimum and maximum temperatures for the day
 - Humidity and wind speed
- Use the `useEffect` hook to fetch weather data from a weather API (e.g., OpenWeatherMap, AccuWeather, or WeatherBit) when the user submits a location search.
- Handle loading and error states during the data fetching process.
- Provide meaningful error messages to the user if the weather data cannot be fetched (e.g., invalid location, API errors).
- Handle any potential issues with the API response, such as missing or incomplete data.

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